CHAPTER 4

RESULTS

4.1. OBJECTIVE 1: To know the overall status of the spider from the Jharbari Forest Range.

Jharbari Forest Range harbours diverse species of spiders. A total of 100 species belonging to 83 genera under 19 families were recorded (Table 4.1.1). The highest species were recorded from the family Aranediae (n=33) followed by Salticidae (n=20), Theridiidae (n=11), Thomisidae (n=6), Oxyopidae (n=5) and Tetrganathidae (n=5). The least species of spiders were from Amaurobiidae (n=1), Corinnidae (n=1), Ctenidae (n=1), Clubionidae (n=1), Deinopidae (n=1), Hersiliidae (n=1), Nemesiidae (n=1), and Psechridae (n=1).

Table 4.1.1 Number of Families, Genera and Species composition from Jharbari Forest Range, Assam

Sl. No.	Family	No. of Genera	No. of species
1	Amaurobiidae	1	1
2	Araneidae	23	33
3	Corinnidae	1	1
4	Ctenidae	1	1
5	Clubionidae	1	1
6	Cheiracanthiidae	1	1
7	Deinopidae	1	1
8	Hersiliidae	1	1
9	Lycosidae	2	2
10	Nemesiidae	1	1
11	Oxyopidae	4	5
12	Pisauridae	4	4
13	Psechridae	1	1
14	Salticidae	19	20
15	Sparassidae	3	3
16	Tetragnathidae	3	5
17	Theridiidae	8	11

18	Thomisidae	6	6
19	Uloboridae	2	2
	Total	**83**	**100**

4.2. OBJECTIVE 2: To prepare checklist of spiders from Jharbari Forest Range.

4.2.1. Taxonomy

Classification:

Phylum: Arthropoda

Class: Arachnida

Order: Araneae

Suborder: Mygalomorphae

Suborder: Araneomorphae

Keys to families of spider Jharbari Forest Range

1a. Two sets of book lungs; cheliceral fangs positioned parallel to one another or arranged in a paraxial manner; sternum with distinct markings **Mygalomorphae**

1b. Single sets of book lungs; cheliceral fangs facing each other or arranged diaxially; sternum without distinct markings **Araneomorphae**

2a. Legs equipped with scopula on tarsi; paired claws featuring two rows of teeth; tibia of leg I with spur distally **Nemesiidae**

3a. Cribellum and calamistrum are both present (Section: Cribellate) **4**

3b. Cribellum and calamistrum are both absemt (Section: Ecribellate) **5**

4a. Enlarged posterior median eyes (PME), being two to four times the size of anterior median eyes (AME); front pairs of legs are elongated and slender **Deinopidae**

4a. Posterior median eyes (PME) are not significantly enlarged; front legs are either not as long **5**

5a. Femora have long trichobothria in rows, metatarsi IV are curving and compressed, first pair of legs notably longer than the second pair **Uloboridae**

5b. Femora lack trichobothria, metatarsi IV are not curved, first pair of legs in not noticeably longer **6**

6a. Cribellum is split, calamistrum is composed of three or four rows of short setae, three tarsal claws and cluster with cluster of claw tufts present **Psechridae**

6b. Cribelllum is not split, calamistrum with a single row of setae, tarsal claws are both approximately the same size **Amaurobiidae**

7a. Tarsus has 2 claws **9**

7b. Tarsus has 3 claws **12**

8a. Three rows of eyes, with very large anterior median eyes (AMEs); jumping spiders **Salticidae**

8b. Eyes are arranged uniquely **9**

9a. Tarsi and metatarsus lack scopulae, while legs I and II are typically much longer **Thomisidae**

9b. Tarsi and metatarsus features scopulae, legs I and II distinct **10**

10a. Generally large and robust spiders; flattened body shape; eyes arranged in two rows; tarsi and metatarsi lacks scopulae ventrally **Sparassidae**

10b. Varies in size from medium to large spiders; elongated body shape; eyes arranged in three rows; tarsi and metatarsi often possess scopulae **Ctenidae**

11a. Body often elongated with a flattened appearance; anterior lateral eyes (ALEs) positioned ahead of posterior lateral eyes (PLEs); spinnerets are not compressed, lacks row of spigots **Corinnidae**

11b. Body not elongated, more of a compact; eyes arrangement different; spinnerets compressed, spigots present **Clubionidae**

12a. Tarsus with trichobothria in a row **13**

12a. Tarsus without trichobothria **16**

13a. Clypeus high; posterior eyes and anterior eyes creates a hexagonal cluster in front of smaller anterior median eyes; tibia and metatarsus adorned with numerous long spines **Oxyopidae**

13b. Clypeus not high; position of eyes and spines on legs different **14**

14a. Eyes not placed on tubercles; oval shaped abdomen, rounded smoothly on posterior region; cocoon are carried on spinnerets; anal tubercle monoarticulate **Lycosidae**

14b. Eyes placed on shallow tubercles; elongated abdomen; cocoon carried on chelicerae; anal tubercle biarticulate **Pisauridae**

15a. Body coloured creamish yellow; abdomen lacks long, curved setae; leg I is longer as compared to leg IV; femora lacks dorsal setae **Cheircanthidae**

15b. Body colouration, abdomen and legs pattern different **16**

16a. Very long posterior spinnerets **17**

16b. Usually not long spinnerets **18**

17a. Normal anal tubercle, long posterior spinnerets **Hersiliidae**

17b. Anal tubercle and posterior spinnerets different **17**

18a. Tarsi of leg IV feature a ventral comb composed of serrated hairs; eyes encircled by brownish rings; femora lack spines **Theridiidae**

18b. Tarsi of leg IV lack serrated hairs; eyes not encircled by brownish rings **18**

19a. Male palp is intricate, often possessing a median apophysis, with the embolus not encircled by a conductor, paracymbium generally hook shape; chelicerae may appear swollen, they are not specialized for courtship; epigyne often includes a scape **Araneidae**

19b. Male palp is simple and lacks median apophysis; chelicerae is swollen and specialized for courtship; epigyne indistinct **Tetragnathidae**

Table 4.2.1. Checklist of spider fauna with their guild types and relative abundance recorded during the study period in Jharbari Forest Range, Assam

Sl. No.	Family/Species	Guild types	Relative abundance
	Amaurobiidae Thorell, 1869		
1	*Himalmartensus ausobskyi* Wang and Zhu, 2008	Sheet web weavers	0.0053
	Araneidae (Simon, 1895)		
2	*Acusilas coccineus* Simon, 1895	Orb web weavers	0.0145
3	*Argiope aemula* (Walckenaer, 1841)	Orb web weavers	0.0122
4	*Argiope pulchella* Thorell, 1881	Orb web weavers	0.0198

5	*Bijoaraneus mitificus* (Simon, 1886)	Orb web weavers	0.0297
6	*Arachnura angura* Tikader, 1970	Orb web weavers	0.0145
7	*Caerostris sumatrana* Strand, 1915	Orb web weavers	0.0069
8	*Cyrtarachne inaequalis* Thorell, 1895	Orb web weavers	0.0099
9	*Cyrtarachne nagasakiensis* Strand, 1918	Orb web weavers	0.0061
10	*Cyrtophora cicatrosa* (Stoliczka, 1869)	Orb web weavers	0.0206
11	*Cyrtophora moluccensis* (Doleschall, 1857)	Orb web weavers	0.0160
12	*Cyrtophora unicolor* (Doleschall, 1857)	Orb web weavers	0.0137
13	*Cyrtophora feae* (Thorell, 1887)	Orb web weavers	0.0129
14	*Eriovixia excelsa* (Simon, 1889)	Orb web weavers	0.0122
15	*Eriovixia laglaizei* (Simon, 1877)	Orb web weavers	0.0107
16	*Eriovixia pseudocentrodes* (Bösenberg and Strand, 1906)	Orb web weavers	0.0015
17	*Eriovixia kachugaonensis* Basumatary, Chanda, Das, Kalita, Brahma, Basumatary, Basumatary and Daimary, 2019	Orb web weavers	0.0076
18	*Gasteracantha kuhli* C.L. Koch, 1837	Orb web weavers	0.0183
19	*Herennia multipuncta* (Doleschall, 1859)	Orb web weavers	0.0129
20	*Larinia phthisica* (L. Koch, 1871)	Orb web weavers	0.0129
21	*Macracantha hasselti* (C.L. Koch, 1837)	Orb web weavers	0.0198
22	*Neoscona bengalensis* Tikader and Bal, 1981	Orb web weavers	0.0213
23	*Neoscona mukerjei* Tikader, 1980	Orb web weavers	0.0091
24	*Neoscona theisi* (Walckenaer, 1841)	Orb web weavers	0.0107
25	*Neogea nocticolor* (Thorell, 1887)	Orb web weavers	0.0046
26	*Nephila pilipes* (Fabricius, 1793)	Orb web weavers	0.0160
27	*Nephilengys malabarensis* (Walckenaer, 1841)	Orb web weavers	0.0091
28	*Ordgarius sexspinosus* (Thorell, 1894)	Orb web weavers	0.0091

29	*Paraplectana mamoniae* Basumatary and Brahma, 2019	Orb web weavers	0.0046
30	*Pasilobus kotigeharus* Tikader, 1963	Orb web weavers	0.0038
31	*Parawixia dehaani* (Doleschall, 1859)	Orb web weavers	0.0228
32	*Poltys columnaris* Thorell, 1890	Orb web weavers	0.0091
33	*Poltys illepidus* C. L. Koch, 1843	Orb web weavers	0.0084
34	*Guizygiella indica* (Tikader and Bal, 1980)	Orb web weavers	0.0137
	Corinnidae (Karsch, 1880)		
35	*Corinnomma severum* (Thorell, 1877)	Ground hunters	0.0053
	Ctenidae (Keyserling, 1877)		
36	*Bowie sikkimensis* (Gravely, 1931)	Other hunters	0.0061
	Clubionidae (Wagner, 1887)		
37	*Clubiona filicata O. Pickard-Cambridge, 1874*	Other hunters	0.0038
	Cheiracanthiidae Wagner, 1887		
38	*Cheiracanthium danieli* Tikader, 1975	Ambush hunters	0.0122
	Deinopidae C.L. Koch, 1850		
39	*Asianopis goalparaensis* (Tikader and Malhotra, 1978)	Ambush hunters	0.0091
	Hersiliidae (Thorell, 1870)		
40	*Hersilia savignyi* Lucas 1836	Sensing web weavers	0.0091
	Lycosidae (Sundevall, 1833)		
41	*Lycosa mackenziei* Gravely 1924	Ground hunters	0.0107
42	*Pardosa pseudoannulata* (Bösenberg and Strand, 1906)	Ground hunters	0.0145
	Nemesiidae Simon, 1889		
43	*Gravelyia boro* Basumatary and Brahma 2021	Nocturnal ground ambushers	0.099
	Oxyopidae (Thorell, 1870)		
44	*Hamadruas sikkimensis* (Tikader, 1970)	Other hunters	0.0122
45	*Hamataliwa pentagona* Tang and Li, 2012	Other hunters	0.0076
46	*Oxyopes shweta* Tikader, 1970	Other hunters	0.0107
47	*Oxyopes sitae* Tikader, 1970	Other hunters	0.0137

48	*Peucetia latikae* Tikader, 1970	Other hunters	0.0076
	Pisauridae (Simon, 1890)		
49	*Dendrolycosa songi* (Zhang, 2000)	Nocturnal ground ambushers	0.0046
50	*Hygropoda higenaga* (Kishida, 1936)	Nocturnal ground ambushers	0.0129
51	*Nilus albocinctus* (Doleschall, 1859)	Nocturnal ground ambushers	0.0114
52	*Polyboea vulpina* (Thorell, 1895)	Nocturnal ground ambushers	0.0076
	Psechridae Simon, 1890		
53	*Psechrus himalayanus* Simon, 1906	Sheet web weavers	0.0145
	Salticidae (Blackwall, 1841)		
54	*Asemonea tenuipes* (O. Pickard-Cambridge, 1869)	Other hunters	0.0046
55	*Bianor angulosus* (Karsch, 1879)	Other hunters	0.0046
56	*Brettus cingulatus* Thorell, 1895	Other hunters	0.0091
57	*Carrhotus viduus* (CL Koch, 1846)	Other hunters	0.0107
58	*Chinattus prabodhi* Basumatary, Das, Caleb and Brahma, 2020	Other hunters	0.0015
59	*Cocalus murinus* Simon, 1899	Other hunters	0.0030
60	*Dexippus kleini* Thorell, 1891	Other hunters	0.0069
61	*Epeus indicus* Prószyński, 1992	Other hunters	0.0076
62	*Thiania bhamoensis* Thorell, 1887	Other hunters	0.0069
63	*Hyllus semicupreus* (Simon, 1885)	Other hunters	0.0145
64	*Hyllus diardi* (Walckenaer, 1837)	Other hunters	0.0038
65	*Myrmaplata plataleoides* (O. Pickard-Cambridge, 1869)	Other hunters	0.0076
66	*Phaeacius fimbriatus* Simon, 1900	Other hunters	0.0061
67	*Phintella vittata* (C.L. Koch, 1846)	Other hunters	0.0091
68	*Plexippus paykulli* (Audouin, 1826)	Other hunters	0.0289
69	*Portia fimbriata* (Doleschall, 1859)	Other hunters	0.0023
70	*Rhene flavicomans Simon, 1902*	Other hunters	0.0076
71	*Siler semiglaucus* (Simon, 1901)	Other hunters	0.0069
72	*Telamonia dimidiata* (Simon, 1899)	Other hunters	0.0076
73	*Vailimia jharbari* Basumatary, Caleb and Das, 2020	Other hunters	0.0084
	Sparassidae (Bertkaw, 1872)		
74	*Heteropoda venatoria* (Linnaeus, 1767)	Other hunters	0.0152
75	*Olios lamarcki* (Latreille, 1806)	Other hunters	0.0091

76	*Thelcticopis severa* (L. Koch, 1875)	Other hunters	0.0023
	Tetragnathidae (Menge, 1866)		
77	*Leucauge decorata* (Blackwall, 1864)	Orb web weavers	0.0160
78	*Leucauge fastigata* (Simon, 1877)	Orb web weavers	0.0168
79	*Tylorida ventralis* (Thorell, 1877)	Orb web weavers	0.0091
80	*Tylorida striata* (Thorell, 1877)	Orb web weavers	0.0023
81	*Tetragnatha javana* (Thorell, 1890)	Orb web weavers	0.0152
	Theridiidae (Sundevall, 1833)		
82	*Argyrodes miniaceus* (Doleschall, 1857)	Space web weavers	0.0099
83	*Ariamnes cylindrogaster* Simon, 1889	Space web weavers	0.0107
84	*Chrysso scintillans* (Thorell, 1895)	Space web weavers	0.0084
85	*Chrysso urbasae* (Tikader, 1970)	Space web weavers	0.0046
86	*Chrysso angula* (Tikader, 1970)	Space web weavers	0.0061
87	*Chikunia nigra* (O. Pickard-Cambridge, 1880)	Space web weavers	0.0061
88	*Meotipa picturata* Simon, 1895	Space web weavers	0.0114
89	*Meotipa ultapani* Basumatary and Brahma, 2019	Space web weavers	0.0046
90	*Parasteatoda celsabdomina* (Zhu, 1998)	Space web weavers	0.0122
91	*Theridula gonygaster* (Simon, 1873)	Space web weavers	0.0069
92	*Thwaitesia margaritifera* O. Pickard-Cambridge, 1881	Space web weavers	0.0137
	Thomisidae (Sundevall, 1883)		
93	*Amyciaea forticeps* (O. Pickard-Cambridge, 1873)	Ambush hunters	0.0076
94	*Camaricus khandalaensis* Tikader, 1980	Ambush hunters	0.0084
95	*Thomisus lobosus* Tikader, 1965	Ambush hunters	0.0114
96	*Oxytate greenae* (Tikader, 1980)	Ambush hunters	0.0038
97	*Phrynarachne decipiens* (Forbes, 1884)	Ambush hunters	0.0061
98	*Tmarus jabalpurensis* Gajbe and Gajbe, 1999	Ambush hunters	0.0069
	Uloboridae Thorell, 1869		
99	*Miagrammopes apostrophus* Sen, Saha and Raychaudhuri, 2013	Orb web weavers	0.0069

100	*Philoponella alata* Lin and Li, 2008	Orb web weavers	0.0069

Table 4.2.2. List of new species discovered in Jharbari Forest Range of Chirang Reserve Forest, Assam

SL. NO.	Name of Species	Family
1	*Eriovixia kachugaonensis* Basumatary, Chanda, Das, Kalita, Brahma, Basumatary, Basumatary and Daimary, 2019	Araneidae
2	*Paraplectana mamoniae* Basumatary and Brahma, 2019	Araneidae
3	*Meotipa ultapani* Basumatary and Brahma, 2019	Theridiidae
4	*Vailimia jharbari* Basumatary, Caleb and Das, 2020	Salticidae
5	*Chinattus prabodhi* Basumatary, Das, Caleb and Brahma. 2020	Salticidae
6	*Gravelyia boro* Basumatary and Brahma, 2021	Nemesiidae

Two genus has been newly recorded from India

Family Salticidae: *Chinattus* (Logunov, 1999)

Family Salticidae: *Vailimia* (Kammerer, 2006)

One species and one conspecific sexes of a genus has been rediscovered after a century

Family Salticidae: *Deixippus kleini* Thorell (1891) (129 years)

Family Salticidae: *Vailima* Kamemerer (2006) (first female representative discovered after 113 years

Table 4.2.3. List of species documented for the first time from India

SL. NO.	Name of Species	Family
1	*Himalmartensus ausobskyi* Wang and Zhu, 2008	Amaurobiidae

2	*Cyrtarachne nagasakiensis* Strand, 1918	Araneidae
3	*Eriovixia pseudocentrodes* (Bösenberg and Strand, 1906)	Araneidae
4	*Poltys illepidus* C. L. Koch, 1843	Araneidae
5	*Hygropoda higenaga* (Kishida, 1936)	Pisauridae
6	*Dendrolycosa songi* (Zhang, 2000)	Pisauridae
7	*Hyllus diardi* (Walckenaer, 1837)	Salticidae
8	*Dexippus kleini* Thorell, 1891	Salticidae
9	*Phrynarachne decipiens* (Forbes, 1884)	Thomisidae
10	*Ariamnes flagellum* (Doleschall, 1857)	Theridiidae
11	*Philoponella alata* Lin and Li, 2008	Uloboridae

Table 4.2.4. List of endemic species of India found in Jharbari Forest Range of Chirang Reserve Forest, Assam

SL. NO.	Name of Species	Family
1	*Arachnura angura* Tikader, 1970	Araneidae
2	*Guizygiella indica* (Tikader and Bal, 1980)	Araneidae
3	*Eriovixia kachugaonensis* Basumatary et al., 2019	Araneidae
4	*Paraplectana mamoniae* Basumatary and Brahma, 2019	Araneidae
5	*Bowie sikkimensis* (Gravely, 1931)	Ctenidae
6	*Asianopis goalparaensis* (Tikader and Malhotra, 1978)	Deinopidae
7	*Gravelyia boro* Basumatary and Brahma, 2021	Nemesiidae
8	*Vailimia jharbari* Basumatary et al., 2020	Salticidae
9	*Chinattus prabodhi* Basumatary et al., 2020	Salticidae
10	*Chrysso urbasae* (Tikader, 1970)	Theridiidae
11	*Chrysso angula* (Tikader, 1970)	Theridiidae
12	*Meotipa ultapani* Basumatary and Brahma, 2019	Theridiidae

13	*Pasilobus kotigeharus* Tikader, 1963	Thomisidae
14	*Camaricus khandalaensis* Tikader, 1980	Thomisidae
15	*Thomisus lobosus* Tikader, 1965	Thomisidae
16	*Oxytate greenae* (Tikader, 1980)	Thomisidae
17	*Tmarus jabalpurensis* Gajbe and Gajbe, 1999	Thomisidae
18	*Miagrammopes apostrophus* Sen, Saha and Raychaudhuri, 2013	Uloboridae

Table 4.2.5. List of species documented for the first time from Assam state.

SL. NO.	Name of species	Family
1.	*Himalmartensus ausobskyi* Wang and Zhu, 2008	Amaurobiidae
2.	*Argiope aemula* (Walckenaer, 1841)	Araneidae
3.	*Arachnura angura* Tikader, 1970	Araneidae
4.	*Caerostris sumatrana* Strand, 1915	Araneidae
5.	*Cyrtarachne inaequalis* Thorell, 1895	Araneidae
6.	*Cyrtarachne nagasakiensis* Strand, 1918	Araneidae
7.	*Cyrtophora unicolor* (Doleschall, 1857)	Araneidae
8.	*Cyrtophora feae* (Thorell, 1887)	Araneidae
9.	*Eriovixia laglaizei* (Simon, 1877)	Araneidae
10.	*Eriovixia pseudocentrodes* (Bösenberg and Strand, 1906)	Araneidae
11.	*Eriovixia kachugaonensis* Basumatary et al., 2019	Araneidae
12.	*Herennia multipuncta* (Doleschall, 1859)	Araneidae
13.	*Larinia phthisica* (L. Koch, 1871)	Araneidae
14.	*Neoscona mukerjei* Tikader, 1980	Araneidae
15.	*Neoscona theisi* (Walckenaer, 1841)	Araneidae
16.	*Neogea nocticolor* (Thorell, 1887)	Araneidae
17.	*Nephilengys malabarensis* (Walckenaer, 1841)	Araneidae
18.	*Ordgarius sexspinosus* (Thorell, 1894)	Araneidae
19.	*Paraplectana mamoniae* Basumatary and Brahma, 2019	Araneidae

20.	*Pasilobus kotigeharus* Tikader, 1963	Araneidae
21.	*Parawixia dehaani* (Doleschall, 1859)	Araneidae
22.	*Poltys columnaris* Thorell, 1890	Araneidae
23.	*Poltys illepidus* C. L. Koch, 1843	Araneidae
24.	*Guizygiella indica* (Tikader and Bal, 1980)	Araneidae
25.	*Clubiona filicata* O. Pickard-Cambridge, 1874	Clubionidae
26.	*Cheiracanthium melanostomum* (Thorell, 1895)	Cheiracanthidae
27.	*Asianopis goalparaensis* (Tikader and Malhotra, 1978)	Deinopidae
28.	*Lycosa mackenziei* Gravely, 1924	Lycosidae
29.	*Gravelyia boro* Basumatary and Brahma, 2021	Nemesiidae
30.	*Hamadruas sikkimensis* (Tikader, 1970)	Oxyopidae
31.	*Oxyopes shweta* Tikader, 1970	Oxyopidae
32.	*Oxyopes sitae* Tikader, 1970	Oxyopidae
33.	*Peucetia latikae* Tikader, 1970	Oxyopidae
34.	*Peucetia akwadaensis* Patel, 1978	Oxyopidae
35.	*Dendrolycosa songi* (Zhang, 2000)	Pisauridae
36.	*Hygropoda higenaga* (Kishida, 1936)	Pisauridae
37.	*Nilus albocinctus* (Doleschall, 1859)	Pisauridae
38.	*Polyboea vulpina* (Thorell, 1895)	Pisauridae
39.	*Asemonea tenuipes* (O. Pickard-Cambridge, 1869)	Salticidae
40.	*Chinattus prabodhi* Basumatary et al., 2020	Salticidae
41.	*Cocalus murinus* Simon, 1899	Salticidae
42.	*Dexippus kleini* Thorell, 1891	Salticidae
43.	*Hyllus diardi* (Walckenaer, 1837)	Salticidae
44.	*Myrmaplata plataleoides* (O. Pickard-Cambridge, 1869)	Salticidae
45.	*Phaeacius fimbriatus* Simon, 1900	Salticidae
46.	*Phintella vittata* (C.L. Koch, 1846)	Salticidae
47.	*Plexippus paykulli* (Audouin, 1826)	Salticidae
48.	*Rhene rubrigera* (Thorell, 1887)	Salticidae

49.	*Siler semiglaucus* (Simon, 1901)	Salticidae
50.	*Telamonia dimidiata* (Simon, 1899)	Salticidae
51.	*Vailimia jharbari* Basumatary, Caleb and Das, 2020	Salticidae
52.	*Olios lamarcki* (Latreille, 1806)	Sparassidae
53.	*Thelcticopis severa* (L. Koch, 1875)	Sparassidae
54.	*Leucauge fastigata* (Simon, 1877)	Tetragnathidae
55.	*Tylorida ventralis* (Thorell, 1877)	Tetragnathidae
56.	*Tylorida striata* (Thorell, 1877)	Tetragnathidae
57.	*Tetragnatha javana* (Thorell, 1890)	Tetragnathidae
58.	*Argyrodes miniaceus* (Doleschall, 1857)	Theridiidae
59.	*Ariamnes flagellum* (Doleschall, 1857)	Theridiidae
60.	*Chrysso scintillans* (Thorell, 1895)	Theridiidae
61.	*Chrysso urbasae* (Tikader, 1970)	Theridiidae
62.	*Chrysso angula* (Tikader, 1970)	Theridiidae
63.	*Meotipa picturata* Simon, 1895	Theridiidae
64.	*Meotipa ultapani* Basumatary and Brahma, 2019	Theridiidae
65.	*Parasteatoda celsabdomina* (Zhu, 1998)	Theridiidae
66.	*Chikunia nigra* (O. Pickard-Cambridge, 1880)	Theridiidae
67.	*Theridula gonygaster* (Simon, 1873)	Theridiidae
68.	*Thwaitesia margaritifera* O. Pickard-Cambridge, 1881	Theridiidae
69.	*Amyciaea forticeps* (O. Pickard-Cambridge, 1873)	Thomisidae
70.	*Camaricus khandalaensis* Tikader, 1980	Thomisidae
71.	*Thomisus lobosus* Tikader, 1965	Thomisidae
72.	*Oxytate greenae* (Tikader, 1980)	Thomisidae
73.	*Phrynarachne decipiens* (Forbes, 1884)	Thomisidae
74.	*Tmarus jabalpurensis* Gajbe and Gajbe, 1999	Thomisidae
75.	*Miagrammopes apostrophus* Sen, Saha and Raychaudhuri, 2013	Uloboridae
76.	*Philoponella alata* Lin and Li, 2008	Uloboridae

1. Family **Amaurobiidae** Thorell, 1869

Diagnosis: Cephalothorax long, elevated cephalic region, fovea varying from depression to longitudinal. Eyes arranged in two rows and pale colured. Sternum varies from oval to heart shaped. Labium and maxilla varies from rectangular to square in shape. Chelicerae long and slender in males as compared to females, with promarginal and retromarignal teeth present. Legs long and strong, tarsi with one row of trochobothria, dark annular rings present. Abdomen oval, darkinh brown to grayish, adorned with fine setae. Epigyne scletorized, posterior median lobe divided by sutures from lateral lobe. Male palp stout, RTS scletorized with tibial apophysis dorsally.

1. Genus ***Himalmartensus*** Wang and Zhu, 2008

Diagnosis: Carapace is elongated, reddish-brown, ocular region narrow, covered sparsely with blackish setae, carapace with depressed fovea. Promarig and retromargin teeth with five to eight teeth. Legs I and IV longest, leg III shortest. Abdomen dark brownish with dark markings, covered densely with short bristles. Spinnerets short. Epigyne scletorized; spermathecal globular and widely spaced; CDs long and with multiple coiling around spermathecal; FDs short and narrow. Tibial apophysis simple, pointed and distally twisted; conductor with broad base, emerging from tegulum; embolus thin, whip shape and forming a single loop around tegulum.

1. ***Himalmartensus ausobskyi*** Wang and Zhu, 2008

(Plate 12A-G, 63A)

Taxonomic account

Himalmartensus ausobskyi Wang and Zhu, 2008: p. 244, figs. 1-13.

Specimen examined: 1 ♀ (IV/ARA/ERS-59), 22.vii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapace is lengthened, reddish-brown, and sparsely adorned with short, long blackish setae (Plate 12A, C, E). Abdomen is dark brown, featuring 3 pairs of prominent abdominal sigilla and wide yellowish chevron markings, covered with short blackish setae (Plate 12A). Legs are lengthy, reddish-brown, and thickly covered with numerous setae and trichobothria (Plate 12A, C). Chelicerae have 6 promarginal and 8 retromarginal teeth (Plate 12D). Epigyne is sclerotized with very long copulatory ducts that originate posteriorly between the spermathecal bases, extend anteriorly, and face each other, each forming a loop (Plate 12F, G). Spermathecae have large bases, and the fertilization ducts are short, gradually merging with their distal ends positioned close together (Plate 12G).

Distribution: INDIA: Assam (New record); NEPAL (WSC, 2024).

Natural history: It was found living in rock crevices, where they build cribellate sheet webs.

2. Family: **Araneidae** Clerck, 1757

Diagnosis: Cephalothorax generally flat, abdomen widely variable. Eight eyes arranged in two horizontal rows, of four each, with the anterior median eyes (AME) and posterior median eyes (PME) close together, while the anterior lateral eyes (ALE) and posterior lateral eyes (PLE) are positioned farther apart from the AME and PME. Males are typically much smaller than females. Six simple spinnerets, colulus present, ecribellate. Epigyne complex, completely or partially sclerotised, with or without scape. Male palp with median apophysis and bulbus cymbium.

1. Genus: ***Acusilas*** Simon, 1895

Diagnosis Cephalothorax narrows anteriorly, while the abdomen longer than wide, cylindrical, lacks tubercles but features pairs of moderately small, spherical sigillae arranged in two longitudinal rows. Males are significantly smaller than females. Males feature a black and slender embolus with a blunt tip. Females possess an epigynal septum that is wide at the front.

1. *Acusilas coccineus* Simon, 1895

(Plate 13A-F, 63B)

Taxonomic account

Acusilas coccineus Simon, 1895: p. 785; Uyemura, 1939: p. 142, figs. a-f; Yaginuma, 1960: p. 59, fig. 58; Namkung, 1964: p. 37, fig. 23; Yaginuma, 1971: p. 59, fig. 58; Murphy and Murphy, 1983: p. 117, figs. 3-6; Murphy and Murphy, 1983: p. 122, figs. 18-20; Hu, 1984: p. 88, figs. 78.1-2; Yaginuma, 1986: p. 116, fig. 61.2; Chikuni, 1989: p. 75, fig. 40; Chen and Zhang, 1991: p. 112, figs. 106.1-3; Yin et al., 1997: p. 109, figs. 35a-d; Song, Zhu and Chen, 1999: p. 230, figs. 133A-D, 145M; Namkung, 2002: p. 256, figs. 19.18a-b; Kim and Kim, 2002: p. 177, figs. 1, 70-71, 156-157; Namkung, 2003: p. 257, figs. 19.17a-b; Shin, 2007: p. 163, figs. 11A-H; Tanikawa, 2007: p. 90, figs. 279-281, 746-747; Kuntner, Coddington and Hormiga, 2008: p. 176, figs. 17B-D; Schmidt and Scharff, 2008: p. 18, figs. 7A-B, 10A-D, 11A-B, 12A, 13A, 18A-B, 19A-E, 20A-B, 21A-B; Tanikawa, 2009: p. 461, figs. 317-318; Yin et al., 2012: p. 587, figs. 282a-d; Kim and Lee, 2012: p. 12, figs. 3A-C, pl. 1; Baba and Tanikawa, 2015: p. 41, fig. 4 f; Roy, Saha and Raychaudhuri, 2017: p. 11, figs. 48-52, 176; Sankaran and Sebastian, 2018: p. 391, figs. 1A-E, 2A-G.

Phonognatha vicitra Sherriffs, 1928: p. 183, figs. 1-2.

Specimen examined: 1 ♀ (IV/ARA/ERS/166), 12.vii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax reddish brown, cephalic area raised, covered with bristles (Plate 13A). Eyes ringed at the base with black (Plate 13D). Clypeus inclined (Plate 13A). Chelicerae reddish brown, with promargin bearing 4 and retromargin bearing 3 teeth. Labium slightly wider than long, basally russet brown. Abdomen elongated, yellowish brown, covered with hairs, sigillae 4 pairs in mid-longitudinal rows, 3 pairs of short blackish patches dorsally (Plate 13A). Venter gray, with a yellow tint (Plate 13B). Spermatheca round, dark brown, fertilization duct coiled downward, sub-medially forked, copulatory duct long, V-shaped, beneath fertilization duct (Plate 13E-F).

Distribution: INDIA: Assam, West Bengal, Kerala, Karnataka; CHINA, INDONESIA (Moluccas) (WSC 2024).

Natural history: Found among dry shrub vegetation. Constructs a retreat using a rolled leaf. Drops to the ground when disturbed.

2. Genus: *Argiope* Audouin, 1826

Diagnosis: Cephalothorax flat, narrowed anteriorly, covered with dense white hairs and distinct patterns. Ocular quadrangle trapezoid, longer than wide and wider behind than in front, posterior row of eyes strongly procurved, ALEs smaller than PLEs, lateral eyes close, situated on conspicuous tubercles. Abdomen flat and variable in shape, bright coloured, conspicuous abdominal markings present, often with bold stripes or spots. Females are significantly larger than males. Their long legs are banded with alternating colors, long and robust. The broad, somewhat flattened abdomen may have lateral projections or lobes. The epigyne has a median septum that can be thin or thick.

1. *Argiope aemula* (Walckenaer, 1841)

(Plate 14A-H, 63C)

Taxonomic account

Epeira aemula Walckenaer, 1841: p. 118.

Epeira striata Doleschall, 1857: p. 415; Doleschall, 1859: p. 30, pl. 9, fig. 2.

Argiope trivittata Karsch, 1892: p. 280, pl. 10, fig. 6.

Metargiope ornatus lineatus Marapao, 1965: p. 46, pl. 2, fig. 1-4.

Argiope ornata lineata Brignoli, 1983: p. 242.

Argiope aemule Feng, 1990: p. 62, figs. 37.1-4.

Argiope aemula Thorell, 1877: p. 364; Thorell, 1887: p. 164; Shimojana, 1967: p. 18, fig. 11; Tikader, 1970: p. 29, fig. 17b; Chrysanthus, 1971: p. 9, figs. 1-3; Yin, 1978: p. 4, figs. 9A-C; Song, 1980: p. 100, figs. 46a-c; Tikader, 1982: p. 119, figs. 223-226; Levi, 1983: p. 273, figs. 9-10, 29-35; Hu, 1984: p. 101, figs. 97.1-3; Yaginuma, 1986: p. 114, fig. 59.6; Chikuni, 1989: p. 78, fig. 46; Barrion and Litsinger, 1995: p. 575, figs. 356a-d, 357a-f; Yin

et al., 1997: p. 69, figs. 3a-g; Song, Zhu and Chen, 1999: p. 260, figs. 150R-S, 151A, 152L, 153F; Gajbe, 2007: p. 512, figs. 269-272; Tanikawa, 2007: p. 45, figs. 24-25, 439-440; Tanikawa, 2009: p. 425, figs. 28-29; Zhu and Zhang, 2011: p. 206, figs. 144A-E; Yin et al., 2012: p. 566, figs. 270a-g; Jäger, 2012: p. 281, figs. 3-7; Sen et al., 2015: p. 111, figs. 642-646, pl. 21; Ade and Dixit, 2016: p. 729, figs. 1a-f; Roy, Saha and Raychaudhuri, 2017: p. 8, figs. 18-22, 169 .

Specimen examined: 1 ♀ (IV/ARA/ERS/167), 25.ii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax longer than broad, covered with thick white hair, displaying irregular yellowish spots, and having a raised cephalic region (Plate 14A). PMEs surrounded by black rings, PLEs situated on tubercles (Plate 14F). Sternum heart-shaped, covered with pubescent setae (Plate 14C). Labium pale yellow. Maxillae pale yellow. Legs lengthy, covered with setae, femora of all legs showing yellow spots. Abdomen oval, longer than broad, truncated at the front, covered with whitish setae (Plate 14B). Abdomen silvery white with a blackish transverse band and a broad yellow longitudinal stripe (Plate 14D).

Distribution: INDIA: West Bengal, Kerala, Gujarat, Tamil Nadu, Madhya Pradesh, Maharashtra, Chattisgarh, Andhra Pradesh, Andaman and Nicobar Islands, Assam (New record); PHILIPPINES, INDONESIA (SULAWESI), VANUATU (WSC 2024).

Natural history: Found inhabiting low bushy vegetation, constructing a web with a stabilimentum.

2. ***Argiope pulchella*** Thorell, 1881

(Plate 63D)

Taxonomic account

Argiope undulata Thorell, 1887: p. 154; Thorell, 1895: p. 161.

Argiope pulchella Thorell, 1881: p. 74; Thorell, 1887: p. 158; Gravely, 1921a: p. 412, fig. 3b; Dyal, 1935: p. 190, pl. 11, fig. 8; Tikader, 1970: p. 27, fig. 17a; Tikader and Biswas,

1981: p. 37, figs. 62-64; Tikader, 1982a: p. 129, figs. 243-246; Levi, 1983: p. 304, figs. 238-250; Yin et al., 1989: p. 64, figs. 4A-F; Yin et al., 1997d: p. 85, figs. 17a-I; Song, Zhu and Chen, 1999: p. 262, figs. 152A-C, 153C, N; Jäger and Praxaysombath, 2009: p. 38, figs. 52-68, 74; Jäger, 2012c: p. 304, figs. 115-118; Sen et al., 2015: p. 110, figs. 637-641, pl. 21; Roy, Saha and Raychaudhuri, 2017: p. 8, figs. 23-27, 170.

Specimen examined: 1 ♀ (IV/ARA/ERS/168), 12.vii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax longer than broad, adorned with dense whitish hairs, with a raised cephalic region. PMEs encircled by dark rings. PLE situated on a tubercle. Anterior eyes slightly curved forward. Sternum heart-shaped, covered with pale hairs. Labium pale yellow. Legs elongated, covered with bristles, displaying yellowish-brown patches on all leg segments. Abdomen pentagonal, truncated anteriorly, exceeding in length than in width. Dorsum snowy with deep brown spots, transverse by brown and yellowish stripes, along with three pairs of sigilla. Venter dark brownish with chalky white longitudinal patches.

Distribution: INDIA: Maharashtra, Tamil Nadu, Arunachal Pradesh, Orissa, Madhya Pradesh, Lakshadweep islands, West Bengal, Manipur, Andaman Islands, Kerala, Assam; PAKISTAN, CHINA AND INDONESIA (WSC 2024).

Natural history: Found dwelling amidst tall shrubs, constructing an orb web adorned with a stabilimentum.

3. Genus: *Bijoaraneus* Tanikawa, Yamasaki and Petcharad, 2021

Diagnosis: Cephalothorax greenish in colour, narrow in front, wider behind. Median ocular area anteriorly wider than posterior. Anterior median eyes larger than the posterior median eyes. Sternum heart shaped, narrowed behind. Legs long and somewhat strong. Abdomen oval in shape and longer than wide. Epigynal scape short, well sclerotized, inflexible without differentiation between median plate and lateral lamella.

1. *Bijoaraneus mitifcius* (Simon, 1886)

(Plate 15A-C, 63E)

Taxonomic account

Epeira mitifica Simon, 1886a: p. 150; Workman, 1896: p. 39, pl. 39. *Araneus mitificus* Simon, 1909e: p. 109; Lee, 1966: p. 40, figs. 10k-l; Hu, 1984: p. 95, figs. 89.1-2; Feng 1990: p. 58, figs. 33.1-4; Chen and Gao, 1990: p. 46, figs. 51a-b; Chen and Zhang, 1991: p. 89, figs. 79.1-4; Barrion and Litsinger, 1995: p. 638, figs. 405a-h; Yin et al., 1997d: p. 139, figs. 54a-f; Song, Zhu and Chen, 1999: p. 239, figs. 139A-B; Yin et al., 2012: p. 609, figs. 294a-f; Sen et al. 2015: p. 122, figs. 771-776, pl. 23; Ade and Dixit, 2016: p. 730, figs. 2a-f; Roy, Saha and Raychaudhuri, 2017: p. 26, figs. 161-165, 198.

Zilla nawazi Dyal, 1935: p. 186, pl. 11, fig. 6, pl. 16, fig. 124.

Zygiella nawazi Roewer, 1942: p. 886.

Araneus mitifica Tikader, 1963: p. 43, figs. 4a-c; Tikader and Bal, 1981: p. 53, figs. 115-120; Tikader, 1982a: p. 233, figs. 452-457; Gajbe, 2007: p. 524, figs. 303-307; Biswas and Raychaudhuri, 2013a: p. 158, figs. 1-7.

Araneus nawazi Levi, 1974: p. 271.

Bijoaraneus mitificus Tanikawa, Yamasaki and Petcharad, 2021: p. 98, figs. 2C, 5A-I.

Specimens examined: 2 ♀ (IV/ARA/ERS/169), 2.iii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax longer than wide, tapering anteriorly, covered with setae. Cephalothorax glossy and yellowish green in colour (Plate 15A). Eyes black, PME largest. Sternum heart-shaped, yellow, adorned with dark hairs. Labium broader than long. Legs are also yellowish green in colour and arranged with short spines; distal ends of tarsi and metatarsi featuring brown transverse bands. Abdomen oval in shape, greenish in colour with distinct black and white pattern, a prominent kidney shaped mark can be seen in anterior part of abdomen (Plate 15A). Ventral side greenish.

Distribution: INDIA: Karnataka, West Bengal, Chattisgarh, Maharashtra, Assam, Madhya Pradesh; PAKISTAN, BANGLADESH, CHINA, TAIWAN, THAILAND, CAMBODIA, SINGAPORE, PHILIPPINES, NEW GUINEA (WSC 2024).

Natural history: Found inhabiting shrubs. Constructs a silken retreat with leaves resembling a tunnel near the orb web and retreats when threatened.

4. Genus: *Arachnura* Vinson, 1863

Diagnosis: Cephalothorax is relatively long, with the cephalic region narrowing towards the front. The ocular quadrangle is longer than it is wide, and the lateral eyes are not touching. The legs are short and sturdy, lacking spines but equipped with stiff setae. Abdomen is elongated, featuring prominent shoulder humps and tapering tail-like tubercles at the rear, which are movable. This tail extends beyond the spinnerets for a distance that is slightly more than a third of the total abdomen length.

1. *Arachnura angura* Tikader, 1970

(Plate 16A-D, 63F)

Taxonomic account

Arachnura angura Tikader, 1970: 31, figs. 19a-b.
Arachnura angura Tikader, 1982a: 210, figs. 411-413.

Arachnura angura Kulkarni and Deshpande, 2012b: 113, figs. 1-4.
Arachnura angura Sen et al., 2015: 113, figs. 662-666, pl. 22.

Specimens examined: 2 ♀ (IV/ARA/ERS/170), 17.vii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax is longer than wide, with a narrow, slightly elevated front and deep brown longitudinal patches on the sides and a mid-dorsal stripe (Plate 16A). Pearly white eyes are arranged with the anterior row recurved and the larger median eyes on an elevated

knob, while the posterior row is straight. The heart-shaped sternum and long, robust legs are covered with hairs and some spines, with the first two pairs of legs being longer than the last two. Abdomen tapers towards the rear, featuring large shoulder points at the front, a mid-dorsal white patch, prominent sigilla on the dorsal side, and two elevated knobs near the tail end (Plate 16B). The ventral side is deep brown.

Distribution: INDIA: Sikkim, Kerala, West Bengal (WSC 2024); Assam (New record).
Natural history: Found constructing orb webs on low tree branches. They are often seen lying motionless in the center of the web with their posterior abdomen raised like a scorpion tail. Plant debris such as flowers, twigs, and leaves are arranged on the web.

5. Genus: *Caerostris* Thorell, 1868

Diagnosis: Carapace has a highly elevated cephalic region and a low thoracic region, featuring a transverse row of six prominent tubercles - two on the summit and two on each side. The ocular quad is wider than it is long, narrower towards the front, with small, equal lateral eyes positioned closely on angular tubercles on each side. The legs are short, robust and sturdy, with flat dorsoventrally tibiae and metatarsi that are strongly grooved. Abdomen is large, elevated at the front, and irregularly covered with tubercles.

1. *Caerostris sumatrana* Strand, 1915

(Plate 17A-E, 63G)

Taxonomic account

Caerostris paradoxa Simon, 1895a: p. 831, fig. 875; Tikader, 1982a: p. 132, figs. 247-250; Yin et al., 1997d: p. 212, figs. 130a-c.
Caerostris sumatrana Strand, 1915d: p. 225; Grasshoff, 1984: p. 758, figs. 5, 40, 48; Song,

Zhu and Chen, 1999: p. 262, figs. 154C-E; Jäger, 2007: p. 37, figs. 10-17; Sen et al., 2015: p. 112, figs. 647-651, pl. 22; Omelko and Marusik, 2023: p. 282, figs. 1-27.

Specimens examined: 2 ♀ (IV/ARA/ERS/171), 17.iv.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Large in size, carapace elongated rather than wide, dark brown with short white setae and prominent humps (Plate 17A, C). Clypeus, chelicerae, labium, and endites are uniformly dark brown. Sternum brown, slightly darker in center, wide, lacking setae (Plate 17B). Cephalothorax slightly wider than long, uneven and tubercular, featuring two large conical horn-like tubercles in center and three pairs of horizontally directed tubercles on sides, densely covered with white pubescence (Plate 17A, C). Ocular quad positioned on elevated area, forming trapezium shape, nearly twice as wide behind as in front, with anterior median eyes slightly larger than posterior medians. Lateral eyes small, equal, and close together, situated on prominent large angular tubercle. Sternum heart-shaped, tapering towards back with two tubercles, light reddish-brown and hairy. Labium almost as wide as long, reddish-brown with pale edge, while maxillae slightly elongated, broad towards tip, and yellowish-brown, featuring distinct scopulae. Chelicerae robust and stout, reddish-brown with moderate boss. Legs short and sturdy, with depressed patellae, tibiae, and metatarsi, covered in greyish pubescence and hairs. Abdomen large, spherical, highly elevated at front, yellowish with yellow pubescence and tubercles. Dorsal side of abdomen adorned with several pairs of small but pointed tubercles, including one very large and prominent pair, as well as single median tubercle between large pair (Plate 17A). Additionally, several pairs of red-colored sigilla and greyish lines present on dorsum. Ventral side pale yellow. Epigyne scletorized, with each external opening equipped with horn-like projection, large copulatory openings.

Distribution: INDIA: West Bengal, Assam (New record); CHINA, LAOS, MALAYSIA, BORNEO, INDONESIA (SUMATRA, JAVA) (WSC 2024).

Natural history: Constructs large orb webs on tree branches, and when disturbed, swiftly scuttles to the nearest tree trunk, blending into its surroundings for concealment.

6. Genus: *Cyrtarachne* Thorell, 1868

Diagnosis: Cephalothorax is convex and hairless, with the ocular quadrangle being wider than it is long. The lateral eyes are adjacent and not positioned on prominent tubercles. Abdomen is large, overhangs the cephalothorax, is convex on the dorsal side, and is wider than it is long. The integument is leathery or shell-like, with numerous sigilla on the dorsal surface. Epigyne has a short, blunt and wrinkled scape.

1. *Cyrtarachne inaequalis* Thorell, 1895

(Plate 63H)

Taxonomic account

Cyrtarachne inaquolis Yin, 1978: p. 8, figs. 20A-C.

Cyrtarachne inaequalis Thorell, 1895b: p. 201; Tikader, 1961a: p. 548, figs. 1a-c; Song, 1980: p. 113, figs. 57a-c; Tikader and Biswas, 1981: p. 29, figs. 39-40; Tikader, 1982a: p. 143, figs. 266-269; Hu, 1984: p. 113, figs. 111.1-3; Feng, 1990: p. 77, figs. 52.1-7; Zhu and Zhang, 2011: p. 220, figs. 157A-D; Yin et al., 2012: p. 669, figs. 330a-e; Kim and Lee, 2012b: p. 67, figs. 48A-C, pl. 11; Tanikawa, 2013b: p. 96, figs. 2, 7-8; Roy, Saha and Raychaudhuri, 2017: p. 9, figs. 28-32, 171.

Specimens examined: 2 ♀ (IV/ARA/ERS/172), 14.viii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapace brown, broader than long, with a convex head region. Chelicerae yellowish-brown, sternum yellow. Legs light yellow, devoid of patterns or spines. Abdomen spherical, wider than long, narrowing towards the rear. Abdominal dorsum yellowish, adorned with rounded protuberances on the shoulders, displaying irregular circular markings and greyish-white rings on them, muscle impressions anteriorly, two in the middle and two posteriorly.

Distribution: INDIA: Assam, West Bengal, Andhra Pradesh, Madhya Pradesh; CHINA, KOREA, MYANMAR (WSC 2024).

Natural history: They are seen inhabiting low vegetation. Small sticky droplets are observed on the web which may mimic pheromone and attract insect prey.

2. *Cyrtarachne nagasakiensis* Strand, 1918

(Plate 18A-H, 63I)

Taxonomic account

Cyrtarachne niger Yaginuma, 1960: append. 5, pl. 26, fig. 151, fig. 101K. *Cyrtarachne bengalensis* Hu and Li, 1987: p. 267, figs. 13.1-4.

Cyrtarachne nagasakiensis Strand, 1918: p. 81, pl. 1, figs. 15-17; Jo, 1981: p. 77, figs. 1-7; Chikuni, 1989: p. 82, fig. 59; Feng, 1990: p. 79, figs. 54.1-3; Chen and Gao, 1990: p. 60, figs. 72a-b; Yin et al., 1997: p. 274, figs. 185a-e; Song, Zhu and Chen, 1999: p. 279, figs. 162R-S, 163D, N; Hu, 2001: p. 457, figs. 299.1-3; Tanikawa, 2001: p. 88, figs. 3-4 (S); Namkung, 2002: p. 287, figs. 19.48a-b; Kim and Kim, 2002: p. 205, figs. 41, 123, 232-233; Namkung, 2003: p. 289, figs. 19.48a-b; Tanikawa, 2007: p. 49, figs. 42-47, 457-458; Tanikawa, 2009: p. 428, figs. 45-46; Yin et al., 2012: p. 670, figs. 331a-e; Kim & Lee, 2012: p. 68, figs. 49A-C, Baba and Tanikawa, 2015: p. 58, fig. 5 f; Basumatary et al., 2018: p. 463, figs. 1-10; Akhtar et al., 2019: p. 1030, figs. 1-6; Rio and Matsumoto, 2020: p. 85, figs. 1-2.

Specimen examined. 1♀ (IV/ARA/ERS/173), 23.xi.2018, Jharbari Forest Range, collected by Paris Basumatary.

Diagnosis: *Cyrtarachne nagasakiensis* Strand, 1918 can be distinguished from other related species by its oval-shaped spermatheca and highly coiled copulatory duct. It differs from *C. bengalensis* Tikader 1961 by lacking small tubercles and having less complex spiral ducts.

Female: Total length: 8.14; carapace 2.02 long, 2.38 wide; abdomen 6.12 long, 7.87 wide; sternum length 0.65 long, 1.02 wide; labium 0.28 long, 0.46 wide; maxillae 0.57 long, 0.54 wide. The carapace, chelicerae, labium, and sternum are reddish-brown (Plate 18A). Eye

measurements: PME 0.15, AME 0.16, PME-PME 0.18, AME-AME 0.21, AME-PME: 0.11, ALE 0.10, PLE 0.09, ALE-ALE 1.44, PLE-PLE 1.49, AME-ALE 0.48, PME-PLE 0.55. The chelicerae have 3 promarginal teeth and 2 to 4 retromarginal teeth. The legs are

yellow-brown and lack spines. Leg measurements: I 5.66 (1.96, 0.70, 1.42, 1.04, 0.54); II 5.61 (1.98, 0.76, 1.31, 0.97, 0.59); III 4.17 (1.44, 0.61, 0.83, 0.97, 0.32); IV 5.83 (2.05, 0.84, 1.34, 0.93, 0.67). The abdomen is elliptical with a broad white transverse band and no tubercles. The dorsum is dark grey at the front, featuring three pairs of sigilla, with the middle pair being large and distinct (Plate 18B). Epigyne situtated on a scletorized rim, with copulatory ducts forming a spherical coil and oval shaped spermethecae (Plate E, F, G, H).

Distribution: INDIA: Assam; PAKISTAN, INDIA, CHINA, KOREA, JAPAN (WSC 2024).

Natural history: It was found dangling on air with a single silk dragline on a dense shrub vegetation.

7. Genus: *Cyrtophora* Simon, 1864

Diagnosis: Carapace is nearly flat with an extended cephalic region. The ocular quadrangle is slightly longer than it is wide, with lateral eyes that are equal in size and slightly apart. The legs are moderately long and sturdy. Abdomen is very high at the front and features paired tubercles. Female spiders have an abdomen with pointed or rounded shoulders. Occasionally, there are additional pairs of tubercles along the dorsal side of the abdomen. Epigyne has a median septum, is very broad with a small scape and has a prominent rim.

1. *Cyrtophora cicatrosa* (Stoliczka, 1869)

(Plate 63J)

Taxonomic account

Epeira cicatrosa Stoliczka, 1869: 242, pl. 20, fig. 5.

Epeira salebrosa Thorell, 1878b: 48.

Epeira salebrosa Thorell, 1881: 84, 687.

Meta adspersata Karsch, 1892: 284, pl. 10, fig. 8.

Euetria salebrosa Workman, 1896: 31, pl. 31.

Araneus cicatrosa Pocock, 1900a: 226.

Cyrtophora salebrosa Strand, 1915d: 220.

Cyrtophora cicatrosa Chrysanthus, 1960: 28, figs. 19-23; Tikader and Biswas, 1981: 32, figs. 45-46; Tikader, 1982a: 179, figs. 341-345; Koh, 1991: 179, figs. 18-19; Okuma et al., 1993: 29, figs. 26A-B; Yin et al., 1997d: 279, figs. 188a-f; Song, Zhu & Chen, 1999: 279, figs. 163P-Q, 164O-P, 165A; Biswas and Raychaudhuri, 2004: 124, figs. 1-6; Gajbe, 2007: 516, figs. 278-282; Sen et al., 2015: 118, figs. 728-736, pl. 23; Roy, Saha and Raychaudhuri, 2017: 14, figs. 58-62, 178; Tyagi et al., 2019: Supplement, figs. S2.8, S3.23-24.

Specimen examined: 1♀ (IV/ARA/ERS/174), 12.ii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax pale brownish, adorned with yellowish patches. Slightly longer than wide, narrowing at the front and broadening at the back, covered in yellowish hairs. Thoracic region characterized by a bifid fovea at the rear, while the cephalic region elevates towards the front. Eyes arranged in a trapezoid shape, with anterior median eyes larger than the posterior ones, and lateral eyes nearly equal in size, positioned on prominent tubercles. Legs are brownish with yellowish patches and densely adorned with spines. Abdomen displaying yellowish and brown patches, elevated at the front and slightly overlapping the cephalothorax, features dense hairs, shoulder humps, middle lateral humps, bifid caudal humps, and a broad yellowish-brown patch. Additionally, it exhibits four pairs of sigilla with red outer margins and black inner color.

Distribution: INDIA: Assam, Andaman and Nicobar Island, Gujarat, Kerala, Madhya Pradesh, Maharashtra, Punjab, Tamil Nadu, Uttar Pradesh, West Bengal; PAKISTAN TO AUSTRALIA (NORTHERN TERRITORY) (WSC 2024).

Natural history: Builds a tent web among low shrub vegetation, positioning itself at the center of the web in an inverted position. Numerous egg cocoons dangle inside the web.

2. *Cyrtophora moluccensis* (Doleschall, 1857)

(Plate 63K)

Taxonomic account

Epeira moluccensis Doleschall, 1857: 418.

Epeira maritima Keyserling, 1865: 813, pl. 18, figs. 22-23.

Epeira hieroglyphica L. Koch, 1871: 89, pl. 7, fig. 8.

Argiope leuco-picta Urquhart, 1890**a**: 234.

Euetria moluccensis Thorell, 1890**a**: 111.

Argiope marxii McCook 1894: 223, pl. 1, fig. 5.

Araneus moluccensis Pocock, 1897c: 599, pl. 25, fig. 9.

Cyrtophora simoni Rainbow, 1898a: 337, pl. 7, fig. 4.

Cyrtophora albopunctata Rainbow, 1898a: 339, pl. 7, fig. 5.

Aranea moluccensis albidinota Strand, 1911b: 203.

Aranea moluccensis bukae Strand, 1911b: 203.

Aranea moluccensis rubicundinota Strand, 1911b: 202

Suzumia moluccensis Nakatsudi, 1943a: 160, fig. 9, pl. XXIII, fig. 1.

Cyrtophora leucopicta Levi, 1983: 260.

Argiope thai Levi 1983: 292, figs. 152-156.

Cyrtophora moluccensis Simon, 1895a: 770, fig. 846 (m); Kulczyński, 1910: 394, pl. 17, fig. 5; Yaginuma 1958c: 14, figs. 2F-H; Chrysanthus, 1959: 199, figs. 1, 9, 30; Lee 1966: 47, figs. 15a-c, i; Levi 1968a: 334 (S); Chrysanthus, 1971: 19, figs. 31-33; Tikader, 1982a: 172, figs. 326-330; Hu 1984: 112, figs. 109.1-3; Davies and Gallon, 1986: 232, 233; Davies, 1988b: 320, fig. 42; Feng 1990: 82, figs. 57.1-4; Chen & Gao, 1990: 61, figs. 74a-b; Chen and Zhang, 1991: 105, figs. 99.1-4; Koh 1991: 179, figs. 15-17; Song, Zhu & Li 1993: 872, figs. 38A-C; Yin et al. 1997d: 285, figs. 195a-g; Song, Zhu and Chen, 1999: 280, figs. 164I, L. S; Tanikawa, Chang and Tso, 2010: 34, figs. 1, 8-12, 17-19; Zhu and Zhang, 2011: 222, figs. 159A-C; Yin et al. 2012: 675, figs. 334a-g; Jäger, 2012c: 315; Vink, 2014: 62, figs. 1-2; Nentwig et al. 2019: 35.

Specimen examined: 1♀ (IV/ARA/ERS/175), 15.xii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax of the spider is olive-brown with a slate tint and interrupted yellowish bands, ocular area reddish-brown, covered with silky white hairs. Cephalic part somewhat flat with rounded sides, eye eminence projecting forward. Thoracic part depressedly convex, fovea large and deep. Eyes, on small black rings, arranged with posterior row slightly recurved and anterior row strongly recurved. Legs yellowish olive-brown with irregular chocolate-brown bands. Sternum dark chocolate-brown with yellowish central mark. Ovoid abdomen, slightly convex, projecting over cephalothorax, with tubercular eminence in front and pointed prominence at rear. Rich brown integument, clouded with deeper hues and stone-colored patches, sparse black hairs and silky white hairs on lighter areas. Dorsal field elongate-oval with spots and lines forming distinct patterns.

Distribution: INDIA: West Bengal, Assam (New record); JAPAN, INDONESIA, PAPUA NEW GUINEA, AUSTRALIA, SOLOMON ISLANDS, PALAU, MICRONESIA, FIJI, TONGA, FRENCH POLYNESIA (WSC 2024).

Natural history: They inhabit dense forest vegetation where they build tent web with egg cocoons attached in it.

3. *Cyrtophora unicolor* (Doleschall, 1857)

(Plate 63L)

Taxonomic account

Epeira unicolor Doleschall, 1857: 419; Doleschall 1859: pl. 2, fig. 1.
Epeira stigmatisata Karsch, 1878c: 326, pl. 9, fig. 3; van Hasselt 1882: 21, pl. 4, fig. 5.
Epeira stigmatisata serrata Thorell, 1890a: 33.
Epeira unicolor Workman and Workman, 1894: 20, pl. 20.
Araneus unicolor Pocock, 1897c: 600, pl. 25, fig. 10.

Cyrtophora unicolor Chrysanthus, 1959: 201, figs. 3, 7, 26; Yaginuma, 1968b: 36, figs. 8-9; Yaginuma, 1986a: 117, fig. 62.4; Barrion and Litsinger, 1995: 587, figs. 366a-I; Yin et

al. 1997d: 287, figs. 196a-c; Song, Zhu and Chen, 1999: 280, figs. 164M-N, 165G; Tanikawa, 2007c: 43, figs. 16-18, 434-436; Framenau, 2008b: 131, figs. 1-9; Tanikawa, 2009: 423, figs. 23-25; Malamel, 2018: 112, figs. 2A-B. 3A-I.

Specimen examined: 1♀ (IV/ARA/ERS/176), 02.xii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapace appears highest at the fovea in lateral view, presenting a roundish pit. The carapace's sides are adorned with large tubercles in an orange-brown hue, hosting sparse black setae and a few white ones towards the anterior. Eyes are arranged in rows, with both anterior and posterior rows slightly curved. Sternum, wider than long, shows an orange-brown hue with black pigmentation and is covered with black macrosetae. Femora of legs I-IV display an orange-brown tone with faint dark annulations and very dark brown apices, while patellae appear very dark brown. Tibiae exhibit a dark brown hue with light annulations emphasized by white setae, and metatarsi along with tarsi exhibit a brown color. Abdomen, longer than wide, showcases distinct and pointed humeral humps at the anterior, displaying a uniform olive-brown color with numerous small orange-brown sclerotized plates.

Distribution: INDIA: Kerala, Assam (New record); SRI LANKA TO JAPAN, PHILIPPINES, NEW GUINEA, AUSTRALIA (CHRISTMAS IS.) (WSC 2024).

Natural history: They build large tent web with the spider resting in the middle. It also keeps curled dry leaf in the middle as a retreat.

4. *Cyrtophora feae* (Thorell, 1887)

(Plate 64A)

Taxonomic account*Euetria feae* Thorell, 1887: 173

Araneus feae Pocock, 1900a: 226.

Cyrtophora feae Tikader, 1982a: 176, figs. 336-340.

Specimens examined: 2♀ (IV/ARA/ERS/177), 02.iii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax longer than wide, tapering towards the front, flat, adorned with pubescence and hair. Thoracic area displays a noticeable longitudinal fovea. All eyes surrounded by black rings. Anterior median eyes larger than posterior median eyes, with lateral eyes situated close together on prominent tubercles. Anterior row of eyes strongly recurved, while posterior row almost straight. Sternum brownish with a chalk white band running longitudinally, covered in pubescence and hair. Legs long and moderately robust, clothed in pubescence hairs, with femora exhibiting longitudinal brownish stripes on dorsal side. Abdomen elongated, posterior region tilted upward, narrowly overlapping the carapace; dorsum adorned with patches and lines in yellowish-orange, black, white, and greyish hues, featuring small conical humps. Ventral side greyish-brown with a pair of longitudinal chalk white stripes.

Distribution: INDIA: West Bengal, Assam (New record); MYANMAR (WSC 2024).

Natural history: Construct irregular tent web on tree branches. Birghtly coloured abdomen resembling a human shape might serve as a deterrent to predators.

8. Genus: *Eriovixia* Archer, 1951

Diagnosis: Cephalothorax is pear-shaped, slightly longer than wide, with a narrow eye region. The cervical groove is deep in females but barely visible in males. Legs are yellowish with dark bands, and the first coxa in males does not have a hook. Abdomen is flat and triangular, featuring a tail-like extension at the rear. Epigyne is almost triangular, with wide copulatory openings facing dorsally. Male palpal patella lacks macrosetae, has a small paracymbium, a large median apophysis, a wide conductor and a slender, short embolus.

1. *Eriovixia excelsa* (Simon, 1889)

(Plate 64B)

Taxonomic account

Glyptogona excelsa Simon, 1889i: 337.

Araneus excelsus Simon, 1906c: 283.

Araneus excelsus Dyal, 1935: 179, pl. 16, fig. 116.

Neoscona excelsus Tikader and Bal, 1981: 25, figs. 50-54.

Araneus excelsus Tikader and Biswas, 1981: 20, figs. 16-18.

Neoscona excelsus Tikader, 1982a: 261, figs. 520-524.

Eriovixia excelsa Grasshoff, 1986: 118; Barrion and Litsinger, 1995: 643, figs. 409a-f; Tso and Tanikawa 2000: 129, figs. 17-22; Mi, Peng and Yin, 2010b: 41, figs. 1-8; Han and Zhu 2010b: 2616, figs. 1C, 6A-C; Sen et al. 2015: 120, figs. 754-758, pl. 23; Roy, Saha and Raychaudhuri, 2017: 10, figs. 43-47, 174; Caleb, 2020b: 15717, figs. 3C, 24K; Dippenaar-Schoeman et al., 2021a: 21, figs. 1-11, 13-18; Dippenaar-Schoeman et al., 2022e: 4, p. 3: 4 f., p. 4: 4 f; Jaffry, Butt and Zahr,a 2024: 412, figs. 2A-G.

Specimens examined: 3♀ (IV/ARA/ERS/178), 11.v.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax, brownish, tapers towards the front, adorned with white hairs. Cephalic region elevated with a faint groove. Eight eyes in two rows. Sternum chordate, shows a white longitudinal median band. Legs coated with whitish hairs and numerous setae, femora of legs I-IV dark brown. Abdomen blackish dorsally with chalk white patches, wider than long, globular, with a blunt posterior tip, two pairs of sigilla medially. Venter blackish-brown with a pair of large chalkish white spots.

Distribution: INDIA**:** Gujarat, Kerala, Tamil Nadu, West Bengal, Maharashtra, Assam, Bihar; PAKISTAN, INDIA, THAILAND, CHINA, TAIWAN, PHILIPPINES, INDONESIA. INTRODUCED TO SOUTH AFRICA, ESWATINI (WSC 2024).

Natural history: Found resting on the underside of leaves alongwith an egg sac.

2. *Eriovixia laglaizei* (Simon, 1877)

(Plate 64C)

Taxonomic account

Epeira thomisoides Doleschall, 1857: 422; Doleschall 1859: pl. 2, fig. 2.

Epeira laglaisei Simon, 1877b: 77.

Epeira thelura Thorell, 1878b: 84.

Epeira laglaizei Simon, 1880l: 15; Workman 1896: 41, pl. 41.

Araneus laglaizei Simon, 1895a: 820, figs. 871-872; Chrysanthus 1960: 39, figs. 50, 56, 75; Chrysanthus 1971: 28, figs. 45-47 (m); Yaginuma and Wen 1983: 196, figs. 5A-D; Song 1987: 163, figs. 124.

Aranea laglaizei thelura Strand, 1911d: 224.

Aranea laglaizei Roewer, 1938: 41, fig. 29.

Simonarachne laglaizei Archer, 1951b: 28.

Neoscona laglaizei Tikader and Bal, 1981: 27, figs. 55-58; Tikader 1982a: 263, figs. 525-528; Biswas and Raychaudhuri, 2013c: 173, figs. 24-29.

Neoscona laglaizai Zhu et al., 1994: 45, figs. 19A-E.

Eriovixia laglaizei Grasshoff, 1986: 118; Barrion and Litsinger, 1995: 641, figs. 408a-j; Yin et al. 1997d: 296, figs. 206a-e; Song, Zhu and Chen 1999: 281, figs. 166Q-R, 167F, J; Han and Zhu 2010b: 2623, figs. 3A-B, 10A-I; Sen et al. 2015: 120, figs. 748-753, pl. 23; Biswas and Raychaudhuri, 2018: 4, f. 1a-f (f).

Specimens examined: 2♀ (IV/ARA/ERS/179), 16.vii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax is narrowing towards the front, elongated, and yellowish-white. Features hairs covered with powdery patches. Ocular quadrangle is wide as it is long, with both rows of eyes curving backward, and median eyes are the same size. Heart-shaped sternum is covered with hairs and yellowish-brown. Maxillae share the yellowish-brown hue. Legs are covered with pubescent hairs and yellowish brown, femora of legs I-IV are brownish at the distal ends. Abdomen yellowish-grey with chalkish white patches and cone-shaped towards the back, is covered in hairs, with three pairs of sigilla in the middle and a long, tail-like hump at the rear. Ventral side features a dark brown patch alongwith two pairs of chalk-white patches.

Distribution: INDIA: Kerala, West Bengal, Andhra Pradesh, Tamil Nadu, Assam (New record); PAKISTAN, BANGLADESH, CHINA TO PHILIPPINES, INDONESIA (WSC 2024).

Natural history: Found on an orb web, but generally stays retreat underside of a leave.

3. *Eriovixia pseudocentrodes* (Bösenberg & Strand, 1906)

(Plate 19A – C, 64D)

Taxonomic account

Aranea pseudocentrodes Bösenberg and Strand, 1906: 232, pl. 15, fig. 415.

Heurodes pseudocentrodes Yaginuma and Archer, 1959: 36.

Araneus pseudocentrodes Yaginuma, 1986a: 99, fig. 53.1e; Chikuni, 1989b: 68, fig. 21; Chen and Zhang, 1991: 85, figs. 75.1-2; Yin et al. 1997d: 140, figs. 55a-e; Song, Zhu and Chen 1999: 240, figs. 139W-X, 148S.

Eriovixia pseudocentrodes Tanikawa, 1999a: 43, figs. 1-3, 5-8; Tanikawa, 2007c: 90, f. 282-284, 748-749; Tanikawa, 2009: 461, figs. 319-320; Jäger and Praxaysombath, 2009: 39, figs. 78-79; Mi, Peng and Yin, 2010b: 43, figs. 9-16; Han and Zhu, 2010b: 2627, figs. 4A, 12A-C.

Specimen examined: 1♀ (IV/ARA/ERS/180), 24.vii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapace is light brown. Cephalic area is slightly raised compared to the thoracic region, with a transverse fovea. There are eight eyes arranged in two rows, with the anterior row significantly recurved and the posterior row nearly straight. Chelicerae are brown, featuring four promarginal teeth and three retromarginal teeth. Maxillae, labium, and sternum are also brown. Maxillae are almost square-shaped, while the labium is wider than it is long and has a crescent shape. Sternum is heart-shaped and covered with short black hairs. Abdomen is greenish-brown, with a large folium pattern on the dorsal side; folium includes three pairs of large brown sigillae arranged along the midline and edged in dark (Plate 19A). Venter is grey-black. Epigyne has an indistinct boundary between its base and

the scape, which is small (Plate 19B, C).

Distribution: INDIA: Assam (New record); CHINA, LAOS, JAPAN (WSC 2024).

Natural history: Generally seen underside of the leaves.

4. *Eriovixia kachugaonensis* Basumatary et al., 2019

(Plate 20A-I, 64E)

Taxonomic account

Eriovixia kachugaonensis Basumatary et al., 2019: p. 24, figs. 1-13.

Type material. 1♀ (BMGU/A-10/ARA- 30), Kachugaon, Assam, India (26°44'44.1" N, 90°08'14.6" E, 81 m), 11.VII.2018, coll. T. Basumatary. **Paratypes:** 1♀ (BMGU/A-10/ARA- 31) Kachugaon (26°44'38.4" N, 90°07'59.1" E, 72 m), 12.VII.2018 and 1♀ (BMGU/A-10/ARA- 32) Jharbari Forest under Chirang Reserve Forest (26°35'49.3" N, 90°14'15.7" E, 72 m), 24.VI.2018, coll. P. Basumatary.

Etymology: The species is named after the type locality 'Kachugaon' (noun in apposition).

Diagnosis: This species resembles *Eriovixia pseudocentrodes* (Bösenberg and Strand, 1906) in appearance but can be distinguished by its flat, elongated abdomen, which does not taper posteriorly. In contrast, *E. pseudocentrodes* has an upright abdomen that tapers towards the posterior. The epigyne is oval-shaped with globular spermathecae and long copulatory ducts that fold once posteriorly and almost touch each other. In E. *pseudocentrodes*, the epigyne is triangular, the spermathecae are oval, and the copulatory ducts are unfolded with their posterior ends facing each other.

Female holotype: Total length: 8.83; prosoma: 1.56 long, 1.48 wide; opisthosoma: 7.27 long, 3.42 wide; sternum: 0.94 long, 0.82 wide. Carapace shaped as pear and brownish, featuring a short blackish dorsal stripe running medially extending to the foveal groove, and is covered with whitish setae, longer than wide with a deep cervical ridge; ocular region brownish (Plate 20A). Anterior eyes protruded and the posterior eyes straight (Plate 20A, B). Prosoma: 1.56 long, 1.48 wide; opisthosoma: 7.27 long, 3.42 wide; sternum: 0.94 long, 0.82 wide. Eye measurements: AME 0.11, PME 0.11, ALE 0.06, PLE 0.06, AME-AME 0.14, AME-ALE 0.33, AME-PME 0.09, ALE-PME 0.38, PME-PME 0.16, PME-PLE 0.38.

The chelicerae are brownish with sparse gray hairs and feature four retromarginal and three promarginal teeths (Plate 20D). The sternum is triangular and yellowish-brown, while the labium and maxillae are dark brown. Legs blackish brown with bristle hairs. The abdomen is elongated and tapers posteriorly, with rounded muscle margins at the posterior end; it is pale yellowish-brown, sparsely covered with whitish hairs, and has dark brown margins dorsally, featuring three pairs of sigillae; broad blackish markings adorn the lateral sides (Plate 20A, B). The venter is dark brown, with a short, blackish, broad margin extending from the distal end of the epigynum to the proximal end of the spinneret which is blackish brown (Plate 20C). Epigyne shaped ovally, epigynal scape long; spermethecae globular; long copulatory ducts with single loop alongwith dorsal openings (Plate 20F, G, H, I).

Distribution: INDIA: Assam.

Natural history. During the daytime, females were observed resting on narrow- lanceolate leaved plants such as *Saccharum spontaneum* (wild sugarcane), positioned approximately 4 ft above from the ground. The females were found at intervals of 5 meters apart from each other.

9. Genus: *Gasteracantha* Sundevall, 1833

Diagnosis: Cephalic area of the cephalothorax is significantly raised in the middle and slopes downward both forward and backward. Ocular quadrangle is wider at the back, with the median eyes being nearly the same size. Abdomen is distinctly colored, large, nearly square, transversely oblong or narrowed at the sides, with a hard outer covering and numerous sigilla. The abdomen has a spine at the front and both posterior and median spines on either side.

1. *Gasteracantha kuhli* C. L. Koch, 1837

(Plate 64F)

Taxonomic account

Plectana acuminata Walckenaer, 1841: 159.

Gasteracantha annulipes C. L. Koch, 1844: 52, fig. 876.

Plectana leucomelas Doleschall, 1859: 42, pl. 11, fig. 8; Sherriffs, 1934: 87, fig. 2.

Gasteracantha annamita Simon, 1886a: 148.

Gasteracantha leucomelaena Thorell, 1887: 231; Saito 1939: 10, fig. 2(4); Saito, 1959: 112, figs. 137a-d; Tikader, 1970: 40, fig. 23a.

Gasteracantha leucomelas Simon, 1904b: 282, pl. 16, fig. 3; Bösenberg and Strand, 1906: 239, pl. 3, fig. 18, pl. 15, fig. 395.

Gasteracantha nabona Chamberlin, 1924a: 22 (Df).

Gasteracantha kuhlii C. L. Koch, 1837a: 20, fig. 262; Dahl 1914: 262; Fox 1938b: 365 (S); Nakatsudi, 1943a: 162, fig. 11; Tikader and Biswas, 1981: 34, fig. 50-52 ; Tikader, 1982a: 59, fig. 119-122; Hu, 1984: 114, figs. 112.1-2; Yaginuma, 1986a: 111, fig. 58.4; Chikuni, 1989b: 83, fig. 64; Feng, 1990: 83, figs. 58.1-6; Chen and Gao, 1990: 62, fig. 75; Chen and Zhang, 1991: 101, figs. 95.1-4; Zhao, 1993: 238, fig. 111; Barrion and Litsinger, 1995: 559, figs. 345a-f; Zhao, 1995: 956, fig. 450; Yin et al., 1997d: 97, figs. 26a-f; Song, Zhu and Chen, 1999: 281, figs. 168G-H, M, S-T; Song, Zhu and Chen, 2001: 204, figs. 122A-F; Namkung, 2002: 289, figs. 19.50a-b; Kim and Kim, 2002: 207, figs. 46, 127, 240-241; Kim and Cho, 2002: 267, figs. 655-660; Namkung, 2003: 291, figs. 19.50a-b; Kim and Park, 2007: 119, figs. 1a-d; Shin, 2007: 160, figs. 10A-I ; Tanikawa, 2007c: 52, figs. 61-63, 471-472; Tanikawa, 2009: 429, figs. 55-56; Zhu and Zhang, 2011: 225, figs. 161A-F; Yin et al., 2012: 582, figs. 280a-f; Sato, 2012: 68; Kim and Lee, 2012b: 74, figs. 53A-D, pl. 13; Sen et al., 2015: 108, figs. 622-626, pl. 21; Roy, Saha and Raychaudhuri, 2017: 6, figs. 7-12, 167; Tan et al., 2019a: 46, figs. 1E, 8A-E; Macharoenboon, Siriwut and Jeratthitikul, 2021: 38, figs. 8A-D, 11J-L.

Specimens examined: 2♀ (IV/ARA/ERS/181), 02.xi.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax is blackish and longer than it is wide, with a blunt front and covered in whitish hairs, cephalic region is elevated. Median eyes are of equal size. Cternum is dark brown with a chalky white patch. Labium is dark brown, and the maxillae are yellowish-brown. Legs are yellowish-brown, with the segments of legs I-IV having brownish transverse bands near the ends. Abdomen is octagonal, wider than it is long, overlapping the cephalothorax at the front; dorsum is concave, featuring yellowish chalky

white patches and two pairs of sigilla, with three pairs of spines along the sides and posteriorly. Ventral side is blackish with yellowish chalky white patches.

Distribution: INDIA: Kerala, West Bengal, Assam, Andaman and Nicobar Islands, Bihar, Sikkim; JAPAN, PHILIPPINES AND INDONESIA (WSC 2024).

Natural history: Found resting in the center of its orb web in open forest areas, with plant debris visible on the web.

10. Genus: *Herennia* Thorell, 1877

Diagnosis: Carapace is flat and densely coated with white fuzz. Ocular quadrangle is nearly square and slightly wider towards the back than the front; the front anterior median eyes are larger than the rear ones, while the lateral eyes are close and of similar size. The posterior row of eyes is nearly straight. Legs are long, slender, and covered with hairs and spines, with the combined length of tarsi and metatarsi exceeding that of tibiae and patellae. Abdomen is flat on top and bulges outwards at the sides, marked with radial lines of spots.

1. *Herennia multipuncta* (Doleschall, 1859)

(Plate 21A-J, 64G)

Taxonomic account

Epeira ornatissima Doleschall, 1859: 32, pl. 1, fig. 5.

Epeira multipuncta Doleschall, 1859: 32, pl. 11, fig. 1.

Epeira mammillaris Stoliczka, 1869: 236, pl. 20, fig. 12.

Herennia sampitana Karsch, 1880c: 381.

Herennia mollis Thorell, 1887: 166.

Herennia ornatissima Simon, 1894a: 759, figs. 828, 835; Tikader 1982a: 106, figs. 202-204; Feng 1990: 86, figs. 61.1-6; Hormiga, Eberhard and Coddington, 1995: 334, figs. 11A-B, E-F; Song, Zhu and Chen, 1999: 213, figs. 120P-R; Zhu, Song and Zhang, 2003: 71, figs. 31A-H, pl. IVA-D.

Herennia multipuncta Thorell, 1877b: 371; Kuntner, 2005a: 397, figs. 1A-G, 2A-D, 3A-C, 4A-E, 5A-F, 6A-F, 7A-F, 8A-F, 9A-F, 10A-F, 11A-F, 12A-F, 13A-F, 14A-C, 15; Kuntner,

Coddington and Hormiga, 2008: 168, figs. 9A-E, I-L; Kuntner, Coddington and Schneider, 2009: 1452, figs. 1B, 4D; Kuntner et al., 2009: 258, figs. 1a-b; Eberhard and Huber, 2010: 264, figs. 12.13; Álvarez-Padilla and Hormiga, 2011a: 846, figs. 133F, 134E-F; Sen et al., 2015: 104, figs. 601-606, pl. 21.

Specimens examined: 2♀ (IV/ARA/ERS/182), 25.ii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax is longer than it is wide, flat, and tapers towards the front, covered in hairs (Plate 21A). Cephalic region is light brown with a U-shaped yellowish-white patch, while the thoracic region has dark brown patches and yellowish sides, as well as a transverse groove. Ocular quadrangle is as long as it is wide at the back, slightly wider at the back than at the front. Anterior row of eyes is curved, and the posterior row is nearly straight (Plate 21C). Sternum is broad at the front, orange-yellow, and covered in hairs (Plate 21E). Chelicerae are robust and strong, light brownish, with a moderate boss (Plate 21D). Legs are long and slender, covered in hairs and spines, with brownish patellae, tarsi, and metatarsi. Abdomen is flat and lobed, with four pairs of lateral lobes, covered in hairs (Plate 21A). Dorsum of the abdomen features numerous greyish spots with distinct centers, five pairs of distinct sigilla arranged longitudinally, and some longitudinal lines towards the back. Ventral side has a broad yellowish patch with a large black spot in the center (Plate 21B). Epigyne features a pair of rounded chambers separated by a narrow septum, with laterally positioned copulatory openings (Plate 21F, G). Copulatory ducts are wide, long, and curved, and are sclerotized (Plate 21H, J). Fertilization ducts are short (Plate 21H, J).

Distribution: INDIA: West Bengal, Tamil Nadu, Meghalaya, Arunachal Pradesh, Maharashtra, Assam (New record); CHINA, VIETNAM, BORNEO, SULAWESI (WSC 2024).

Natural history: Found residing on tree bark, it constructs a cozy web nest for its retreat. Its flat abdomen and body coloration allow it to blend seamlessly with the tree bark. It creates an intricate, straight dragline web connected to its retreat, which may assist in detecting prey when they touch the web.

11. Genus: *Larinia* Simon, 1874

Diagnosis: Cephalothorax is elongated rather than broad, with the ocular quadrangle forming a trapezoid nearly twice as wide at the front as at the back. Lateral eyes are nearly equal in size and positioned close together. Maxillae are longer than they are wide. Legs are lengthy and slender. Abdomen is elongated, featuring a blunt point at the front and lacking any rear extension. Epigyne has a central septum and a small, blunt scape.

1. *Larinia phthisica* (L. Koch, 1871)

(Plate 22A-F, 64H)

Taxonomic account

Epeira phthisica L. Koch, 1871: 103, pl. 8, fig. 5; Keyserling 1887a: 171, pl. 14, fig. 6.

Larinia chhagani Patel, 1975a: 113, figs. 5-8.

Larinia nenilini Marusik, 1987c: 246, figs. 1-5.

Larinia albigera Yin et al. 1990: 76, figs. 188-194.

Larinia nenilini Song, Zhou and Chen 1992: 10, figs. 2A-F.

Larinia phthisica Chrysanthus, 1961b: 205, figs. 42-45; Grasshoff 1970b: 224, figs. 8f-i; Grasshoff 1973b: 148, fig. 11; Tikader and Biswas 1981: 44, figs. 72-73; Tikader, 1982a: 208, figs. 408-410; Tanikawa, 1989: 36, figs. 15-21; Okuma et al., 1993: 23, figs. 18, 20A-B; Zhu and Zhang, 1993: 37, figs. 8-13; Yin, 1994: 135; Barrion and Litsinger, 1995: 614, figs. 386a-e, 387a-l; Yin et al. 1997d: 321, figs. 225a-f; Song, Zhu and Chen, 1999: 291, figs. 171N-O. 172G-H, P; Tanikawa, 2007c: 74, figs. 203-204, 614-617; Framenau and Scharff, 2008: 237, figs. 23-34; Tanikawa, 2009: 447, figs. 193-196; Yin et al., 2012: 705, figs. 350a-f; Biswas and Raychaudhuri, 2012: 58, figs. 14-19; Sen et al. 2015: 118, figs. 737-742, pl. 23.

Specimens examined: 3♀ (IV/ARA/ERS/183), 10.iii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax is longer than it is wide, tapering towards the front, and covered with whitish hairs (Plate 22A). The head region is elevated, with a light-yellow spot near the fovea. Eyes are pearly white, the front row of eyes is straight, while the back row is curved (Plate 22D). Sternum is oblong, brownish with dark edges. Chelicerae have four

teeth on the promargin and three teeth on the retromargin (Plate 22C). Legs are long, yellowish and covered with hairs and bristles (Plate 22E). Abdomen is pale yellow, longer than it is wide, with four light brown spots on the top and is pointed at both the front and back, the underside has a white longitudinal median patch (Plate 22A, B, E). Epigyne is sclerotized, with a long scape, short and arching fertilization ducts and long copulatory ducts (Plate 22F).

Distribution: INDIA: Kerala, Gujarat, West Bengal, Assam (New record); BANGLADESH, VIETNAM, USBEKISTAN, TURKMENISTAN, CHINA, JAPAN, PHILIPPINES, PAPUA NEW GUINEA, AUSTRALIA. INTRODUCED TO GREECE (CRETE) (WSC 2024).

Natural history: It is found constructing orb webs among grassy patches and generally stays hidden on the underside of the grass.

12. Genus: *Macracantha* Simon 1864

Diagnosis: Cephalothorax wide black in colour, decorated with white hairs. Lateral eyes are widely spaced from median eyes. Legs are black in colour, moderately strong. Abdomen reddish to yellowish in colour, with many prominent black spots. Adult female *Macracantha* have long median spines, which are several times the width of its abdomen.

1. *Macracantha hasselti* (C. L. Koch, 1837)

(Plate 65J)

Taxonomic account

Gasteracantha horrens Thorell, 1859: 303.

Gasteracantha parvula Thorell, 1859: 303.

Gasteracantha blackwalli Keyserling, 1864: 65, pl. 1, fig. 1.

Gasteracantha helva Blackwall, 1864b: 42.

Gasteracantha hepatica L. Koch, 1871: 8, pl. 1, fig. 5.

Gasteracantha helva O. Pickard-Cambridge, 1879c: 287, pl. 27, fig. 15.

Gasteracantha propinqua O. Pickard-Cambridge, 1879c: 288, pl. 27, fig. 16.

Gasteracantha pictospina van Hasselt, 1882: 14, pl. 1, figs. 1-2.

Actinacantha pictispina Simon, 1885a: 37.

Actinacantha propinqua Simon, 1886a: 147.

Plectana hasselti Thorell, 1887: 224.

Plectana blackwallii Thorell, 1890a: 68.

Gasteracantha hasselti Pocock, 1900a: 233.

Gasteracantha perakensis Simon, 1901k: 60.

Gasteracantha propinqua Simon, 1904b: 282, pl. 16, figs. 5.

Gasteracantha tjibodensis Strand, 1907m: 424.

Gasteracantha hasseltii C. L. Koch, 1837a: 29, fig. 267; Tikader, 1970: 41, fig. 23b; Tikader and Biswas, 1981: 33, figs. 47-49; Tikader, 1982a: 63, figs. 127-130; Yin et al. 1997d: 96, figs. 25a-f; Song, Zhu and Chen, 1999: 281, figs. 168E-F, K-L, Q-R; Yin et al., 2012: 581, figs. 279a-f; Sen et al., 2015: 108, figs. 617-621, pl. 21; Williams, 2017: 249, figs. 1-7; Tan et al., 2019a: 45, figs. 1F, 7A-E; Akhtar and Summer, 2021: 842, figs. 2-5, 6a-b.

Macracantha hasselti Macharoenboon, Siriwut and Jeratthitikul, 2021: 45, figs. 9C-D, 12D-I.

Specimens examined: 1♀ (IV/ARA/ERS/184), 22.vii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax is dark brown, longer than it is wide, and covered with brown and grayish hairs. Sternum is yellowish-white with a dark brown patch. Labium and maxillae are dark brown. Legs are short, with dark brown patches on all legs (I-IV) and covered with black hairs. Abdomen is octagonal, wider than it is long; the dorsal side is yellowish with a pair of sigilla and three pairs of spines, with the middle spines being the largest, ventral side is chalk white.

Distribution: INDIA: Sikkim, West Bengal, Kerala, Assam; PAKISTAN, CHINA TO INDONESIA (WSC 2024).

Natural history: It is found constructing orb webs between tree branches, with the spider typically resting in the center.

13. Genus: *Neoscona* Simon 1864

Diagnosis: A longitudinal groove present on the cephalothorax. The ocular quadangle forms a trapezium shape, slightly longer than wide, with the anterior median eyes either the largest or similar in size to the posterior median eyes. Lateral eyes are close together and not positioned on prominent protrusions, with the posterior lateral eyes being the smallest; both rows of eyes are curved outward. In males, the first coxa on the underside features a hook on the outer edge; the second tibia has macrosetae on its front surface. Abdomen may take on an oval, suboval, triangular, or sub-triangular shape. Epigyne is simple and tongue-like; the scape is fully fused to the base and may have one or two pairs of side lobes, with the epigynal openings located underneath the scape.

1. *Neoscona bengalensis* Tikader and Bal 1981

(Plate 64I)

Taxonomic account

Neoscona bengalensis Tikader and Bal, 1981: 15, figs. 22-25.

Neoscona bengalensis Tikader and Biswas, 1981: 24, figs. 25-27.

Neoscona bengalensis Tikader, 1982a: 246, figs. 474-477.

Neoscona bengalensis Mukhtar, 2012: 1714.

Neoscona bengalensis Biswas and Raychaudhuri, 2013c: 171, figs. 1-6.

Neoscona bengalensis Sen et al., 2015: 125, figs. 793-798, pl. 24.

Neoscona bengalensis Roy, Saha and Raychaudhuri, 2017: 23, figs. 132-137, 191.

Neoscona bengalensis Basu, Roy and Raychaudhuri, 2017: 66, figs. xii-xvii, 12-17.

Specimens examined: 3♀ (IV/ARA/ERS/185), 21.iv.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax is elongated, narrowing towards the front, and covered with hairs; the cephalic region is slightly elevated. Anterior median eyes are larger than the posterior ones; the posterior eyes are surrounded by black rings, and the lateral eyes are positioned close together, each on a black protrusion. Both rows of eyes curve outward. Sternum tapers at the rear, is brown, covered with hairs and spines, and has a pale longitudinal bar.

Labium and chelicerae are covered with thick hairs and spines. Abdomen is sub-triangular, longer than it is wide, broader at the front, and covered with hairs, five pairs of sigilla arranged longitudinally on the dorsal side, dorsum features small chalk-white spots, each accompanied by a short, deep brown line; ventral side of the abdomen is brown with a broad, dark brown longitudinal patch.

Distribution: INDIA: West Bengal, Kerala, Andhra Pradesh, Manipur, Assam; PAKISTAN, BANGLADESH (WSC 2024).

Natural history: Found on its orb web throughout the day, it creates a curled leaf retreat located near the web.

2. ***Neoscona mukerjei*** Tikader, 1980

(Plate 64J)

Taxonomic account

Neoscona mukerjei Tikader, 1980b: 247, figs. 1-23.
Neoscona mukerjei Tikader and Bal, 1981: 17, figs. 11-12, 26-30.
Neoscona mukerjei Tikader, 1982a: 248, figs. 60-61, 478-500.
Neoscona mukerji Gajbe, 2007: 528, figs. 312-316.
Neoscona mukerjei Biswas and Raychaudhuri, 2013c: 173, figs. 37-44.
Neoscona mukerjei Sen et al. 2015: 125, figs. 805-810, pl. 24.
Neoscona mukharji Ade and Dixit, 2016: 730, figs. 4a-i.
Neoscona mukerjei Jaffry, Butt and Zahra, 2024: 416, figs. 4A-K, 5A-D.

Specimen examined: 1♀ (IV/ARA/ERS/186), 06.viii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax is elongated and narrows towards the front, covered with fine hairs and pubescence, with prominent dark brown 'V'-shaped patches on the cephalic region. Lateral eyes are closely spaced, each on a small protrusion, and both rows of eyes curve outward. Sternum narrows towards the rear and has a central longitudinal white band.

Labium is dark brown with a pale distal edge, while the maxillae are yellowish with dark brown patches near the base. Legs are long and sturdy, covered with hairs and spines, and have dark brown transverse bands at the distal ends of segments on legs I-IV, except for the coxa and trochanter. Abdomen is sub-triangular, slightly longer than it is wide, tapering towards the rear, and covered with grayish pubescence and hairs; dorsal side of the abdomen features a longitudinally arranged grayish-white patch and five pairs of sigilla arranged longitudinally; ventral side is brownish-gray with a broad dark brown patch along the mid-ventral line.

Distribution: INDIA: Maharashtra, Tamil Nadu, Kerala, Andhra Pradesh, Arunachal Pradesh, West Bengal, Madhya Pradesh, Manipur, Assam (New record); PAKISTAN, BANGLADESH (WSC 2024).

Natural history: Found on its orb web, it hides on the underside of leaves when threatened. The adult female displays distinctive coloration and abdominal patterns.

3. ***Neoscona theisi*** (Walckenaer, 1841)

(Plate 64K)

Taxonomic account

Epeira theis Walckenaer, 1841: 53, pl. 18, fig. 4.
Epeira mangareva Walckenaer, 1847a: 469.
Epeira assidua Vinson, 1863: 180, 310.
Epeira braminica Stoliczka, 1869: 238, pl. 20, fig. 8.
Epeira mangareva L. Koch, 1871: 85, pl. 7, fig. 4.
Epeira theisii Thorell, 1877b: 390; Thorell 1878b: 65.
Neoscona theis Tikader and Bal, 1981: 32, figs. 13, 68-72; Biswas and Raychaudhuri, 2013c: 175, figs. 62-69.
Neoscona theisi Tikader and Biswas, 1981: 26, figs. 31-33; Barrion et al., 1988a: 402, figs. 6a-g, 7a-e, 9f-g; Barrion and Litsinger, 1995: 625, figs. 394a-e, 305a-d; Roy, Saha and

Raychaudhuri, 2017: 25, figs. 155-160, 196; Basu, Roy and Raychaudhuri, 2017: 66, figs. xviii-xxiii, 18-23; Nentwig et al. 2019: 34, figs. 4a-f; Zamani, Marusik and Šestáková, 2020: 36, figs. 11A-B, 14A,D, 17A-C; Jaffry, Butt and Zahra, 2024: 420, figs. 6A-G, 7A-D.

Specimen examined: 3♀ (IV/ARA/ERS/187), 13.ii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax is longer than it is wide, tapering towards the front, and adorned with hairs and pubescence, exhibiting two lateral and one central longitudinal dark brown bands. Sternum is dark brown, featuring a prominent mid-longitudinal band; both the labium and maxillae are dark brown with a pale anterior border. The abdomen is sub-oval, longer than it is wide, broader at the front, covered with pubescence and hairs that extend over the cephalothorax. On the dorsal side, there is a noticeable mid-longitudinal chalk-white bar and lateral projections, bordered by deep brown or black patches. Four pairs of sigilla are arranged longitudinally. The ventral side appears light brownish, with a broad deep brown patch.

Distribution: INDIA: Orissa, Gujarat, West Bengal, Maharashtra, Madhya Pradesh, Assam (New record); CYPRUS, ISRAEL, CAUCASUS (GEORGIA, RUSSIA), IRAN, PAKISTAN, NEPAL, PHILIPPINES, CHINA TO INDONESIA, JAPAN, AUSTRALIA. INTRODUCED TO SEYCHELLES, PACIFIC IS. (WSC 2024)

Natural History: Frequently encountered in open forest habitats, it builds webs between twigs or branches.

14. Genus: *Neogea* Levi, 1983

Diagnosis: Carapace black, covered with white setae on the carapace and sometimes on the sides of the carapace. The abdomen is black with paired and median white or silver patches. The underside features paraxial white marks. Abdomen extends posteriorly, overhanging the spinnerets. *Neogea* having the posterior eyes equally spaced, with the median eyes

equidistant from each other and the posterior lateral eyes. Epigynum is weakly sclerotized.

1. *Neogea nocticolor* (Thorell, 1887)

(Plate 23A-C, 64L)

Taxonomic account

Gea nocticolor Thorell, 1887: 170.

Gea guttata Thorell, 1890a: 107.

Gea lugens O. Pickard-Cambridge, 1899b: 520, pl. 29, fig. 3.

Gea diadema Hogg, 1919: 92, pl. 9, fig. 6.

Argiope lalita Sherriffs, 1928: 186, figs. 3-7; Tikader 1982a: 113, figs. 211-214.

Neogea nocticolor Levi, 1983: 331, figs. 391-392, 398-406.

Specimen examined: 1 ♀ (IV/ARA/ERS/66), 13.x.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax narrowing towards the front, is adorned with white pubescence (Plate 23A). Cephalic region slightly surpasses the thoracic region in height. The front row of eyes slightly curves backward, while the rear row slightly curves forward; the lateral eyes are closely positioned on a moderately raised tubercle. Sternum is brownish, covered

in pubescence and hairs, featuring a central chalk-white patch. Legs exhibit pale patches at the proximal ends of the femora and irregular pale patches on the tibiae, adorned with pubescence, hairs, and spines. Abdomen is oval-shaped, tapering towards the back, covered in pubescence and hairs; at the front end, there are two small elevations and the dorsum is embellished with chalk-white patches; there are five pairs of sigillae on the dorsal side (Plate 23A). The underside of the abdomen displays a pair of longitudinal chalk-white bands.

Distribution: INDIA: Karnataka, West Bengal, Assam (New record); INDONESIA (SUMATRA) (WSC 2024).

Natural history: It is often seen building orb webs within low shrub vegetation and typically descends when disturbed.

15. Genus: *Nephila* Leach, 1815

Diagnosis: Carapace, bearing the cephalic region, exhibits a convex morphology, prominently elevated above the thoracic region and commonly adorned posteriorly with a singular pair of tubercles. Ocular quad presents near-square proportions or marginal widening posteriorly. Legs long and robust, black in colour, spinulose ornamentation; the combined lengths of tarsi and metatarsi surpass those of tibiae and patellae. Abdomen long and elongated, build strong with muscular ridges.

1. *Nephila pilipes* (Fabricius, 1793)

(Plate 65A)

Taxonomic account

Aranea longipes Fabricius, 1781: 545.

Aranea maculata Fabricius, 1793: 424.

Aranea pilipes Fabricius, 1793: 425.

Aranea sebae Walckenaer, 1805: 55.

Epeira chrysogaster Walckenaer, 1805: 53.

Nephila maculata Leach, 1815: 134, pl. 110.

Nephila fuscipes C. L. Koch, 1839a: 136, fig. 528.

Epeira chrysogaster Walckenaer, 1841: 92.

Epeira fuscipes Walckenaer, 1841: 97.

Epeira doreyana Walckenaer, 1841: 100.

Epeira caliginosa Walckenaer, 1841: 100.

Nephila ornata Adams, 1847: 291.

Epeira penicillum Doleschall, 1857: 413.

Epeira walckenaeri Doleschall, 1857: 413.

Epeira hasseltii Doleschal, l 1859: 27, pl. 13, fig. 5.

Epeira chrysogaster Doleschall, 1859: 27, pl. 14, fig. 2, pl. 11, fig. 2.

Epeira walckenaeri Doleschall, 1859: pl. 1, fig. 4, pl. 2, fig. 4 (f).

Epeira harpyia Doleschall, 1859: 28, pl. 14, fig. 1.

Nephila chrysogaster O. Pickard-Cambridge, 1871d: 620, pl. 49, figs. 3-4.

Meta ornata L. Koch, 1872a: 134, pl. 11, fig. 6 (j).

Nephila fuscipes L. Koch, 1872a: 156, pl. 13, fig. 1.

Nephila pecuniosa L. Koch, 1872a: 157, pl. 13, fig. 2.

Nephila aurosa L. Koch, 1872a: 160, pl. 13, fig. 4.

Nephila procera L. Koch, 1872a: 162, pl. 14, fig. 1.

Nephila sulphurosa L. Koch, 1872a: 163, pl. 14, fig. 2.

Nephila tenuipes L. Koch, 1872a: 165, pl. 13, fig. 5.

Nephila walckenaeri Thorell, 1877b: 447.

Nephila maculata annulipes Thorell, 1881: 146.

Nephila maculata McCook, 1894: 254, pl. 23, fig. 4; Simon, 1894a: 755, figs. 832-833; Bösenberg and Strand, 1906: 193, pl. 11, fig. 208; Wunderlich, 1986: 197, fig. 163; Song, 1987: 174, fig. 134; Dahl, 1912a: 35, 52. Saito, 1959: 117, figs. 140a-d; Chrysanthus, 1959: 197, fig. 2, 11, 24; Chrysanthus, 1960: 23, figs. 3-4; Wiehle, 1967b: 195, fig. 51; Levi, 1980a: 17, figs. 16-22; Tikader, 1982a: 97, figs. 187-190; Hu and Wu, 1989: 106, figs. 81.1-3; Chikuni, 1989b: 80, fig. 52; Feng 1990: 97, figs. 72.1-5; Chen and Zhang, 1991: 111, figs. 105.1-4; Barrion and Litsinger, 1995: 560, figs. 346a-c, 347a-e; Kim, 2006: 203, figs. 1a-c, 2a-e; Gajbe, 2007: 510, figs. 266-268.

Nephila maculata jalorensis Simon, 1901k: 58.

Nephila submaculata Strand, 1906c: 30.

Nephila maculata novae-guineae Strand, 1906d: 261.

Nephila maculata flavornata Merian, 1911: 195.

Nephila maculata piscatorum Vis, 1911: 167.

Nephila pictithorax Kulczyński, 1911c: 469, pl. 20, fig. 40.

Nephila maculata lauterbachi Dahl, 1912a: 53.

Nephila maculata hasselti Hogg, 1915a: 440.

Nephila maculata walckenaeri Hogg, 1915a: 441.

Nephila robusta Tikader, 1962b: 566; Tikader 1982a: 100, figs. 191-194.

Nephila pilipes Barrion et al., 1988b: 248, figs. 1, 2a-e; Song, Zhu and Chen, 1999: 217, figs. 124Q-R, 125E; Song, Zhu and Chen, 2001: 168, figs. 98A-C; Zhu, Song and Zhang, 2003: 82, figs. 34A-F, 35A-C, pl. VA-D; Harvey, Austin and Adams, 2007: 422, figs. 1-2, 4-5, 19-31; Tanikawa, 2007c: 94, figs. 310-315, 766-767; Tanikawa, 2009: 404, figs. 3-4; Sen et al., 2015: 104, figs. 607-611, pl. 21; Sankaran et al., 2020: 592, figs. 1A-D, 2A-C,E-F, 3A-H; Ochi and Shinta, 2021: 108, figs. 2-3; Jaffry, Butt and Zahra, 2024: 426, figs. 10A-G, 11A-E, 12A-D.

Specimens examined: 1 ♀ (IV/ARA/ERS/188), 16.i.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax is blackish-grey, longer than it is wide, and adorned with yellowish hairs, with the cephalic region featuring a pair of sharp tubercles towards the rear. Both rows of eyes curve backward. Sternum is covered in whitish hairs. Legs are extremely slender and elongated, covered in blackish hairs. Abdomen is long, cylindrical, and blackish, with a pair of yellowish longitudinal lines along the dorsal side and yellow patches; there are five pairs of sigilla. Ventral side displays broad longitudinal patches in olive brown.

Distribution: INDIA: Uttar Pradesh, Kerala, Sikkim, Gujarat, West Bengal, Maharshtra, Assam, Madhya Pradesh, Arunachal Pradesh, Andaman and Nicobar Island; PAKISTAN, CHINA, VIETNAM, PHILIPPINES, AUSTRALIA (WSC 2024).

Natural history: Commonly inhabiting forested areas, it constructs massive orb webs. Owing to their size, these webs frequently become ensnared with abundant tree debris and insects. Numerous kleptoparasitic spiders are often observed on these webs, taking advantage of the captured prey.

16. Genus: *Nephilengys* L. Koch, 1872

Diagnosis: Cephalothorax features a broad, elevated carapace region with an upright, spiny

carapace edged by long white hairs. The sternum has three pairs of slit sensilla. Eyes are slightly recurved, with lateral eyes on tubercles widely spaced from the medians and no tapeta in secondary eyes. The legs are long, with tibiae having a weak tuft of dark hairs and follow the sequence 1243. Abdomen oval, cylindrical, and widest in the middle, with short hairs and specific sclerotizations. Abdomen has a light anterior pigment band. Epigynum prominent, with round spermathecae covered in gland pores and well-sclerotized copulatory and fertilization ducts.

1. *Nephilengys malabarensis* (Walckenaer, 1841)

(Plate 65B)

Taxonomic account

Epeira malabarensis Walckenaer, 1841: 103.

Epeira anama Walckenaer, 1841: 102.

Epeira malabarica Doleschall, 1857: 420.

Epeira rhodosternon Doleschall, 1859: 40, pl. 12, fig. 6.

Nephila rivulata O. Pickard-Cambridge, 1871d: 618, pl. 49, figs. 1-2.

Nephilengys schmeltzii L. Koch, 1872a: 144, pl. 11, fig. 7.

Nephilengys hofmanni L. Koch, 1872a: 145, pl. 11, fig. 8.

Nephila urna van Hasselt, 1882: 28, pl. 4, figs. 12-14.

Metepeira andamanensis Tikader, 1977a: 181, figs. 12A-C.

Nephilengys niahensis Deeleman-Reinhold, 1989a: 626, figs. 15-16.

Nephilengys malabarensis Thorell, 1878b: 123; Simon, 1894a: 745, fig. 827; Bösenberg and Strand, 1906: 192, pl. 11, fig. 216; Dahl, 1912a: 46, 49; Wiehle, 1967b: 195, fig. 48; Tikader, 1982a: 95, figs. 183-186; Davies, 1988b: 296, fig. 20; Millidge, 1988c: 258, fig. 24; Deeleman-Reinhold, 1989a: 624, figs. 11-14; Yin et al,. 1990: 3, figs. 6-9; Barrion and Litsinger, 1995: 565, figs. 350a-c; Song, Zhu and Chen, 1999: 217, figs. 125F-I; Zhu, Song and Zhang, 2003: 85, figs. 36A-H, 37A-D, pl. VE-H; Kuntner, 2007: 119, figs. 22A-C, 23A-E, 24A-B; Kuntner, Coddington and Hormiga, 2008: 167, figs. 8H-I; Kuntner, Coddington and Schneider, 2009: 1452, fig. 1B; Kuntner et al., 2009: 258, fig. 1d; Álvarez-

Padilla and Hormiga, 2011a: 848, figs. 135B, 136F, 138D, 139C, 140C.

Specimens examined: 1 ♀ (IV/ARA/ERS/189), 27.viii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax is elongated, tapering towards the front, and covered with whitish hairs, featuring an elevated cephalic region with reddish-brown coloration and spines. Anterior median eyes (AMEs) are larger than the posterior median eyes (PMEs). Sernum is yellowish in color. Legs are blackish. Abdomen is blackish and oval-shaped, elongated, and with reddish patches running laterally on the dorsum, and it has five pairs of sigilla. Ventral side displays numerous red and white ornaments with yellowish patches on the sides.

Distribution: INDIA: Bihar, Kerala, Maharashtra, West Bengal, Tamil Nadu, Andaman and Nicobar Island, Assam (New record); CHINA, PHILIPPINES, INDONESIA (AMBON), JAPAN (WSC 2024).

Natural history: It constructs its orb web on the corner of a tree trunk, often accompanied by a tubular retreat.

17. Genus: *Ordgarius* Keyserling, 1886

Diagnosis: Carapace small, ocular quadrangle rectangular. Carapace wider behind, decorated with patterns. Leg I is nearly equal in length to the second legs. S hape of the tubercles on the cephalothorax varies. Abdomen, somewhat triangular in shape, narrowed posterior, prominent tubercles present.

1. *Ordgarius sexspinosus* (Thorell, 1894)

(Plate 24A-H, 65C)

Taxonomic account

Notocentria sex-spinosa Thorell, 1894: 48.

Caerostris cuspidata Workman, 1896: 26, pl. 26.

Euglyptila nigrithorax Simon, 1909e: 116.

Cladomelea mundhva Tikader, 1963c: 97, fig. 2.

Ordgarius sexspinosus Pocock, 1900a: 230.

Ordgarius sexspinosus Schenkel, 1963: 178, figs. 103a-d; Simon, 1895a: 885; Tikader, 1982a: 135, figs. 251-255; Chikuni, 1989b: 83, fig. 66; Tanikawa, 1997b: 106, figs. 3-4, 12-18; Yin et al., 1997d: 384, figs. 276a-d; Song, Zhu and Chen, 1999: 302, figs. 181O-P, 182B; Namkung, 2002: 290, figs. 19.51a; Kim and Kim, 2002: 222, figs. 66, 285-286; Levi, 2003: 376; Namkung, 2003: 292, figs. 19.51a; Tanikawa, 2007c: 51, figs. 60, 469-470; Tanikawa, 2009: 429, figs. 53-54; Yin et al., 2012: 752, figs. 375a-d; Kim and Lee, 2012b: 105, figs. 78A-C, pl. 21; Thumar, Dholakia and Ade, 2016: 224, figs. 8-17.

Specimen examined: 1 ♀ (IV/ARA/ERS/49), 18.xii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: The cephalothorax is longer than it is wide, covered in whitish pubescent hairs, and encircled by a U-shaped dark brown patch on the sides and rear (Plate 24A). The cephalic region is elevated. Prominent large median eyes are positioned on a raised area. Three retromarginl and 3 promarignal teeth. The center of the cephalothorax features three noticeable horn-like projections (Plate 24D). The tibia, tarsi, and metatarsi of legs I and II are covered with whitish hairs, and the femora of these legs have black spots on the front. The abdomen is broad, yellowish-brown, and overlaps the cephalothorax at the back; it has six conical projections at the front and back (Plate 24B). The ventral side is pale yellow. Epigyne placed on a scelotrized ridge; spermathecae globular; FD short and narrow; CDs long and facing each other anteriorly (Plate 24G, H).

Distribution: INDIA: Gujarat, Maharashtra, Assam (New record); JAPAN, INDONESIA (WSC 2024).

Natural history: It constructs an orb web but typically stays hidden on the underside of leaves most of the time.

18. Genus: *Paraplectana* Brito Capello, 1867

Diagnosis: Colourful spiders, small in size, with a cephalothorax half of its breadth. Cephalothorax is convex, glossy, with brown-red falces. Eyes are near the cephalothorax's front margin, forming a square with larger anterior ones. Legs are short, dark brown, with a yellow hue on coxae and some femora. Abdomen is roughly two-thirds wider than long.

Abdomen is circular, red to yellow in colour, with or without black spots, undersides corrugated and brown-black.

1. *Paraplectana mamoniae* Basumatary and Brahma, 2019

(Plate 25A-H, 65D)

Taxonomic account

Paraplectana mamoniae Basumatary and Brahma, 2019

Type material. Holotype: 1 ♀ (IV/ARA/ERS-22), Jharbari Forest under Chirang Reserve Forest, Kokrajhar, Assam, India (26˚ 36' 22.8" N, 90˚ 14' 45.3" E, 70 m), 02.X.2018, coll. P. Basumatary. Paratypes: 1♀ (IV/ARA/ERS-31), same locality as the holotype, 02.X.2018, coll. P. Basumatary.

Etymology: The species is named in honor of Lt. Mamoni Rava (1990–2019). She was an inspiring researcher in the Department of Biotechnology at Bodoland University and a key contributor to the Research and Development in the Technology Incubation Centre of the department. The name is used as a noun in apposition.

Diagnosis: The female of *Paraplectana mamoniae* can be distinguished from its known relatives by its unique whitish-pink abdomen with 18 blackish spots. In comparison, *P. coccinella* (Thorell, 1890) has a yellowish abdomen with 14 blackish spots and a reddish venter, *P. duodecimmaculata* Simon, 1897 has a glossy red abdomen with 12 blackish spots, *P. sakaguchi* has a reddish-brown abdomen with 17 yellowish markings, P. tushimensis has a reddish-brown abdomen with 12 black spots, *P. gravelyi* has a yellowish-gray abdomen with 14 whitish-blsck patches, and *P. rajashree* has an orange-red abdomen with 14 blackish spots and a blackish patch on the venter posteriorly. *P. mamoniae* exhibits distinctive genital features: large, suboval spermathecae that are narrowly spaced (0.1 mm); a sclerotized atrium; short, uncurved, and widely spaced copulatory ducts. In contrast, *P. sakaguchi* has a slightly sclerotized atrium, small and ovoid spermathecae, *P. gravelyi* features large, spherical spermathecae with thin, narrow and long copulatory ducts originating medially from the posterior end of the spermathecae and directed distally, and *P. rajashree* has small, widely spaced (0.2 mm) spermathecae with long copulatory ducts

that narrow anteriorly and are less spaced posteriorly.

Female: Total length 5.49; carapace 2.35 long, 3.77 wide; abdomen 3.14 long, 4.31 wide. Carapace is reddish-orange with an elevated ocular area (Plate 25A). The AMEs and PMEs are encircled by a narrow blackish ring. Eye measurements: AME 0.27, ALE 0.13, PME 0.24, PLE 0.1; interdistances between eyes: AME–AME 0.26, AME–ALE 0.97, AME–PME 0.18, ALE–ALE 3.05, PME–ALE 1.04, PME–PME 0.26, PME– PLE 1.17, PLE–PLE 3.32. Chelicerae, labium, and maxillae are reddish-orange. Chelicerae with 3 promarginal and 6 retromarginal teeth. The sternum is sub-triangular with deep reddish-orange colour. The legs are reddish-orange, covered with numerous pale brown setae, and the tarsi of legs I–IV are brownish-black. Leg measurements: I 3.15 (1.14 + 0.44 + 0.71 + 0.56 + 0.3), II 3.14 (1.19 + 0.5 + 0.68+ 0.54 + 0.23), III 2.03 (0.87+0.3+0.4+0.24+0.22), IV 3.22 (1.37+0.36+0.63+0.53+0.33). The abdomen is elliptical, broader than it is long, and blunt at the front (Plate 25A). The dorsum is pinkish-white with 18 blackish spots (8 in the middle, 2 at the front, and 8 on the sides). The venter is brownish-orange with a short, longitudinal yellow patch along the epigastric furrow and a faint blackish patch below the epigastric furrow (Plate 25B). The body color transitions from glossy pinkish-white to dull brown in preserved specimens. The epigyne is sclerotized and slightly elongated at the rear, spermathecae are large and suboval, copulatory ducts are short, continuous with the spermathecae, originating laterally and directed backward, with a wide spacing at the posterior, fertilization duct is short and narrow, connecting distally with the copulatory duct (Plate 25E, F, G, H).

Distribution: INDIA (Assam).

Natural history: The newly discovered species was located on the underside of a fig leaf, specifically Ficus hispida, creating a single dragline at a height of 2 meters above the ground. Adult females were noted to be active during the night.

19. Genus: *Pasilobus* Simon, 1895

Diagnosis: Carapace is broader than it is long, with a slight depression behind the eyes and adorned with stout, lanceolate hairs. The ocular quadrangle is nearly square, with closely

positioned lateral eyes. Legs are short and somewhat slim, with flat patellae, tibiae, and metatarsi. Abdomen is sizable, nearly twice as wide as it is long, typically having rough edges and angles on both the anterior and posterior sides, and on the dorsal side, there are low and coarse protrusions.

1. *Pasilobus kotigeharus* Tikader, 1963

(Plate 26A-F, 65E)

Taxonomic account

Pasilobus kotigeharus Tikader, 1963c: 96, fig. 1.

Pasilobus kotigeharus Tikader, 1982a: 156, figs. 293-296.

Pasilobus kotigeharus Sen et al. 2015: 113, figs. 657-661, pl. 22.

Pasilobus kotigeharus Roy, Saha and Raychaudhuri, 2017: 10, figs. 38-42, 173.

Specimen examined: 1 ♀ (IV/ARA/ERS/190), 19.iii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax is broad and widens towards the back, deep blackish-brown in color with minimal hair coverage, front region is blunt with a ridge in front of the lateral eyes (Plate 26A). Posterior median eyes (PMEs) are positioned on prominent ring-like bases on each side, with both eye rows curved. Sternum narrows towards the back and is deep brownish (Plate 26E). Legs are short, stout, blackish-brown, and covered with hairs,

with the femora of the first leg having tubercles on the pro-lateral side (Plate 26b). Abdomen is blackish-brown, wider than it is long, and covered with numerous tubercles; the dorsum has large distinct sigilla and a pair of large conical humps in front of its middle portion (Plate 26A, C). Ventral side is greyish (Plate 26B). Epigyne is sclerotized with oval-shaped spermathecae; fertilization ducts (FDs) are short, originating from the middle of the spermathecae and gently coiled; copulatory ducts (CDs) are long and form an inverted arch (Plate 26F).

Distribution: INDIA: Assam (New record).

Natural history: It constructs a single dragline and remains suspended from the silk line.

20. Genus: *Parawixia* F. O. Pickard-Cambridge, 1904

Diagnosis: Medium to large in size. The posterior central eyes are spaced about half a diameter apart, similar in size to or slightly smaller than the anterior central eyes, which are spaced roughly one diameter apart. The central quadrangle is narrower towards the rear, not longer than it is wide. The posterior row of eyes curves backward; lateral eyes are approximately half a diameter apart and smaller than the posterior lateral eyes. The lateral pair is separated from the posterior central eyes by a gap about two and a half times their distance. In males, the eye rows are more curved, with anterior lateral eyes positioned on a low rounded protrusion. Fang groove margins have three lower and four upper teeth. Legs are densely covered with spines, with irregular series on femora and spinose third and fourth legs. Sternum slightly longer than broad. Abdomen is oval with various tubercles. Vulva features fused scapus, atriolum and lateral sclerites.

1. *Parawixia dehaani* (Doleschall, 1859)

(Plate 65F)

Taxonomic account

Epeira dehaanii Doleschall, 1859: 33, pl. 2, fig. 7.
Epeira spectabilis Doleschall, 1859: 34, pl. 2, fig. 9.
Epeira caputlupi Doleschall, 1859: 35, pl. 8, fig. 6.
Epeira bogoriensis Doleschall, 1859: 35, pl. 11, fig. 7.
Epeira caputlupi van Hasselt, 1877: 52, pl. 4, fig. A.
Epeira kandarensis Thorell, 1877b: 372 .
Epeira dehaani van Hasselt, 1882: 21.
Epeira submucronata Simon, 1887i: 106.
Epeira caestata Thorell, 1890a: 122.
Araneus caputlupi Pocock, 1897c: 599, pl. 25, fig. 8.
Araneus dehaani Simon, 1899a: 90; Pocock, 1900a: 225, fig. 72.

Araneus submucronatus Simon, 1901k: 59.

Aranea dehaanii pygituberculata Strand, 1911b: 203.

Aranea dehaanii quadripunctigera Strand, 1911d: 151.

Aranea dehaani Roewer, 1938: 38, fig. 26.

Araneus dehaani Chrysanthus, 1960: 31, figs. 24-31; Tikader and Biswas, 1981: 21, figs. 19-21; Feng 1990: 55, figs. 30.1-4; Chen and Gao, 1990: 44, fig. 46; Yin et al., 2012: 602, figs. 290a-h.

Parawixia dehaanii Tikader, 1982a: 212, figs. 414-418.

Araneus dehaanii Yin et al., 1997d: 133, figs. 48a-i.

Parawixia dehaani Barrion and Litsinger, 1995: 582, figs. 362a-e; Song, Zhu and Chen, 1999: 302, figs. 182E-I; Sen et al., 2015: 119, figs. 743-747, pl. 23; Roy, Saha and Raychaudhuri, 2017: 22, figs. 127-131, 190; Biswas and Raychaudhuri, 2017a: 115, figs. 1a-g; Nentwig et al., 2019: 34.

Specimens examined: 2 ♀ (IV/ARA/ERS/191), 16.viii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax is reddish-brown, tapering towards the front, and covered with whitish hairs and spines that have grainy bases, cephalic region is notably elevated in the middle, bearing eight eyes arranged in two rows, with a raised ocular quadrangle that is slightly broader at the front. Chelicerae are robust and reddish-brown, featuring a moderate prominence. Sternum is also reddish-brown. Abdomen is dark brown and triangular in shape, covered with whitish hairs, two pointed spine-like shoulder humps laterally and one tail-like hump posteriorly, five pairs of sigilla and a chalk-white transverse band between the two shoulder humps. Ventral side is greyish-brown with brown patches.

Distribution: INDIA: West Bengal, Karnataka, Tamil Nadu, Sikkim, Kerala, Assam (New record); PHILIPPINES, INDONESIA, NEW GUINEA (WSC 2024).

Natural history: Different morphs of female individuals have been observed. They construct webs on high vegetation, and all observed webs have damaged portions. When disturbed, they fall to the ground.

21. Genus: *Poltys* C. L. Koch, 1843

Diagnosis: Medium to large size, characterized by a prominent eye tubercle and a carapace shaped like a pear when observed from above. Carapace displays a curved profile. The median eyes form an anterior quadrangle on the tubercle, while the ALE are situated at varying distances towards the base. PLE are distinctly spaced apart from the ALE along the outer edge. Abdomen widely variable in shape, cylindrical to flat. Habitus brownish in colour.

1. *Poltys columnaris* Thorell, 1890

(Plate 65G)

Taxonomic account

Poltys columnaris Thorell, 1890a: 87.
Poltys columnaris Smith, 2006b: 88, figs. 223-225.
Poltys columnaris Tanikawa, 2007c: 91, figs. 289-294, 754-756.
Poltys columnaris Tanikawa, 2009: 461, figs. 325-327.
Poltys columnaris Kulkarni and Smith, 2013: 4524, figs. 1-3, images 1-3.

Specimen examined: 1 ♀ (IV/ARA/ERS/192), 13.xii.2017, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapace is yellow, elevated, and slightly raised with a pointed tubercle. Tuft-like setae are located between and behind the posterior median eyes. Labium, maxillae, and sternum are brownish. Femora are stout and distinctly bulged, with black dots on legs I and II. A bdomen is tall, extending high above the posterior region of the carapace, and features many shiny maculae arranged in rows on the dorsum.

Distribution: INDIA: Maharashtra; SRI LANKA, INDONESIA (SUMATRA), JAPAN (WSC 2024).

Natural history: It constructs an orb web and lies motionless with its legs kept close to the cephalothorax, resembling a tree twig fallen on the web.

3. *Poltys illepidus* C. L. Koch, 1843

(Plate 27A-F, 65H)

Taxonomic account

Poltys coronatus Keyserling, 1886a: 128, pl. 10, fig. 2.

Poltys keyserlingi Keyserling, 1886a: 129, pl. 10, fig. 3.

Poltys multituberculatus Rainbow, 1898b: 82, pl. 18, fig. 2.

Poltys multituberculatus Rainbow, 1916a: 118, pl. 22, fig. 43.

Poltys penicillatus Rainbow, 1920b: 249, pl. 29, f.

Poltys illepidus C. L. Koch, 1843: 97, figs. 821; Simon, 1895a: 892; Pocock, 1900a: 236; Chrysanthus, 1961b: 211, figs. 70-73; Davies, 1988b: 316, fig. 34; Chikuni, 1989b: 81, fig. 55; Barrion and Litsinger, 1995: 579, figs. 359a-h, 360a-f; Smith, 2005: 469, figs. 1-2, 7-12; Smith, 2006b: 55, figs. 16-17, 25-26, 33-41, 46-51, 56-63, 67-69; Tanikawa, 2007c: 92, figs. 295-298, 757-759; Tanikawa, 2009: 463, figs. 328-330; Hawes, 2020: 272, figs. 1A-N.

Specimen examined: 1 ♀ (IV/ARA/ERS/193), 20.x.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapace dark brown, thin process projecting from the carapace and is situated in the middle of a curved row of regularly sized and evenly distributed spiked protuberances; anterior portion features a raised, dome-like region, ovoid in shape (Plate 27A). Legs are brown with alternating dark and lighter bands. Abdomen dark brown, pentagonal with sloping sides, covered with numerous pointed muscle protrusions; ventrum blackish (Plate 27A, B). Epigyne scletorized and with a scape, spermathecae globular; FDs short and directed upwards; CDs not visible (Plate 27E, F).

Distribution: INDIA: Assam (New record); THAILAND TO AUSTRALIA (MAINLAND, LORD HOWE ISLANDS, NORFOLK ISLANDS (WSC 2024).

Natural history: It constructs orb webs on the upper branches of trees. When disturbed, it wraps its legs and brings the opisthosoma close to the cephalothorax.

22. Genus: *Guizygiella* Zhu, Kim and Song, 1997

Diagnosis: Cephalothorax glossy brown, eight eyes arranged in two rows, with the anterior row spaced evenly. Posterior median eyes (PME) are closer to the posterior lateral eyes (PLE) than to each other. Ocular quardangle is broader than it is long and is wider at the front than at the back. The femur does not have trichobothria. The abdomen is oval in shape. The epigyne is hardened.

1. *Guizygiella indica* (Tikader and Bal, 1980)

(Plate 28A-F, 65I)

Taxonomic account

Zygiella indica Tikader and Bal, 1980: 245, figs. 5-9.
Zygiella indica Tikader, 1982a: 217, figs. 423-427.
Zygiella indica Gajbe, 2007: 523, figs. 299-302.
Guizygiella indica Jäger and Praxaysombath, 2009: 33.

Specimens examined: 3 ♀ (IV/ARA/ERS/194), 26.ii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax dark brownish, narrowing at the front and with a darker cephalic region (Plate 28A). Sternum yellowish-brown, the labium pale brown (Plate 28B). The legs are moderately long, with dark patches at the ends of the femora (Plate 28A). The abdomen is oval, longer than wide and covered in hairs; dorsum features a distinct folium of black and pale patches; ventral side pigmented in white (Plate 28A, B). The epigyne has spiral openings and no scape, spermathceae small and globular (Plate 28E, F).

Distribution: INDIA: Maharashtra, Assam (New record).

Natural history: It constructs orb webs on tree branches and retreats into a curled leaf when disturbed.

3. FAMILY: Corinnidae Karsch, 1880

Diagnosis: These spiders are small to medium in size, eight-eyes, free hunters, robust chelicerae is convex in shape, two tarsal claws and claw tufts present in legs. Abdomen with sclerotization some members especially in the book lung area. Three large cylindrical gland spigots present in median spinnerets and two large cylindrical gland spigots present in posterior spinnerets of females, triangular colulus present. Members of this family mimics on ants and velvet ants.

1. Genus: *Corinnomma* Karsch, 1880

Diagnosis: Cephalothorax black longer than wide, covered with fine grayish white hairs; legs long, posterior eye row slightly procurved than the anterior eye row. Abdomen wider in middle and elongated, grayish bands present on abdomen.

1. *Corinnomma severum* (Thorell, 1877)

(Plate 29A-J, 65K)

Taxonomic account

Corinna severa Thorell, 1877b: 481.

Corinnomma harmandi Simon, 1886a: 158; Thorell 1887: 45; Workman 1896: 79, pl. 79; Gravely 1931: 276, fig. 20F; Schenkel 1963: 269, figs. 152a-f.

Castaneira himalayensis Gravely, 1931: 275, fig. 20C; Tikader and Biswas 1981: 72, figs. 127-128; Tikader 1981d: 265, figs. 14-16; Majumder and Tikader, 1991: 137, figs. 282-286; Deeleman-Reinhold, 2001: 316; Sen et al. 2015: 71, figs. 394-398, pl. 18; Dhali, Saha and Raychaudhuri 2017: 55, figs. 219-223, pl. 20.

Castianeira hamulata Song and Zhu, 1992a: 107, figs. 1-4; Song and Li 1997: 420, figs. 25A-D; Song, Zhu and Chen, 1999: 429, figs. 254O-P, 255E-F.

Castianeira tiranglupa Barrion and Litsinger, 1995: 172, figs. 98a-f.

Corinnomma yulinguana Barrion, Barrion-Dupo and Heong, in Barrion et al. 2013: 10, figs. 10A-D.

Corinnomma severum Karsch, 1880c: 375; Deeleman-Reinhold, 1993b: 177, figs. 13-16, 18-19, 23; Deeleman-Reinhold, 2001: 318, figs. 464-471; Wang, Zhang and Zhang, 2012:

38, figs. 1A, 2A-I; Yin et al., 2012: 1131, figs. 601a-f; Raven, 2015: 32, figs. 12a-d; Zhang and Wang, 2017: 208, 5 fig; Sankaran, Caleb and Sebastian, 2019a: 334, figs. 2A-C,E; Suzuki et al., 2020a: 75, figs. 1-3; Caleb, 2020b: 15720, figs. 6G-J, 25K; Zhang, Jin and Zhang, 2022: 244, figs. 3A-D, 4A-E, 9E-F, 10A-B; Sankaran, 2023a: 536, figs. 4A-E, 5D.

Specimens examined: 2 ♀ (IV/ARA/ERS/36), 18.xi.2019, Jharbari Forest Range, collected by Paris Basumatary.

Male: Cephalothorax black with fine grayish hairs, much longer than wide, eyes eight, eyes are in two rows (Plate 29A). Sternum oval shaped; legs long and covered with spines and hairs (Plate 29C, E). Abdomen black and elongated, with several faint white bands (Plate 29A, B). Cymbium has a paracymbial spine situated retrobasally; tegulum is pear-shaped, coiled sperm duct; embolus is long, slightly undulating, with broad basal and narrow distal halves, culminating in a blunt tip (Plate 29G, H, I, J).

Distribution: INDIA: West Bengal, Tamil Nadu, Assam (New record); CHINA, PHILIPPINES, INDONESIA (SUMATRA, SULAWESI) (WSC 2024).

Natural history: It is commonly found wandering among the foliage of shrub vegetation and constructs silken retreats underneath leaves.

4. FAMILY: Ctenidae Keyserling, 1877

Diagnosis: These are small to very large spiders; ecribellate, trochanters deeply notched. Eyes eight in number; three rows of eyes as 2,4,2, anterior lateral eyes between posterior median and posterior lateral eyes.

1. Genus: *Bowie* Jäger, 2022

Diagnosis: Large size spiders, brownish in colour. Cephalothorax longer than wide, a prominent black marking may present on middle of carapace longitudinally. Legs long and robust. Abdomen longer than wide, sigilla prominent. Two folds of the vulva covering the copulatory ducts in a dorsal view, creating a central space into which the typically two-chambered spermathecae extend.

1. *Bowie sikkimensis* (Gravely, 1931)

(Plate 30A-C, 65L)

Taxonomic account

Ctenus sikkimensis Gravely, 1931: 232, figs. 1D, 2F-H.

Ctenus sikkimensis Tikader and Malhotra, 1981: 121, figs. 11A-D.

Ctenus sikkimensis Sen et al., 2015: 27, figs. 62-66, pl. 12.

Ctenus sikkimensis Dhali, Saha and Raychaudhuri, 2017: 42, figs. 130-134, pl. 18.

Bowie sp. cf. *sikkimensis* Jäger, 2022a: 42, figs. 163-164, 190-194.

Specimen examined: 1 ♀ (IV/ARA/ERS/195), 12.vi.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapace dark reddish-brown hue; cephalic area is elongated, shiny, with a notable fovea situated at the midpoint of the thoracic region (Plate 30A). Eyes are dark in color. Sternum appears dark as well. Segs are stout, reddish brown and adorned with both hair and spines. Abdomen is oval-shaped, with a reddish-yellow coloration and covered in fine hairs (Plate 30A). Two pairs of sigillae are visible on the dorsal middle area. On the ventral side, the abdomen is brown with two longitudinal rows of white spots. Epigynal field is wider than it is long, with bulbous spermathecae. The Fds (fertilization ducts) are long and slender, lightly arching; the CDs (copulatory ducts) are short and curl outward (Plate 30B, C).

Distribution: INDIA: West Bengal, Sikkim, Assam (New record).

Natural history: These creatures are often discovered roaming amidst leaf litter, where their coloration seamlessly merges with the surroundings. Observations have revealed their feeding behavior, which includes consuming frogs and juvenile lizards.

5. Family: Clubionidae Simon, 1878

Diagnosis: Small to medium sized spiders; Cephalothorax longer than wide, somewhat rounded. Cephalic region elevated. Eyes eight; in two rows, small, uniform in size; posterior row slightly longer than anterior row. Legs are short and robust; the second pair of legs is longer than the first pair. Entelegyne; anterior spinnerets close together, not heavily sclerotized.

1. GENUS: *Clubiona* Latreille, 1804

Diagnosis: The cephalothorax is longer than it is wide, narrowing at the front and slightly convex. The eyes are arranged in slightly curved rows, with the posterior row being the longest. The anterior median eyes are closer together than the posterior median eyes and the PME are closer to the posterior lateral eyes than to each other. The fovea is generally short and faint. The sternum is tapered. The legs are uniformly colored and have scopulae, with the leg order being 4123. The abdomen has a dagger-shaped cardiac area and is covered with erect setae at the front. Epigynal plate convex, may or may not be sceletorized.

1. *Clubiona filicata* O. Pickard-Cambridge, 1874

(Plate 66A)

Taxonomic account

Clubiona distincta Thorell, 1887: 48.

Clubiona swatowensis Strand, 1907b: 562; Strand, 1909f: 39, pl. 2, figs. 24.

Clubiona pashabhaii Patel and Patel, 1973b: 2, figs. 1a-c; Majumder and Tikader, 1991: 126, figs. 36-38.

Clubiona batikanoides Barrion, Barrion-Dupo and Heong, in Barrion et al., 2013: 6, figs. 5A-R.

Clubiona foliata Keswani and Vankhede, 2014: 36, figs. 1-13.

Clubiona filicata O. Pickard-Cambridge, 1874a: 413, pl. 52, fig. 35; Gravely, 1931: 261, fig. 16D; Tikader and Biswas, 1981: 69, figs. 120-121; Gong, 1989: 109, figs. 1-13; Zhang and Hu, 1989: 58, figs. 7, 22; Majumder and Tikader, 1991: 23, figs. 30-35; Biswas and Raychaudhuri, 1996a: 199, figs. 27-33; Song, Zhu and Chen, 1999: 415, figs. 245L-M, 248F-G; Dankittipakul and Singtripop, 2008a: 37, figs. 5-7, 30-33; Dankittipakul et al., 2012: 59, figs. 25-31; Yin et al., 2012: 1095, figs. 575a-e; Yu, Zhang and Chen, 2017b: 13, figs. 3, 7-12; Caleb, 2020b: 15719, figs. 4A-F, 25G; Zhang, Yu and Li, 2021a: 47, f. 38A-E, 39A-C, 58B, 68B; Zhang et al., 2021a: 205, fig. 8E; Lin et al., 2023a: 504.

Specimen examined: 1 ♀ (IV/ARA/ERS/196), 08.x.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapace is a light yellow, longer than it is wide and slightly narrower towards the

front, with a curved fovea. Eyes are arranged in two rows, with the front row being straight and the back row slightly curved forward. Sternum is oval-shaped and yellowish in color. Legs are pale yellow and covered in spines. Abdomen is yellowish-brown, oblong and tapers towards the rear, with brownish patches on the upper side; the underside is a pale yellow.

Distribution: INDIA: Madhya Pradesh, West Bengal, Gujarat, Rajsathan, Tamil Nadu, Maahrashtra, Assam (New record).

Natural history: These spiders are found living among leaf foliage. They also create silken retreats by folding leaves with their silk.

6. Cheiracanthiidae Wagner, 1887

Diagnosis: Small to medium spiders. Cephalothorax longer than wide, oval. Posterior row of eyes procurved, anterior row of eyes straight or slightly procurved, AME largest. Legs long. Presence of notched trochanters. Absence of thoracic groove, the connivent anterior spinnerets. Abdomen elongated.

1. Genus: *Cheiracanthium* C. L. Koch, 1839

Diagnosis: The sides of the cephalothorax are nearly parallel, with a broad cephalic region. The eyes are arranged in two rows, equal in size and spacing. Legs are relatively long and slender, with deeply notched trochanters and the leg sequence is 1243. Epigyne has a central or posterior depression, with funnel-shaped ducts leading to the spermathecae.

1. *Cheiracanthium danieli* Tikader, 1975

(Plate 66B)

Taxonomic account

Cheiracanthium danieli Tikader, 1975a: 43, figs. 1-4.
Cheiracanthium denieli Majumder and Tikader, 1991: 69, figs. 134-139.

Specimen examined: 1 ♀ (IV/ARA/ERS/197), 12.vi.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax is long and pale brown with a narrow longitudinal mark in the middle of the cephalic region. Eyes are black, with the front row curved backward and the back row curved forward. Sternum is pale yellow. Maxillae, labium, and chelicerae are pale reddish-brown. Legs are long, slender, and pale brown, covered with spines. Abdomen is elongated, yellowish, and covered with hairs; the underside is pale brown.

Distribution: INDIA: West Bengal, Assam (New record).

Natural history: These spiders are found in both trees and foliage. They construct sac-like retreats using leaves.

7. Family: Deinopidae C.L. Koch, 1850

Diagnosis: Medium to large spiders; entelegyne; body typically elongated; front legs are long and slender; abdomen may have one or two humps. Eight eyes arranged in three rows; posterior median eyes are the largest; anterior median eyes are the smallest; anterior lateral eyes are situated on small tubercles. Abdomen variable. Habitus brownish in colour.

1. Genus*: Asianopis* Lin and Li, 2020

Diagnosis A distinct setal fringe above the posterior median eyes in both sexes. Female *Asianopis* chelicerae may have numerous denticles or lack them entirely. *Asianopis* femora it may be enlarged proximally or not. The epigynal median plate lateral margins are anchor-shaped in *Asianopis*.

1. *Asianopis goalparaensis* (Tikader and Malhotra, 1978)

(Plate 31A-I, 66C)

Taxonomic account

Deinopis goalparaensis Tikader and Malhotra, 1978: p. 157, figs. 1-5, Basumatary et al., 2020: p. 328, figs. 1-11; Caleb, 2019: 148, figs. 1-11.

Asianopis goalparaensis Basumatary et al., 2020: p. 328, figs. 1-11.

Specimens examined: 1 ♀ (NZC-ZSI) Jharbari Forest Range under Chirang Reserve Forest, Kokrajhar, Assam, India (26.6052°N, 90.2419°E, 74 m), 10.IX.2018, collected by Paris Basumatary; 1 ♀ from Phipsu, Assam, India (26.44384° N, 90.07591° E, 72 m), 23.IX.2018, collected by Paris Basumatary.

Diagnosis: *Asianopis goalparaensis* (Tikader and Malhotra 1978) closely resembles *A. liukuensis* (Yin, Grisworld and Yan, 2002) in overall morphology. However, they can be distinguished by the number of spirals in the copulatory ducts. In *A. goalparaensis*, the copulatory ducts form two and a half spirals, while in *A. liukuensis*, they form three spirals. Furthermore, the spermathecae in *A. goalparaensis* are laterally directed and face each other with a wide V-shaped gap between them, whereas in *A. liukuensis*, they are closely positioned.

Female: Total length 16.18. Carapace 5.18 long, 3.53 wide; abdomen 11 long, 2.72 wide. The carapace is of a yellowish-brown hue, densely covered with short greyish hairs. A pale black longitudinal patch extends from the base of the posterior median eyes to the fovea, tapering posteriorly (Plate 31B). Short blackish spines adorn both lateral sides of the thoracic regions, while coarse blackish hairs form a horn-shaped projection, accompanied by small blackish setae over the posterior median eyes (Plate 31D). The chelicerae are yellowish-brown, bearing 4 promarginal and 7 to 8 retromarginal teeth, with numerous denticles between them (Plate 31E). The sternum is blackish, with a pale yellow triangular patch in the middle, while the labium and maxillae are blackish with pale yellow margins and tufts of brownish hairs. The legs are adorned with blackish hairs, with spines located retrolaterally on femora I–IV. Femur I exhibit basal enlargement and a tuft of hairs prolaterally. Distally, femora I–II appear blackish, while patellae I–IV and metatarsi I–IV are also blackish, particularly just above their proximal ends. Additionally, the tips of tarsi I–IV are blackish. The abdomen is elongated and yellowish-brown, featuring a brownish longitudinal patch pointed posteriorly, with chevron markings merging into the patch (Plate 31B, C). Additionally, a pair of slight lateral bumps is present in the anterior half. Ventrally, it appears blackish, with two pairs of short pale yellow patches—one at the mid-

venter and the other at the posterior end. A broad yellowish-brown longitudinal margin extends from the epigastric furrow to the cribellum, and the spinnerets are dark brown. The epigyne exhibits a median plate shaped like an anchor, with a pair of rounded openings surrounded by plumose hairs. The copulatory ducts form two and a half spirals, with the anterior portion of the ducts being narrow. The spermathecae are oval-shaped and diverge laterally (Plate 31F, G, H I).

Distribution: INDIA (Assam).

Natural history: The species was discovered inhabiting mixed shrub vegetation and bamboo patches. Specimens were commonly found approximately three feet above ground level, although some individuals were occasionally spotted as high as eight feet. Interestingly, it was noted that the size of the net-casting web increased with age, starting from a small web measuring about one centimeter in juveniles, expanding to three centimeters in subadults, and finally reaching five to six centimeters in gravid females. Additionally, the color of the web underwent a noticeable transformation from pale white in juveniles to milky white in adults.

8. Family: Hersiliidae Thorell, 1869

Diagnosis: Medium-sized, eight-eyed spiders. The carapace is oval and flattened, with a narrow, longitudinal fovea. The eyes are positioned on a tubercle, with the anterior median eyes being larger than the posterior median eyes. The leg tarsi have three claws. The abdomen is flat and wider at the rear, with long and slender posterior spinnerets that have a strongly tapering apical segment. The epigyne has a broad central septum, and the male palp lacks a tibial apophysis.

1. Genus: *Hersilia* Audouin, 1826

Diagnosis: Cephalothorax is flat, nearly circular, dark marking around its periphery; cephalic region elevated above the flat thoracic region. Anterior and posterior eyes are strongly recurved. Legs are long and slender, except for the third pair, and have three claws; metatarsus II, III, and IV are bisegmented. Abdomen is flat and circular, slightly

wider than it is long, with very long posterior lateral spinnerets that are longer than the abdomen.

1. *Hersilia savignyi* Lucas, 1836

(Plate 66D)

Taxonomic account

Hersilia indica Walckenaer, 1837: 372.

Hersilia calcuttensis Stoliczka, 1869: 216, pl. 20, fig. 9.

Hersilia clathrata Thorell, 1895b: 56.

Hersilia clathrata Barrion and Litsinger, 1995: 411, figs. 246a-k.

Hersilia aadi Pravalikha, Srinivasulu and Srinivasulu, 2014: 5554, images 1a-j, 2, 3a-f, f. 1a-c.

Hersilia savignyi Lucas, 1836a: 10, pl. 13, fig. 1; Simon, 1885h: 19, pl. 10, figs. 18-19; Simon, 1893a: 414, figs. 417, 426; Pocock, 1900a: 241, fig. 82; Simon, 1901k: 49; Gravely 1922: 1050, pl. 5, fig. 13; Benoit, 1974c: 995, figs. 1, 4; Tikader and Biswas, 1981: 47, figs. 74-76 (f); Gajbe, 1993a: 117, figs. 1-3; Baehr and Baehr, 1993b: 29, figs. 5, 22a-f; Gajbe, 2004b: 135, figs. 1-3; Gajbe, 2007: 434, figs. 26-30; Caleb et al., 2017a: 396, figs. 1-3; Tyagi et al., 2019: Supplement, figs. S2.23, S3.25; Biswas and Raychaudhuri, 2019a: 17, figs. 1a-h; Caleb, 2020b: 15723, figs. 8A-E, 26C; Sajid et al., 2023: 24, figs. 12-13, 15-20.

Specimens examined: 1 ♀ (IV/ARA/ERS/198), 28.xi.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax is grayish-brown, covered with whitish hairs, flat, circular, and both broader and longer, with a high clypeus; both the anterior and posterior eyes are strongly curved and situated on distinct tubercles. Sternum is pale white. Legs are pale yellow with dark brown bands, long and slender, and covered with numerous spines. Abdomen is pale yellow with dark edges at the front, a dark longitudinal band that forms a V-shape at the tip, and three pairs of sigilla. The top side is covered with hairs, and the underside is pale white.

Distribution: INDIA: Karnataka, Uttar Pradesh, Bihar, Tamil Nadu, Assam, Maharashtra, Orissa, Madhya Pradesh, Kerala, West Bengal; PAKISTAN, NEPAL, SRI LANKA TO PHILIPPINES (WSC 2024).

Natural history: Found living on tree bark and their colouration is well suited for camouflaging on the bark. They are very fast and runs around when disturbed.

9. Family: Lycosidae Sundevall, 1833

Diagnosis: Small to large spiders, with a narrow, high cephalothorax that is longer than it is wide and features an elongated fovea. They have eight eyes, with the anterior eyes being smaller than the posterior eyes, all arranged in a single row, and the posterior row is strongly recurved. The chelicerae are strong and toothed. Legs have three claws, scopulae, spines, and notched trochanters. Abdomen is oval and covered with dense setae, lacking a colulus and being ecribellate. Epigyne is complex, with a sclerotized median septum. Male palp usually lacks a retrolateral tibial apophysis. The female carries the egg sac attached to the spinnerets.

1. Genus: *Lycosa* Latreille, 1804

Diagnosis: Cephalothorax is relatively slender, with a raised cephalic region; the front part of the ocular area narrows, while the back part widens. Cephalothorax brownish with a light longitudinal median stripe. Anterior eye row is procurved and slightly shorter than the second row. Legs are quite long and slender, with tibiae I and II each having three pairs of spines on the underside; the fourth metatarsus is never longer than the combined length of the tibia and patella. Abdomen greyish with a dark median stripe that breaks into chevrons or spots. Epigyne features a guide pocket.

1. *Lycosa mackenziei* Gravely, 1924

(Plate 66E)

Taxonomic account

Pardosa mackenziei Roewer, 1955c: 183; Okuma et al., 1993: 51, fig. 45D; Barrion and Litsinger, 1995: 389, figs. 231a-f, 232a-d.

Lycosa mackenziei Gravely, 1924: 606, fig. 4H; Dyal, 1935: 139, pl. 13, figs. 38-39; Tikader and Malhotra, 1980: 419, figs. 318-321; Tikader and Biswas, 1981: 51, figs. 80-81; Biswas and Raychaudhuri, 2014: 299, figs. 11-17; Sen et al., 2015: 53, figs. 254-258, pl. 15; Dhali, Saha and Raychaudhuri, 2017: 81, figs. 420-424, pl. 24.

Specimens examined: 1 ♂ (IV/ARA/ERS/199), 11.vii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax is yellowish-brown and covered with fine hair, with the cephalic region slightly elevated and featuring a noticeable fovea in the middle. Broad blackish longitudinal bands run from the base of the posterior eyes to the base of the cephalothorax and the lateral edges of the thoracic region have small scattered brown patches. The anterior row of eyes is slightly curved. The sternum is pale brown and hairy. Legs are pale brown, covered with blackish spines and hair. Abdomen oval, covered with hair and spine-like bristles, showcasing a striking dorsal pattern of dark blackish patches extending from the base to the end, accented with conspicuous pale chevron markings. Ventral side is pale brown.

Distribution: INDIA: Kerala, West Bengal, Bihar, Punjab, Karnataka, Assam (New record); PAKISTAN, BANGLADESH.

Natural history: They are often observed moving along the ground or amidst leaf litter.

2. Genus: *Pardosa* C. L. Koch, 1847

Diagnosis: Habitus brown or grey, mottled with black markings. Carapace bears a mid longitudinal band surrounded by a dark band and lighter lateral margins. Cephalic region is relatively higher than the thoracic region. Anterior row of eyes is shorter than the second row. Sternum is heart-shaped. Legs are relatively long and thin, equipped with long spines; metatarsus IV is usually as long as or longer than the patella and tibia combined. The tibia I has three pairs of ventral spines. Abdomen longer than wide, may be uniformly brown or with a lanceolate light band anteriorly. Epigyne has a well-sclerotized median septum.

1. *Pardosa pseudoannulata* (Bösenberg and Strand, 1906)

(Plate 66F)

Taxonomic account

Tarentula pseudoannulata Bösenberg and Strand, 1906: 319, pl. 8, f. 106, pl. 13, figs. 323, 326, 334, 338.

Lycosa doenitzi Bösenberg and Strand, 1906: 325, pl. 13, fig. 345.

Lycosa innominabilis Dönitz and Strand, in Bösenberg and Strand, 1906: 392, pl. 7, fig. 100.

Lycosa subtarentula Dönitz and Strand, in Bösenberg and Strand, 1906: 393, pl. 7, fig. 101.

Lycosa annandalei Gravely, 1924: 606, fig. 41.

Lycosa pseudoterricola Schenkel, 1936b: 199, fig. 66.

Pardosa doenitzi Roewer, 1955c: 161.

Pardosa innominabilis Roewer, 1955c: 164.

Pardosa subtarentula Roewer, 1955c: 174.

Pardosa annandalei Roewer, 1955c: 182.

Avicosa pseudoannulata Roewer, 1955c: 234.

Avicosa pseudoterricola Roewer, 1955c: 235.

Lycosa cinnameovittata Schenkel, 1963: 338, figs. 196a-g.

Pardosa annandalei Tikader and Malhotra, 1980: 351, f. 207-210; Tikader and Biswas, 1981: 54, figs. 86-87; Okuma et al., 1993: 51, fig. 45A; Zhao 1993: 95, figs. 40a-b; Barrion and Litsinger, 1994: 311, figs. 1620-1621; Barrion and Litsinger, 1995: 379, figs. 224a-k, 225a-e; Biswas and Raychaudhuri, 2003a: 109, figs. 1-6; Gajbe, 2007: 503, figs. 248-251.

Lycosa pseudoannulata Fox, 1935: 455; Saito, 1939: 77, fig. 9.8; Sait,o 1959: 53, figs. 31a-b; Yaginuma, 1960: 84, figs. 75.4; Yaginuma, 1965b: 366, fig. 9.3; Lee 1966: 61, figs. 21j-k; Yaginuma, 1971: 84, fig. 75.4; Shimojana, 1977b: 112, pl. 6C-D; Yin 1978: 9, figs. 1A-D; Song et al., 1978: 1, figs. 1A-C; Paik and Namkung, 1979: 65, fig. 49; Song, 1980: 163, figs. 14a, 87a-d; Wang, 1981: 119, figs. 59A-C; Yin, Wang and Hu, 1983: 34, fig. 6B; Hu, 1984: 225, figs. 235.1-2; Guo, 1985: 117, figs. 2-56.1-3; Zhu and Shi, 1985: 132, figs. 117a-d; Song, 1987: 227, fig. 184; Zhang, 1987: 148, figs. 123.1-4; Feng, 1990: 148, figs. 123.1-3;

Pardosa pseudoannulata Yaginuma, 1986a: 162, fig. 90.1; Yu and Song, 1988c: 116 (S); Hu and Wu, 1989: 225, figs. 186.1-2; Chikuni, 1989b: 115, fig. 30; Chen and Gao, 1990:

128, figs. 160a-b; Chen and Zhang, 1991: 198, figs. 197.1-3; Tanaka, 1993a: 302, figs. 53-56; Barrion and Litsinger, 1994: 311, figs. 1610-1613; Zhao, 1995: 813, figs. 376a-b; Yin et al., 1997c: 278, figs. 132a-h; Song, Zhu and Chen, 1999: 333, figs. 197F, L; Hu, 2001: 199, figs. 99.1-2; Namkung, 2002: 329, figs. 20.23a-b; Yoo and Kim, 2002a: 28, fig. 55; Namkung, 2003: 331, figs. 20.23a-b; Tanaka, 2009: 245, figs. 127-128; Zhu and Zhang, 2011: 279, figs. 202A-D; Yin et al., 2012: 852, figs. 427a-h, 3-16c-d; Baba and Tanikawa, 2015: 74, 7 f.; Dhali, Saha and Raychaudhuri, 2017: 73, figs. 343-347, pl. 25; Omelko and Marusik, 2020: 486, figs. 37-39; Buchar and Dolejš, 2021: 942, figs. 8A-G; Wang et al., 2021a: 48, figs. 43A-I, 44A-F; Zhang, Peng and Zhang, 2022: 148, figs. 107A-J; Ma et al., 2023a: 101, figs. 1A-H, S1A-B, S3A-D.

Specimen examined: 1 ♀ (IV/ARA/ERS/200), 19.vii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax is yellowish-brown with a broad longitudinal brownish band running medially and the fovea features a mid longitudinal band with brownish margins on both lateral sides. The posterior eyes are larger than the anterior eyes. Sternum is pale brown. Legs are covered with blackish spines and have blackish brown striations. The oval abdomen is brownish, covered with blackish hairs and has blackish and whitish spots dorsally. Whitish lines run medially from both lateral sides. The ventrum is pale brown.

Distribution: INDIA: Tamil Nadu, West Bengal, Kerala, Assam; PAKISTAN, NEPAL, BHUTAN, CHINA, TAIWAN, KOREA, JAPAN, LAOS, PHILIPPINES, INDONESIA (JAVA) (WSC 2024).

Natural history: They are found running among leaf litter and often carry an egg cocoon.

10. Family: Nemesiidae Simon, 1889

Diagnosis: Medium to very large insize. Tarsi are equipped with scopulae, and the cephalic region of the carapace is low. They possess four booklungs and four elongated spinnerets, with the median spinnerets being slightly apart. They have eight eyes arranged in two rows.

1. Genus *Gravelyia* Mirza and Mondal, 2018

Diagnosis: *Gravelyia* is distinguished by a striped abdomen, a strongly procurved fovea, large and merged sub-centric sternal sigilla, a digitiform distal segment of the posterior lateral spinnerets (PLS), mound-shaped spermathecae, and a tibia I featuring a stout apophysis with an inward bent, along with an excavation on the basal metatarsus I that has a raised tubercle bearing a cluster of denticles.

1. *Gravelyia boro* Basumatary and Brahma, 2021

(Plate 32A-J, 33A-S, 66G, H)

Taxonomic account

Gravelyia boro Basumatary and Brahma, 2021: p. 39, figs. 1-36.

Specimens examined: Holotype: 1♀ (IV/ARA/ERS-21), Jharbari Forest under Chirang Reserve Forest, Kokrajhar, Assam, India (N 26º37'23.11", E90º14'48.67", 81 m), 28.III. 2019, coll. P. Basumatary. Paratypes: 2♂ (IV/ARA/ERS-28–29) and 1♀ (IV/ ARA/ERS-30), same data as in the holotype.

Etymology: The specific name is taken from the Boro tribe, a major ethnolinguistic group in Assam, India, which mainly resides in the area where the new species was found. The name is used as a noun in apposition.

Diagnosis: The species *Gravelyia boro* sp. nov. can be distinguished from *G. excavatus* and *G. striatus* by its distinct abdominal pattern. In contrast to the wide, short chevron stripes that almost conceal the abdomen in *G. excavatus* and *G. striatus, G. boro* sp. nov. exhibits sparse pale brownish dorsal spots. Moreover, female *G. boro* sp. nov. can be recognized by the presence of fungiform receptacles with swollen heads that curve outwards and point distally, differing from the fully mounded and inwardly swollen receptacles of *G. excavatus*, and the small mounds with bud-shaped swellings directed distally upwards in *G. striatus*. In males, *G. boro* sp. nov. varies from *G. excavatus* by possessing a spur that is directed outward distally and flattened anteriorly without any

curves, alongside a gently inwardly curved distal end of tibiae I and a slightly raised tubercle on metatarsus I. This contrasts with *G. excavatus*, where the spur is slightly curved and inwardly bent distally, featuring a stout and bulky anterior, tibiae I lacking an inward slope distally, and metatarsus I having a highly raised tubercle.

Female: Total length, without chelicera: 15.08. Carapace (Figs. 2, 6, 8): 5.41 long, 4.41 wide. Matte black in color, with a raised caput, sparsely covered with blackish setae (Plate 32A, B). Eye sizes and interdistances: ALE 0.17, AME 0.26, PLE 0.19, PME 0.18, AME-AME 0.09, PME-PLE 0.04, AME-ALE 0.08, PME-PME 0.58, ALEPLE 0.12. Maxillae: 1.64 long, 0.95 wide, with 15 cuspules. Reddish brown in hue, featuring a tuft of coarse brownish setae on the prolateral sides. Labium (Plate 32F): 0.68 long, 0.56 wide. Dark reddish-brown in color, with a distinct and well-developed labiosternal junction. The chelicera appears glossy blackish and is adorned with 8 promarginal teeth and 16 mesobasal denticles. The rastellum is comprised of thick setae. Sternum (Plate 32D): 2.65 long, 2.48 wide. Yellowish-brown in color, sub-rectangular in shape, sparsely adorned with blackish setae. The sigilla are characterized by slight oval shapes, with the anterior and median ones being marginal, while the posterior sigillum is large, oval-elongated, and subcentral. Legs (Figs. 4, 6, 9, 10): I 9.25 (2.97, 1.61, 1.59, 1.75, 1.33); II 8.91 (2.63, 1.49, 1.72, 1.81, 1.26), III 6.55 (1.83, 1.14, 1.2, 1.41, 0.97), IV 11.95 (3.12, 2.01, 2.91, 2.67, 1.24). Leg spination: leg I, mt, v 4; leg II, mt, v 5, ti, v 1; leg III, mt, v 5, p 4, r, 2, ti, v 3; leg IV, mt, v 6, d 2, ti, v 1. The legs are adorned with numerous blackish setae and sparse blackish spines. Femora, metatarsi, and tarsi exhibit a blackish coloration, while the patellae and tibiae are yellowish-brown. Scopulae are present on the patellae laterally and cover the entire surface of tarsi and metatarsi I–IV, including the patellae and tibiae of the palp. Paired claws on all legs feature a row of 4-6 teeth. Abdomen (Plate 32A, B) 9.67 long, 6.3 wide; presenting a blackish hue and being pilose. The dorsum is adorned with pale brownish spots toward the distal end, while the ventral side appears pale whitish-brown at the proximal end and pale blackish with sparse blackish patches distally. Spinnerets (Plate 32H): PLS 2.09 long, 0.59 wide, PLS-PLS 0.78; PMS 0.69 long, 0.32 wide, PMS-PMS 0.42. The posterior lateral spinnerets (PLS) are yellowish-brown, pilose, and feature an

apical segment that is triangular distally. The posterior median spinnerets (PMS) are pilose and have a blackish-brown coloration. The vulva (Plate 32I, J) exhibits receptacles that are fungiform with swollen heads, curving outward laterally, measuring 0.25 in length. The swollen heads are spaced by 3 widths, while the stalks are spaced by more than 3.7 diameters, with the heads being twice as wide as the stalks. Pores on the receptacle are densely distributed on the mesal side of the stalk and evenly spaced on the heads.

Male: Total length, without chelicera: 13.26. Carapace (Plate 33A): 5.39 long, 4.19 wide. Matte blackish in color, featuring a raised caput and sparsely covered with blackish setae. Eye sizes and interdistances (Plate 33F): ALE 0.2, AME 0.26, PLE 0.11, PME 0.13, AME-AME 0.08, PME-PLE 0.04, AME-ALE 0.1, PME-PME 0.58, ALE-PLE 0.12. Maxillae (Plate 33E): 1.68 long, 0.98 wide, with 15 cuspules. The coloration is similar to that of the female, with ventral coverage by numerous short blackish setae and a tuft of coarse reddish-brown hairs laterally. Additionally, the anterior maxillary lobe is protruded. Labium (Plate 33E): 0.71 long, 0.61 wide. The coloration resembles that of the female, accompanied by a well-developed labiosternal junction. The chelicerae are glossy blackish and bear 8 promarginal teeth along with 16 mesobasal denticles. The rastellum is comprised of thick setae. There is no intercheliceral tumescence present. Sternum (Plate 33D): 3.5 long, 2.25 wide. Sigilla as in female. Leg (Plate 33A): I 14.98 (4.02, 2.09, 3.54, 3.15, 2.18), II 12.1 (3.17, 1.84, 2.45, 2.75, 1.89), III 9.18 (2.71, 1.38, 1.52, 2.05, 1.52), IV 14.34 (3.09, 1.99, 3.55, 3.89, 1.82). Leg spination: leg I, mt, v 4, ti, v 2; leg II, mt, r 4, p 2, ti, r 2, v 1; leg III, mt, p 6, r 4, ti, r 2; leg IV, mt, p 8, r 3, ti, v 2. The legs are adorned with numerous blackish hair-like structures known as setae, interspersed with occasional spines. The first segment of the leg (the tibia) bears a stout, outwardly curved spur at its far end, while the distal end slopes inwardly. Near the base of the first leg segment (the metatarsus), there is a cluster of 60 to 65 small blackish projections called cuspules. The femora are also of a blackish hue, while the knee joints (patellae), second leg segments (tibiae), third leg segments (metatarsi), and foot segments (tarsi) of all legs exhibit a yellowish-brown coloration. The adhesive pads (scopulae) are akin to those of the female. Each leg's paired claws boast a series of 5 to 6 teeth. Abdomen (Plate 33A, C): 4.83 long, 2.92 wide. The

abdomen resembles that of the female, with the exception of broad longitudinal pale brownish spots on the upper side towards the rear. The underside is pale whitish-brown towards the front and becomes pale blackish with scattered blackish patches towards the rear. Spinnerets (Fig. 21): PLS 1.98 long, 0.5 wide, PLS-PLS 0.44; PMS 0.47 long, 0.25 wide, PMS-PMS 0.22. PLS: final segment is triangular. Palp (Plate 33K, L, M, N, O, P, Q, R, S), the femur measures 2.16 in length, blackish in color with a small whitish patch towards the lower end; the patella is 1.08 long and 0.7 wide, with sparse blackish spines towards the tip; the tibia measures 2.0 in length and 0.84 in width, roughly one-third the length of the femur; the cymbium is 0.84 long and 0.48 wide, oval-shaped, slightly curving inward, and covered with blackish setae; the bulb measures 1.01 in length, oval with several shallow ridges; the embolus is slender, twice as long as the tegulum, pointed at the tip, and gently curved inward towards the end.

Distribution: India (Assam).

Natural history: *Gravelyia boro* sp. nov. specimens were discovered in sandy loam underground burrows approximately 10–15 cm beneath the surface. These burrows were observed with open entrances measuring 0.8–1 cm wide. However, during the winter season, entrances to the burrows were not visible, likely due to being concealed by soil particles, possibly for hibernation purposes. The burrowing sites were characterized by some vegetation cover, including herbs and shrubs.

11. Family: Oxyopidae Thorell, 1870

Diagnosis: Small to large-sized spiders. Eyes arranged in a hexagonal pattern. Sternum is scutiform, extending between the fourth pair of coxae. Legs are long with prominent spines. The abdomen tapers posteriorly and has a colulus. Epigyne is highly sclerotized, with structural variations between genera. Male palp features a retrolateral tibial apophysis and paracymbium.

1. Genus: *Hamadruas* Deeleman-Reinhold, 2009

Diagnosis: Large in size, habitus grayish or brightly coloured. Cephalothorax nearly as long as wide, saddle shaped and decorated with patterns. Legs long and decorated with long spines. Abdomen at least about two times longer than the cephalothorax.

1. *Hamadruas sikkimensis* (Tikader, 1970)

(Plate 34A-C, 66I)

Taxonomic account

Oxyopes sikkimensis Tikader, 1970: 76, f. 47a-c; Tikader and Biswas, 1981: 64, f. 108-109; Hu, Zhang and Li, 1983: 9, figs. 2A-C; Hu and Zhang, 1984: 49, figs. 1-4; Song, 1991b: 171, figs. 3A-D; Song, Zhu and Chen, 1999: 400, figs. 234O-P, 235K, 237B; Gajbe, 1999: 47, figs. 34-36; Biswas and Raychaudhuri, 2015: 228, figs. 5a-f.

Hamataliwa sikkimensis Zhang, Zhu and Song, 2005d: 13, figs. 21-25; Gajbe, 2008c: 97, figs. 203-205; Yin et al., 2012: 900, figs. 453a-f.

Hamadruas sikkimensis Deeleman-Reinhold, 2009a: 693; Sen et al., 2015: 81, figs. 464-468, pl. 19 (f).

Specimens examined: 2 ♀ (IV/ARA/ERS/201), 12.iii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax is brownish-orange, elongated, longer than wide and covered with whitish hairs (Plate 34A). All eyes are encircled by a black patch, with the posterior row slightly procurved and the anterior row slightly recurved. Sternum is covered with hairs and small spines. Legs are long, clothed with hairs and conspicuous long spines, with each femur having a longitudinal deep brown line on the front side. Abdomen narrows towards the rear and is covered with fine grey and brown hairs; the dorsum features whitish bands bordered with reddish (Plate 34A). The ventral side is uniformly light brown with two conspicuous blackish lines. Epigyne is sclerotized with large copulatory openings, globular spermathecae, very long and slightly arching FDs and short CDs (Plate 34B, C).

Distribution: INDIA: Sikkim, West Bengal, Meghalaya, Tripura, Assam (New record); BANGLADESH, CHINA (WSC 2024).

Natural history: They are generally seen on leaves, where they are active hunters. They are very fast and agile, quickly moving to the underside of leaves when disturbed.

2. *Hamataliwa* Keyserling, 1887

Diagnosis: Caparace high, square shaped, vertical front region. AMEs are closer than the rest, clypeus surrounded by blackish lines. Patella, tibia and metatarsus of legs I-IV long and thin, covered with dorso-lateral spines, posterior legs short as compared to anterior legs. Male palp features a tegulum that extends ventrally and mesially into a U-shaped lobe; embolus long and thin, originates mesally from the membranous section of the tegulum, curving clockwise towards the lateral side and its tip connects with the conductor and the median apophysis at the center of the tegulum. Epigyne is scletorized; distinguished by a U shaped chitinized rim; copulatory pores are typically beneath the inner sides of rim; FDs thin; CDs stout (Plate 35B, C).

1. *Hamataliwa pentagona* Tang and Li, 2012

(Plate 35A-C, 66J)

Taxonomic account

Hamataliwa pentagona Tang and Li, 2012a: 17, figs. 15A-C, 16A-B.

Hamataliwa pentagona Asalatha and Prasadan, 2020: 99, pl. IIa-d.

Specimens examined: 3 ♀ (IV/ARA/ERS/202), 20.x.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax grayish brown, clothed with whitish hairs (Plate 35A). Anterior eyes strongly recurved and posteriors slightly recurved. Sternum oval shaped. Legs short and brownish, clothed with spines. Abdomen grayish brown, narrowing posteriorly, dorsum with grayish whitish spots and brownish markings (Plate 35A). Ventrum grayish brown. Epigyne pentagonal shaped, spemathecae globular; FDs originating laterally, arching; short copulatory ducts.

Distribution: INDIA: Kerala, Assam (New record); CHINA (WSC 2024).

Natural history: They are observed underside of the leaves with their egg sac.

3. Genus: *Oxyopes* Latreille, 1804

Diagnosis: Cephalothorax is high and rounded, featuring a vertical anterior portion and a steep thoracic part. Chelicerae are long, tapering towards the distal end, with a tooth on the

retromargin. Clypeus is high, with thin black lines running down from the anterior median eyes (AME) to the tips of the chelicerae. Legs are long and slender, adorned with numerous long spines, with the fourth leg longer than the third leg. Abdomen is long and narrow, tapering towards the rear.

1. *Oxyopes shweta* Tikader, 1970

(Plate 66K)

Taxonomic account

Oxyopes shwetae Gajbe, 1999: 46, figs. 31-33; Gajbe, 2008c: 84, figs. 176-178.

Oxyopes shweta Tikader, 1970: 78, figs. 48a-c; Tikader and Biswas, 1981: 61, figs. 105-107; Hu and Li, 1987b: 295, figs. 27.3-4, 28.1-2; Hu 2001: 225, figs. 121.1-4; Sen et al., 2015: 78, figs. 444-448, pl. 18; Dhali, Saha and Raychaudhuri, 2017: 66, figs. 301-305, pl. 22.

Specimen examined: 1 ♀ (IV/ARA/ERS/203), 15.ix.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax long, covered with whitish hairs. Ocular region with a pair of blackish longitudinal bands running along the AMEs and PMEs. Sternum yellowish. Legs brownish, covered with spines, femora leg I-IV with blackish line. Abdomen whitish dorsally, long, tapering posteriorly, pair of blakish bands runs laterally. Ventral side yellowish with an longitudinal brownish stripe.

Distribution: INDIA: Meghalaya, Manipur, Sikkim, Kerala, Tripura, West Bengal, Arunachal Pradesh, Assam (New record); PAKISTAN, CHINA (WSC 2024).

Natural history: They are observed underside of the leaves, actively searching for prey.

2. *Oxyopes sitae* Tikader, 1970

(Plate 66L)

Taxonomic accounts

Oxyopes sitae Tikader, 1970: 75, figs. 46a-b.

Oxyopes sitae Gajbe, 1999: 48, figs. 37-38.

Oxyopes sitae Gajbe, 2008c: 87, figs. 183-184.

Oxyopes sitae Sen et al., 2015: 78, figs. 439-443, pl. 18.

Oxyopes sitae Biswas and Raychaudhuri, 2015: 229, figs. 6a-e.

Specimens examined: 4 ♀ (IV/ARA/ERS/204), 17.viii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax wide, broadened posteriorly, raised cephalic region. Eyes bordered by blackish band. Sternum brownish. Legs slender, clothed with blackish spines, tibia legs I-IV with a blackish marking. Abdomen long, yellowish and elongated, brownish bands runs medially. Ventrum yellowish with a graying longitudinal broad patch.

Distribution: INDIA: Gujarat, Sikkim, Meghalaya, West Bengal, Assam (New record); BANGLADESH (WSC 2024).

Natural history: Observed among shrub vegetation in active search of prey.

4. Genus: *Peucetia* Thorell, 1869

Diagnosis: Cephalothorax is not as high or convex as in Oxyopes; the anterior median eyes (AME) are the smallest, with the posterior row slightly procurved and the anterior row strongly recurved. Clypeus has two black lines extending downward from the base of the AME. Cheliceral retromargin lacks a tooth, and the labium is longer than it is wide. The legs are long, adorned with black spines. Abdomen is elongated, almost cylindrical, tapering behind the spinnerets. The integument of the living spider is predominantly green or various shades of green.

1. *Peucetia latikae* Tikader, 1970
(Plate 36A- G, 67A)

Taxonomic account

Peucetia latikae Tikader, 1970: 80, figs. 49a-c.

Peucetia latikae Hu, Wang and Chen, 1987: 69, figs. 2A-D.

Peucetia latikae Chen and Gao, 1990: 143, figs. 180.

Peucetia latikae Song, Zhu and Chen, 1999: 401, figs. 237H-I.

Peucetia latikae Gajbe, 1999: 71, figs. 90-93.

Peucetia latikae Gajbe, 2008c: 27, figs. 43-46.

Peucetia latikae Zhang and Wang, 2017: 497, 5 f.

Peucetia latikae Lo, Cheng and Lin, 2024: 26, figs. 1D, 17A-C, 18A-D, S2G.

Specimens examined: 2 ♀ (IV/ARA/ERS/205), 26.xi.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax long and greenish with distinct fovea, covered with conspicuous blackish spots with raised cephalic region, covered with blackish spines (Plate 36C). Ocular region raised, basal area of eyes sourrounded by blakish rings. Sternum oval, pale yellowish brown (Plate 36D). Legs very long and slender, covered with blakish spots and spiny. Abdomen long, greenish, narrows posteriorly, broad longitudinal stripes runs middorsally bordered by whitish lines (Plate 36A, B). Ventrum pale brownish. Epigyne large, shield shaped; epigynal plate with a pair of prominent downward ridges; copulatory openings large, anterior edge with a pair of prominent horn-like structures; spermathecae spherical, and situated front of copulatory ducts, CDs ducts thick (Plate 36F, G).

Distribution: INDIA: Sikkim, Meghalaya, Gujarat, Assam (New record); CHINA, TAIWAN (WSC 2024).

Natural history: There greenish coloration blends with the colour of the leaves. They are observed on shrub vegetation.

12. Family: Pisauridae Simon, 1890

Diagnosis: Medium-sized to very large araneomorph spiders; ecribellate; entelegyne; tarsi with pseudosegment; trochanters deeply notched. Egg-case carried in the chelicerae. Eyes: eight; in two (4:4), three (4:2:2) or four (2:2:2:2) rows; at least one pair of eyes on shallow tubercles; secondary eyes with grate-shaped tapetum.

1. Genus: *Dendrolycosa* Doleschall, 1859

Diagnosis: Anterior lateral eyes being clearly the smallest eyes rather than be being as large if not larger than the Posterior median eyes and the anterior row being clearly

recurved. Dark chevrons marking present on dorsum of abdomen. Anterior patch of the abdomen embedded in a dark folium with undulating margins, especially in posterior half, as a diagnostic character.

1. *Dendrolycosa songi* (Zhang, 2000)

(Plate 37A-G, 67B)

Taxonomic account

Pisaura songi Zhang, 2000a: 5, figs. 5A-C.

Dianpisaura songi Zhang, Zhu and Song, 2004d: 368, figs. 8-10.

Dendrolycosa songi Jäger, 2011: 17, figs. 81-83.

Specimen examined: 1 ♀ (IV/ARA/ERS/206), 20.xi.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax brownish yellow with distinct fovea, covered with brownish hairs, whitish bands on both the lateral sides (Plate 37A). Eyes circled by blackish band, PMEs blackish (Plate 37D). Sternum yellowish. Legs brownish, covered with numeours hairs and spines, legs I-IV with yellowish circular markings. Abdomen yellowish brown with a short dark brownish patch medially (Plate 37B). Ventrum yellowish brown. Epigyne scletorized, median field transverse and depressed medially, spermathecae spherical (Plate 37F-G).

Distribution: INDIA: Assam (New record); CHINA (WSC 2024).

Natural history: They are generally found inhabiting vegetation near river streams.

1. Genus: *Hygropoda* Thorell, 1895

Diagnosis: Carapace yellowish, with two dark parallel bands and a pair of dark marginal bands; often with a thin narrow line of dark brown colour between PME and fovea. Fovea longitudinal, deep. Anterior eye row slightly procurved, posterior one strongly recurved. Legs more or less distinctly annulated, long and slender, provided with erect spines. Long and slender legs I, II and IV; long and flexible tarsi. Abdomen elongate oval, covered with

fine pubescence; dorsum yellowish posteriorly, dark median band anteriorly bifurcated, followed by a series of transverse lines. Posterior lateral and median spinnerets with cylindrical gland spigots.

1. *Hygropoda higenaga* (Kishida, 1936)

(Plate 38A-F, 67C)

Taxonomic account

Dolomedes higenaga Kishida, 1936b: 119, pl. 13, fig. 8.
Hygropoda hippocrepiforma Wang, 1993a: 156, figs. 1-4; Song, Zhu and Chen, 1999: 348, figs. 203O-Q.

Hygropoda higenaga Yaginuma, 1965a: 32, figs. 2.1-7; Yaginuma, 1971: 126, figs. 105.18-23; Hu 1984: 260, figs. 273.1-2; Yaginuma, 1986a: 176, fig. 97.2; Zhang and Zhang, 2003b: 14, figs. 1A-G; Zhang, Zhu and Song, 2004d: 383, figs. 77-85, 206-213; Tanikawa and Ono, 2009: 216, figs. 1-3; Yin et al., 2012: 885, figs. 444a-e.

Specimens examined: 2 ♀ (IV/ARA/ERS/207), 03.xi.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapace long and brownish, marked with broad brownish bands, covered with plumose setae (Plate 38A). Eyes placed on tubercles, wide ocular region and clothed with fine hairs. Sternum shield shape and pale brown. Abdomen very long and elongated and brownish, broad anteriorly and narrows posteriorly, dorsum with whitish bands laterally and a brownish patch medially (Plate 38A). Ventral side brownish (Plate 38B). Epigyne scletorized, spermathecae oval shaped and coverge outwardly, FDs long and slightly arched, CDs short (Plate 38E, F).

Distribution: INDIA: Assam (New record); CHINA, TAIWAN, JAPAN (WSC 2024).

Natural history: Found residing alongside edge of stream on shrub vegetation. Females are seen clutching on egg sac made by leaf rolled. They are alo found overhanging on

branch over flowing water looking out of prey and when disturbs runs very fast on the water and flows along it.

3. Genus: *Nilus* O. Pickard-Cambridge, 1876

Diagnosis: Cephalothorax is small and wide, with minimal lateral constrictions at the head. Eyes are moderately sized and fairly uniform in size, spanning the entire width of the upper part of the head, arranged in two closely spaced, nearly equally curved rows. The curves of the rows face forward, with the front row being slightly shorter. Legs are moderately strong, not excessively long or differing greatly in length; their order of length is 4, 1, 2, 3, or 1, 4, 2, 3; each tarsus terminates with three curved claws. Maxillae are of moderate length, straight, wider at their tips than at their base and somewhat rounded at the ends. Labium is short, barely half the length of the maxillae, with slightly curved lateral margins and a rounded apex. Abdomen is short, oval-shaped, tapering towards the rear and extends notably beyond the cephalothorax's base.

1. *Nilus albocinctus* (Doleschall, 1859)

(Plate 67D)

Taxonomic account

Dolomedes albocinctus Doleschall, 1859: 9, pl. 15, fig. 4.

Titurius marginellus Simon, 1884n: 329.

Thalassius marginellus Simon, 1885h: 13.

Dolopoeus cinctus Thorell, 1891: 61.

Thalassius doleschalli F. O. Pickard-Cambridge, 1897c: 352, pl. 4, fig. 19.

Thalassius simoni F. O. Pickard-Cambridge, 1897c: 351.

Dolopoeus doleschalli F. O. Pickard-Cambridge, 1898: 28.

Thalassius cinctus Simon, 1898a: 299.

Thalassius mutillatus Strand, 1913d: 121 (D).

Thalassius albocinctus Simon, 1898a: 298, figs. 307-308; Merian 1911: 287, fig. H1; Sierwald 1987: 119, figs. 127, 132-140, 143-148; Barrion and Litsinger 1995: 352, figs .

209a-e; Sunil Jose et al. 2003b: 309, figs. 1a-g.

Specimens examined: 2 ♀ (IV/ARA/ERS/208), 25.x.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax blackish brown and wide, broad whitish stripes on lateral sides and a yellowish triangular patch on ocular region. Sternum yellowish brown. Legs long and strong, blackish brown, covered with numerous spines. Abdomen blackish brown, long, posteriorly narrow, dorsum with longitudinal whitish stripes, sigilla six pairs. Ventral side with dark brown band.

Distribution: INDIA: Kerala, Assam (New record); PHILIPPINES WSC 2024).

Natural history: Found inhabiting the herb vegetation on surface of running water. They are very fast and agile on water. It retreats under water when threatened and can hold their postion for about 5-6 mins underwater.

2. Genus: *Polyboea* Thorell, 1895

Diagnosis: Anterior and posterior eye rows are nearly equal in width, with the anterior lateral eyes larger than both the anterior median eyes and posterior median eyes; the tibia of the leg lacks a pair of short ventral spines at the distal end; the carina of the epigynum is complete.

1. *Polyboea vulpina* Thorell, 1895

(Plate 67E)

Taxonomic account

Polyboea vulpina Thorell, 1895b: 229.

Polyboea vulpina Workman, 1896: 97, pl. 97.

Polyboea vulpina Sierwald, 1997: 401, figs. 88-90, 97-101.

Polyboea vulpina Sen and Sureshan, 2021a: 56, figs. 1-4.

Specimen examined: 1 ♀ (IV/ARA/ERS/46), 13.x.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax brownish yellow, narrowing anteriorly, pari of mid brownish

longitudinal band runs along the dorsum, raised cephalic region. Eyes circled with black rings, recurved posterior and procuved anterior eyes. Sternum yellowish brown. Legs brownish yellow, femora leg I-IV with blackish line. Abdomen yellowish and elongated with blackish longitudinal band medially. Venter brownish grey, pair of longitudinal and lateral bands present.

Distribution: INDIA: Tamil Nadu, Assam (New record); MYANMAR, THAILAND, MALAYSIA, SINGAPORE (WSC 2024).

Natural history: They construct small cobweb underside of the leaves.

13. Family: *Psechridae* Simon, 1890

Diagnosis: Medium to large araneomorph spiders; claw tufts; cribellate; entelegyne; tarsi widened towards the tip. Eyes: eight in two rows; both rows strongly procurved; posterior eye row wider than anterior one; secondary eyes with grate-shaped tapetum.

1. *Genus: Psechrus* Thorell, 1878

Diagnosis: Medium to large in size, the anterior median eyes (AME) are at most the same size as the other eyes, usually smaller; a white longitudinal line is present on the underside of the opisthosoma; the clypeus is relatively tall, 2 to 3.5 times the diameter of the AME, making the cephalic region of the carapace; the length of fourth leg is approximately the same as second leg. Females have a relatively simple median septum on the epigyne, and the vulva generally has spherical spermathecal heads.

1. *Psechrus himalayanus* Simon, 1906

(Plate 67F)

Taxonomic account

Psechrus himalayanus Simon, 1906b: 287.

Psechrus himalayanus Hubert, 1973a: 678, figs. 7-12.

Psechrus himalayanus Levi, 1982: 119, figs. 7-12.

Psechrus himalayanus Bayer, 2012: 64, figs. 31a-d, 32a-k, 82l, 85g, 88h, 91h.

Specimens examined: 1 ♀ (IV/ARA/ERS/209), 17.i.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax brownish with short and narrow yellowish patches, longer than wide, elevated cephalic region. Eyes blackish, high clypeus. Sternum brownish. Legs long and elongated; femora, patella and tibia with blackish annulations; legs are covered with spines. Abdomen yellowish brown, long and elongated, dorsum with whitish variegated patches and short whitish patches run medially. Ventrum brownish.

Distribution: INDIA: Uttarakhand, Assam (New record); NEPAL, BHUTAN (WSC 2024).

Natural history: Found construcuting sheet web among the hollows of the base of the tree. The web consists of a narrow silken tubular retreat deep inside.

14. Family: Salticidae Blackwall, 1841

Diagnosis: Carapace square fronted. Eyes: eight; in three or four rows; eyes occupying the entire width of carapace; anterior median eyes largest, anterior lateral eyes slightly smaller, anterior row of eyes faces forward. Abdomen is generally small but elongated in some species, often displaying attractive color patterns. Epigyne can be complex in some species and relatively simple in others, showing high diversity.

1. Genus: *Asemonea* O. Pickard-Cambridge, 1869

Diagnosis: Males cephalothorax and legs are translucent in colour, abdomen mostly covered with iridescent setae and decorated posteriorly with red marking, females are greenish to light yellowish to whitish in colour decorated with few black markings, translucent. Medium sized salticids. Cephalothorax longer than wide. AME eyes are bulged frontally. Abdomen elongated. Spinnerets slender and longer compared to other salticids. Legs are widely spread at usual posture. Sexual dimorphism is present, males are more brightly coloured than females. Females are generally translucent in colour.

1. *Asemonea tenuipes* (O. Pickard-Cambridge, 1869)

(Plate 67G)

Taxonomic account

Lyssomanes tenuipes O. Pickard-Cambridge, 1869c: 65, pl. 5, figs. 50-52.

Asemonea cingulata Thorell, 1895b: 314.

Lyssomanes andamanensis Tikader, 1977a: 205, figs. 25A-C.

Lyssomanes bengalensis Tikader and Biswas, 1978: 259, figs. 4-6; Tikader and Biswas 1981: 107, text-figs. 21-23.

Lyssomanes andamanensis Tikader and Biswas, 1981: 109, figs. 201-203.

Asemonea tenuipes Peckham and Peckham, 1886: 340; Peckham, Peckham and Wheeler, 1889: 243, pl. 12, figs. 5, 19; Simon, 1901a: 399, figs. 399-400, 412; Wanless, 1980d: 240, figs. 2D; 18A-I; Prószyński, 1984a: 3; Roy, Saha and Raychaudhuri, 2016: 23, figs. 19A-E, 25H, 27Q; Prószyński, 2017b: 125, figs. 54H-I, 55A; Tam, Nhan and Khang, 2020: 1, figs. 1-3.

Specimens examined: 2 ♂ (IV/ARA/ERS/210), 03.xii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Male: Cephalothorax blackish with light yellowish band medially. AMEs prominently large. Legs slender and light yellowish. Abdomen thin and elongated, yellowish golden with a reddish-orange patch bordered by whitish spot at the tip. Spinnerets long and slender with tailed like projection and blackish in colour.

Distribution: INDIA: West Bengal, Andaman Islands, Assam (New record); NEPAL, BHUTAN (WSC 2024).

Natural history: Found actively movind on underside of the broad leaves. They construct transparent silken retreat.

2. Genus: *Bianor* G. W. Peckham & E. G. Peckham, 1886)

Diagnosis: Blackish to brownish in colour. Small size salticids. Posterior part of the Cephalothorax narrower than anterior part. Cephalothorax surface smooth, dull coloured. Abdomen ovoid. First pair of legs are robust and stiff spines present on ventral sides of tibia and metatarsus of leg I.

1. *Bianor angulosus* (Karsch, 1879)

(Plate 39A-J, 67H)

Taxonomic account

Ballus angulosus Karsch, 1879d: 553.

Stichius albo-maculatus Thorell, 1890b: 70.

Bianor leucostictus Thorell, 1890c: 158.

Bianor trepidans Thorell, 1895b: 334.

Stertinius leucostictus Simon, 1901a: 839.

Simaetha angulosa Simon, 1903a: 838.

Stichius albomaculatus Roewer, 1955c: 1662; Prószyński 1984a: 57.

Bianor hotingchiehi Schenkel, 1963: 434, figs. 249a-f; Yin and Wang, 1979: 27, figs. 1A-E; Song, 1980: 209, figs. 117a-e; Bohdanowicz and Hęciak, 1980: 253, figs. 10-19; Wang, 1981: 138, figs. 79A-C; Yin and Wang, 1981b: 268, figs. 1A-H; Hu, 1984: 354, figs. 368.1-5; Żabka, 1985: 210, figs. 1-15; Song, 1987: 286, figs. 243; Feng, 1990: 198, figs. 173.1-6; Chen and Gao, 1990: 180, figs. 229a-c; Chen and Zhang, 1991: 288, figs. 301.1-5, 302.1-6; Song, Zhu and Li, 1993: 883, figs. 58A-D; Okuma et al., 1993: 75, figs. 65; Peng et al., 1993: 26, figs 34-42; Zhao, 1993: 391, figs. 195a-c; Barrion and Litsinger, 1994: 285, figs. 1431-1435; Barrion and Litsinger, 1995: 62, figs. 27a-e; Zhao, 1995: 1109, figs. 536a-c; Song, Zhu and Chen, 1999: 506, figs. 289J, 290A, 324M; Hu, 2001: 375, figs. 233.1-4.

Bianor simoni Żabka, 1985: 204, figs. 30-34.

Stichius albomaculatus Logunov, 2001a: 281.

Stichius albomaculatus Prószyński, 2017b: 49, fig. 22T1.

Bianor incitatus Prószyński, 2017b: 49, fig. 22T.

Rhene haldanei Gajbe, 2004d: 135, figs. 181-183.

Bianor angulosus Żabka, 1988: 442, figs. 56-58; Logunov, 2001a: 231, figs. 47-74; Zhu and Zhang, 2011: 475, figs. 342A-F; Yin et al., 2012: 1330, figs. 719a-I; Logunov, 2019: 101, figs. 1-3, 5-10; Peng, 2020: 45, figs. 11a-I; Babu, Caleb and Prasad, 2021: 19177, figs. 1-6; Chen, Lin and Ueng, 2021: 292, figs. 2A-C; Caleb et al., 2022a: 403, figs. 65-70.

Specimens examined: 2 ♀ (IV/ARA/ERS/211), 13.ix.2019, Jharbari Forest Range, collected by Paris Basumatary.

Male: Cephalothorax brownish yellow, covered with brownish setae and long whitish scales anteriorly, whitish scales cover laterally (Plate 39A). Ocular region blackish and covered with whitish hairs (Plate 39D). Legs reddish brown; femora, patella and tibiae of legs I-Iv covered with line of whitish scales medially; leg I long and robust as compared to legs II-IV (Plate 39A, C). Abdomen brownish, covered with coarse blackish haris with a pair of whitish longitudinal bands (Plate 39A, B). Palp reddish brown, covered with band of whitish scales dorsally, cymbium small, embolous thin and slender, RTA thick and curveing with broad base, tip pointed (Plate 39F, G, H, I, J).

Distribution: INDIA: Himachal Pradesh, Orissa, Punjab, Karnataka, Assam, West Bengal, Bihar, Kerala; SRI LANKA, BHUTAN, BANGLADESH, CHINA, TAIWAN, MYANMAR, VIETNAM, THAILAND, MALAYSIA, INDONESIA (WSC 2024).

Natural history: Found inhabiting lanceolate shaped grass. They move slowly but are active jumpers. They construct silken retreat on the upper side of the leaves.

3. Genus: *Brettus* Thorell, 1895

Diagnosis Males are metallic bluish green coloured, cephalothorax entirely covered by a thick white band, legs are iridescent blackish in colour. Females are brownish to yellowish in colour with irregular white markings on abdomen, females also have a thick white band 38 on cephalothorax. Medium size salticids. Cephalothorax is high and more or less oval in shape. Patella and tibia of first pairs of legs have brush like hairs. Body covered with shiny hairs, there is no hairy projection on dorsal surface of abdomen. Sexual dimorphism presents.

1. *Brettus cingulatus* Thorell, 1895

(Plate 67I)

Taxonomic account

Brettus albolimbatus Simon, 1900d: 31; Peng and Kim, 1998: 411, figs. 1A-C; Sen et al., 2015: 43, figs. 165-169, pl. 14; Roy, Saha and Raychaudhuri, 2016: 23, figs. 18A-E, 25G, 27P; Dhali, Saha and Raychaudhuri, 2017: 40, figs. 116-122, pl. 16; Wanless, 1979a: 188, figs. 2C; 3C-D; 4A-B.

Brettus semifimbriatus Simon, 1900d: 31.

Portia semifimbriata Simon, 1901a: 401, figs. 416-418.

Portia albolimbata Simon, 1901a: 402.

Portia foveata Strand, 1912a: 148.

Portia cingulata Reimoser, 1925: 90.

Brettus cingulatus Thorell, 1895b: 355; Wanless, 1978f: 83; Wanless, 1979a: 185, figs. 1A, C, E, G; 2A-B; Wanless, 1984a: 181, figs. 32A-C, 33C-E, 36C-D; Ahmed et al., 2017: 3, figs. 2.1-4, 3.1-7, 4.1-8, 5.1-11, 6.1-11, 8.1-4; Patil and Uniyal, 2018a: 105, figs. 1A-G; Peng, 2020: 48, figs. 14a-c; Tam et al., 2021: 1, figs. 1-9.

Specimens examined: 2 ♀ (IV/ARA/ERS/212), 14.ii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapace is blackish brown with greenish bronze iridescence hairs, a wide strip of silky white hairs running across the front part and along the edges to the back. All eyes except one have black borders around them. Sternum oval-shape and dark brown. Legs I and II are long, stout with coarse blackish hairs underneath, femora and tibiae of legs I-IV with some shiny hairs. Abdomen is bronze green covered with shiny iridescent hairs alongwith bright yellow patches – two oval ones at the front and a band at the back, surrounded by darker areas. Ventrum pale yellow.

Distribution: INDIA: Assam, Kerala, West Bengal; SRI LANKA, CHINA, VIETNAM, MYANMAR, THAILAND, MALAYSIA, INDONESIA (SUMATRA) (WSC 2024).

Natural history: Found underside the leaves in resting position with legs I-III positioned forward and leg IV is held backwards. Females gurad their eggs and spiderlings.

4. Genus: *Carrhotus* Thorell, 1891

Diagnosis: Males are usually black in colour furnished with reddish or brownish or whitish setae. Females are generally yellowish brown in colour. Medium to large size salticids. Cephalothorax longer than wide. Abdomen oval in shape, longer than wide, hairy. All legs are more or less same in length. Distinct abdominal pattern presents in some species. Fine setae present on ocular quadrangle, projected upwards. Sexual dimorphism present, males

are black and white coloured, females are brownish in colour.

1. *Carrhotus viduus* (C. L. Koch, 1846)

(Plate 40A-F, 67J, K)

Taxonomic account

Plexippus viduus C. L. Koch, 1846: 104, fig. 1166.

Attus viduus Walckenaer, 1847a: 426.

Hyllus morgani Simon, 1886c: 437.

Mogrus ornatus Simon, 1886c: 439.

Plexippus cumulatus Karsch, 1892: 301, pl. 12, fig. 28.

Marpissa decorata Tikader, 1974b: 206, figs. 4-6; Tikader and Biswas, 1981: 94, figs. 171-172; Sen et al., 2015: 34, figs. 92-96, pl. 13; Roy, Saha and Raychaudhuri, 2016: 8, figs. 5A-E, 24C, 27A; Dhali, Saha and Raychaudhuri, 2017: 31, figs. 48-52, pl. 17; Biswas and Raychaudhuri, 2022: 7, figs. 4a-e, 5d.

Marpissa tikaderi Biswas, 1984a: 125, figs. 14-16.

Marpissa lakshmikantapurensis Majumder, 2004c: 32, figs. 11-15.

Plexippus gajbei Karthikeyani and Kannan, 2013: 43, figs. 1a-c, images 1-2.

Carrhotus viduus Thorell, 1891: 142; Workman and Workman, 1894: 14, figs. 14; Simon, 1903a: 701, 707, figs. 827-828; Pocock, 1904: 804, pl. 66, fig. 8; Andreeva, Kononenko and Prószyński, 1981: 103, figs. 39-42; Prószyński, 1984a: 16; Song and Chai, 1991: 13, figs. 1A-D; Prószyński, 1992b: 169, fig. 7; Peng et al., 1993: 36, figs. 75-83; Jastrzebski, 1999: 4, figs. 8-11; Song, Zhu and Chen, 1999: 507, figs. 290I-J, 291A-B, 324Q; Prószyński and Deeleman-Reinhold, 2010: 157, figs. 25, 29; Yin et al., 2012: 1339, f. 724a-I; Roy, Saha and Raychaudhuri, 2016: 18, figs. 14A-E, 25C, 27J; Caleb, 2016b: 273, figs. 1-5; Prószyński, 2017b: 15, fig. 4D; Prószyński, 2018a: 26, fig. 5J; Caleb, Bera and Acharya, 2020: 61, figs. 57-73, 76-78, 80-82; Peng, 2020: 57, figs. 21a-I; Satkunanathan and Benjamin, 2022: 102, figs. 2C-D, 15A-G, 16A-D.

Specimens examined: 3 ♀ (IV/ARA/ERS/213), 17.viii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Male: Cephalothorax dark black with a pair of whitish parallel bands runs laterally. Eyes blackish. Legs blackish. Abdomen blackish with a longitudinal whitish band running dorsolaterally.

Female: Cephalothorax brownish black, covered with fine hairs, cephalic region flat, pair of whitish patches present dorsolaterally, lateral sides' sourrounded by brownish bands. Eyes sourrounded by coarse whitish haris basally (Plate 40A). Abdomen oval shaped and blackish, two distinct borad whitish bands on lateral sides arising from proximal end of abdomen and extending till spinnerets, dull white chevron markings dorsally (Plate 40A, C). Epigyne heart shaped, spermathecae oval, central region with two prominent copulatory openings, FDs short and wavy, CDs long and directed upwards anteriorly (Plate 40E, F).

Distribution: INDIA: Tamil Nadu, Lakshadweep Islands, West Bengal, Assam and Maharashtra; IRAN, NEPAL, CHINA (WSC 2024).

Natural history: They are found inhabiting underside of leaves and constructs silken retreat.

4. Genus: *Chinattus* Logunov, 1999

Diagnosis: Carapace is moderately high, featuring a flat and wide eye field. Chelicerae are small and vertical, with teeth on both margins. Abdomen is oval-shaped, lacking a dorsal scutum in males. Spinnerets are equal in length and thickness. Male palps exhibit a typical structure, including retrolateral tibial apophyses. Female genitalia are relatively simple, with copulatory openings widely separated and facing laterally.

1. *Chinattus prabodhi* Basumatary et al., 2020

(Plate 41A-I, 67L)

Taxonomic account

Chinattus prabodhi Basumatary et al. 2020: p. 127, figs. 1-11.

Specimens examined: Holotype: 1♀ (IV/ARA/ERS–39): Jharbari Forest under Chirang Reserve Forest, Kokrajhar, Assam, India (26.1873 N, 90.1758 E, 74 m), 08.VII.2019, coll.

P. Basumatary. Paratype: 1♀ (IV/ARA/ERS–40), collected along with the holotype.

Etymology: The species is named in honor of Prabodh Kumar Brahma, a forest officer and passionate nature enthusiast, in appreciation of his assistance in facilitating and promoting our field research endeavors on spiders.

Diagnosis: The female of *C. prabodhi* sp. nov. shares similarities in genital structure with *C. szechwanensis* (Prószyński 1992) and *C. undulatus* (Song & Chai 1992). However, it can be distinguished by its elongated spermathecae and long, curving copulatory ducts (CDs) that extend backward along the copulatory openings. In contrast, *C. szechwanensis* exhibits elongated spermathecae with shorter, laterally directed CDs that lack curvature, while *C. undulatus* displays rounded spermathecae with narrower, medially folded CDs.

Female: Total length: 5.77 long; carapace: 2.46 long, 1.94 wide; abdomen: 3.31 long, 2.31 wide. The carapace is a deep brown shade, adorned with greyish hairs (Plate 41A). Both the anterior and posterior eyes are encircled by reddish-brown orbital setae. In the clypeal region, there's a dark brown hue with a line of white hairs situated below the anterior eyes and along the carapace's margin (Plate 41E). Eye measurements: AME 0.26, ALE 0.14, PME 0.09, PLE 0.17, ALE–ALE 0.52, PME–PME 1.01, PLE–PLE 0.91, PME–PLE 0.15. Clypeus height: 0.35. The sternum is oval-shaped and displays a reddish-brown hue. Chelicerae are also reddish-brown, featuring two promarginal and one retromarginal teeth; labium and maxillae exhibit a similar reddish-brown coloration (Plate 41D). Legs are of a yellowish-brown shade, adorned with greyish hairs (Plate 41B). Leg measurements: I 3.53 (1.03, 0.68, 0.72, 0.67, 0.43), II 2.79 (0.99, 0.34, 0.47, 0.57, 0.42), III 3.82 (1.13, 0.68, 0.83, 0.72, 0.46), IV 4.27 (1.29, 0.70, 0.86, 0.88, 0.54). The abdomen presents a yellowish-brown tone and is covered with pale brownish hairs. Three white patches adorn the dorsum—two along the median region and one at the posterior end. The anterior region and lateral sides are edged with a fringe of white hair. On the venter, the hue is brownish with pale brownish hairs, while the spinnerets exhibit a brownish coloration (Plate 41B). The epigyne is hardened, presenting a pair of copulatory openings situated laterally. The spermathecae are elongated in shape. The copulatory ducts are extended, gently curving, and accompanied by a pair of glandular ducts aligned towards the rear. Furthermore, the fertilization ducts emerge anteriorly from the spermathecae (Plate F, G, H, I).

Distribution. INDIA: Assam.

Natural history: The species was discovered along the moist and damp banks of the perennial Bhumka stream. These banks are predominantly concealed beneath leaf litter and are nestled under a dense canopy cover, characteristic of a moist deciduous forest type. During observation, they were seen feeding on water striders.

5. Genus: *Cocalus* C. L. Koch, 1846

Diagnosis: It features an elevated cephalothorax with a steep rise from the front to the rear eyes, followed by a sharp downward slope to the posterior edge. The chelicerae are long and slender. The head and thorax exhibit a yellowish rust-brown coloration with fine black rings around the eyes, while the abdomen is bare, olive-yellow, with remnants of scale-like hairs at the anterior edge. Abdomen is narrow and elongated, with noticeably long spinnerets.

1. *Cocalus murinus* Simon, 1899

(Plate 42A-H, 68A)

Taxonomic account

Cocalus murinus Simon, 1899a: 102.

Cocalus murinus Simon, 1901a: 406, figs. 429-433.

Cocalus murinus Wanless, 1981c: 256, figs. 3A-E.

Cocalus murinus Roy, Saha and Raychaudhuri, 2016: 26, figs. 22A-E, 26B, 28D.

Specimen examined: 1♀ (IV/ARA/ERS/38), 13.vii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapace is oval shaped, clothed with brownish hairs, elevated cephalic region, depressed thoracic region with longitudinal fovea below the posterior lateral eyes (Plate 42A). Eyes surrounded with black rings, clothed with brownish hairs, arranged transversely in three rows and a small tubercle at the centre of posterior lateral eyes and posterior median eyes (Plate 42D). Sternum yellowish brown, elongated, clothed with coarse brown hairs and pale brown ones. Legs yellowish brown, clothed with whitish hairs and spines

(Plate 42C). Two tarsal claws with claw tufts. Abdomen long, brownish, clothed with long hairs and pale brown ones, sooty lateral markings (Plate 42B). Ventrally brown, clothed with white and few brown hairs, brownish spinnerets clothed with white hairs (Plate 42C, E). Epigyne dark amber clothed with fine creamy hairs; copulatory openings crescent shaped with scletorised edges; spermetheca is large and kidney shaped; fertilisation ducts are short and located at the posterior part of the spermatheca (Plate 42G, H).

Distribution: INDIA: West Bengal, Assam (New record); INDONESIA (SUMATRA) (WSC 2024).

Natural history: They are typically observed lying motionlessly on tree twigs, with their coloration blending seamlessly with the twig, providing excellent camouflage.

6. Genus: *Dexippus* Thorell, 1891

Diagnosis: Cephalothorax elongated, slightly wider than tall, with rounded sides and a gentle slope leading to a moderately convex dorsum. The height of the clypeus matches roughly the diameter of the anterior median eye. Eyes are of moderate size; the front row is slightly curved, with the anterior median eyes prominent and close together, separated from the anterior lateral eyes by a small space. The ocular quadrangle occupies about half the length of the cephalothorax and is equally wide both front and back, or slightly narrower at the back. Posterior eyes are spaced not much closer to each other than to the edge of the cephalothorax. Sternum matches the width of the front coxae, and the space between these coxae is almost as wide as the labium. Mandibles are straight and parallel, while the maxillae are longer than half the length of the labium, which is longer than it is wide and has parallel sides ending in a rounded tip.

1. *Dexippus kleini* Thorell, 1891

(Plate 43A-E, 68B)

Taxonomic account

Dexippus kleini Thorell, 1891: p. 112; Prószyński, 1984: p. 33; Basumatary, Brahma and Caleb, 2021: p. 35, figs. 2-5.

Specimen examined: 1♂ (NZC-ZSI) Jharbari Forest Range under Chirang Reserve Forest, Kokrajhar, Assam, India (26.6052°N, 90.2419°E, 72 m), 10.VII.2018, collected by Paris Basumatary.

Diagnosis: The species resembles *Dexippus taiwanensis* Peng and Li, 2002 in the palpal structure but can be distinguished by its short embolus, which is slightly curved at the apex; the RTA is brief with a broad notch at the tip, oriented posteriorly with an irregular surface. In contrast, *D. taiwanensis* has a long and broadly curved embolus forming an S shape, and an RTA with a shallow notch at the tip and a smooth surface, also directed posteriorly.

Male: Total length: 7.6 long; carapace: 3.62 long, 2.59 wide; abdomen: 3.98 long, 1.89 wide. The carapace is whitish with a metallic sheen, with both lateral sides being reddish-brown. The ocular area is also reddish-brown, and the fringe areas around the AMEs have tufts of hair (Plate 43A). Eye measurements: AME 0.45, ALE 0.30, PME 0.26, PLE 0.18. AER 1.71, PER 1.52, EFL 1.10. Chelicerae are brownish, and the sternum is also brownish, sparsely covered with whitish setae. The labium and maxillae are pale brown. The legs are brownish and sparsely covered with blackish and whitish hairs (Plate 43A). The abdomen is oval with a metallic sheen, covered in blackish hairs, and has reddish-brown lateral sides (Plate 43A). The venter is pale brown with a broad mid-ventral blackish band and a pair of narrow blackish bands that merge together. The spinnerets are blackish. The palp is brownish and adorned with long blackish setae; the embolus is elongated with a robust base, curving distally to form an S-shape. The bulb is oval-shaped with a conical outward projection at the rear. The RTA is short, featuring a broad incision at the tip, and is oriented posteriorly (Plate 43B, C, D, E).

Distribution: INDIA: Assam (New record); INDONESIA (Sumatra) (WSC 2024).

Natural history: The species was discovered on *Imperata cylindrica* (Cogon grass). They were typically seen on a long, cylindrical cocoon-shaped silken retreat created by weaving together cogon grass flowers.

7. Genus: ***Epeus*** G. W. Peckham and E. G. Peckham, 1886

Diagnosis: Habitus somewhat greenish in colour with abdominal pattern or spots.

Cephalothorax elevated. Ocular quadrangle square in shape. Legs are long and stout, bearing stiff spines. All legs are more or less equal in length. Abdomen elongated and pointed behind. Sexual dimorphism present males are slender and darker in colour, where

females are lighter in colour and fatter than that of males.

1. *Epeus indicus* Prószyński, 1992

(Plate 68C)

Taxonomic account

Epeus indicus Prószyński, 1992b: 171, figs. 22-23, 26, 29.

Epeus indicus Jastrzebski, 2010a: 116, figs. 1-2, 5-7.

Epeus indicus Dhali, Saha and Raychaudhuri, 2017: 26, figs. 15-19, pl. 16.

Specimen examined: 1♀ (IV/ARA/ERS/214), 16.vii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax greenish, covered with whitish setae, conspicuous ocular region clothed with orangish setae. Eyes in four rows. Legs greenish, tibia and tarsus of legs I-IV with whitish black annulations. Sternum pale green. Abdomen greenish yellow, three pairs of whitish spots present dorsally.

Distribution: INDIA: West Bengal, Kerala, Assam, Orissa; NEPAL (WSC 2024).

Natural history: Found underside of leaves on tall trees. They make transparent silken retreat with female inside guarding the eggs.

8. Genus: *Thiania* C. L. Koch, 1846

Diagnosis: Flattened cephalothorax and abdomen with pointed tip. Cephalothorax short and adorned with blackish setae. Abdomen oval shaped and narrowed posteriorly. First pairs of legs build strong and covered with spines.

1. *Thiania bhamoensis* Thorell, 1887

(Pate 68D)

Taxonomic account

Marptusa oppressa Thorell, 1891: 114.

Thiania oppressa Simon, 1901a: 588.

Euophrys chiriatapuensis Tikader, 1977a: 206, figs. 26A-B.

Euophrys chiriatapuensis Tikader and Biswas, 1981: 101, figs. 183-184.

Thiania bhamoensis Thorell, 1887: 357; Prószyński, 1983b: 284, figs. 5-6; Sen et al., 2015: 37, figs. 112-116, plate 13; Roy, Saha and Raychaudhuri, 2016: 9, figs. 7A-E, 24E, 27C; Dhali, Saha and Raychaudhuri, 2017: 35, figs. 78-85, plate 18.

Specimen examined: 1♀ (IV/ARA/ERS/215), 10.vii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapace flattened, blackish with broad ocular quadrangle with a bluish metallic patch anteriorly. Abdomen flattened, elongated posteriorly and oval shaped. Inverted U shaped markings alongwith chevron marks formed by metallic bluish setae dorsally.

Distribution: INDIA: Andaman & Nicobar Islands, Assam, Kerala, Manipur, West Bengal; CHINA, INDIA TO MYANMAR, THAILAND, LAOS, INDONESIA (SUMATRA, BALI)

Natural history: They inhabit bushes and shrubs, constructing silken reatreat with two leaves attached to each other.

9. Genus: *Hyllus* C. L. Koch, 1846

Diagnosis: Cephalothorax spherical, with some species featuring a tuft of long, curved hairs on the lateral sides. Chelicerae robust, and the legs are strong, stout. Abdomen broad anteriorly and blunt posteriorly. Abdominal pattern is present in most of the species. Body and legs covered with dense hairs. Stiff spines present on metatarsus and tibia of leg I and II. Sexual dimorphism present Males are shiny metallic in colour and females are greyish to brownish or whitish in colour. Male palp consists of an almost rectangular cymbium, a round bulbus, and a coiled embolus. The retrolateral tibial apophysis (RTA) sometimes has a few spur-like projections.

1. *Hyllus semicupreus* (Simon, 1885)

(Plate 68E)

Taxonomic account

Thyene semicuprea Simon, 1885h: 4, 29, pl. 10, fig. 1.

Sandalodes semicupreus Simon, 1903a: 689, figs. 820-821.

Phidippus indicus Tikader, 1974a: 122, figs. 5-9.

Sandalodes semicupreus Prószyński and Żabka, 1980: 214, fig. 4.

Phidippus indicus Tikader and Biswas, 1981: 92, figs. 160-163.

Sandalodes semicupreus Prószyński, 1984a: 64-65.

Hyllus semicupreus Prószyński, 1990: 177; Prószyński, 1992b: 180, figs. 57, 60-64; Roy, Saha and Raychaudhuri, 2016: 16, figs. 12A-E, 25A, 27H; Prószyński, 2017b: 36, figs. 14A, 16D, 17A; Prószyński, 2018b: 151, fig. 10O.

Specimen examined: 1♀ (IV/ARA/ERS/216), 23.ix.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax yellowish brown, covered with whitish hairs. Eyes blackish. Sternum pale brown. Legs brownish, covered with hairs and numeorus blackish setae. Legs I-IV with blakish circular rings alongwith sparse whitish spots. Abdomen yellowish white, dorsum with brownish chevron markings medially.

Distribution: INDIA: Assam, West Bengal; SRI LANKA, NEPAL (WSC, 2024).

Natural history: Found on underside of the leaves, they are active hunters and seen preying on insects larger than themselves. They build oval silken cocoon retreat.

2. *Hyllus diardi* (Walckenaer, 1837)

(Plate 44A-F, 68F)

Taxonomic account

Attus diardi Walckenaer, 1837: p. 460.

Plexippus mutillarius C. L. Koch, 1846: p. 93, figs. 1155-1156.

Plexippus janthinus C. L. Koch, 1846: p. 97, fig. 1160.

Plexippus succinctus C. L. Koch, 1846: p. 98, fig. 116.

Plexippus lacertosus C. L. Koch, 1846: p. 94, figs. 1157-1158.

Attus succinctus Doleschall, 1857: p. 431.

Phidippa diardi Simon, 1864: p. 327.

Hyllus diardi Simon, 1886a: p. 139; Prószyński, 1984a: p. 62; Żabka, 1985: p. 229, figs. 217-220; Żabka, 1988: p. 458, figs. 97-98; Peng et al., 1993: p. 96, figs. 310-313; Song, Zhu and Chen, 1999: p. 514, figs. 301E, 326L; Xiong, Liu and Zhang, 2017: p. 23, figs. 1A-G; Zhang and Wang, 2017: p. 587, fig.7; Basumatary et al., 2018: p. 35, figs. 1-5; Peng, 2020: p. 181, figs. 119a-d; Logunov, 2021: p. 1032, figs. 41-44; Caleb, 2023: p. 394, figs. 7-12.

Hyllus mutillarius Thorell, 1892: p. 381.

Hyllus janthinus Thorell, 1895: p. 376; Prószyński, 1984: p. 63; Żabka, 1988: p.458, figs. 99-100.

Hyllus lacertosus Simon, 1899: p. 111; Prószyński, 1984: p. 63; Żabka, 1985: p. 230, figs. 221-226; Peng and Kim, 1998: p. 411, figs. 1D-F; Peng, 2020: p. 182, figs. 120a-b.

Hyllus maskaranus Barrion and Litsinger, 1995: 65, f. 29a-f (Df)

Phidippus tirapensis Biswas and Biswas, 2006: 495, f. 4-6 (Df)

Specimen examined. 1♀ (IV/ARA/ERS/217), 19.xi.2019, Jharbari Forest Range, collected by Paris Basumatary.

Diagnosis: This species can be identified from other related species by the presence of two chambered spermathecae, its large body size and the unique abdominal pattern found in females. Unlike *H. manu*, the copulatory ducts in *H. diardi* do not wind around spermathecae, additionally the shape and pattern of the abdomen are entirely different from those of *H. semicupreus*.

Female: Body length 17.28; carapace length 6.96, width 5.93; opisthosoma length 10.32, width 7.00; sternum length 3.14, width 1.89; chelicera length 2.59, width 1.56; maxilla length 1.86, width 1.10; labium length 1.35, width 1.34. The carapace is brown with a black edge, densely covered in white hairs, narrowing towards the front, and has a cephalic region with very sparse hairs (Plate 44A). Distinct long hair tufts, resembling horns, are present near the PMEs. AME 1.02, PME 0.16, ALE 0.48, PLE 0.56, AME-AME 0.13, PME-PME 3.01, AME-ALE 0.22, PME-PLE 0.66, AME-PME 0.44, ALE-ALE 2.47, ALE-

PME 0.45, PLE-PLE 3.04. The sternum is longer than it is wide (Plate 44B). The chelicerae are dark brown, covered with long white hairs, and have two teeth on the promargin of the fang furrow and one tooth on the retromargin. The pedipalp is brown and densely covered with white hairs. The legs are brown with a mix of white and black hairs and bristles. Lengths of legs: I 11.01 (3.37 + 2.33 + 2.80 + 1.41 + 1.10), II 10.67 (3.23 + 2.48 + 2.38 + 1.74 + 0.84), III 10.45 (3.33 + 2.32 + 1.75 + 2.19 + 0.86), IV 10.90 (3.41 + 2.23 + 1.95 + 2.21 + 1.10). The opisthosoma is oval, tapering towards the rear and broad in the middle, brown with dense patches of white and black hairs (Plate 44C). The venter is brown with a black longitudinal patch extending from below the epigastric furrow to the base of the spinnerets. The spinnerets are dark brown and covered with hairs. There is a pair of large, oval-shaped copulatory orifices separated by a median ridge (Plate 44E). The spermatheca is divided into two chambers, each measuring 0.30 mm in length and 0.26 mm in width (Plate 44F).

Distribution: INDIA: Assam (New record); MYANMAR, THAILAND, LAOS, CHINA TO INDONESIA, PHILIPPINES (WSC 2024).

Natural history: Found among the shrub vegetation of Jharbari Forest.

10. Genus: *Myrmaplata* Prószyński, 2016

Diagnosis: Female spiders of this species have elongated spermathecal "pipes" without a transverse detour, terminating in a small chamber with internal spines. The male's embolus has a broad base that gradually narrows. The tibial apophysis in males is short, straight, and conical. Males have a long body with a pronounced constriction, while female abdomens are oval-shaped without constriction.

1. *Myrmaplata plataleoides* (O. Pickard-Cambridge, 1869)

(Plate 45A-H, 68G)

Taxonomic account

Salticus plataleoides O. Pickard-Cambridge, 1869c: 68, pl. 6, figs. 61-65; Peckham and Peckham, 1892: 33, pl. 3, fig. 1.

Myrmarachne daitarensis Prószyński, 1992b: 185, figs. 80-81, 83-89.

Myrmarachne megachelae Ganesh Kumar and Mohanasundaram,1998: 27, 5 unnumbered fig.

Myrmarachne plataleoides Simon, 1901a: 499, figs. 586, 590-592; Szombathy, 1913: 23, figs. 1-6; Bhattacharya, 1937: 426, fig. 3; Peng et al., 1993: 140, figs. 479-488; Song, Zhu and Chen, 1999: 536, figs. 305G, S; Edmunds and Prószyński, 2003: 298, figs. 1-7; Edwards and Benjamin, 2009: 16, fig. 7; Yamasaki, 2015: 55, figs. 17-18; Sen et al., 2015: 42, figs. 147-151, pl. 14;

Hill and Otto, 2015: 3, fig. 2.1; Benjamin, 2015b: 2646, figs. 29A-D, 30A-D, 31A-E, Roy, Saha and Raychaudhuri, 2016: 25, figs. 21A-G, 26A, 28A-C; Caleb, 2016c: 411, figs. 31-54; Peng, 2020: 250, figs. 174a-j.

Myrmaplata plataleoides Prószyński, 2018b: 165, fig. 22F; Prószyński, 2016: 10, figs. 1E-F, 2G, 3H; Caleb, 2020b: 15737.

Specimens examined: 4♀ (IV/ARA/ERS/218), 07.vii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax brownish orange, elongated and constricted on the mid, dorsoventrally flattened and conspicuous, covered with whitish hairs (Plate 45A). AMEs are the largest. Sternum pale brown and slender. Legs thin and elongated, legs III and IV with light blackish patches. Abdomen brownish orange, elongated and constricted, narrow anteriorly and widened posteriorly (Plate 45A, B, C). Epigyne compact; spermathecae close to each other; copulatory ducts pipe like, terminating in a small chamber with internal spines (Plate 45E, F, G, H).

Distribution: INDIA: Orissa, Karnataka, Bihar, Tamil Nadu, West Bengal, Assam (New record); SRI LANKA, CHINA, SOUTHEAST ASIA (WSC 2024).

Natural history: Found actively moving on leaves are seen to mimic weaver ants. They raised their front legs like an antenna of ants.

11. Genus: *Phaeacius* Simon, 1900

Diagnosis: Large size salticids. Habitus flat upside down, Cryptic coloured. Covered with

dense hairs. Cephalothorax highly domed and somewhat pentagonal in shape. Abdomen compressed and somewhat pentagonal. Legs are long compared to other salticidae. Fourth pair of legs are longest. Legs have numerous long and robust spines.

1. *Phaeacius fimbriatus* Simon, 1900

(Plate 46A-F, 68H)

Taxonomic account

Phaeacius fimbriatus Simon, 1900d: 32.

Phaeacius fimbriatus Simon, 1901a: 408, fig. 434.

Phaeacius fimbriatus Wanless, 1981b: 202, figs. 4A-H, 5B.

Phaeacius fimbriatus Wanless, 1984a: 190, figs. 28A-H.

Phaeacius fimbriatus Jastrzebski, 1997c: 707, figs. 15-19.

Phaeacius fimbriatus Prószyński and Deeleman-Reinhold, 2012: 55, figs. 130-140.

Phaeacius fimbriatus Roy, Saha and Raychaudhuri, 2016: 27, figs. 23A-E, 26C, 28E.

Specimens examined: 2♀ (IV/ARA/ERS/219), 21.viii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapace brownish with sooty light blackish markings, covered with fine whitish hairs (Plate 46A). Eyes in three rows, sourrounded by blackish rings (Plate 46D). Chelicerae with 2 promarginal and 4 retromarginal teeth (Plate 46C). Sternum pale yellow. Legs lon and yellowish brown, covered with blackish setae. Abdomen brownish and narrowing anteriorly, with lateral blackish bands (Plate 46A). Ventrum pale yellow (Plate 46B). Epigyne scletorized, two oval depressions along with the whole length; spermathecae small and globular; FDs long and forms a hook shape anteriorly; CDs short (Plate 46E, F).

Distribution: INDIA: West Bengal, Assan (New record); NEPAL, INDONESIA (JAVA) (WSC 2024).

Natural history: They reside on tree bark. Constructs silk reatreat under the bark.

12. Genus: *Phintella* Strand, 1906

Diagnosis: Iridescent colour pattern presents. First pair of legs are slightly longer and stronger in males. Slender chelicera with long fangs. Abdomen oval to round in shape. Very active salticidae. They prefer dense bushes and foliage close to ground for forays. Sexual dimorphism presents, male being larger in size and brighter in colour. Epigyne is not notably sclerotized, with spermathecae featuring curved copulatory ducts. The male palp has a spine-like embolus, with the tegulum having a lobe or bump. The retrolateral tibial apophysis (RTA) is usually present, one or more, typically small and curved.

1. *Phintella vittata* (C. L. Koch, 1846)

(Plate 68I)

Taxonomic account

Plexippus vittatus C. L. Koch, 1846: 125, fig. 1185.

Hyllus alternans C. L. Koch, 1846: 169, fig. 1222.

Thiania vittata Simon, 1864: 326.

Maevia alternans Thorell, 1891: 122; Workman and Workman, 1894: 11, pl. 11.

Maevia vittata Thorell, 1892a: 335.

Telamonia vittata Simon, 1901a: 540, 541, 548, fig. 655.

Salticus ranjitus Tikader, 1967: 117, figs. 1a-c.

Chrysilla vittata Prószyński, 1971e: 390.

Salticus ranjitus Tikader and Biswas, 1981: 89, figs. 154-155.

Phintella vittata Żabka, 1985: 429, figs. 435-441, 453; Prószyński, 1990: 281; Prószyński, 1992b: 200, figs. 148-152; Peng et al., 1993: 164, figs. 577-585; Song, Zhu and Chen, 1999: 539, fig. 308Q; Sen et al., 2015: 37, figs. 107-111, pl. 13; Roy, Saha and Raychaudhuri, 2016: 18, figs. 15A-E, 25D, 27K; Dhali, Saha and Raychaudhuri, 2017: 34, figs. 73-77, pl. 18; Kanesharatnam and Benjamin, 2019: 70, figs. 29E-H, 34A-F, 35A-E, 36A-D; Tyagi et al., 2019: Supplement, figs. S2.54, S3.27-30; Peng, 2020: 309, figs. 222a-

I; Sudhin, Caleb and Sen, 2024: 39, figs. 12A-H, 13A-C; Logunov, 2024a: 1023, figs. 24-26 (f).

Specimen examined: 1♀ (IV/ARA/ERS/220), 23.viii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax compact and rounded, adorned with greenish, blackish and bluish horizontal band patterns with metallic lusture, giving it a striped appearance. Ocular region clothed with iridescent hairs. Sternum greenish yellow. Legs slender and greenish in colour. Abdomen is usually elongated and exhibit contrasting colors of greenish, blackish, bluish, pale yellowish patterns, aiding in species identification. Venterp pale greenish yellow.

Distribution: INDIA: Tamil Nadu, West Bengal, Sikkim, Goa, Assam (New record); NEPAL, CHINA, PHILIPPINES (WSC 2024).

Natural history: They are birghly coloured and the specific metallic shine gives away its identification character. Found constructing silk retreat underside of the leaves.

13. Genus: *Plexippus* C. L. Koch, 1846

Diagnosis: Medium to large size salticids. Brownish to blackish in colour. In some species distinct patterns or strips presents. Cephalothorax longer than wide. Ocular quadrangle wider than long. Abdomen longer than wide, moderately oval. Legs are thick and covered with hairs. Sexual dimorphism presents, male being blackish in colour, females are yellowish brown in colour. Male palp is thick and sclerotized, featuring an almost rectangular bulbus that is sharply pointed. Embolus slightly curved, emerging from the upper inner corner of the bulbus. The retrolateral tibial apophysis (RTA) is short and broad. The epigyne has a transverse base and a median upward canal.

1. *Plexippus paykulli* (Audouin, 1826)

(Plate 68J)

Taxonomic account

Attus paykullii Audouin, 1826: 409, pl. 7, fig. 22.

Attus ligo Walckenaer, 1837: 426, pl. 12, fig. 4.

Marpissa bengalensis Tikader, 1974b: 211, figs. 11-12.

Marpissa mandali Tikader, 1974b: 213, figs. 13-16.

Plexippus mandali Nenilin, 1984a: 6.

Plexippus bengalensis Nenilin, 1984a: 6.

Plexippus paykulli Tikader, 1967: 120, figs. 4a-c; Prószyński 2017c: 61, figs. 2A-F, U, 4A, 5L-L1, 6I, 7M; Żabka and Gardzińska 2017: 232, figs. 1A-F, 2A-F; Caleb et al. 2022b: 315, figs. 13-18.

Specimen examined: 1♀ (IV/ARA/ERS/221), 19.xii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax blackish with whitish bands medially and laterally. Ocular region adorned with coarse orangish tuft of hairs. Sternum pale brownish. Legs long, patella, tibiae, metatarsus and tarsus of leg I-IV adorned with longitudinal short blakish markings. Abdomen longer than wide, blackish with a broad blackish longitudinal band and patch of pale brownish markings

Distribution: INDIA: Tamil Nadu, Maahrashtra, Sikkim, West Bengal, Lakshwadeep Islands, Assam (New record); AFRICA. INTRODUCED TO BOTH AMERICAS, EUROPE, MIDDLE EAST, PAKISTAN, INDIA, NEPAL, SOUTHERN ASIA, AUSTRALIA, PACIFIC IS. (WSC 2024).

Natural history: Often seen on tree barks and are active hunters. Consruct thick silken oval retreat on tree barks.

14. Genus: *Portia* Karsch, 1878

Diagnosis: Cephalothorax is compact, with a sharp slope. The posterior median eyes are minute, and there is a conspicuous fovea. The abdomen is broad in the middle. The tarsi and metatarsi of the legs are slender and almost naked, with short stiff hairs and sharp spines on the femur. There is a brush-like patch of stiff hairs on the ventral margin of the

femur, patella, and tibia, among which the tibia, especially of the first pair, is rather inconspicuous. The palpal organ generally features an oval bulbus and a long curved embolus. The epigyne has large oral spermathecae.

1. *Portia fimbriata* (Doleschall, 1859)

(Plate 47A-F, 68K)

Taxonomic account

Salticus fimbriatus Doleschall, 1859: 22, pl. 5, figs. 8.

Sinis fimbriatus Thorell, 1878b: 269.

Linus fimbriatus Peckham and Peckham, 1886: 289; Peckham and Peckham, 1901a: 342, pl. 25, fig. 5; Simon, 1901a: 411, figs. 435-443; Sherriffs, 1939b: 196, pl. 24, fig. 2; Roewer, 1965: 17, figs. 17a-c, 18; Chrysanthus, 1968: 49, figs. 1-6; Prószyński, 1971e: 385 (S).

Linus alticeps Pocock, 1898j: 117, pl. 11, fig. 14.

Boethoportia ocellata Hogg, 1915b: 502, fig. 1.

Portia fimbriata Wanless, 1978f: 99, figs. 7A-G, 8A-F, pl. 3a-f, 4c-f, 5c-d, f; Wanless, 1984b: 446, figs. 19D, F, 21A-E, 22A, C; Davies and Żabka, 1989: 194, pl. 3; Chikuni, 1989b: 157, figs. 50; Wijesinghe, 1990: 101, figs. 1-6; Jastrzebski, 1997c: 711, figs. 26-30; Chang and Tso, 2004: 30, figs. 15-18; Ono, Ikeda and Kono, 2009: 564, figs. 23-24; Sen et al., 2015: 44, figs. 170-176, pl. 14; Dhali, Saha and Raychaudhuri, 2017: 41, figs. 123-129, pl. 18; Fu 2018: 147, figs. 25-18.A-D, pl. 31; Peng, 2020: 344, figs. 246a-d.

Specimens examined: 2♀ (IV/ARA/ERS/222), 26.viii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapace dark brownish, slender, covered with tinge scanty patches of brownish hairs (Plate 47A). Ocular region covered with coarse balkish hairs, eyes sourrounded by whitish orange hairs. Sternum dark orange. Legs blackish brown, tibiae and patella of legs I-IV with orangish fringes (Plate 47A, C). Abdomen blackish brown, clothed with orangish hair tufts dorsally (Plate 47A). Ventrum blackish (Plate 47B).

Distribution: INDIA: Kerala, West Bengal, Assam (New record); SRI LANKA, NEPAL, CHINA, TAIWAN TO AUSTRALIA (WSC 2024).

Natural history: Found preying on other spiders and invade webs of other spiders. They are seen mimicking plant debris.

15. Genus: *Rhene* Thorell, 1869

Diagnosis: Cephalothorax flat, wider than long, covered by dense hairs. Legs are short and thick, First pairs of legs are robust. The posterior lateral eyes (PLE) are positioned posteriorly, while the posterior median eyes (PME) are closer to the anterior row. Abdomen pointed posteriorly. Distinct colour pattern can be seen in some species. Epigyne is less conspicuous. Male palp features a swollen bulbus and a short, curved conductor.

1. *Rhene flaviocomans* Simon, 1902

(Plate 68L)

Taxonomic account

Rhene flavicomans Simon, 1902d: 33.

Rhene flavicomans Prószyński, 1984a: 119-121.

Rhene biembolusa Song and Chai, 1991: 23, figs. 14A-E.

Rhene biembolusa Peng, Xie and Kim, 1994: 32, figs. 5-9.

Rhene flavicomans Jastrzebski, 1997b: 51, figs. 9-11.

Rhene biembolusa Song, Zhu and Chen, 1999: 543, figs. 314E-F, M-N, 328E.

Rhene biembolusa Peng, 2020: 386, figs. 280a-i.

Rhene flavicomans Caleb et al., 2022a: 390, figs. 1-4.

Specimen examined: 1♀ (IV/ARA/ERS/223), 15.xi.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapce brownish yellow, clothed with dense whitish hairs. Eyes arranged in three

rows, third row wider than first row. Sternum blackish gray. Legs reddish brown, covered with thick hairs and setae. Abdomen oval shaped and brownish yellow, distinct stamp shaped brownish patch dorsally, tip of the abdomen brownish. Ventrum grayish.

Distribution: INDIA: West Bengal, Tamil Nadu, Assam (New record); SRI LANKA, NEPAL, BHUTAN, CHINA, THAILAND, VIETNAM (WSC 2024).

Natural history: They resembles beetles on surface of leaves. Active jumper and hunter, constructs silken retreat underside of leaves.

16. Genus: *Siler* Simon, 1889

Diagnosis: Small to medium size salticids. Brightly coloured habitus in some species. Cephalothorax oval, cephalic area high. Abdomen oval to elongated, covered with lustrous setae. Legs slender, short stiff spines present. First pair of legs robust in some species.

1. *Siler semiglaucus* (Simon, 1901)

(Plate 69A)

Taxonomic account

Cyllobelus semiglaucus Simon, 1901a: 549, fig. 664; Simon, 1901c: 151; Reimoser, 1925: 91.

Siler semiglaucus Prószyński, 1984a: 137; Prószyński, 1985: 73, figs. 14-15, 18-20; Xie, 1993: 360, figs. 18-23; Peng et al., 1993: 212, figs. 645-753; Song, Zhu and Chen, 1999: 568, figs. 315M, 316C-D, 329J; Kulkarni and Joseph, 2015: 7701, images 1a-b, 2a-b, 3a-b, 4; Sen et al., 2015: 40, figs. 130-135, pl. 13; Roy, Saha and Raychaudhuri, 2016: 10, figs. 8A-E, 24F, 27D; Dhali, Saha and Raychaudhuri, 2017: 37, figs. 92-95, pl. 18; Peng, 2020: 408, figs. 297a-i.

Specimens examined: 2♀ (IV/ARA/ERS/224), 22.x.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapace design featuring greenish with reddish blue stripes, clothed with iridescent hairs. Eyes sourrounded with tinge orange hairs. Sternum pale yellow, Legs pale

yellow with blakichs markings dorsally. Abdomen broad, blackish with reddish coloration adorned with short greenish blue bands dorsally, semicircular whitish band posteriorly. Ventrum pale yellow.

Distribution: INDIA: Kerala, West Bengal, Assam (New record); CHINA AND PHILIPPINES (WSC 2024).

Natural history: Easily identifiable with its colourfull and glittering colouration. Active hunters and constructs silken retreats.

17. Genus: *Telamonia* Thorell, 1887

Diagnosis: Cephalothorax large, elongated and slender. Abdomen elongated and pointed behind. Thick white patches on lateral sides of cephalothorax present in males. Longitudinal stripe may be present on dorsal surface of abdomen. Legs are long, covered with hairs and few stiff spines.

1. *Telamonia dimidiata* (Simon, 1899)

(Plate 48A-H, 69B)

Taxonomic account

Viciria dimidiata Simon, 1899a: 118.

Phidippus pateli Tikader, 1974a: 124, figs. 10-11; Tikader and Malhotra 1978b: 543, figs. 1-3; Tikader and Biswas, 1981: 91, figs. 156-159.

Telamonia dimidiata Prószyński, 1984c: 428, figs. 29-32; Próchniewicz 1990: 156, figs. 10-17; Prószyński 1992b: 207; Sen et al. 2015: 38, figs. 117-121, pl. 13; Roy, Saha and Raychaudhuri 2016: 12, figs. 10A-E, 24H, 27F.

Specimens examined: 2♀ (IV/ARA/ERS/225), 29.x.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cepalothorax pale yellow, elongated posteriorly (Plate 48A). Ocular region covered with coarse whitish hairs, eyes blackish. Sternum pale yellow (Plate 48B). Legs long and slender, pale white, covered with short hairs and blackish spines. Abdmen whitish, adorned with lanceolate shaped blackish marking (Plate 48A). Ventral pale yellowish (Plate 48B).

Distribution: INDIA: Gujarat, Maharashtra, Tamil Nadu, West Bengal, Assam (New record); PAKISTAN, INDIA, NEPAL, BHUTAN, MALAYSIA, SINGAPORE, INDONESIA (SUMATRA) (WSC 2024).

Natural history: Large jumping spider, commonly seen on leaves and tree bark. They construct silken retreat underside of leaves and tree barks.

18. Genus: *Vailimia* Kammerer, 2006

Diagnosis: *Vailimia* displays distinctive physical characteristics. These spiders typically have a moderately sized body, featuring a elongated cephalothorax that is flatter in appearance. Their eyes are arranged in two rows, with the front-facing median eyes notably larger than the others. Their chelicerae are sturdy, with prominent teeth, and their legs are relatively long and slender, suited for rapid movement. The abdomen of *Vailimia* spiders is elongated and often adorned with unique markings aiding in species differentiation. Female *Vailimia* have a simple yet identifiable epigyne, with a median septum usually visible near the posterior half close to the epigastric furrow. Male spiders are distinguished by a simple retrolateral tibial apophysis (RTA) and a membranous conductor without a defined shape. These distinctive physical traits, along with their specific genital structures, set *Vailimia* apart from other genera within their family.

1. *Vailimia jharbari* Basumatary, Caleb and Das, 2020

(Plate 49, 50)

Taxonomic account

Vailimia jharbari Basumatary, Caleb and Das, in Basumatary et al., 202**0**: p. 182, figs. 12-27

Vailimia jharbari Asima, Caleb and Prasad, 2024: p. 268, figs. 50-51, 57-58.

Type material: Holotype: 1♂ (ZSI-6591/18) Jharbari Forest under Chirang Reserve Forest, Kokrajhar, Assam, India (26°36’18.8” N, 90°14’31” E, 74 m), 01.II. 2017, coll. P. Basumatary.

Paratypes: 1 ♂ (ZSI-6592/18) Jharbari Forest Range under Chirang Reserve Forest (26°35'49.3" N, 90°14'15.7" E, 72 m), 21.XII.2017; 2 ♀♀ (ZSI-6593/18) and (ZSI-6594/18) (26°36'16.5" N, 90°14'16.1" E, 81m), 11.XII.2018, coll. P. Basumatary.

Etymology: The specific name originates from the Jharbari Forest range, where the species was discovered. It is used as a noun in apposition.

Diagnosis: The species closely resembles *Vailimia longitibia* Guo, Zhang and Zhu, 2011 in general appearance and the shape of the palpal organ but differs by having a long and slim RTA with a wide base and blunt tip. The epigyne is situated on a sclerotized plate, with globular spermathecae and short fertilization ducts. The copulatory duct forms a short, single loop above the spermathecae.

Male: Total length: 6.63; carapace: 3.12 long, 2.77 wide; abdomen: 3.51 long, 2.23 wide. Carapace is brown and bulging, covered with gray-whitish hairs, and slightly depressed on the mid PMEs. There is a transverse blackish area extending from the ALE through the PME to the end of the PLE, with coarse whitish hairs laterally on both sides below the ocular region. Both the AMEs and ALEs are surrounded by whitish orbital setae. Eye measurements: AME 0.73, PME 0.14, ALE 0.37, PLE 0.34, AME-AME 0.08, PME-PME 2.32, AME-ALE 0.17, PME-PLE 0.35, AME-PME 0.89, ALE-ALE 1.82, ALE-PME 0.39, PLE-PLE 2.61. The chelicerae are dark amber with yellowish tips, featuring two promarginal teeth and a single bifurcated retromarginal tooth. The sternum is pale brown and oval-shaped, while the labium and maxillae are also pale brown. The legs are brownish and covered with short, black bristle-like hairs; the coxa and femur of legs I-IV have coarse whitish hairs (Plate 50A, C). Leg measurements: I 7.18 (2.11, 1.51, 1.81, 1.03, 0.72); II 5.04 (1.84, 0.76, 1.22, 0.83, 0.39); III 5.97 (2.58, 0.82, 0.80, 1.29, 0.48); IV 5.99 (2.11, 0.93, 1.21, 1.34, 0.40). The abdomen is elongated and oval, pale brown with sparse blackish hairs and short chevron markings along the mid-dorsal area. The dorsum features two pairs of sigillae, while the venter is pale creamy white with coarse whitish hairs along the sides and a broad, longitudinal blackish stripe running down the mid-ventral area (Plate 50A). The spinnerets are brownish, surrounded by small patches of white hairs. The palps are creamy white and covered with whitish hairs; the tibia has long blackish hairs on the

lateral side; the cymbium is covered with coarse blackish hairs and features a tuft of black hairs in the middle (Plate 50D, E, F). The RTA is long and slender with a blunt tip, a broad base, and is slightly upcurved. The embolus is also long and slender (Plate 50E).

Female: Total length: 9.12; carapace: 4.02 long, 3.16 wide; abdomen: 5.10 long, 3.40 wide. The coloration pattern is similar to that of the male but differs in the following way: the carapace lacks the transverse blackish area extending from the ALE through the PME to the end of the PLE (Plate 49D). Eye measurements: AME 0.79, PME 0.15, ALE, PLE 0.41, AME-AME 0.10, PME-PME 2.60, AME-ALE 0.18, PME-PLE 0.55, AME-PME 0.93, ALE-ALE 2.05, ALE-PME 0.36, PLE-PLE 2.88. The abdomen features black markings on the sides with a short dark mid-dorsal line linking to the chevron pattern. A wide longitudinal black stripe runs along the mid-ventral area from the epigastric furrow to the end of the abdomen (Plate 49A). Leg measurements: I 6.85 (1.98, 1.47, 1.71, 0.86, 0.83); II 6.19 (2.18, 1.17, 1.18, 0.93, 0.73); III 7.71 (2.99, 1.53, 1.41, 1.12, 0.66), IV 6.82 (2.30, 1.16, 1.46, 1.23, 0.671). The epigyne exhibits a shape akin to a heart, featuring lateral copulatory openings, while the epigynal plate is hardened (Plate 49F, G, H, I). The spermathecae appear rounded with short fertilization ducts, and the copulatory ducts are slim, lacking any convolutions, and form a concise, singular loop above the spermathecae (Plate 49F, G, H, I).

Distribution. INDIA (Assam, Kerala).

Natural history: The species is nocturnally active, typically located within mixed shrubbery amidst dry tree twigs.

15. Family: Sparassidae Bertkaw, 1872

Diagnosis: Medium to large spiders. The cephalothorax is broadly oval, tapering at the front. Eyes are arranged in two rows, with anterior eye sizes varying between genera; chelicerae have a boss and two rows of teeth. Legs are long and robust, laterigrade, with the first two pairs longer than the third and fourth pairs, and well-developed leg scopulae. Trochanters are slightly notched. Abdomen is round to oval. Epigyne is sclerotized and intricate. Male palp features a prominent tibial apophysis.

1. Genus: *Heteropoda* Latreille, 1804

Diagnosis: Cephalothorax is broadly oval, longer than wide, narrower near the eyes, and covered with fine setae. Its color ranges from cream to dark brown, grey, green, or white, often with dark stripes and a mottled pattern. Eight eyes in two rows, with varying anterior eye sizes and evenly spaced posterior eyes. Sternum is pointed and longer than wide, the labium is short and rebordered, and the maxillae have a thick scopula and serrula. Chelicerae have two rows of teeth and a boss. Legs are long, laterigrade, and the first two pairs are longer than the last two, with well-developed scopulae and claw tufts. Trochanters are slightly notched, and metatarsi have a trilobate membrane. Abdomen is round to oval, densely set with fine setae, and often features a dark, heart-shaped mark. The epigyne is complex and sclerotized, and the male palp has a strong tibial apophysis.

1. *Heteropoda venatoria* (Linnaeus, 1767)

(Plate 69D)

Taxonomic account

Aranea venatoria Linnaeus, 1767: 1035.

Aranea venatoria Fabricius, 1775: 439; Olivier, 1789: 230 (D).

Aranea regia Fabricius, 1793: 408 (D).

Aranea pallens Fabricius, 1798: 291 (D).

Heteropoda invicta Bösenberg and Strand, 1906: 275, pl. 15, fig. 437, pl. 16, fig. 448.

Heteropoda venatoria chinesica Strand, 1907b: 559.

Heteropoda venatoria japonica Strand, 1907b: 559.

Heteropoda venatoria maculipes Strand, 1907b: 559.

Heteropoda venatoria Latreille, 1804b: 135 (D); Bösenberg and Strand, 1906: 273, pl. 6, fig. 64, pl. 16, fig. 453; Gravely, 1931: 251, figs. 9C, 10D; Sethi and Tikader, 1988: 16, figs. 52-57; Jäger, 2014b: 147, figs. 1-25; Korai and Wang, 2023a: 44, figs. 9A-E, 10A-D, 12E.

Specimen examined: 1♀ (IV/ARA/ERS/227), 12.xi.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax wide and flat, brownish. Anterior eye rows procurved and posterior rows recurved. Sternum brownish. Legs very long and strong, covered with numerous blaciish setae. Abodmen brownish, tapering posteriorly and truncated anteriorly, distinct two pairs of sigilla. Venter pale brownish.

Distribution: INDIA: Throughout the country; TROPICAL ASIA. INTRODUCED TO PACIFIC IS., NORTH, CENTRAL AND SOUTH AMERICA, MACARONESIA, EUROPE and AFRICA (WSC 2024).

Natural history: Commonly seen on tree trunks. Females are seen carrying egg sac.

2. Genus: *Olios* Walckenaer, 1837

Diagnosis: The cephalothorax is notably high and convex, with an indistinct or absent fovea. The anterior eye row is straight, while the posterior row is slightly curved forward. Leg II is longer than leg I, and tibia I is equipped with two pairs of ventral spines. The abdomen is oval or elongated. Females generally have a membranous internal duct system.

1. *Olios lamarcki* (Latreille, 1806)

(Plate 69E)

Taxonomic accounts

Thomisus lamarcki Latreille, 1806: 113.

Olios captiosus Walckenaer, 1837: 565; Vinson, 1863: 93, 304, pl. 2, fig. 1.

Sparassus lamarcki Pocock, 1900a: 267.

Eusparassus lamarcki Järvi, 1912: 60, fig. 50, pl. 4, figs. 11-13; Järvi, 1914: 176.

Olios lamarcki Simon, 1880a: 301; Karsch, 1892: 292, pl. 11, fig. 14; Gravely, 1931: 241, figs. 5B, 6B-C; Akash, Jahan and Badhon, 2017: 99, figs. 2a-c; Caleb, 2018b: 339, figs. 1-17 (mf).

Specimen examined: 1♀ (IV/ARA/ERS/228), 24.x.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax yellowish brown, clothed with brownish hairs, distinct fovea. Anterior ocular area blackish. Sternum pale brown. Legs brownish, covered with blackish

spines, distal ends of femora and prximal end of patella legs I-IV colured blackish brown, metatarsus and tarsus leg I-IV blackish. Abdomen yellowish, blackish markings dorsally. Sternum pale brownish.

Distribution: INDIA: Tamil Nadu, West Bengal, Orissa, Assam (New record); MADAGASCAR, SRI LANKA, BANGLADESH (WSC 2024).

Natural history: Commonly seen on shrub vegetation. Female carries egg sac.

2. Genus: *Thelcticopis* Karsch, 1884

Diganosis: Medium to large, with a broadly oval cephalothorax that narrows anteriorly and is distinctly high and convex, often covered in fine setae with an indistinct or absent fovea. Their coloration ranges from cream to dark brown, grey, green, or white, often with dark stripes and mottled patterns. They have eight eyes arranged in two rows, with the anterior row straight and the posterior row slightly procurved; anterior eye sizes vary, while median eyes are typically the largest and the posterior row is evenly spaced. Sternum has a pointed apex and is longer than wide to almost circular. Their long, strong legs are laterigrade, with leg II longer than leg I, and the first two pairs longer than the third and fourth pairs; tibia I has two pairs of inferior spines. Abdomen is round to oval or elongated, densely covered with fine setae, often marked with a dark heart-shaped median mark. Epigyne is complex and sclerotized, and the male palp features a strong tibial apophysis.

2. *Thelcticopis severa* (L. Koch, 1875)

(Plate 51A-H, 69F)

Taxonomic account

Themeropis severa L. Koch, 1875a: 699, pl. 60, fig. 1.

Stasina maculifera Dönitz and Strand, in Bösenberg and Strand, 1906: 286, pl. 6, fig. 77.

Stasina japonica Strand, in Bösenberg and Strand, 1906: 278, pl. 13, fig. 310.

Theleticopes jiulongensis Zhang and Kim, 1996: 79, figs. 10-15; Song, Zhu and Chen, 1999: 469, fig. 270L.

Thelcticopis severa Simon, 1897a: 72; Bösenberg and Strand, 1906: 276, pl. 6, fig. 65, pl.

14, fig. 443; Saito 1959: 121, figs. 153a-b; Yaginuma, 1986a: 198, fig. 110.2; Hu and Ru, 1988: 93, figs. 1-5; Chikuni, 1989b: 131, fig. 5; Zhang and Kim, 1996: 80, figs. 16-21; Song, Zhu and Chen, 1999: 469, fig. 270Q; Jäger and Yin, 2001: 131; Namkung, 2002: 501, figs. 40.5a; Namkung, 2003: 504, figs. 40.5a; Ono, 2009a: 475, figs. 54-57; Ono, 2009a: 592; Yin et al., 2012: 1243, figs. 667a-f; Zhu, Lin and Zhong, 2020: 109, figs. 2A-H, 3A-F.

Specimens examined: 2♀ (IV/ARA/ERS/229), 25.ix.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapace blackish, adorned with yellowish hairs, elevated cephalic area, sloping thoracic region, distinct cervical groove (Plate 51A). Eyes pearly white. Anterior eye rows slightly curved and posterior rows procurved. Legs long and strong, blackish, covered with yellowish hairs, clothed with blackish spines. Sternum blackish. Abdomen elliptical and elongated, blackish and covered with chevron shaped yellowish hairs (Plate 51C, D). Venter blackish. Epigyne scletorized, ridge median septum, spemathecae sac shaped (Plate 51G, H).

Distribution: INDIA (New record), KOREA, JAPAN, TAIWAN, CHINA, LAOS (WSC 2024).

Natural history: Found among shrub vegetation. Constructs leaf retreat by sticking two leaves with silk.

16. Family: Tetragnathidae Menge, 1866

Diagnosis: Cephalothorax is longer than wide, and they have eight eyes arranged in two rows. The sternum is pointed at the rear. The chelicerae vary, being either short and stout or long and well-developed, equipped with a row of large teeth and strong projecting spurs. Legs are long and end in three claws. Abdomen can be elongated, cylindrical, or round to ovoid. Epigyne lacks external structures. Male palp features a movable paracymbium, a coiled embolus and conductor, and lacks a median apophysis.

1. Genus: *Leucauge* White, 1841

Diagnosis: Cephalothorax is truncated at the front, with a deep fovea directed towards the rear. Legs elongated and slender, Legs I and II are long and slender, with femur IV having a double fringe of hairs on the prolateral side. Abdomen rounded to oval covered with silvery guanine patches and a paired row of long and feathered trichobothria on the femur of fourth leg.

1. *Leucauge decorata* (Blackwall, 1864)

(Plate 69G)

Taxonomic account

Tetragnatha decorata Blackwall, 1864b: 44; O. Pickard-Cambridge, 1869b: 389, pl. 13, figs. 61-68.

Nephila angustata Stoliczka, 1869: 241, pl. 20, fig. 7.

Meta decorata L. Koch, 1872a: 141, pl. 11, fig. 5.

Argyroepeira celebesiana Workman, 1896: 52, pl. 52.

Leucauge decorata Simon, 1906c: 282; Lessert, 1915a: 23, pl. 1, figs. 14-15, 22-23; Gravely, 1921b: 451, 454, figs. 8d-e; Dyal, 1935: 187, pl. 11, fig. 7, pl. 16, figs. 120-130; Tikader, 1970: 41, figs. d-f; Chu and Okuma, 1970: 72, figs. 4A-C; Chrysanthus, 1975: 23, figs. 88-94; Yin, 1976: 121, pl. III.1-5; Song, 1980: 117, figs. 60a-c; Tikader and Biswas, 1981: 41, figs. 67-69; Tikader, 1982a: 78, figs. 155-158; Hu, 1984: 138, figs. 139.1-2; Guo, 1985: 81, figs. 2-30.1-3; Chen and Gao, 1990: 77, figs. 97a-b; Tanikawa, 1990a: 10, figs. 10-14; Barrion and Litsinger, 1994: 328, figs. 1755-1757; Barrion and Litsinger, 1995: 539, figs. 332a-g, 333a-f; Song, Zhu and Chen, 1999: 216, figs. 121H-I, 122E-F, 130L-M; Hu, 2001: 592, figs. 402.1-1; Zhu, Song and Zhang, 2003: 228, figs. 122A-E, 123A-D; Butt and Siraj, 2006: 217, figs. 2A-C; Gajbe, 2007: 509, figs. 263-265; Tanikawa, 2007c: 102, figs. 354, 806-807; Tanikawa, 2009: 412, figs. 43-44; Yin et al., 2012: 437, figs. 196a-e; Sen et al., 2015: 102, figs. 595-600, pl. 21; Dippenaar-Schoeman et al., 2020t: 14, p. 14: 7 figs., p. 15: 6 f.; Dippenaar-Schoeman et al., 2023a: 17, p. 17: 1-7, p. 18: 8-9.

Specimen examined: 1♀ (IV/ARA/ERS/230), 16.xii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax longer than wide, clothed with whitsh hairs, raised cephalic region.

Ocular region wide, both eye rows recurved. Sternum pale yellowish. Legs long and slender, clothed with fine hairs. Abdomen elongated, prominently raised anteriorly, silvery whitish and blakish patches dorsally. Ventrum with pair of longitudinal silvery patches.

Distribution: INDIA: Gujarat, Uttar Pradesh, Kerala, Karnataka, Meghalaya, Tamil Nadu, Orissa, Sikkim, Bihar, West Bengal, Maharashtra, Assam; TANZANIA, BOTSWANA, MOZAMBIQUE, SOUTH AFRICA, COMOROS, PAKISTAN, NEPAL, BANGLADESH, CHINA, JAPAN, THAILAND, PHILIPPINES, INDONESIA, PAPUA NEW GUINEA, AUSTRALIA (WSC 2024).

Natural history: Constructs orb web among open low shrub vegetation.

2. *Leucauge fastigata* (Simon, 1877)

(Plate 69H)

Taxonomic account

Meta fastigata Simon, 1877b: 79, pl. 3, f.ig 10.

Meta fastuosa Thorell, 1877b: 413.

Meta elegans Thorell, 1877b: 416.

Callinethis elegans Thorell, 1887: 134; Workman and Workman, 1894: 22, pl. 22; Thorell, 1895b: 156.

Callinethis fastuosa Thorell, 1890a: 193.

Argyroepeira fastigiata Simon, 1894a: 732, fig. 817; Pocock, 1900a: 216.

Argyroepeira fastuosa Merian, 1911: 188.

Leucauge fastuosa Roewer, 1938: 48, fig. 32.

Opadometa fastigiata Archer, 1951a: 9; Zhu, Song and Zhang, 2003: 286, figs. 159A-K; Dzulhelmi et al., 2015: 102, figs. 1-2; Sen et al., 2015: 100, figs. 580-584, pl. 20; Dzulhelmi et al., 2015: 102, figs. 1-2; Sen et al., 2015: 100, figs. 580-584, pl. 20.

Leucauge fastigiata Simon, 1905c: 61; Tikader, 1982a: 76, figs. 151-154; Barrion and Litsinger, 1995: 540, figs. 335a-f; Yoshida, 2009d: 16, figs. 26-28; Anju, Bhagirathan and Sudhikumar, 2021b: 162, figs. 1A-F, 2A-E.

Specimens examined: 2♀ (IV/ARA/ERS/231), 23.ix.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax long, brownish orange in colour, clothed with whitish hairs. Eyes surrounded by blackish rings, placed on tubercles. Sternum brownish yellow. Legs slender, clothed with spines, legs I-IV with blackksh annulations. Abdomen posteriorly broad, overalapping the carapace anteriorly, dorsum with whitish silvery patches. Ventrum with silvery patches.

Distribution: INDIA: West Bengal, Kerala, Uttar Pradesh, Orissa, Assam (New record); PHILIPPINES, INDONESIA (SULAWESI) (WSC 2024).

Natural history: Constructs horizontal orb web among open space under good canopy cover.

2. Genus: *Tetragnatha* Latreille, 1804

Diagnosis: Cephalothorax is oval, widest in the middle, and flattened on top, featuring a prominent thoracic groove. Eye rows can be parallel, convergent, or divergent, with each eye encircled by a black ring. Chelicerae are well-developed, particularly in males, which have a clasping spur that may be bifid at the tip. Both legs and palps are very long and slender.

1. *Tetragnatha javana* (Thorell, 1890)

(Plate 69K)

Taxonomic account

Eucta javana Thorell, 1890a: 236; Thorell, 1895b: 146; Gravely, 1922: 1047, pl. 2, fig. 4.

Tetragnatha javana Okuma, 1968b: 100, f. 4A-F; Yin, 1976: 125, pl. XI.1-13; Song, 1980: 128, figs. 67a-h; Barrion and Litsinger, 1994: 324, figs. 1700-1703; Okuma, 1988b: 169, figs. 2A-L; Dimitrov and Hormiga, 2009: 104, figs. 67A-G, 68A-I, 69A-D; Anju et al., 2024: 995, figs. 9A-D.

Specimens examined: 2♀ (IV/ARA/ERS/234), 20.xi.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax brownish with a C shaped fovea. Eyes in two rows, anterior row straight and posterior rows recurved. Sternum yellowish. Legs yellowish brown and

slender. Abdomen narrow and elongated, brownish with silvery patches dorsally. Ventrum brownish.

Distribution: INDIA: West Bengal, Bihar, Karnataka, Orissa, Tamil Nadu, Assam (New record); AFRICA, ASIA (WSC 2024).

Natural history: Found building orb web, but mostly seen resting in plane with tree twigs.

3. Genus: *Tylorida* Simon, 1894

Diagnosis: Cephalothorax is oval, widest at the middle, and flattened above, with a prominent thoracic groove. The eye rows can be parallel, convergent, or divergent, with each eye surrounded by a black ring. Legs and palps are exceptionally long and thin. The abdomen is elongated, almost twice as long as it is wide, broad at the anterior and narrowing posteriorly, sometimes featuring a shoulder hump and caudal tubercle. Abdomen often displays silver decorations. Legs I and II are long and slender, with femur IV having a double fringe of hairs on the prolateral side. The epigyne lacks external structures, and the male palp features a movable paracymbium, a coiled embolus and conductor, and lacks a median apophysis.

1. *Tylorida striata* (Thorell, 1877)

(Plate 69J)

Taxonomic account

Meta striata Thorell, 1877b: 427; van Hasselt, 1882: 25.

Meta stellimicans Simon, 1886c: 449.

Argyroepeira bigibba Thorell, 1887: 140.

Argyroepeira striata Thorell, 1887: 142; Workman and Workman, 1894: 19, pl. 19.

Tylorida stellimicans Simon, 1894a: 737.

Tylorida striata Simon, 1894a: 737, fig. 809.

Tylorida striata Kulkarni and Yadav, 2015: 3, figs. 1a-c, 3.

Tylorida striata Sankaran et al., 2017b: 308, figs. 1D, 2B, 7D-F, 12F-G, 13A-F, 14A-G.

Specimen examined: 1♀ (IV/ARA/ERS/233), 19.ix.2018, Jharbari Forest Range, collected

by Paris Basumatary.

Female: Cephalothorax yellowish with blackish margins, grayish longitudinal bands from PMEs to fovea. Two rows of eyes, recurved anetior rows and procurved posterior rows. Sternum grayish. Legs yellowish, lon g and slender, covered with brownish spines. Abdomen yellowish adorned with silvery bands dorsally and laterally. Ventrum yellowish.

Distribution: INDIA: West Bengal, Nicobar Islands, Kerala, Assam (New record); COMOROS, CHINA, SE ASIA TO AUSTRALIA (QUEENSLAND) (WSC 2024).

Natural history: They construct irregular orb web on underside of shrub vegetation.

2. *Tylorida ventralis* (Thorell, 1877)

(Plate 69I)

Taxonomic account

Meta ventralis Thorell, 1877b: 423.

Argyroepeira ventralis Thorell, 1887: 138; Workman, 1896: 55, pl. 55.

Leucauge ventralis Pocock, 1904: 800, pl. 66, fig. 3; Tikader, 1982a: 85, figs. 168-171.

Anopas ventralis Archer, 1951a: 7, figs. 8-9.

Leucauge pondae Tikader, 1970: 44, figs. 25a-d; Tikader, 1982a: 89, figs. 175-178.*;* Sen et al., 2015: 101, figs. 585-589, pl. 21.

Leucauge sphenoida Wang, 1991a: 157, figs. 17-20; Song, Zhu and Chen, 1999: 216, figs. 121O, 122K-L, 130R.

Tylorida ventralis Chrysanthus, 1975: 31, figs. 117-120; Yoshida, 1978b: 8, figs. 1-6; Song, Zhu and Chen, 1999: 223, figs. 129C-D, F; Zhu, Wu and Song, 2002: 29, figs. 4A-J; Zhu, Song and Zhang, 2003: 308, figs. 172A-J, pl. XE-H; Tanikawa, 2005a: 153, figs. 3-4, 7-8; Tanikawa, 2007c: 100, figs. 340-342, 798-799; Tanikawa, 2009: 410, figs. 35-36; Jäger and Praxaysombath, 2009: 35, figs. 18, 24-37; Yin et al., 2012: 472, figs. 216a-f; Kulkarni and Lewis, 2015: 2, figs. 1a, 2a, 3a, 5a; Sankaran et al., 2017b: 310, figs. 1E-F, 2C, 7G-I, 12H-I, 15A-F, 16A-J, 17A-O, 18A-O, 19A-E.

Specimens examined: 2♀ (IV/ARA/ERS/232), 21.xi.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax brownish with blackish striaton medially and laterally. Ocular region blackish and eyes placed on tubercles. Sternum brownish. Legs very long and slender, blackish and covered with spines. Abdomen oval shaped and greenish, slightly overlapping the cephalothorax anteriorly, sigilla prominent. Ventral blackish.

Distribution: INDIA: Sikkim, West Bengal, Kerala, Assam (New record); PAKISTAN, JAPAN, TAIWAN, NEW GUINEA (WSC, 2024).

Natural History: Found constructing large orb web along the perennial streams. They generally lie in resting posting among tree twigs or leaves with first two pairs of legs directed straight outwards and rest backwards.

17. Family: Theridiidae Sundevall, 1833

Diagnosis: Cephalothorax exhibits variability, sternum takes on a triangular shape. Legs are long, equipped with three claws each, and leg IV features a comb on the tarsus. Abdomen varies, ranging from oval to round and from tall to elongated. Epigyne typically contains one or two pairs of spermathecae. Male palp lacks apophysis, and the paracymbium shapes a hook on the distal edge of the cymbium.

1. Genus: *Argyrodes* Simon, 1864

Diagnosis: General colouration orange to silver. Male clypeus and ocular quadrangle modified with projections or grooves. Abdomen not extruded into a long protrusion. Abdomen usually modified with humps, worm shaped, higher than long. Abdomen with bright white shining guanine spots. Colulus present or replaced by two setae.

1. *Argyrodes miniaceus* (Doleschall, 1857)

(Plate 52A-E, 69L)

Taxonomic account

Theridion miniaceum Doleschall, 1857: 408.

Argyrodes miniatus Thorell, 1881: 161.

Argyrodes walkeri Rainbow, 1902b: 524, pl. 28, figs. 2-3

Argyrodes musgravei Rainbow, 1916a: 52, pl. 15, f. 28.

Argyrodes miniaceus Thorell, 1878b: 138; Nakatsudi, 1943a: 152, figs. 3a-c; Chrysanthus, 1963: 739, figs. 63-66, 69; Barrion and Litsinger, 1994: 304, figs. 1550-1553; Tanikawa, Chida and Kumada, 1996: 48, figs. 2, 4, 6, 8, 10; Kim and Kim, 2007: 216, figs. 2A-H, 7B-C; Sibi, Gigi and Sudhikumar, 2022: 91, figs. 1A-D, 2A-E.

Specimens examined: 2♀ (IV/ARA/ERS/235), 26.xii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax reddish brown (Plate 52A). Eyes place on tubercles, anterior eyes row recurved and posterior rows straight. Sternum brownish. Legs slender and blackish. Abdomen pentagonal shaped, silvery markings dorsally and laterally (Plate 52C). Ventral brownish. Epigyne with sceltorized ridge; spermathecae spherical, FDs short and arise posteriorly from spermathecae and directed inwards; CDs long and directed outwards forming almost U shaped (Plate 52D, E).

Distribution: INDIA: Kerala, Assam (New record); KOREA, JAPAN TO AUSTRALIA (WSC 2024).

Natural history: They are found inhabiting orb webs of *Nephila pilipes* and *Crtophora unicolor*. Ocassionally seen constructing single dgraline.

2. Genus: *Ariamnes* Thorell, 1869

Diagnosis: Cephalothorax is flat, longer than it is wide, with a rectangular shape that tapers towards the front. It bears eight eyes arranged in two rows, with the anterior row curving backward and the posterior row slightly curving forward. Ocular quardangle widens towards the rear. Sternum is longer than it is wide. Legs are slender and lengthy, with the fourth leg being the longest, following a formula of 4123. Abdomen extends into a long, curved shape, narrowing towards the rear and often pointed at the tip.

1. *Ariamnes cylindrogaster* Simon, 1889

(Plate 53A-C, 70A)

Taxonomic account

Ariamnes cylindrogaster Simon, 1889d: 251.

Ariamnes cylindrogaster Bösenberg and Strand, 1906: 128, pl. 5, figs. 53, pl. 10, fig. 195, pl. 12, figs. 245, 262.

Ariamnes cylindrogaster Baba and Tanikawa, 2015: 22, 6 fig.

Ariamnes cylindrogaster Jin, 2018: 14, figs. 4-3.A-G, pl. 3.

Ariamnes cylindrogaster Kim, 2021: 24, figs. 6A-G, pl. 2.

Specimen examined: 1♀ (IV/ARA/ERS/55), 13.x.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax greenish with a pale yellow longitudinal band (Plate 53A). Two rows of eyes, anterior row recurving and posterior row slightly procurved. Sternum greenish. Legs greenish and slender, leg IV longer than rest, femora and tibia of legs I-IV with yellowish annulations, spines absent. Abdomen whip shaped, thin and elongated, dark greenish with sparse yellowish markings (Plate 53A). Ventral greenish. Spermathecae kidney shaped; FDs short and forms single loop anteriorly; CDs long, forming and curved inwards anteriorly (Plate 53B, C).

Distribution: INDIA: Assam (New record); JAPAN, KOREA, CHINA, TAIWAN, LAOS (WSC 2024).

Natural history: This spider resembles a plant tendril. They are generally seen dangling on single silk line, sometimes with an egg sac.

3. Genus: *Chrysso* O. Pickard-Cambridge, 1882

Diagnosis: Cephalothorax is longer than it is wide, with the anterior row of eyes slightly curving forward, and the posterior row either straight or slightly curving forward or backward. The anterior median eyes are separated by a diameter of one anterior median eye or more and are positioned closer to the anterior lateral eyes than to each other, while the posterior median eyes are moderately closer to each other than to the lateral eyes. Eyes are mostly equal in size, or the anterior median eyes may be slightly larger or smaller than the others. Sternum is truncated between the posterior coxae. First leg is the longest, with patellae featuring a tubercle on the back, and the fourth tarsus bears a comb. Abdomen is

longer than it is wide, extending beyond the spinnerets, with lateral sides featuring furrows or stripes and dorso-lateral spines, often appearing subtriangular in lateral view. Epigyne complex, well-sclerotized. Spermathecal ducts can be relatively short or more extended and convoluted, depending on the species.

1. *Chrysso scintillans* (Thorell, 1895)

(Plate 70B)

Taxonomic account

Physcoa scintillans Thorell, 1895b: 83.

Argyria venusta Yaginuma, 1957b: 11, figs. 1A-J.

Argyroaster venusta Yaginuma, 1958c: 37.

Physcoa scintillans Levi and Levi, 1962: 47, figs. 114-117.

Chrysso venusta Levi, 1962b: 209, figs. 3-5;Yaginuma, 1986a: 46, figs. 24.4.

Linyphia bilobata Roy et al., 2015: 62, figs. 1-7; Sen et al., 2015: 96, figs. 552-557, pl. 20.

Chrysso scintillans Yoshida, 2001c: 174, figs. 66-71; Namkung, 2003: 118, figs. 13.34a-b; Yoshida, 2003a: 120, f. 309-314, 581; Jin, 2018: 18, figs. 4-8.A-G, pl. 4; Kim, 2021: 40, figs. 13A-J, pl. 7.

Specimen examined: 1♀ (IV/ARA/ERS/56), 08.xi.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapace yellowish and longer than it is wide. Eyes arranged in two rows, both slightly concave towards the rear. Sternum appears dark brown. Legs adorned with yellowish orange coloration and marked with black-brown rings. Abdomen features golden-yellow coloration, adorned with silver-scale-like patches that are rhomboidal. Ventral side grayish-yellow.

Distribution: INDIA: West Bengal, Assam (New record); MYANMAR, CHINA, KOREA, JAPAN, PHILIPPINES (WSC 2024).

Natural history: Commonly found on lowerside of the leaves, they are observed giving parental care to the spiderlings.

2. *Chrysso urbasae* (Tikader, 1970)

(Plate 70C)

Taxonomic account

Linyphia urbasae Tikader, 1970: 19, figs. 11a-c.

Linyphia urbasae Sen et al., 2015: 97, figs. 558-562, pl. 20.

Chrysso urbasae Breitling, 2015a: 4.

Chrysso urbasae Vishnudas, Anis and Sudhikumar, 2022: 86, figs. 1A-E, 2A-D.

Specimen examined: 1♀ (IV/ARA/ERS/57), 29.x.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapace brownish, longer than wide and almost round. Pearly white eyes, anterior row of eyes recurving and straight posterior row, eyes bordered by blackish rings basally. Sternum brownish. Legs long brownish, covered with setae, proximal end of tibia and metatarsus blackish. Abdomen elliptical, yellowish, dorsal featuring blackish symmetrical patterns. Ventral side brownish.

Dstribution: INDIA: Sikkim Kerala, Assam (New record) (WSC, 2024).

Natural history: Typically observed on the underside of leaves on top vegetation.

3. *Chrysso angula* (Tikader, 1970)

(Plate 70D)

Taxonomic account

Theridula angula Tikader, 1970: 15, figs. 8a-c.

Theridula swatiae Biswas, Saha and Raychaudhuri, 1997: 230, figs. 1-12.

Chrysso pseudotheridula Siliwal, 2009b: 6, figs. 1-8.

Chrysso angula Sen, Saha and Raychaudhuri, 2011a: 878, figs. 1-19.

Chrysso angula Sen et al., 2015: 84, figs. 481-492, pl. 19.

Chrysso angula Sekhar and Sunil Jose, 2020: 880, figs. 1-11.

Specimen examined: 1 (IV/ARA/ERS/236), 10. x.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax orangish yellow, elevated cephalic region. Ocular region blackish, eyes present in two rows, anteriorly recurved and posteriorly procurved. Sternum brownish. Legs all blackish, except for femora of legs I-IV brownish. Abdomen rhomboid shaped, yellowish orange, featuring two prominent blackish dots laterally and one posteriorly. Venter brownish.

Distribution: INDIA: Sikkim, Kerala, West Bengal, Andhra Pradesh, Arunachal Pradesh, Assam (New record).

Natural history: Generally observed underside of leaves.

4. Genus: *Chikunia* Yoshida, 2009

Diagnosis: Orange or black abdomen and abbreviated legs. Abdomen less sclerotized. Legs are elongated, with the first patella and tibia measuring nearly 2 to 4 times the carapace length, and the abdomen exhibits vibrant hues. Epigyne moderately sclerotized. Spermathecal ducts can be short and straight or more convoluted, depending on the specific species.

1. *Chikunia nigra* (O. Pickard-Cambridge, 1880)

(Plate 70E)

Taxonomic account

Argyrodes nigra O. Pickard-Cambridge, 1880b: 341, pl. 30, fig. 20. *Theridion oxyurum* Thorell, 1890a: 266.*Theridion nigrum* Simon, 1905c: 58. *Theridula caudata* Saitō, 1933b: 44, pl. 3, fig. 4; Lee 1966: 30, figs. 7e-g; Hu 1984: 174, figs. 182.1-

5.*Chrysso nigra* Levi, 1962b: 209, figs. 1-2; Yoshida, 1978a: 23, figs. 4; Yoshida, 1993c: 33, figs. 15, 18-19; Zhu, 1998: 53, figs. 27A-E; Song, Zhu and Chen, 1999: 103, figs. 49G-H, O; Yin et al. 2012: 298, figs. 110a-d; Grinsted, Agnarsson and Bilde, 2012: 1027; Jin 2018: 17, figs. 4-6.A-D, pl. 3.

Chrysso yulingu Barrion, Barrion-Dupo and Heong, in Barrion et al., 2013: 36, figs. 40A-F. *Chikunia nigra* Smith et al., 2019: 341, figs. 1A-C, 6A-L, 9A-I; Lin et al., 2023a: 520.

Specimen examined: 1♀ (IV/ARA/ERS/237), 07.vi.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapace blackish, cephalic area raised. Eyes pearl white, anterior row is distinctly recurved and somewhat longer than the moderately recurved posterior row. Sternum pale blackish. Legs slender, yellowish, tibia of leg IV blackish marked distally. Abdomen subtriangular in shape, as long as it is wide, blackish. Venter place blackish.

Distribution: INDIA: Assam (New record); CHINA, THAILAND, LAOS (WSC 2024).

Natural history: Found living underside of leaves and construct cob webs.

5. Genus: *Meotipa* Simon, 1895

Diagnosis: Cephalothorax longer than wide. Anterior median eyes dark, other eyes inconspicuous white. Anterior eye row procurved, posterior row straight, or slightly procurved or recurved. Leg I longest, leg IV longer than leg II, tarsus IV bears tarsal comb. Abdomen somewhat triangular. Abdomen spiny, irregular, longer than wide and height, extending beyond spinnerets, with dorsolateral spines. Epigyne with deep pit like atrium, copulatory ducts wide basally narrowing into thin, tube like distal part, spermathecae round. Male palp with short embolus, cymbium truncated.

1. *Meotipa picturata* Simon, 1895

(Plate 54A-E, 70F)

Taxonomic account

Meotipa picturata Simon, 1895g: 133.

Meotipa picturata Levi and Levi, 1962: 47, figs. 112-113.

Meotipa picturata Deeleman-Reinhold, 2009b: 410, figs. 1-3.

Meotipa picturata Kulkarni et al., 2017: 515, figs. 39-44.

Meotipa picturata Murthappa et al., 2017: 590, figs. 1A-J, 2A-F, 4A-D.

Meotipa picturata Deng et al., 2022: 161, figs. 3A-H, 9A.

Specimens examined: 2♀ (IV/ARA/ERS/238), 11.viii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax pale whitish featuring reddish stripes medially, elevated cephalic area (Plate 54A). Eyes pearly white except for AMEs blackish. Sternum brownish. Legs long featuring blackish lanceolate spines on femora, patella and tibia distally; femora of leg IV features distoventrally lanceolate spines (Plate 54C). Abdomen triangular shaped and posteriorly raised, adorned with alternating red and blackish stripes, lanceolate spines on posterior knob (Plate 54A, C). Epigyne with broad atrium; copulatory opening distinct; FDs long and curving apically; CDs narrow, concolution absent (Plate 54D, E).

Distribution: INDIA: Tamil Nadu, Goa, Kerala, Assam (New record); CHINA, THAILAND, LAOS, INDONESIA (WSC 2024).

Natural history: They are observed on the underside of leaves, lying laterally. Their retreat contains tree debris, which the spider mimics.

2. *Meotipa ultapani* Basumatary and Brahma, 2019

(Plate 55A-F, 70G)

Taxonomic account

Meotipa ultapani Basumatary and Brahma, 2019: p. 21, figs. 1-15.

Type material. Holotype: 1 ♀ (BMGU/A-10/ARA-34), Ultapani Forest under Chirang Reserve Forest, Kokrajhar, Assam, India (26˚ 36' 21.7" N, 90˚ 14' 44.3" E, 78 m), 21.I.2018, coll. P. Basumatary. Paratypes: 1♀ (BMGU/A-10/ARA-35), same locality as the holotype, 4.III.2018, 1♀ (BMGU/A-10/ARA-36) Jharbari Forest Range (26˚ 36' 22.8" N, 90˚ 14' 45.3" E, 70 m), 4.III.2018, 1♀ (BMGU/A-10/ARA-37) Jharbari Forest Range (26˚ 34' 20.8" N, 90˚ 12' 40.3" E, 70 m), 12.III.2018, coll. P. Basumatary.

Etymology: The specific name is derived from its type locality. The name is used as a noun in apposition.

Diagnosis: The new species is distinguishable from *Meotipa vesiculosa* Simon, 1895 by the following characters viz., kidney- shaped spermathecae, whereas roundish in *M. vesiculosa;* short copulatory ducts and connected to spermathecae laterally, but forms a long, semicircular shape and connecting posteriroly to spermathecae in *M. vesiculosa*; fertilization ducts medial but posterior in *M. vesiculosa;* ventro-distal part of femora I with one lanceolate spine, whereas pair in *M. vesiculosa.*

Female: Total length 3.1; carapace length 1.25, width 0.94; abdomen length 1.85. Carapace pale whitish gray with median stripes that are shortened laterally on both sides; A light reddish wide central stripe extends from the ocular region to the fovea, accompanied by a dark wide patch from the AMEs to the far end of the clypeus (Plate 55A). Eyes elevated from sloping clypeus, anterior median eyes (AMEs) are reddish-black, while the remaining eyes are pearly white, encircled by a brown ring (Plate 55A). Eye sizes: AME 0.09, ALE 0.03, PME 0.07, PLE 0.08; interdistances between eyes: AME-AME 0.07, PME-PME 0.07, PME-PLE 0.03, AME-PME 0.05, ALE-ALE 0.32, PLE-PLE 0.37. The chelicerae, labium, and maxillae exhibit a reddish-brown hue. The sternum appears reddish-black and takes on a sub-triangular shape, featuring a white triangular marking at its center (Plate 55B). The legs are slender, primarily whitish-yellow and transparent, adorned with numerous whitish setae. Femora I–IV have a yellowish-brown distal portion, featuring one lanceolate spine ventro-distally and sporadic blackish semicircular annulations and blackish spots ventrally. Patellae I, II & IV each exhibit a yellowish-brown coloration with two dorsal lanceolate spines, while patellae III are yellowish-brown without spines. Tibiae I & IV have one

dorso-medial lanceolate spine, with the distal portion turning blackish-brown and sporting a whirl of 6-8 blackish lanceolate spines. Tibiae II & III have two dorsal lanceolate spines medially and distally, with the distal portion being yellowish-brown. Metatarsi and tarsi lack any lanceolate spines, with the tips of metatarsi appearing blackened. Leg measurements: I 11.51 (4.09 + 0.57 + 2.13 + 3.96 + 0.76); II 7.43 (2.15 + 0.49 + 1.50 + 2.57 + 0.72); III 4.59 (1.66 + 0.43 + 0.97 + 1.03 + 0.50); IV 10.02 (3.70 + 0.45 + 2.19 + 2.98 + 0.70). The abdomen exhibits two pairs of bulges on the sides, with the rear part protruding upwards. It is entirely adorned with white, black, and red spots, while the sides and rear appear darkened. The abdomen is thinly coated with long whitish hairs and features one pair of leaf-shaped flattened spines on the rear projection and two pairs near the spinnerets on the backside. In live individuals, the lower sides display some transparency, while the rear projection appears long and slim, but is noted to contract in preserved specimens (Plate 55C, D). The epigyne exhibits a pair of central profound cavities; the spermathecae are kidney-shaped. The copulatory ducts are brief and straight, linking to the lateral side of the spermathecae and curving posteriorly. The fertilization ducts are positioned in front of the short copulatory ducts with slightly forward curving (Plate 55E, F).

Dsitribution: INDIA (Assam).

Natural history: The species was discovered on the undersides of broad leaves of fig plants, specifically *Ficus* sp., near the forest stream. The spiders were found hidden by constructing small retreats using debris from the plants alongwith females carrying egg sacs.

6. Genus: *Parasteatoda* Archer, 1946

Diagnosis: Cephalothorax is pale, featuring a low fovea and dark yellow lateral bands. Chelicerae are not geniculate, and the legs are long thick and marked with rings. Abdomen is oval or rounded and covered with numerous hairs. In males, the palp is simplified, lacking a terminal apophysis but possessing a strongly developed conductor. Epigynal atrium is elliptical, with shallow grooves leading to the copulatory openings.

1. *Parasteatoda celsabdomina* (Zhu, 1998)

(Plate 56A-F, 70H)

Taxonomic account

Achaearanea celsabdomina Zhu, 1998: 82, figs. 45A-E.

Achaearanea celsabdomina Song, Zhu and Chen, 1999: 86, figs. 38G-H, O-P.

Parasteatoda celsabdomina Yoshida, 2008: 39.

Parasteatoda celsabdomina Jäger and Praxaysombath, 2011b: 15, figs. 11-20, 32-38.

Parasteatoda celsabdomina Sekhar and Sunil Jose, 2016: 188, figs. 1, 2A-C, 3A-B.

Specimens examined: 2♀ (IV/ARA/ERS/239), 17.xi.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax elongated shaped, appearing pale yellowish with dark brownish edges (Plate 56A). It bears eight eyes in two rows with distinct rings. Sternum is heart-shaped with yellowish black markings. Legs are slender, adorned with black stripes and fine hairs (Plate 56C). Abdomen is oval, brownish, and longer than wide, with a blackish dorsal marking (Plate 56A). Venter pale yellowish with irregular black lines and golden hairs. Epigyne scletorized with a median circular opening; spematheca globular, FDs short; CDs long and stout, arching (Plate 56 E, F).

Distribution: INDIA: Kerala, Assam (New record); CHINA, THAILAND, LAOS (WSC 2024).

Natural history: They construct cobwebs on corners of trees which includes a silken dry leaf roll for retreat. Eggs sacs can be observed on the web.

7. Genus: *Theridula* Emerton, 1882

Diagnosis: Very small in size and are generally orange or black in colour. Cephalothorax elongated, with a low fovea, and chelicerae that are not geniculate. Their legs are thick and often marked with distinct annulations. Abdomen oval-shaped and adorned with numerous hairs. In males, the palp is typically simplified, lacking a terminal apophysis, but featuring a strongly developed conductor. Female Theridula spiders typically have an epigynal atrium that is elliptical in shape, with shallow grooves leading to the copulatory openings.

1. *Theridula gonygaster* (Simon, 1873)

(Plate 57A-E, 70I)

Taxonomic account

Theridium gonygaster Simon, 1873a: 108, pl. 2, fig. 24.

Chrysso nivipictus Butler, 1883: 764, pl. 57, fig. 1.

Theridula triangularis Keyserling, 1886b: 30, pl. 11, fig. 149.

Theridula quinqueguttata Keyserling, 1886b: 31, pl. 11, fig. 150.

Mesopneustes nigrovittata O. Pickard-Cambridge, 1894a: 126, pl. 17, figs. 3-4.

Theridula tricornis O. Pickard-Cambridge, 1896a: 208, pl. 25, fig. 1.

Theridula nigrovittata F. O. Pickard-Cambridge, 1902a: 392, pl. 37, fig. 8.

Theridula opulenta Petrunkevitch, 1930a: 189, figs. 33-36.

Theridula opulenta albomaculata Franganillo, 1936b: 79, fig. 38 (D).

Theridula regia Gertsch and Archer, 1942: 2, fig. 10.

Theridula gonygaster Levi, 1954c: 340, fig. 18-22; Levi, 1967c: 176, fig. 5-8; Brignoli, 1969c: 262, figs. 2-3, 6; Roberts, 1983: 227, figs. 36-37; Chikuni, 1989b: 40, fig. 50; Zhu, 1998: 75, figs. 43A-D; Song, Zhu and Chen, 1999: 148, figs. 83H-J; Melic, 2000b: 49, figs. 1-4; Yoshida, 2001c: 178, figs. 79-82; Yoshida, 2003a: 116, figs. 301-304; Trotta, 2005: 175, figs. 456-457; Saaristo, 2006: 85, figs. 97-99; Wunderlich, 2008b: 397, figs. 598-603; Yoshida, 2009b: 384, figs. 264-266; Saaristo, 2010: 274, figs. 37.141-144; Kostanjšek, 2010: 27, figs. 1a-b; Le Peru, 2011: 487, figs. 858; Yin et al., 2012: 423, figs. 189a-e; Lecigne, 2018b: 77, f. 11J;Vanuytven, 2021: 42, 283, figs. A.30a-b, B.313-314; Sekhar and Sunil Jose, 2021a: 72, figs A-F, 2.

Specimen examined: 1♀ (IV/ARA/ERS/240), 16.vii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax blackish (Plate 57A). Ocular region elevated, eyes arranged in two rows, PME large (Plate 57D). Sternum blackish. Legs short and yellowish. Abdomen wide and blackish, diamond shaped with pointed laterals and dorsal, two yellowish sports posteriorly (Plate 57B). Ventral region blackish. Epigyne very small, spermethaca round shaped; FDs very tiny, CDs longer than FDs (Platr 57E).

Distribution: INDIA: Kerala, Assam (New record); CENTRAL AND SOUTH AMERICA, CARIBBEAN. INTRODUCED TO EUROPE, CONGO, MADAGASCAR, SEYCHELLES, GEORGIA, CHINA, JAPAN

Natural history: They are generally observed on underside of leaves alongwith its spiderlings.

8. Genus: *Thwaitesia* O. Pickard-Cambridge, 1881

Diagnosis: Carapace appears nearly circular, with the posterior median eyes spaced close together. Chelicerae are small and lack teeth. Legs are long, with the first patella-tibia measuring several times the carapace length. Abdomen is typically taller than it is wide and adorned with silvery spots. Instead of a colulus, there are two setae present. Each anterior spinneret bears a spigot, and the palpus features all sclerites.

1. *Thwaitesia margaritifera* O. Pickard-Cambridge, 1881

(Plate 58A-D, 70J)

Taxonomic account

Thwaitesia margaritifera O. Pickard-Cambridge, 1881d: 766, pl. 66, fig. 1.

Thwaitesia margaritifera Simon, 1894a: 514, fig. 526.

Thwaitesia margaritifera Levi and Levi, 1962: 54, figs. 207-210.

Thwaitesia margaritifera Zhu, 1998: 286, figs. 193A-D.

Thwaitesia margaritifera Song, Zhu and Chen, 1999: 149, figs. 83O-P.

Thwaitesia margaritifera Gupta and Siliwal, 2012: 77, figs. 3A-G.

Specimens examined: 2♀ (IV/ARA/ERS/241), 16.x.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax almost circular and pale white, features pale brownish band medially (Plate 58A, C). Ocular area raised and sloping posteriorly, tansparent eyes, both anterior and posterior rows recurved (Plate 58C). Sternum pale white. Legs pale white covered with whitish hairs and adorned with black annulations on femora, patella and tibiae of legs I-III (Plate 58A, B). Abdomen pale white, triangular with raised posterior, covered

with silvery spots (Plate 58A, B). Epigyne small; spemathecae oval shaped, FDs small and curving outwards parallel to eac other; CDs long and stout (Plate 58D).

Distribution: INDIA: Uttarakahnd, Assam (New record); SRI LANKA, CHINA, VIETNAM (WSC 2024).

Natural history: They are observed hanging on a single silk line and constructs retreat by rolling a leaf or underside of leaves. When the spider feels threatened, the silvery spots made of guanine contracts and features mirrr like appearance.

18. Family: Thomisidae Sundevall, 1883

Diagnosis: Small to large spiders with a variable cephalothorax ranging from semi-circular, ovoid to elongated shapes. Eyes are positioned on simple rounded or distinct tubercles, with lateral eyes typically elevated. Cheliceral boss is usually present, and teeth are absent, although sometimes there may be cusps or denticles on the promargins. Legs are two-clawed, laterigrade, with the anterior pair of legs larger and stronger, often bearing paired ventral spines, while claw tufts are typically absent. Abdomen is large and varies in shape from round to ovoid or elongated, with the presence of a colulus. Epigyne features a hood and a bordered atrium. In males, the palp has ventral and retrolateral tibial apophyses.

1. Genus: *Amyciaea* Simon, 1886

Diagnosis: Cephalothorax is as long as it is wide, with a high profile and a sloping cephalic region in front. Eyes are round, with the lateral eyes encircled by prominent tubercles. Both rows of eyes are recurved, but the posterior row is strongly recurved, and the lateral eyes are notably larger than the median eyes. Spiders belonging to this genus exhibit a distinctive ant-like appearance. Abdomen is longer than it is wide and covered with fine hairs.

1. *Amyciaea forticeps* (O. Pickard-Cambridge, 1873)

(Plate 59A-G, 70K)

Taxonomic account

Amycle forticeps O. Pickard-Cambridge, 1873d: 122, pl. 13, fig. 6.

Amyciaea forticeps Simon, 1895a: 983, figs. 1054-1057.

Amyciaea forticeps Szombathy, 1913: 30, fig. 7.

Amyclea forticeps Badcock, 1918: 283, fig. 2.

Amyciaea forticeps Tikader, 1971a: 65, figs. 17J-L.

Amyciaea forticeps Tikader, 1980a: 169, figs. 234-236.

Amyciaea forticeps Tang and Song, 1988b: 13, figs. 1A-D.

Amyciaea forticeps Song and Zhu, 1997: 35, figs. 17A-D.

Amyciaea forticeps Song, Zhu and Chen,1999: 479, figs. 274D, 276G, K.

Amyciaea forticeps Sunil Jose et al., 2003a: 157, figs. 1a-h.

Amyciaea forticeps Sen et al., 2015: 61, figs. 314-318, pl. 16.

Specimens examined: 2♀ (IV/ARA/ERS/242), 18.xii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax reddish brown, elevated cephalic region (Plate 59A). Eyes in three rows and recurved and encircled by whitish rings (Plate 59C). Sternum reddish orange. Legs slender, reddish brown, without any markings. Abdomen reddish brown, narrowing anteriorly and widening on the mid, dorsum with two prmominent blackish spots posteriorly, single pale brownish chevron markings anteriorly (Plate 59A). Venter brownish. Epigyne scletorized; spermathecal spherical; FDs short, arising anteriorly from spematheca; CDs long, forming 4 coiled loops (59D, E, F, G).

Distribution: INDIA: West Bengal, Kerala, Maharashtra, Assam (New record); CHINA, MALAYSIA (WSC 2024).

Natural history: They resembles ant species, namely Oecophylla smaragdina, and the front pair of legs swags like an antenna. Construct silken leaf retreat.

2. Genus: *Camaricus* Thorell, 1887

Diagonsis: Cephalothorax is moderately high, slightly convex on top but with steep sides and a wider front. The sides are nearly parallel, almost square in shape but marginally

wider near the rear, and are covered with hairs. Eyes are arranged in two rows, both of which are recurved, with the middle eyes closer to the laterals. Abdomen maintains a uniform thickness, with the flat top more or less continuing the general level of the cephalothorax. It is broad oval, slightly broader behind the center, and adorned with hairs, with the front and rear obliquely terminated. The front of the abdomen covers much of the rear margin of the carapace. Legs are moderately long and strong, featuring a few small spines dorsally on the femora and stronger spines ventrally on the tibiae and metatarsi I and II. Epigyne complex, well-sclerotized. Epigynal plate prominent, can be flat, slightly raised.

1. *Camaricus khandalaensis* Tikader, 1980

(Plate 60A-G, 70L)

Taxonomic account

Camaricus khandalaensis Tikader, 1980a: 176, f. 246-248

Specimens examined: 2♀ (IV/ARA/ERS/243), 19.xi.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax pale greenish and flattened, posteriorly sloped and narrows anteriorly, covered with hairs (Plate 60A). Eyes arranged in two rows and recurved, placed on tubercles (Plate 60C). Sternum light brownish colour. Legs brownish and robust; femora, patella and tibiae of legs I and II with light brown annulations, tibia and metatarsus of legs I and II blackish and covered with thick blackish hairs. Abdomen reddish, widened medially, dorsolaterally covered one pair of short yellowish patches, two yellowish spots each laterally and posteriorly, yellowish patch anterior region close to cephalothorax (Plate 60A). Venter pale brownish. Epigyne scletorized; spermatheca globular with convolutions; FDs very short, CDs long and curving (Plate 60D, E, F G).

Distribution: INDIA: Maharashtra, Assam (New record) (WSC 2024).

Natural history: They can be found on flowers and leaves, waiting to catch their prey. They create a shelter by rolling up a leaf.

3. Genus: *Oxytate* L. Koch, 1878

Diagnosis: Cephalothorax appears flat with a steep slope on the thoracic region, while the carapace is nearly circular, narrowing abruptly near the front to form a wide, projecting rectangular eye region. Lateral eyes protrude slightly, encircled by white rings. Abdomen is elongated, widest towards the front, and gradually tapers towards the spinnerets. Legs are long, with longer spines on the first and second legs compared to the third and fourth legs. These spiders generally exhibit a plain pale green coloration without any discernible patterns on the abdomen. Epigyne distinctive, sclerotized, simple to moderately complex.

1. *Oxytate greenae* Tikader, 1980

(Plate 71B)

Taxonomic account

Dieta greenae Tikader, 1980a: 235, figs. 308-309.

Oxytate greenae Sen et al., 2015: 61, figs. 309-313, pl. 16.

Oxytate greenae Sudhin and Sen, 2023b: 552, figs. 1E-H, 5B-C.

Specimen examined: 1♀ (IV/ARA/ERS/245), 17.vii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax greenish, longer than wide, cephalic region narrowing anteriorly. Eyes pearly white, anterior eyes row strongly recurved. Sternum pale yeelow. Legs I and II longer than the rest, tibiae and metarsi with robust spines. Abdomen greenish, elongated, tapering and narrowing anteriorly, covered with whitish hairs, lighr brownish patches covers the dorsum. Ventrum pale brown.

Distribution: INDIA: West Bengal, Andaman Island, Assam (New record) (WSC 2024).

Natural history: Comnonnly found on underside of the leaves and the colouration matches with leave. It constructs silken leaf retreat.

4. Genus: *Phrynarachne* Thorell, 1869

Diagnosis: Large or medium-sized spiders, with males significantly smaller than females. Cephalothorax is nearly equal in length and width and is adorned with small bumps. Eyes

are small and approximately equal in size, with a faint fovea present. Chelicerae feature two teeth on the front margin and one on the back margin. Labium is longer than its width, and the sternum has an oval shape. Epigynum is uncomplicated, characterized by a central plate and heavily hardened spermathecae.

1. *Phrynarachne decipiens* (Forbes, 1884)

(Plate 61A-F, 71C)

Taxonomic account

Thomisus decipiens Forbes, 1884: 586, pl. 51.

Ornithoscatoides decipiens O. Pickard-Cambridge, 1884a: 199, pl. 15, fig. 1.

Thomisus decipiens Jacobson, 1921: 186, pl. 12, figs. 1-4.

Phrynarachne decipiens Thorell, 1890b: 63.

Phrynarachne decipiens Workman, 1896: 92, pl. 92.

Specimen examined: 1♀ (IV/ARA/ERS/246), 15.viii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapace chalk white with a pair of prominent lateral black markings at the posterior end, pale blackish markings at ocular region and at cephalothoracic junction anteriorly, cephalothorax with numerous tubercula dorsally, elevated cephalic area with eyes present on tubercles (Plate 61A). Chelicerae pale blackish, sternum brownish white with blackish spots posteriorly, maxilla dull blackish white and labium blackish. Legs chalk white covered with blackish setae and whitish miniscule spines, legs I and II directed forward in resting position, has dirty brown femur with several tubercles, chalk white patella and the tibia is blackened at the anterior region (Plate 61B). Abdomen chalk white with dark blackish semicircular patch anteriorly, eight tubercles on the anterior side dorsally, pair of round blackish patches laterally, dorsum with whitish tuberculum laterally and anteriorly, venter chalk white in colour and pleated laterally with two prominent black line running medially from epigastric furrow to the base of spinnerets (Plate A, B, C). Spinnerets whitish brown. Epigynum with an anteriorly situated atrium; epigynal ridges sclerotized, copulatory ducts short and curved anteriorly forming a hood shape, directed

outwards anteriorly with heads facing each other; spermathecae stout and curving inwards bilaterally.

Distribution: INDIA: Assam (new record); MALAYSIA, INDONESIA (Java, Sumatra) (WSC 2024).

Natural history: The spider is usually seen lying motionlessly on upper side of broad leaves (Fig. 10). Chalky white colour of the spider and whitish deposition on leave makes it very difficult to be sighted by mimicking that of bird excreta.

4. Genus: *Thomisus* Walckenaer, 1805

Diagnosis: Cephalothorax is truncated at the front, with upper corners prominently and conically protruding and diverging, accommodating the lateral eyes. It is wide, as long as it is broad, with the widest point at the highest level. Posterior margin is very broad, and the curved lateral margins converge towards a broad anterior margin. Viewed from above, a wide straight ridge extends, forming distinct pointed horns with the carapace. Eyes are extremely small. Abdomen is pentagon-shaped, narrow and truncated at the front, expanding considerably in width towards the rear, where short blunt conical protuberances are present at each corner of the dorsal side. From these protuberances, the sides sharply drop away and converge towards the spinnerets. Legs are long, with the first and second legs much longer than the third and fourth, giving them a typical crab-like appearance. Epigynal plate prominent, heavily sclerotized, Spermathecae pherical, oval, or elongated.

1. *Thomisus lobosus* Tikader, 1965

(Plate 71A)

Taxonomic account

Thomisus lobosus Tikader, 1965a: 285, figs. 9a-b.

Thomisus lobosus Tikader, 1971a: 17, figs. 6M-N.

Thomisus lobosus Tikader, 1980a: 36, figs. 51-52.

Thomisus lobosus Sunil Jose and Sebastian, 2001b: 188, figs. 3A-B.

Thomisus lobosus Gajbe, 2007: 438, figs. 36-37.

Specimens examined: 4♀ (IV/ARA/ERS/244), 13.xi.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax is high and as long as it is wide, featuring longitudinal light brown to deep brown patches on the anterior lateral sides and a conspicuous V-shaped white marking in the center. Eyes are round and blackish, set in a chalk-white ocular area with a transverse yellow line running from the left lateral eyes to the right lateral eyes. Sternum is pale white. Legs are long and stout, with the legs I and II longer, legs I and II have blackish bands at the ends of the tibiae. Abdomen whtish, nearly round, slightly overlapping the posterior region of the cephalothorax at the front, muscular elevation on the broadest portion featuring a conspicuous transverse black line, anterolateral border with several black spots. Ventrum pale white.

Distribution: INDIA: Chattisgarh, Maharashtra, Assam (New record); (WSC 2024).

Natural history: Observed on underside of the leaves, construcuting silken leaf retreat.

5. Genus: *Tmarus* Simon, 1875

Diagnosis: Cephalothorax truncated at the front, with upper corners prominently and conically protruding and diverging to accommodate the lateral eyes. Cephalothorax posterior margin is very broad, and the curved lateral margins converge towards a broad anterior margin. Lateral eye tubercles are distinct and close together, with lateral eyes larger than median eyes. Ocular quadrangle is nearly as long as it is wide. They lack a cheliceral tooth. Abdomen is longer than wide, elevated, and pointed at the rear, pentagon-shaped, narrow and truncated at the front, but expands considerably in width towards the rear, where short blunt conical protuberances are present at each corner of the dorsal side. Legs long, with the first and second legs much longer than the third and fourth. Epigyne simple and small structure, slightly sclerotized. Spermathecae small, rounded or oval structures, sometimes visible through the cuticle.

1. *Tmarus jabalpurensis* Gajbe and Gajbe, 1999

(Plate 62A-E, 71D)

Taxonomic account

Tmarus jabalpurensis Gajbe and Gajbe, 1999c: 141, figs. 1-3.

Tmarus jabalpurensis Gajbe, 2004d: 126, figs. 165-167.

Specimens examined: 2♀ (IV/ARA/ERS/247), 19.xii.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax is longer than wide, with a high cephalic region, clypeus high, with a margin featuring seven forward-directed spines, broad longitudinal dark brown patches are present laterally (Plate 62A). Eyes are round and black, with both rows recurved, though the anterior row is more recurved and shorter than the posterior row, lateral eyes are large and set on dark green tubercles, while the AMEs are smaller than PMEs (Plate 62C). Legs I and II are longer than the III and IV, covered with hairs and spines, tibia on legs I and II have pairs of ventral spines. Abdomen is longer than wide, and pointed at the rear, being broadest just behind the middle, covered with spines and has five pairs of dark brown patches, with the fifth pair meeting at the high posterior end. (Plate 62A). Epigyne simple, large in size; copulatory openings large, close to each other; spermathecae ovoid but tapering at both ends, copulatory ducts spiral (Plate 62D, E).

Distribution: INDIA: Madhya Pradesh, Assam (New record).

Natural history: Generally observed on tree twigs where remain in resting position. Their coloration lets it blend with the tree twigs and aids in camouflage.

19. Family: Uloboridae Thorell, 1869

Diagnosis: Cephalothorax with pair of swellings laterally. Eyes eight, arranged in two rows. Sternun tirangularish to ovalish. Labium long and pointed distally. Legs long, femora of all legs covered with trichobothria, metatarsus of leg IV adorned with setae. Abdomen elongated, with a pair of humps.

1. Genus: *Miagrammopes* O. Pickard-Cambridge, 1870

Diagnosis: Cephalothorax is longer than it is wide. Four eyes are arranged in a single posterior row, with no anterior row present, and the posterior lateral eyes (PLE) are on a

tubercle. Abdomen is elongated and cylindrical. Sternum is divided, and the legs are moderately short and lack bands. Abdomen is elongated. Both the cribellum and calamistrum are distinct features. Ducts connecting the atrium to the spermathecae. These can vary in length and coiling depending on the species. Epigynes are generally less sclerotized.

1. *Miagrammopes apostrophus* Sen, Saha and Raychaudhuri, 2013

(Plate 71E)

Taxonomic account:

Miagrammopes apostrophus Sen, Saha and Raychaudhuri, 2013: 42, figs. 1-7.

Miagrammopes apostrophus Sen et al., 2015: 21, figs. 23-28, pl. 12.

Specimens examined: 2♀ (IV/ARA/ERS/249), 28.xii.2019, Jharbari Forest Range, collected by Paris Basumatary.

Female: Cephalothorax pale, elongated, rectangular structure with a central raised area featuring a narrow V-shaped mark, flat thoracic section, with a yellowish-white band at the back. Fovea wide and prominent, covered in fine hairs. Four pearly white eyes, outlined in black, arranged in a curved row at the back. The PME largest and the lateral eyes are on small projections. Sternum is yellowish. Legs are yellowish as well, long, and covered with hairs. Abdomen elongated and cylindrical, with silvery reticulations covering the dorsal surface, base with central grey longitudinal markings, three pairs of sigilla positioned on either side of the grayish marking. Ventral side is also covered with silvery reticulations.

Distribution: INDIA: West Bengal Assam (New record).

Natural history: These spider looks lile a tree twig stuck on spider web. They construct a single dragline where they remain resting and when disturbed they retreat to near bramch where its web is anchored.

2. Genus: *Philoponella* Mello-Leitão, 1917

Diagnosis: The color of these spiders is predominantly white, with faint, dusky spots on the abdominal tubercles. Carapace is longer than it is wide and pale, with broad dusky side

stripes. The eyes are small, and the posterior row is almost straight. The integument is covered with white setae. Abdomen features distinct anterior tubercles, less distinct posterior tubercles, and the apex is located nearly in the middle of the abdomen's length. Epigyne complex, sclerotized.

1. ***Philoponella alata*** Lin and Li, 2008

(Plate 71F)

Taxonomic account

Philoponella alata Lin and Li, 2008a: 260, figs. 1-9.

Specimens examined: 1♀ (IV/ARA/ERS/50), 15.x.2018, Jharbari Forest Range, collected by Paris Basumatary.

Female: Carapce reddish orange, covered with whitish hairs, raised cephalic region, distinct fovea. Eyes in two rows, anterior eye row slightly curved and posterior rows straight, ALEs and PLEs blackish, AMEs and PMEs transparent. Sternum reddish orange. Legs slender, legs I and IV longest, metatarsus and tarsus of legs I-IV pale brownish, tibia leg I blackish distally. Abdomen elongated and reddish orange, covered with whitish setae, dorsum with pale whitish longitudinal band medially. Ventrum brownish orange. Epigyne bulgy and scletorized, short scape and ridges; spermathecal globular; FDs long, forming single loop; CDs short and directed inwards.

Distribuiton: INDIA: Assam (New record); CHINA (WSC 2024).

Natural history: They inhabit lower shrub vegetation, constructing large irregular cob webs.

4.3. OBJECTIVE 3: To study the abundance of spiders along with seasonal variation.

The overall species accumulation curve for four years of survey showed stability (asymptote) at 100 species (Fig. 4.3.1).

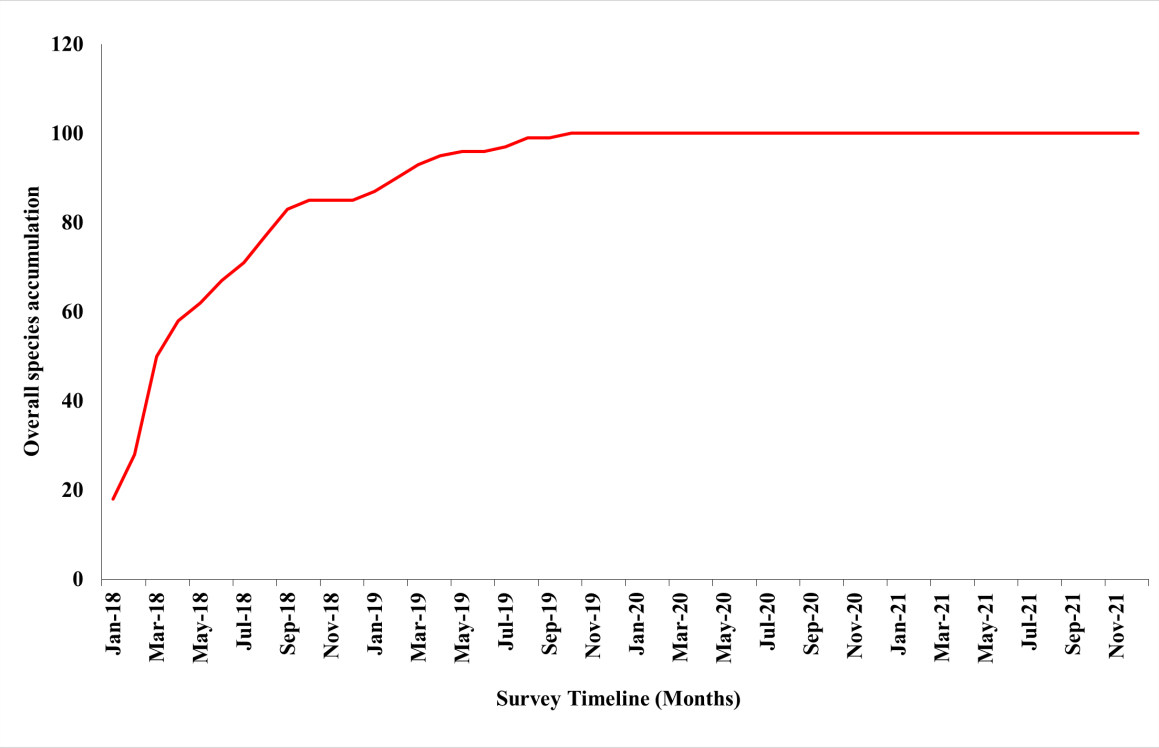

Figure 4.3.1 Species accumulation curve (Year 1 - Year 4)

The species abundance exhibited distinct variations throughout all the seasons (winter, pre-monsoon, monsoon and post-monsoon). The study highlighted a general pattern of species abundance peaking during the pre-monsoon (n=80) and monsoon season (n=63), gradually declining towards the winter (n=57) and post-monsoon (n=38) periods in the study area.

During the post-monsoon season, the family Agelenidae was not observed, while the family Araneidae was most frequently observed during the pre-monsoon (n=28), followed by the monsoon (n=23), winter (n=18), and post-monsoon (n=10). Cheiracanthidae was observed during winter (n=1) and pre-monsoon (n=1), and

Clubionidae (n=1) was sighted only during pre-monsoon. Both Corinnidae and Ctenidae were observed during winter (n=1) and post-monsoon (n=1), and Deinopidae was sighted during pre-monsoon (n=1) and monsoon (n=1). Hersiliidae was recorded during winter (n=1) and pre-monsoon (n=1), while Lycosidae was recorded during pre-monsoon (n=1), monsoon (n=1), and post-monsoon (n=1) seasons, except for winter (n=0). Nemesiidae was recorded in three seasons: winter (n=1), monsoon (n=1), and post-monsoon (n=1). Oxyopidae was most frequently sighted during the monsoon (n=5), followed by post-monsoon (n=3), winter (n=2), and pre-monsoon (n=1). Pisauridae was seen most often in winter (n=4) and monsoon (n=4), followed by post-monsoon (n=3) and pre-monsoon (n=1). Psechridae was present in all seasons, with sightings during the monsoon (n=2), winter (n=1), pre-monsoon (n=1), and post-monsoon (n=1). Salticidae was observed most frequently in pre-monsoon (n=17), with equal sightings in winter (n=10) and the monsoon (n=10), and the least in post-monsoon (n=6). Sparassidae was observed more in pre-monsoon (n=3), followed by an equal number of species seen in both winter (n=2) and the monsoon (n=2), and the least number of species sighted in post-monsoon (n=1). A similar number of species (n=3) from Tetragnathidae were sighted in all four seasons. Theridiidae was mostly seen in the pre-monsoon season (n=9), with a similar trend of species numbers in both winter and monsoon seasons (n=3), while the lowest number of species (n=2) was observed in the post-monsoon. Similarly, the same number of species under the family Uloboride was seen in winter (n=1) and monsoon (n=1), with an equal number of species observed both in pre-monsoon (n=2) and post-monsoon (n=2).

In the winter season, the Araneidae family exhibited the highest species richness (n=18), followed by Salticidae (n=10), Theridiidae (n=7), Pisauridae (n=4), Tetragnathidae, and Thomisidae (n=3), with Sparassidae (n=2). On the other hand, the families Agelenidae, Cheiracanthidae, Corinnidae, Ctenidae, Hersiliidae, Nemesiidae, Psechridae, and Uloboridae each recorded the least number of species (n=1). In the pre-monsoon season, a similar trend of species numbers was observed in the Araneidae family (n=28), the highest among the four habitats, followed by Salticidae (n=17), Theridiidae (n=9), Thomisidae

(n=6), Sparassidae, and Tetragnathidae (n=3), with Lycosidae and Uloboridae (n=2). Contrarily, very few species were recorded from the families Agelenidae, Cheiracanthidae, Clubionidae, Corinnidae, Ctenidae, Deinopidae, Hersiliidae, Oxyopidae, Pisauridae, and Psechridae, with only one species (n=1) each. During the monsoon season, the Araneidae family (n=23) recorded the highest number of species among other spider families, followed by Salticidae (n=10), Oxyopidae (n=5), Theridiidae (n=5), Pisauridae (n=4), Tetragnathidae (n=3), Thomisidae (n=3), and Lycosidae (n=2), with Psechridae (n=2), Agelenidae (n=1), Deinopidae (n=1), Nemesiidae (n=1), and Uloboridae (n=1). Subsequently, in the post-monsoon season, the Araneidae family (n=10) recorded the highest number of species, with Salticidae (n=6) as the second highest, followed by Theridiidae (n=5), Oxyopidae, Pisauridae, and Tetragnathidae (n=3), and Thomisidae and Uloboridae with (n=2) species each. Furthermore, Lycosidae (n=1), Nemesiidae (n=1), and Sparassidae (n=1) encountered the least number of species during this particular season.

Table 4.3.1: Seasonal variations in species abundance throughout the four seasons (Winter, Pre-monsoon, Monsoon, and Post monsoon) in the entire survey period in Jharbari Forest Range, Assam

Spider Family	Winter	Pre-monsoon	Monsoon	Post-monsoon
Agelenidae	1	1	1	0
Araenidae	18	28	23	10
Cheiracanthidae	1	1	0	0
Clubionidae	0	1	0	0
Corinnidae	1	1	0	0
Ctenidae	1	1	0	0
Deinopidae	0	1	1	0
Hersiliidae	1	1	0	0
Lycosidae	0	2	2	1
Nemesiidae	1	0	1	1
Oxyopidae	2	1	5	3
Pisauridae	4	1	4	3
Psechridae	1	1	2	1

Salticidae	10	17	10	6
Sparassidae	2	3	2	1
Tetragnathidae	3	3	3	3
Theridiidae	7	9	5	5
Thomisidae	3	6	3	2
Uloboridae	1	2	1	2

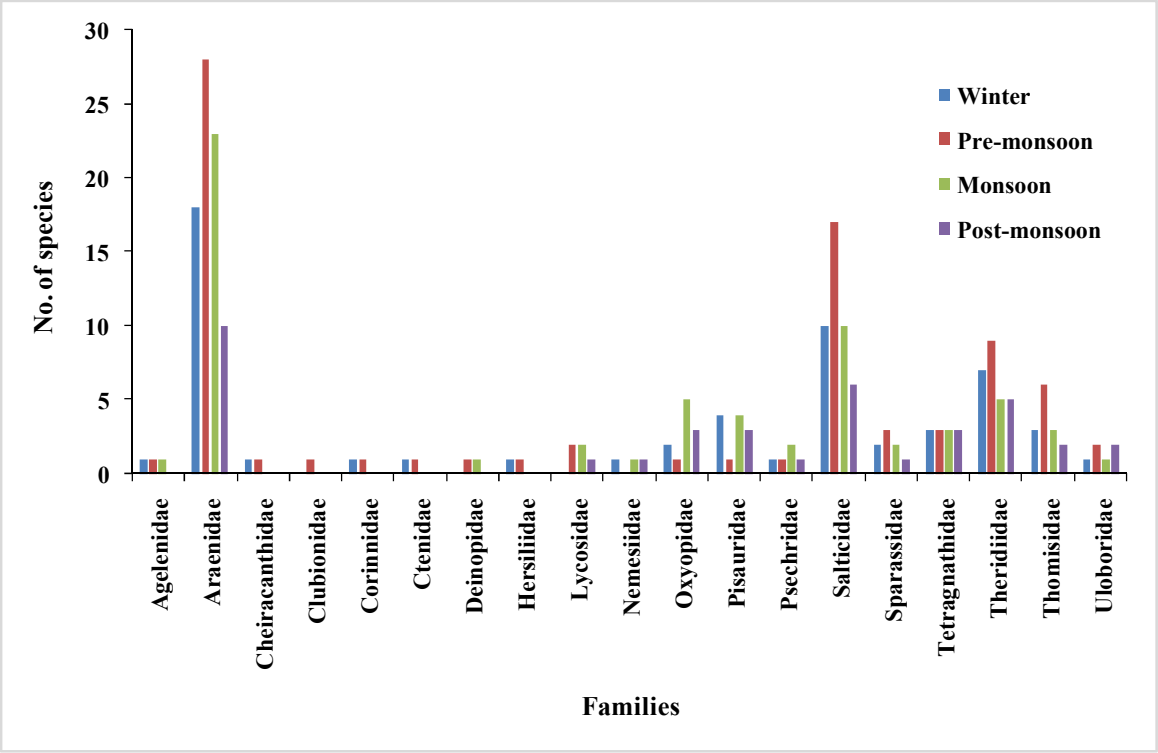

Figure 4.3.2 Seasonal variation in species abundance (Year 1- Year 4)

4.4. OBJECTIVE 4: To study the diversity and guild types of spiders in different microhabitats.

The diversity of spiders across eight habitat types, as indicated by the Shannon diversity index in Table 4.4.1. was highest in Shrubs (4.0) and Herbs (3.4). Moderate levels of diversity were observed in Grasses (1.49), Tree bark (1.47), Forest stream (1.29) and Forest litter (1.16). However, low levels of diversity were noted in Under rocks (0.91) and Burrow habitat (0.25).

Table 4.4.1 Diversity variation of spiders at different habitats of the study area (ranked highest to lowest).

Habitats	No. of Species	No. of Individuals	Shannon-Weiner index (H′)	Evenness	Simpson (1-D)
Shrubs	63	786	4.00477	0.8708	0.9798
Herbs	34	321	3.4326	0.9105	0.9647
Grasses	5	46	1.49285	0.89	0.7571
Tree Bark	5	54	1.47851	0.8773	0.7593
Forest stream	5	47	1.2972	0.7318	0.6999
Forest Litter	4	44	1.1669	0.803	0.6715
Under rocks	3	23	0.91896	0.8356	0.5671
Burrow	2	14	0.2573	0.6467	0.1327

The study revealed the occurrence of 100 species belonging to 85 genera under 19 families of spiders. Analysis of guild structure revealed 8 guilds (Table 4.4.2). The guild types of spiders varied significantly with orb weavers (n = 40) being the most occurring type, followed by Other hunters (n = 30), Space web weavers (n = 11), Ambush hunters (n = 8), Nocturnal ground ambushers (n = 5), Ground hunters (n = 3), Sheet web weavers (n = 2), Sensing web weavers (n = 1) (χ^2 = 117.92, df = 7, p-value = 0.00000000000000022) (Fig. 4.4.1).

Table 4.4.2 Different functional guild structure of spiders found in Jharbari Forest Range.

SL. NO.	GUILD	FAMILIES
1.	Ambush hunters	Cheiracanthiidae, Thomisidae
2.	Ground hunters	Corinnidae, Lycosidae,
3.	Nocturnal ground ambushers	Nemesiidae, Pisauridae
4.	Orb web weavers	Araneidae, Tetragnathidae, Uloboridae
5.	Other hunters	Ctenidae, Clubionidae, Oxyopidae, Salticidae, Sparassidae
6.	Sensing web weavers	Hersiliidae

7.	Sheet web weavers	Amaurobiidae, Psechridae,
8.	Space web weavers	Theridiidae

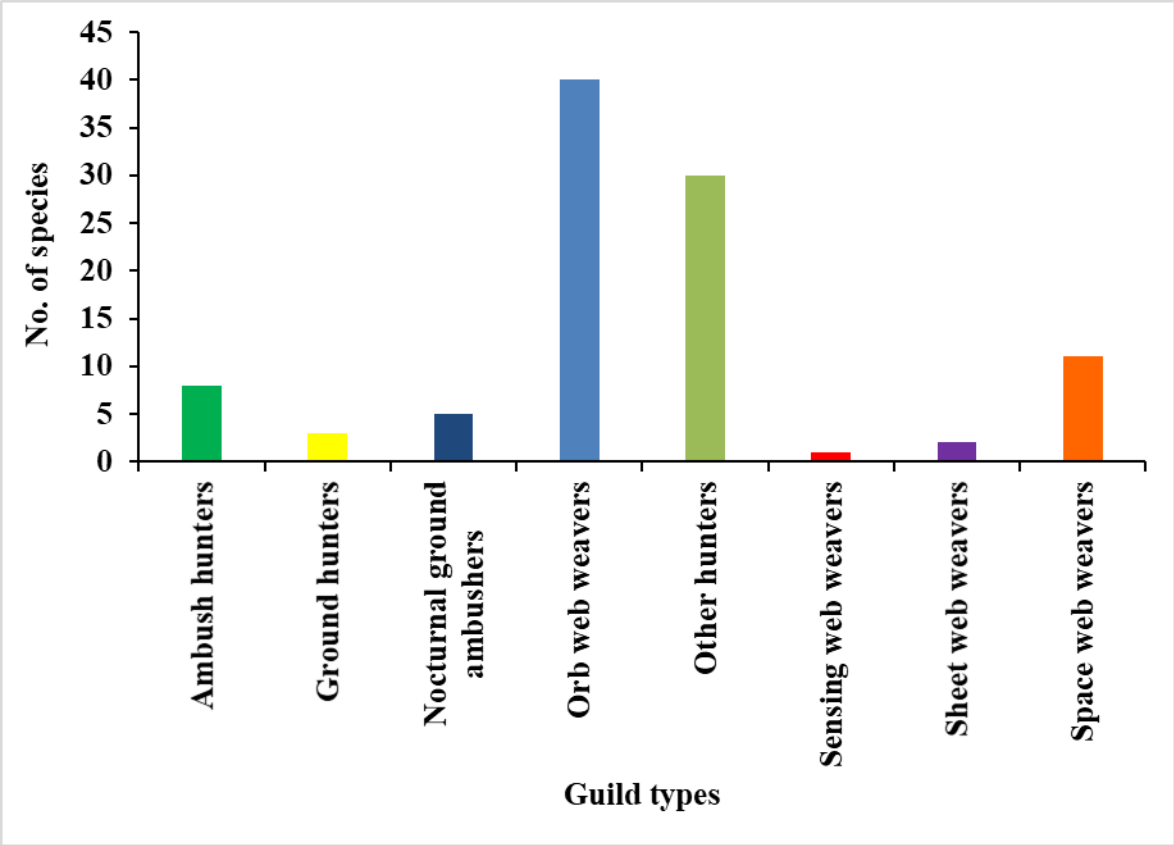

Figure 4.4.1 Guild types of spiders

The species accumulation varied for each habitat types. The species accumulation for Shrubs habitat was the highest (n = 63) (Fig. 4.4.2), followed by Herbs habitat (n = 34) (Fig. 4.4.3), Tree bark (n = 5) (Figure 4.4.4), Grasses (n = 5) (Fig. 4.4.5), Forest stream (n = 5) (Fig. 4.4.6), Forest litter (n = 4) (Fig. 4.4.7), Under rocks (n = 3) (Fig. 4.4.8) and Burrow habitat (n = 2) (Fig. 4.4.9) repectively.

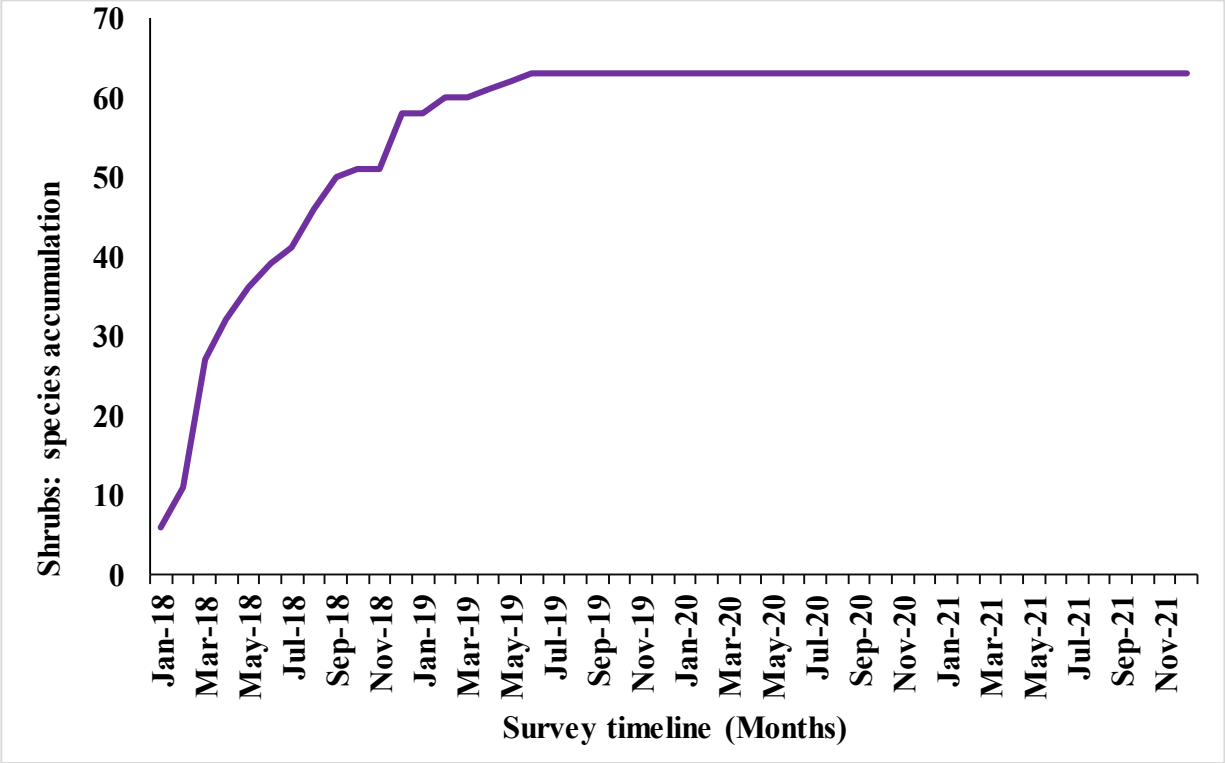

Figure 4.4.2 Species accumulation curve in Shrubs habitat (Year 1 – Year 4)

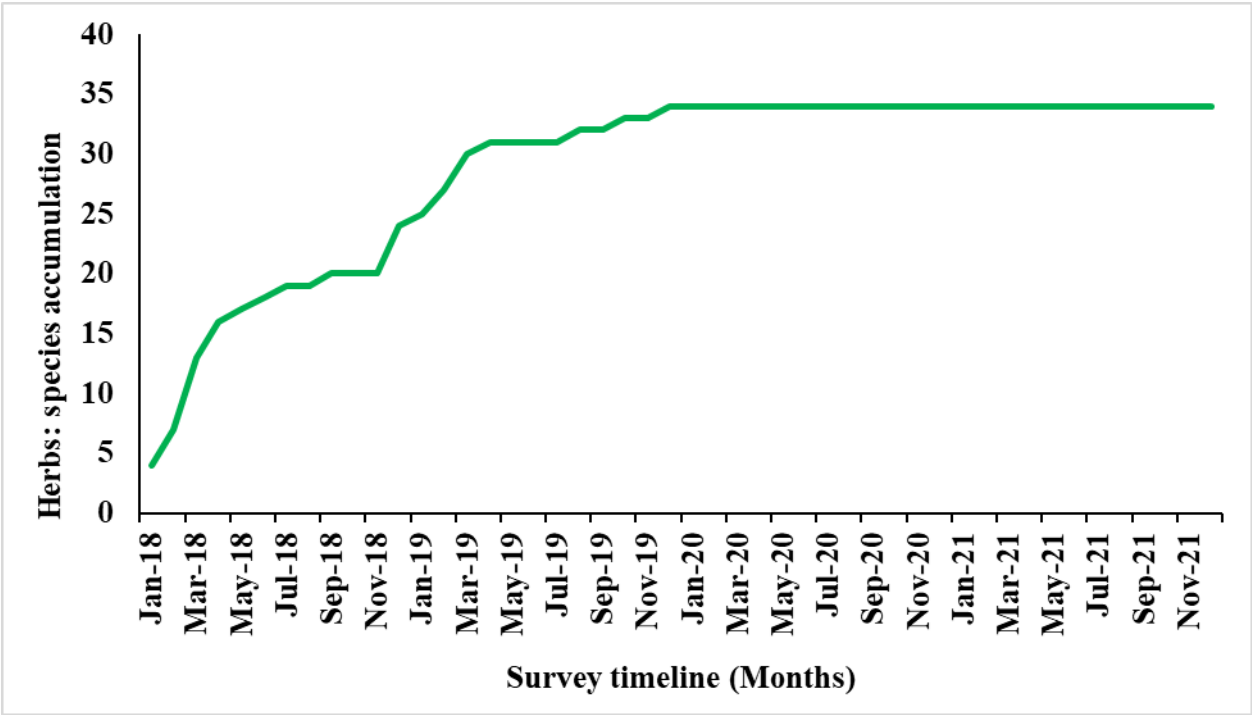

Figure 4.4.3 Species accumulation curve in Herbs habitat (Year 1 – Year 4)

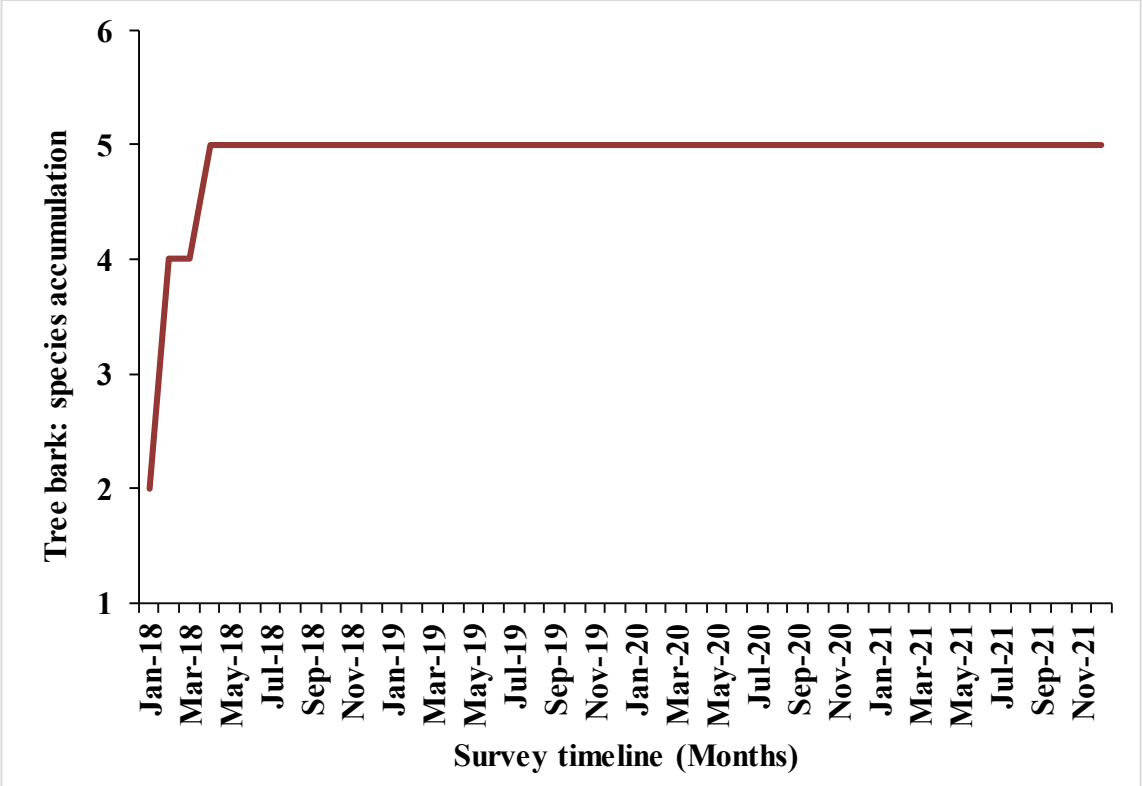

Figure 4.4.4 Species accumulation curve in Tree bark habitat (Year 1 – Year 4)

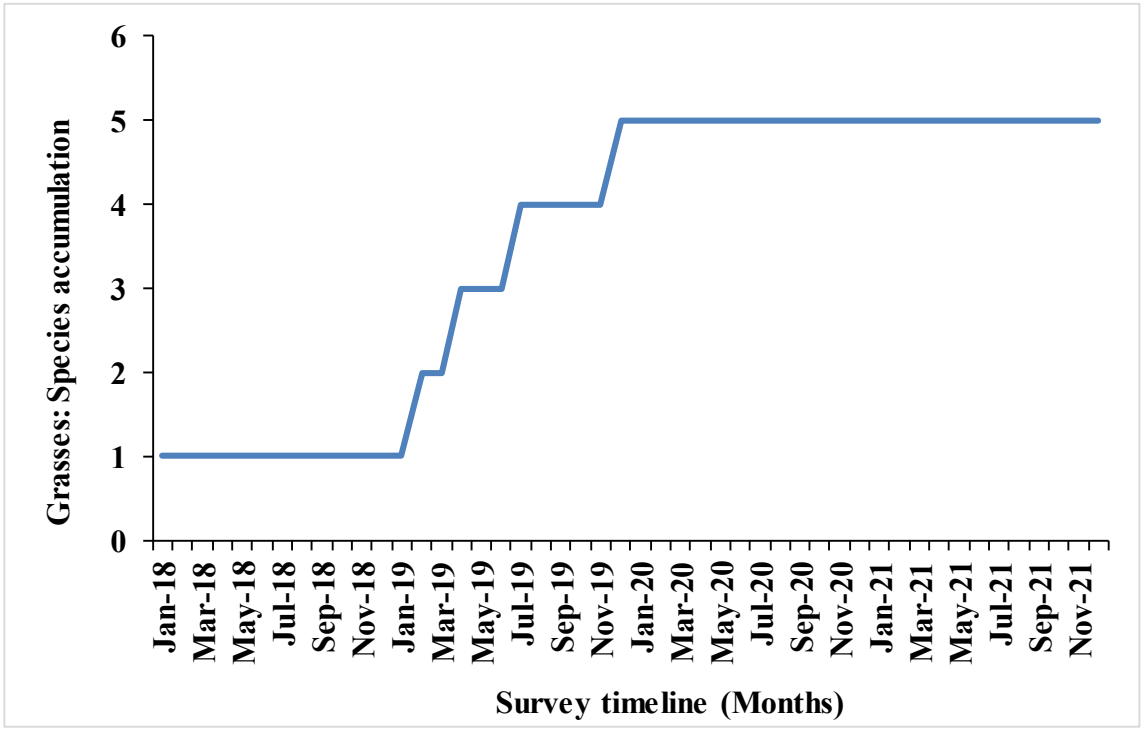

Figure 4.4.5 Species accumulation curve in Grasses habitat (Year 1 – Year 4)

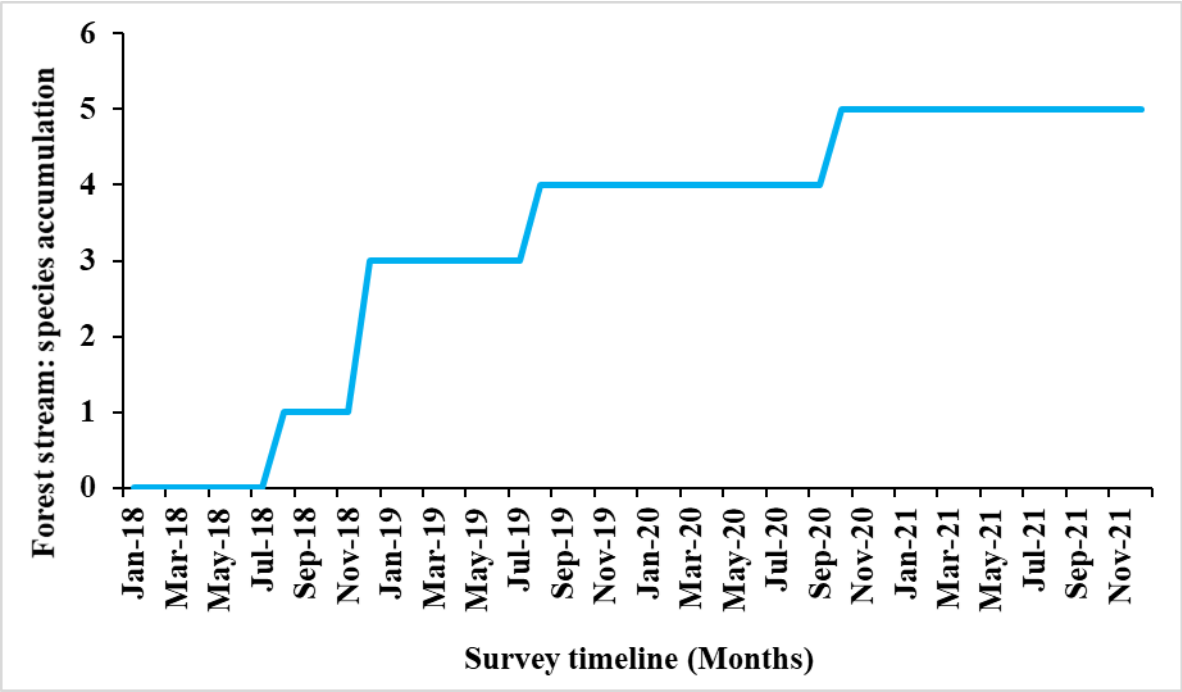

Figure 4.4.6 Species accumulation curve in Forest Stream habitat (Year 1 – Year 4)

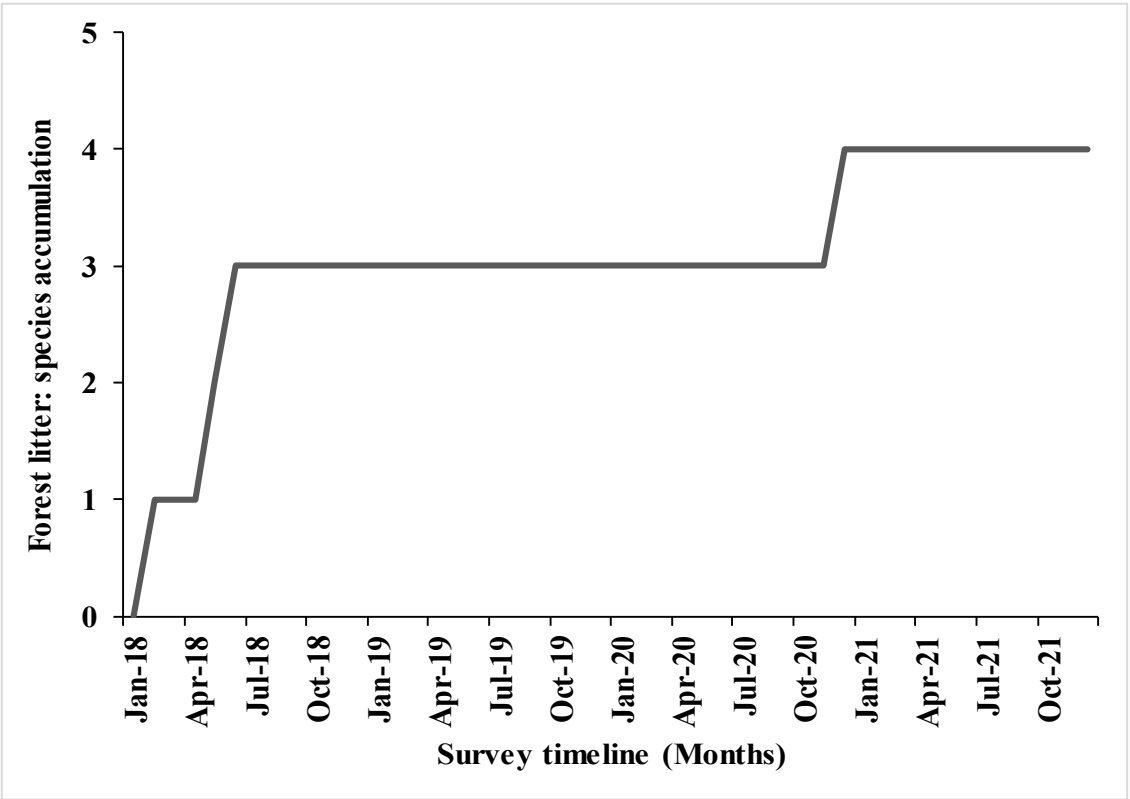

Figure 4.4.7 Species accumulation curve in Forest litter habitat (Year 1 – Year 4)

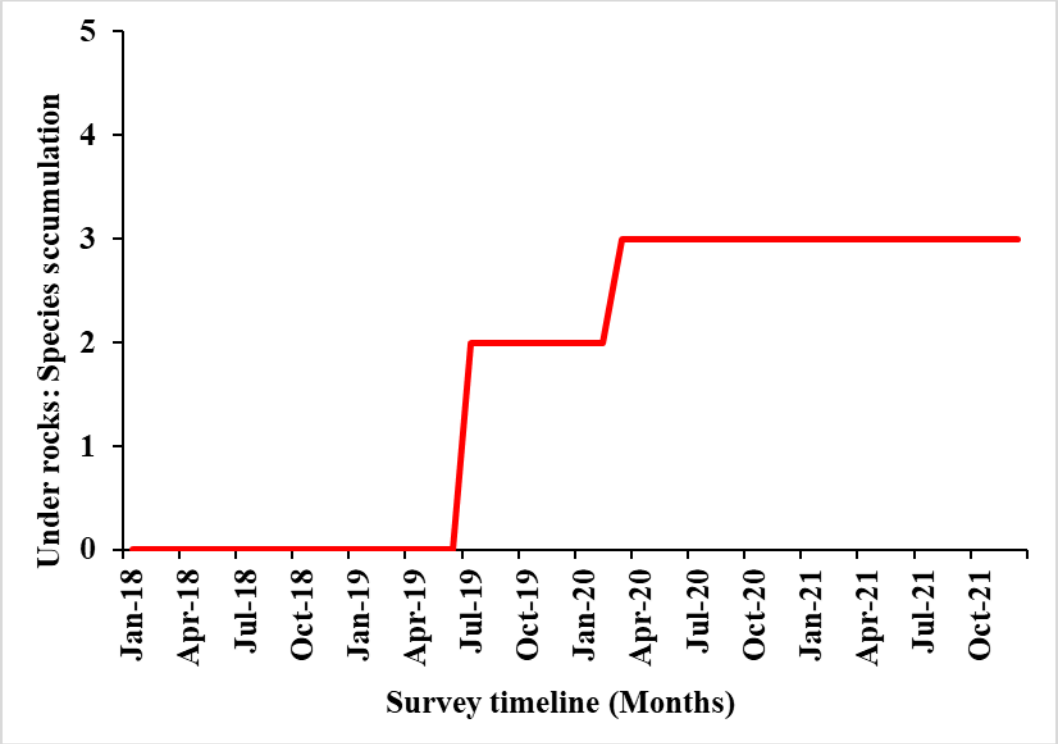

Figure 4.4.8 Species accumulation curve in Under rocks habitat (Year 1 – Year 4)

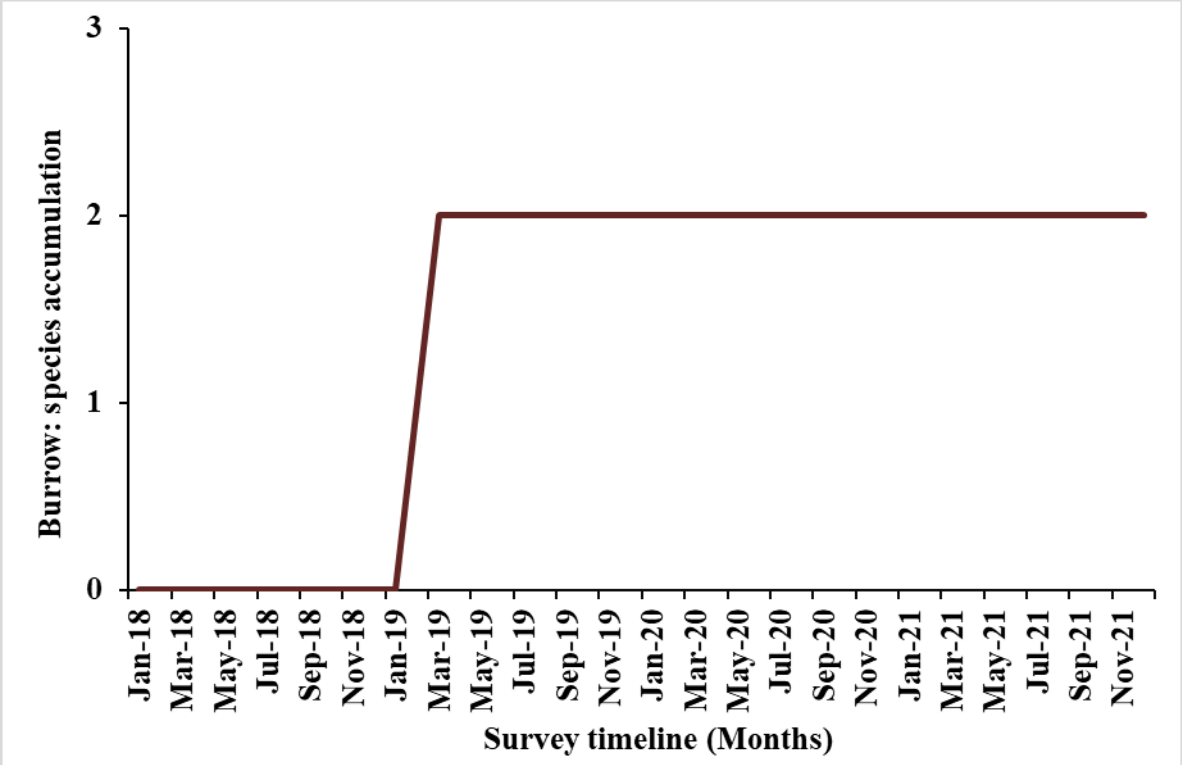

Figure 4.4.9 Species accumulation curve in Burrow habitat (Year 1 – Year 4)

4.5. OBJECTIVE 5: To study the perception of the local community towards spiders on fringe villages of Jharbari Forest Range.

A total of 89 individuals were interviewed consisting of three ethnic groups (Bodo, Nepali, Santhal). There was significant difference among the residents who could recognize spiders with 94% of the interviewees being aware of the spider species existence (χ^2 = 68.36, df = 1, $p < 0.05$) (Fig. 4.5.1). There was significant difference among the interviewees with majority (43%) having no fear of spiders (χ^2 = 36.538, df = 3, p-value = 0.00000005761) (Fig. 4.5.2). There is no significant difference with Araneidae (33%) being the most identified by the interviewees (χ^2 = 6.2645, df = 3, p-value = 0.09943) (Fig. 4.5.3). There is significant difference among the availability of spiders with most interviewees (55%) having seen them in indoors of their houses (χ^2 = 53.606, df = 3, p-value = 0.00000000001362) (Fig. 4.5.4). The was significant difference regarding the occurrence of spiders with most interviewees (31%) claiming the maximum occurrence to be in monsoon and premonsoon (28%) (χ^2 = 33.64, df = 4, p-value = 0.000000883) (Fig. 4.5.5).

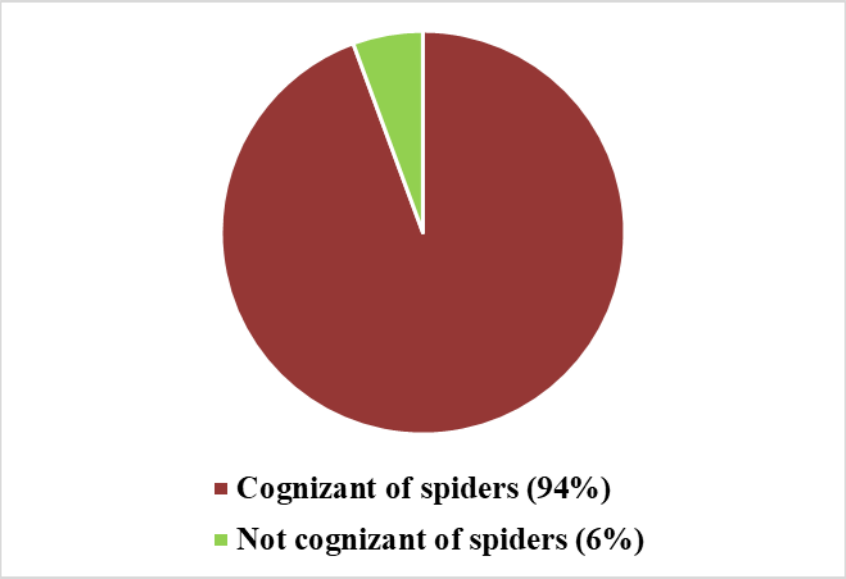

Figure 4.5.1. Interviewees' cognizance of spiders

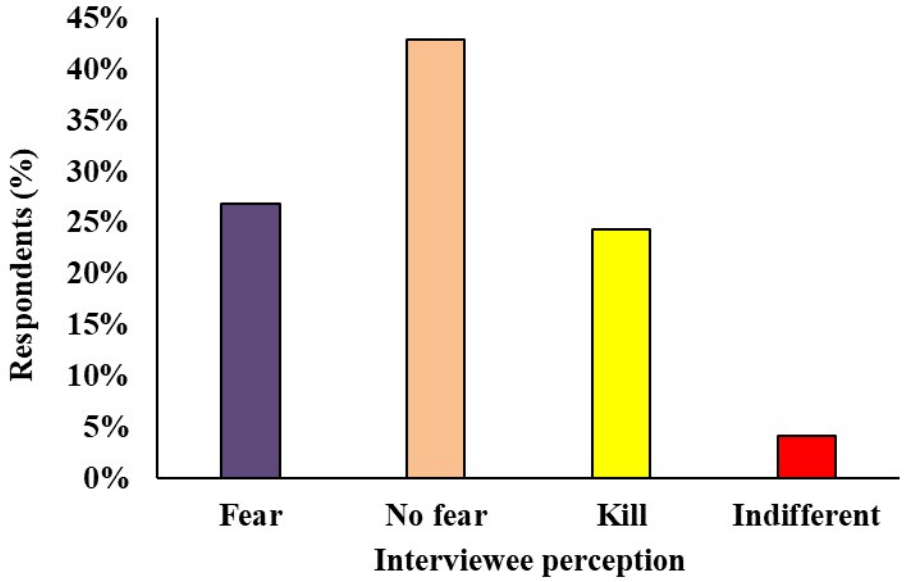

Figure 4.5.2 Interviewees' perception on spiders.

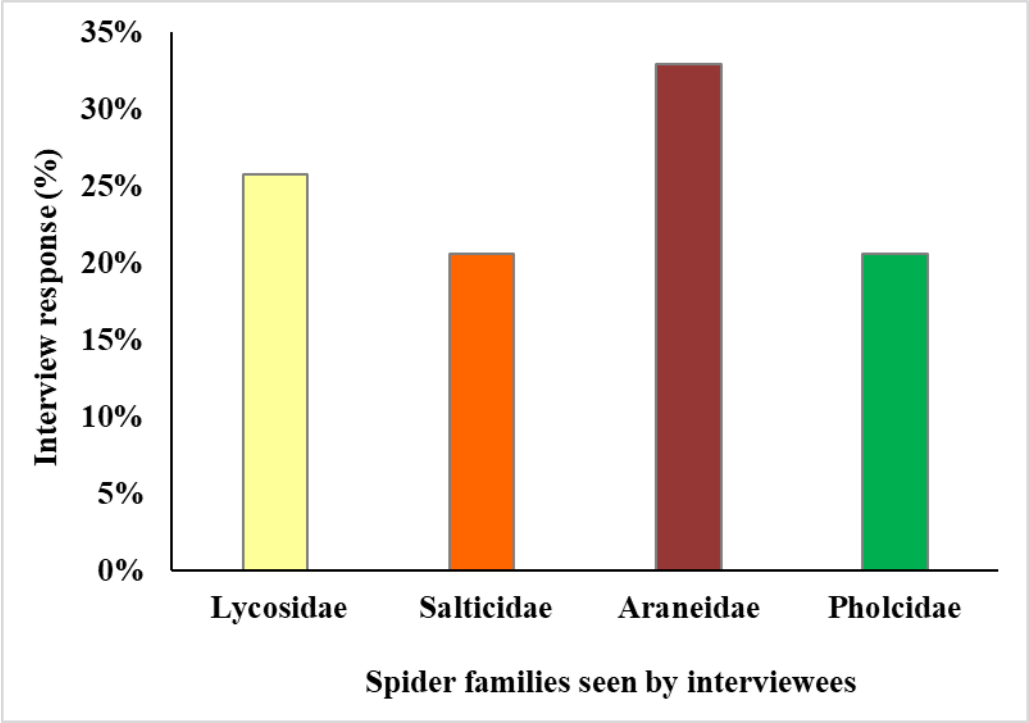

Figure 4.5.3 Spider families (%) sighted by the interviewees'.

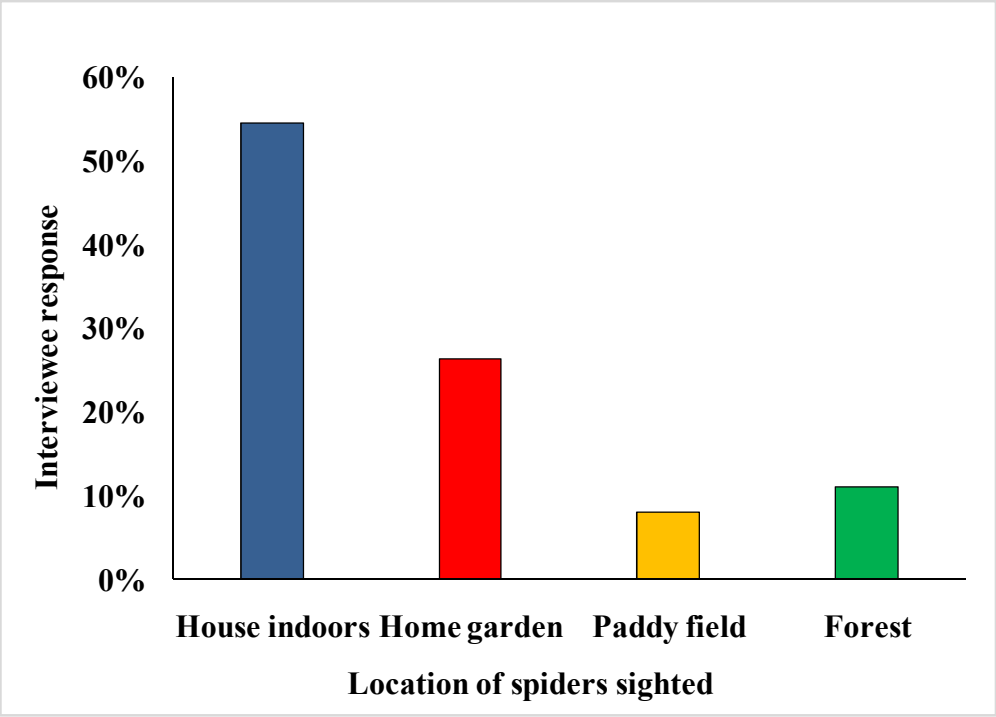

Figure 4.5.4 Spiders sighted in different locations by the interviewees'.

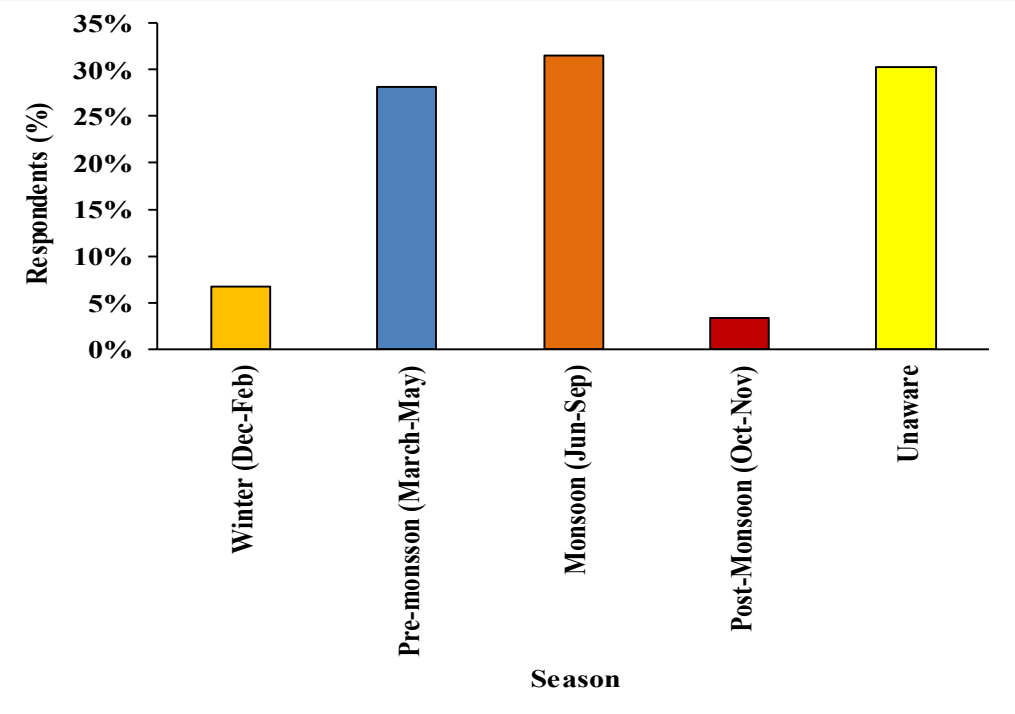

Figure 4.5.5 Sighting of spiders by interviewees' in different seasons