REFERENCES:

Adams, A. (1847). Notes on the habits of certain exotic spiders. *Annals and Magazine of Natural History* 20(134): 289-297.

Ade, P. P. and Dixit, G. S. (2016). Diversity and ecology of spider of the family Araneid Clerck 1757 from Shivaji College campus, Akola. *International Journal of Scientific Research* 5(12): 729-732.

Agnarsson, I., Coddington, J. A. and Kuntner, M. (2013). Systematics: progress in the study of spider diversity and evolution. *Spider research in the 21st century: trends and perspectives*, ed. D Penney, pp. 58–111. Manchester, UK: Siri Scientific Press.

Ahmed, J., Khalap, R. and Sumukha, J. N. (2016). A new species of dry foliage mimicking *Eriovixia* Archer, 1951 from central Western Ghats, India (Araneae: Araneidae). *Indian Journal of Arachnology* 5: 24-27.

Ahmed, J., Khalap, R., Hill, D. E., Sumukha, J. N. and Mohan, K. (2017). First record of *Brettus cingulatus* from India, with a review of *Brettus* in South and Southeast Asia (Araneae: Salticidae: Spartaeinae). *Peckhamia* 151.1: 1-13.

Ahmed, J., Satam, Y., Khalap, R. and Mohan, K. (2015a). A new species of tree dwelling *Peucetia* Thorell, 1869 from Mumbai, India (Araneae: Oxyopidae). *Indian Journal of Arachnology,* 4(1): 49-55.

Ahmed, J., Satam, Y., Khalap, R. and Mohan, K. (2015b). A new species of *Dictis* L. Koch, 1872 (Araneae: Scytodidae) from Mumbai, India. *Indian Journal of Arachnology,* 4(1): 59-63.

Ahmed, J., Sumukha, J. N., Khalap, R., Mohan, K. and Jadhav, B. (2015c). First record of the spider genus *Paraplectana* Brito Capello, 1867 from India, with a description of a new species. (Araneae: Araneidae: Cyrtarachninae). *Indian Journal of Arachnology,* 4(2): 1-5.

Ahmed, J., Sumukha, J. N., Khalap, R., Mohan, K. and Jadhav, B. (2015d). A new species of *Thelcticopis* Karsch, 1884 (Araneae: Sparassidae: Sparianthinae) from the 'Kans' of Karnataka, India. *Indian Journal of Arachnology,* 4(2): 10-15.

Ahmed, J., Sumukha, J. N., Khalap, R., Mohan, K. and Jadhav, B. (2015e). A new species of *Cyrtarachne*, Thorell, 1868 (Araneae: Araneidae: Cyrtarachninae) from the sacred grove forests of central Western Ghats, India. *Indian Journal of Arachnology,* 4(2): 16-21.

Ahmed, J., Sumukha, J. N., Khalap, R., Mohan, K. and Jadhav, B**.** (2015f)**.** A new species of *Cyrtarachne*, Thorell, 1868 (Araneae: Araneidae: Cyrtarachninae) from the sacred grove forests of central Western Ghats, India. *Indian Journal of Arachnology* 4(2): 16-21.

Ahmed, M., Anam, J., Saikia, M. K., Manthen, S. V., and Saikia, P. K. (2014). New records spider species under Wadicosa genus (Sub-order: Araneae; Family: Lycosidae) from agricultural field of Sonitpur District, Assam, India. *Journal on New Biological Reports*, *3*(1), 60-65.

Ahmed, M., Anam, J., Saikia, M. K., Manthen, S. V., and Saikia, P. K. (2014). Records of new genus Chrysilla (group spider: suborder: Araneae: family: Salticidae) in India at agroecosystem, at Sonitpur, Assam. *Journal on New Biological Reports*, *3*(1), 38-43.

Aiken, M., and Coyle, F. A. (2000). Habitat distribution, life history and behavior of Tetragnatha spider species in the Great Smoky Mountains National Park. *The Journal of Arachnology*, *28*(1), 97-106.

Akash, M., Jahan, N. and Badhon, M. K. (2017). Occurrence of a huntsman spider *Olios lamarcki* Latreille, 1806 (Araneae: Araneomorphae: Sparassidae) from Nijhum dwip, Bangladesh. *Bangladesh Journal of Zoology* 45(1): 97-100.

Akhtar, N. and Summer, M. (2021). The first record and redescription of *Gasteracantha hasselti* C. L. Koch, 1837 (Araneae: Araneidae) from Pakistan. *Munis Entomology and Zoology* 16(2): 840-845.

Akhtar, N., Tahir, H. M., Nadeem, A., Nawaz, F. and Summer, M. (2019). First report of *Cyrtarachne nagasakiensis* Strand, 1918: new record from Punjab, Pakistan (Aneaera [sic]: Araneidae). *Journal of Entomology and Zoology Studies* 7(6): 1030-1031.

Akhtar, N., Tahir, H. M., Nadeem, A., Nawaz, F. and Summer, M. (2019). First report of *Cyrtarachne nagasakiensis* Strand, 1918: new record from Punjab, Pakistan (Aneaera [sic]: Araneidae). *Journal of Entomology and Zoology Studies* 7(6): 1030-1031.

Álvarez-Padilla, F. and Hormiga, G. (2011a). Morphological and phylogenetic atlas of the orb-weaving spider family Tetragnathidae (Araneae: Araneoidea). *Zoological Journal of the Linnean Society* 162(4): 713-879.

Álvarez-Padilla, F. and Hormiga, G. (2011a). Morphological and phylogenetic atlas of the orb-weaving spider family Tetragnathidae (Araneae: Araneoidea). *Zoological Journal of the Linnean Society* 162(4): 713-879.

Andreeva, E. M., Kononenko, A. P. and Prószyński, J. (1981). Remarks on genus *Mogrus* Simon, 1882 (Aranei, Salticidae). *Annales Zoologici, Warszawa* 36: 85-104.

Anindita, B., Mahadev, C., and Prabal, S. (2017). Spider diversity in different habitats at Jaintia Hills of Meghalaya. *International Journal of Life Sciences*, 5(4), 613-619.

Anju, K. B., Bhagirathan, U. and Sudhikumar, A. V. (2021b). Redescription of *Leucauge fastigata* (Simon, 1877) (Araneae: Tetragnathidae) with first report of male from India. *Serket* 18(2): 161-166.

Anju, K. B., Sen, S., Asha, T. J., Sudhin, P. P., Sudhikumar, A. V. and Castanheira, P. de S. (2024). Taxonomic notes and new records of *Tetragnatha* (Araneae: Tetragnathidae) in India, with the redescription of three species. *Arachnology* 19(7): 988-997.

Archer, A. F. (1951a). Studies in the orbweaving spiders (Argiopidae). 1. *American Museum Novitates* 1487: 1-52.

Archer, A. F. (1951b). Studies in the orbweaving spiders (Argiopidae). 2. *American Museum Novitates* 1502: 1-34.

Arias, L. M. (2014). Intraguild interactions trophic ecology and dispersal in spider assemblages: Resumen. *Etologuía: boletín de la Sociedad Española de Etología*, (24), 85-86

Asalatha, P. and Prasadan, P. K. (2020). First record of the spiders *Neoscona usbonga* Barrion and Litsinger, 1995 and *Hamataliwa pentagona* Tang and Li, 2012 (Araneae: Araneidae and Oxyopidae) from India. *Serket* 17(2): 97-100.

Asalatha, P.K. (2018). Taxonomy and diversity studies on Spiders in the Western Ghats malabar region [Doctoral Dissertation, Kannur University]. Shodhganga (http://hdl.handle.net/10603/389645).

Asalatha, P. and Prasadan, P. K. (2020). First record of the spiders Neoscona usbonga Barrion & Litsinger, 1995 and Hamataliwa pentagona Tang & Li, 2012 (Araneae: Araneidae & Oxyopidae) from India. *Serket* 17(2): 97-100.

Asima, A., Caleb, J. T. D. and Prasad, G. (2023a)**.** A new species of *Thiania* C. L. Koch, 1846 from the Western Ghats, India (Araneae: Salticidae: Euophryini). *Arachnology* 19(4): 699-701.

Asima, A., Caleb, J. T. D. and Prasad, G. (2023b)**.** A new species of *Pancorius* Simon, 1902 (Araneae: Salticidae) from the Western Ghats, India. *Arachnology* 19(6): 931-935.

Asima, A., Caleb, J. T. D., Babu, N. and Prasad, G. (2022)**.** Two new species of *Habrocestum* Simon, 1876 (Araneae: Salticidae: Hasariini) from Western Ghats, India. *Arthropoda Selecta* 31(3): 305-311.

Asima, A., Caleb, J. T. D., Prajapati, D. A. and Prasad, G. (2021). New distribution data on the genus *Maripanthus* Maddison, 2020 (Araneae: Salticidae) from southern India. *Journal of Threatened Taxa* 13(13): 20130-20132.

Asima, A., Sudhikumar, A. V. and Prasad, G. (2021). Description of a new species of *Uloborus* Latreille, 1806 (Araneae: Uloboridae) from Shendurney Wildlife Sanctuary of Western Ghats, India. *Serket* 18(1): 47-52.

Assam State Biodiversity Board. (n.d.). Biodiversity of Assam. Retrieved from https://asbb.assam.gov.in/information-services/biodiversity-of-assam, accessed on 06/06/2024.

Audouin, V. (1826). *Explication sommaire des planches d'arachnides de l'Égypte et de la Syrie. In: Savigny, M. J. C. L. de: "Description de l'Égypte, ou recueil des observations et des recherches qui ont été faites en Égypte pendant l'expédition de l'armée française, publié par les ordres de sa Majesté l'Empereur Napoléon le Grand.". Histoire Naturelle* 1(4): 1-339.

Avila, A. C., Stenert, C., Rodrigues, E. N. L., and Maltchik, L. (2017). Habitat structure determines spider diversity in highland ponds. *Ecological research*, 32, 359-367.

Azarkina, G. N. (2002). New and poorly known species of the genus *Aelurillus* Simon, 1884 from Central Asia, Asia Minor and the eastern Mediterranean (Araneae: Salticidae). *Bulletin of the British Arachnological Society,* 12(6): 249-263.

Baba, Y. G. and Tanikawa, A. (2015). *The handbook of spiders*. *Bun-ichi Sogo Shuppan, Tokyo*, 112 pp.

Baba, Y.G., Y. Kusumoto and K. Tanaka (2018). Efects of agricultural practce and fne-scale landscape factors on spiders and a pest insect in Japanese rice paddy ecosystems. *Bio Control* 63: 265–275.

Babu, N., Caleb, J. T. D. and Prasad, G. (2021). A new distribution record of *Bianor angulosus* (Karsch, 1879) (Araneae: Salticidae) from Kerala, India. *Journal of Threatened Taxa* 13(8): 19177-19180.

Babu, N., Caleb, J. T. D., Jani, M., Uma, D. and Prasad, G. (2022). On the taxonomy and distribution of the orb-weaving spider *Philoponella feroka* (Bradoo, 1979) n. comb. from India (Araneae, Uloboridae). *Zootaxa* 5087(3): 497-500.

Badcock, H. D. (1918). Ant-like spiders from Malaya collected by the Annandale-Robinson Expedition 1901-02. *Proceedings of the Zoological Society of London* 87(3/4, 1917): 277-321.

Baehr, M. and Baehr, B. (1993b). The Hersiliidae of the Oriental Region including New Guinea. Taxonomy, phylogeny, zoogeography (Arachnida, Araneae). *Spixiana* 19(Suppl.): 1-95.

Banerjee, I., Caleb, J. T. D. and Hill, D. E. (2019). New observations of the jumping spider *Neobrettus tibialis* (Araneae: Salticidae: Spartaeini) in West Bengal, India. *Peckhamia* 198.1: 1-9.

Barrion, A. A., Casal, C. V., Taylo, L. D. and Amalin, D. M. (1988b). Two orb-weaving spiders (Araneae: Araneidae) in the Philippines causing araneidism. *Philippine Journal of Science* 116: 245-254.

Barrion, A. T. and Litsinger, J. A. (1994). Taxonomy of rice insect pests and their arthropod parasites and predators. In: Heinrichs, E. A. (ed.) Biology and Management of Rice Insects. *Wiley Eastern*, New Delhi, pp. 13-15, 283-359.

Barrion, A. T. and Litsinger, J. A. (1995). *Riceland spiders of South and Southeast Asia*. CAB International, Wallingford, UK, 700 pp., 16 pls.

Barrion, A. T., Barrion-Dupo, A. L. A., Catindig, J. L. A., Villareal M., O., Cai, D., Yuan, Q. H. and Heong, K. L. (2013). New species of spiders (Araneae) from Hainan Island, China. *UPLB Museum Publications in Natural History* 3: 1-103.

Basu, B. D. (1963). A new spider of the family Thomisidae (Araneae) from India. *Science and Culture,* 29: 606-607.

Basu, B. D. (1964a). Diagnosis of two new species of *Pistius* (Thomisidae: Araneae: Arachnida) from India. *Journal of the Bengal Natural History Society,* 32: 104-109.

Basu, B. D. (1964b). Morphology of an Indian spider of the family Thomisidae (Araneae: Arachnida). *Science and Culture,* 30: 154-155.

Basu, B. D. (1965a). Four new species of the spider genus *Pistius* Simon (Arachnida: Araneae: Thomisidae) from India. *Proceedings of the Zoological Society, Calcutta,*18: 71-77.

Basu, B. D. (1965b). On the description of two new spiders of the family Thomisidae (Arachnida: Araneae) from India. *Journal of the Asiatic Society of Bengal,* 5: 23-26.

Basu, D., Roy, T. K. and Raychaudhuri, D. (2017). *Neoscona* Simon, 1864, the 'true orb weavers' in ricelands of Gangetic Delta, South 24-Parganas, West Bengal, India. *Species* 18(59): 62-76.

Basu, K. C. (1979). On a new spider of the genus *Xysticus* Koch, 1835 (Thomisidae: Arachnida) from Nainital, India. *Journal of the Zoological Society of India,* 28: 149-150.

Basumatary, P. and Brahma, D. (2019a). A new species of the genus *Meotipa* Simon 1895 (Araneae: Theridiidae) from India. *Acta Arachnologica* 68(1): 21-24.

Basumatary, P. and Brahma, D. (2019b). A new species of *Paraplectana* Brito Capello, 1867 (Araneae: Araneidae) from north-east India. *Arachnology* 18(3): 276-279.

Basumatary, P. and Brahma, D. (2021). One new burrow spider of the genus *Gravelyia* Mirza and Mondal 2018 (Araneae: Nemesiidae) from north-east India. *Acta Arachnologica* 70(1): 39-46.

Basumatary, P., and Brahma, D. (2017). Checklist of spiders from Chakrashila Wildlife Sanctuary, Assam, India. *International Journal of Zoology Studies*, *2*(5), 22-26.

Basumatary, P., Caleb, J. T. D. and Brahma, D. (2021). Rediscovery of *Dexippus kleini* Thorell 1891 (Araneae: Salticidae: Plexippini) after 129 years and its first record from India. *Acta Arachnologica* 70(1): 35-38.

Basumatary, P., Caleb, J. T. D., Das, S. and Brahma, D. (2020b). Redescription of the net-casting spider *Asianopis goalparaensis* (Tikader et Malhotra, 1978) comb.n. (Araneae: Deinopidae) from India. *Arthropoda Selecta* 29(3): 325-329.

Basumatary, P., Caleb, J. T. D., Das, S., Jangid, A. K., Kalita, J. and Brahma, D. (2020a). First record of the genus *Vailimia* Kammerer, 2006 from India, with the description of two new species (Araneae: Salticidae: Plexippina). *Zootaxa* 4790(1): 178-186.

Basumatary, P., Chanda, D., Das, S., Kalita, J., Brahma, D., Basumatary, T., Basumatary, B. K. & Daimary, S. (2019). On a new species of the orb-weaving spider genus *Eriovixia* (Araneae: Araneidae) from India. *Arachnology* 18(1): 24-27.

Basumatary, P., Das, S., Caleb, J. T. D. and Brahma, D. (2020c). First record of the genus *Chinattus* Logunov 1999 with the description of a new species from India (Araneae: Salticidae: Hasariini). *Acta Arachnologica* 69(2): 127-129.

Basumatary, P., Das, S., Kalita, J. and Brahma, D. (2018a). New record of *Hyllus diardi* (Walckenaer 1837) (Araneae: Salticidae) from India. *Acta Arachnologica* 67(1): 35-37.

Basumatary, P., Das, S., Kalita, J. and Brahma, D. (2018b). New record of *Cyrtarachne nagasakiensis* Strand, 1918 (Araneae: Araneidae) from India. *Arachnology* 17(9): 463-465.

Basumatary, S. (2023). Floristic Diversity of Chirang Reserve Forest of Bodoland Territorial Region in Assam with Special Reference to Threatened and Endemic Plants [Doctoral Dissertation, Bodoland University]. Shodhganga (http://hdl.handle.net/10603/523141).

Bayer, S. (2012). The lace-sheet-weavers – a long story (Araneae: Psechridae: *Psechrus*). *Zootaxa* 3379: 1-170.

Bazzaz, F. (1975). Plant species diversity in old-field successional ecosystems in southern Illinois. *Ecology*, *56*(2), 485-488.

Becker, E. S., Rinck, M., Türke, V., Kause, P., Goodwin, R., Neumer, S., and Margraf, J. (2007). Epidemiology of specific phobia subtypes: findings from the Dresden Mental Health Study. *European Psychiatry*, 22(2), 69-74.

Beevi, P.S. and G.K. Mahapatro (2008). Species-spectrum and interrelatonship between ant and spider fauna in cashew agroecosystem. *Journal of Plantaton Crops* 36(3): 375–381.

Beheregaray, L. B., and Caccone, A. (2007). Cryptic biodiversity in a changing world. *Journal of Biology*, *6*(4), 1-5.

Beheregaray, L. B., and Caccone, A. (2007). Cryptic biodiversity in a changing world. *Journal of Biology*, *6*, 1-5.

Benjamin, S. P. (2015b). Model mimics: antlike jumping spiders of the genus *Myrmarachne* from Sri Lanka. *Journal of Natural History* 49(43-44): 2609-2666.

Benoit, P. L. G. (1974c). Araignées intéressantes du Muséum d'Histoire Naturelle de Genève. *Revue Suisse de Zoologie* 81: 993-998.

Bergholz, K., Balthasar, C., Weiss, A. M., Brunkhardt, J., Ristow, M., and Weiss, L. (2023). Niche differentiation of arthropods and plants along small-scale gradients in temporary wetlands (kettle holes). *Basic and Applied Ecology*, 73, 10-17.

Bhandari, R. and Gajbe, P. (2001a). A study of three new species of spiders of the genera *Chorizopes* Cambridge, *Larinia* Simon and *Neoscona* Simon (Araneae:

Araneidae) from Madhya Pradesh, India. *Records of the Zoological Survey of India,* 99: 59-63.

Bhandari, R. and Gajbe, P. (2001b). Description of three new species of spiders of the genera *Thomisus* Walckenaer, *Oxyptila* Simon and *Xysticus* Koch (Araneae: Thomisidae) from Madhya Pradesh, India. *Records of the Zoological Survey of India,* 99: 81-85.

Bhandari, R. and Gajbe, P. (2001c). Description of four new species of spiders of the families Uloboridae, Philodromidae, Gnaphosidae and Lycosidae (Arachnida: Araneae) from Madhya Pradesh, India. *Records of the Zoological Survey of India,* 99: 87-93.

Bhat, P. S., Srikumar, K. K., and Raviprasad, T. N. (2013). Seasonal diversity and status of spiders (Arachnida: Araneae) in cashew ecosystem. *World Applied Sciences Journal*, *22*(6), 763-770.

Bhat, P.S., K.K. Srikumar and T.N. Raviprasad (2013). Spider (Arachnida: Araneae), diversity, seasonality and status in cashew agro-ecosystem. *Indian Journal of Arachnology*, 2 (2): 7–16.

Bhattacharjee, K and Sarma, G. C. (2015). A check list of angiospermic flora of Chirang Reserve Forest under Manas Biosphere Reserve in Assam, India. *Pleione*, 9(2), 419-434.

Bhattacharjee, K., Boro, A., Das, A. K., Dutta, U., and Sarma, G. C. (2014). Phytogeography of Chirang Reserve Forest under Manas Biosphere Reserve in Assam (India). *Pleione*, 8(2), 374-380.

Bhattacharya, G. C. (1935a). A new spider of Bengal, mimicking *Oecophylla smaragdina* (Fabr.). *Journal of Bombay Natural history Soc*iety, 37: 960-962.

Bhattacharya, G. C. (1935b). A new species of gregarious spider mimicking *Camponotus compressus*. *Scientific Culture,* 1: 159-160.

Bhattacharya, G. C. (1937). Notes on the moulting process of the spider (*Myrmarachne plataleoides*, Camb.). *Journal of the Bombay Natural History Society* 39: 426-430.

BirdLife International (2024) Important Bird Area factsheet: Ripu and Chirang Reserve Forests. Downloaded from https://datazone.birdlife.org/site/factsheet/ripu-and-chirang-reserve-forests-iba-india on 25/05/2024.

BirdLife International (2024) Important Bird Area factsheet: Ripu and Chirang Reserve Forests. Downloaded from https://datazone.birdlife.org/site/factsheet/ripu-and-chirang-reserve-forests-iba-india on 21/05/2024.

Biswas, A. T. (1975). A new species of spider of the genus *Peucetia* Thorell (family Oxyopidae) from Orissa, India. *Current Science,* 44: 350-351.

Biswas, A. T. (1977). A new species of spider of the genus *Platythomisus* Simon (family: Thomisidae) from Coorg, Karnataka, India. *Journal of the Bombay Natural History Society,* 74: 332-334.

Biswas, B. (1984a). Description of six new species of spiders of the families Clubionidae, Gnaphosidae and Salticidae from India. *Bulletin of the Zoological Survey of India,* 6: 119-127.

Biswas, B. (1984b). Description of a new species of spider (Araneidae: *Larinia*) from India. *Bulletin of the Zoological Survey of India,* 6: 133-135.

Biswas, B. (1991). Description of a new species of *Eutichurus* (Araneae: Clubionidae) from India. *Records of the Zoological Survey of India,* 88: 101-104.

Biswas, B. (1993). Description of a new species of spider (Clubionidae: *Trachelas*) from India. *Records of the Zoological Survey of India,* 91: 53-56.

Biswas, B. and Biswas, K. (1984). Description of two new species of jumping spiders of the genus *Marpissa* (Family: Salticidae) from India. *Bulletin of the Zoological Survey of India,* 6: 129-132.

Biswas, B. and Biswas, K**.** (1992)**.** Araneae: Spiders. State Fauna Series 3: Fauna of West Bengal, 3: 357-500.

Biswas, B. and Biswas, K. (2006). Araneae: Spiders. In: Fauna of Arunachal Pradesh, State Fauna Series. Zoological Survey of India, Kolkata 13(2), 491-518.

Biswas, B. and Majumder, S. C. (1995)**.** Araneae: Spider. In: Fauna of Meghalaya, State Fauna Series. Zoological Survey of India Kolkata, 4(2), 93-128.

Biswas, B. and Mazumder, S. C. (1981). Description of two new species of crab-spiders of the genera *Diaea* and *Bomis* (Family: Thomisidae) from India. *Bulletin of the Zoological Survey of India,* 4: 271-275.

Biswas, B. and Roy, R. (2005a). Description of three new species of the genus *Peucetia* and genus *Oxyopes* (family: Oxyopidae: Araneae) from India. *Records of the Zoological Survey of India,* 105(1-2): 37-43.

Biswas, B. and Roy, R. (2005b). Description of a new species of spider genus *Camaricus* (Thomisidae: Araneae) from India. *Records of the Zoological Survey of India,* 105(1-2): 165-167.

Biswas, B. and Roy, R. (2005c). Description of three new species of the genera *Thomisus* Walckenaer, *Cheiracanthium* Koch, C. L. and *Tinus* Cambridge of the families Thomisidae, Clubionidae and Pisauridae from India. *Records of the Zoological Survey of India,* 105(3-4): 37-42.

Biswas, B. and Roy, R. (2005d). Description of a new species of giant crab-spider (Araneae: Heteropodidae) from India. *Records of the Zoological Survey of India,* 105(3-4): 199-201.

Biswas, B. and Roy, R. (2008). Description of six new species of spiders of the genera *Lathys* (Family:Dictynidae), *Marpissa* (Family:Salticidae), *Misumenoides* (F amily: Thomisidae), *Agroeca* (Family: Clubionidae), *Gnaphosa* (Family: Gnaphosidae) and *Flanona* (Family: Lycosidae)—from India. *Records of the Zoological Survey of India* 108(1): 43-57.

Biswas, V. and Raychaudhuri, D. (1996a). Clubionid spiders of Bangladesh - I: Genus *Clubiona* Latreille. *Proceedings of Recent Advances in Life Sciences, Dibrugarh University* 1: 191-210.

Biswas, V. and Raychaudhuri, D. (2003a). Wolf spiders of Bangladesh: genus *Pardosa* C. L. Koch (Araneae: Lycosidae). *Records of the Zoological Survey of India* 101(1-2): 107-125.

Biswas, V. and Raychaudhuri, D. (2004). New orb-weaving spiders of the genus *Cyrtophora* Simon (Araneae: Araneidae) from Bangladesh. *Journal of the Bombay Natural History Society* 101: 124-129.

Biswas, V. and Raychaudhuri, D. (2012). Orb-weaving spiders of Bangladesh-II: genus *Larinia* Simon (Araneae: Araneidae) with description of a new species. *Records of the Zoological Survey of India* 112(3): 53-59.

Biswas, V. and Raychaudhuri, D. (2013a). Orb-weaving spiders of Bangladesh-I: genus *Araneus* Clerck (Araneae: Araneidae) with two new species. *Records of the Zoological Survey of India* 113(2): 157-162.

Biswas, V. and Raychaudhuri, D. (2013c). Orb-weaving spiders of Bangladesh: genus *Neoscona* Simon (Araneae: Araneidae). *Records of the Zoological Survey of India* 113(2): 169-188.

Biswas, V. and Raychaudhuri, D. (2015). Lynx spiders of Khulna District of Bangladesh: genus *Oxyopes* Latreille (Areaneae: Oxyopidae). *Bangladesh Journal of Zoology* 43(2): 221-238.

Biswas, V. and Raychaudhuri, D. (2017a). A new record of the orb-weaving spider genus *Parawixia* F.O. Pickard-Cambridge, 1904 from Bangladesh (Araneae: Araneidae). *Serket* 15(3): 113-118.

Biswas, V. and Raychaudhuri, D. (2017b). New species of the genus *Camaricus* Thorell, 1887 (Araneae: Thomisidae) from Bangladesh. *Bangladesh Journal of Zoology* 44(2, 2016): 255-265.

Biswas, V. and Raychaudhuri, D. (2018). New species of the genus *Eriovixia* Archer, 1951 (Araneae: Araneidae) from Bangladesh. *Bangladesh Journal of Zoology* 46(1): 1-10.

Biswas, V. and Raychaudhuri, D. (2019a). A new record of two-tailed spider genus *Hersilia* Savigny, 1825 of the fauna of Bangladesh (Araneae: Hersiliidae). *Serket* 17(1): 15-20.

Biswas, V. and Raychaudhuri, D. (2022). Taxonomic account of jumping spiders – genus *Marpissa* C. L. Koch (Arachnida: Araneae: Salticidae) from Bangladesh. *Journal of Biodiversity Conservation and Bioresource Management* 7(1, 2021): 1-9.

Biswas, V., Kundu, B., Kundu, M., Saha, S. and Raychaudhuri, D**.** (1996)**.** Spiders of the genus *Oxyopes* Latreille (Araneae: Oxyopidae) of Buxa Tiger Reserve, West Bengal. *Acta Arachnologica,* 45: 53-61.

Biswas, V., Saha, S. and Raychaudhuri, D. (1997). Araneidae and Theridiidae of Buxa Tiger Reserve, West Bengal: Genera *Leucauge* White, *Cyrtophora* Stoliczka and *Theridula* Emerton. *Entomon* 22: 229-233.

Blackwall, J. (1864)**.** Descriptions of seven new species of East Indian spiders received from the Rev. O. P. Cambridge. *Annals and Magazine of Natural History,* (3) 14: 36-45.

Blackwall, J. (1864b). Descriptions of seven new species of East Indian spiders received from the Rev. O. P. Cambridge. *Annals and Magazine of Natural History* (3) 14(79): 36-45.

Blackwall, J. (1867). Descriptions of several species of East Indian spiders, apparently to be new or little known to arachnologists. *Annals and Magazine of Natural History,* (3) 19: 387-394.

Blandenier, G. (2009). Ballooning of spiders (Araneae) in Switzerland: general results from an eleven-year survey. *Arachnology*, 14(7), 308-316.

Bohdanowicz, A. and Hęciak, S. (1980). Redescription of two species of Salticidae (Aranei) from China. *Annales Zoologici, Warszawa* 35: 247-256.

Boix, D., Kneitel, J., Robson, B. J., Duchet, C., Zúñiga, L., Day, J., Stéphanie, G., Sala, J., Quintana, X.D. and Blaustein, L. (2016). Invertebrates of freshwater temporary ponds in Mediterranean climates. *Invertebrates in freshwater wetlands: an international perspective on their ecology*, 141-189.

Bösenberg, W. and Strand, E. (1906). Japanische Spinnen. *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft* 30: 93-422.

Bradoo, B. L. (1979). Uloborus ferokus sp. nov. (Araneae: Uloboridae) a commensal of Stegodyphus sarasinorum Karsch. *Bulletin of the British Arachnological Society* 4: 353-355.

Bradoo, B. L. (1980). A new ant-like spider of the genus *Myrmarachne* (Salticidae) from India. *Current Science,* 49: 387-388.

Branco, V. V., and Cardoso, P. (2020). An expert-based assessment of global threats and conservation measures for spiders. *Global Ecology and Conservation*, *24*, e01290.

Breene, R.G., R.L. Meagher and D.A. Dean (1993). Spiders (Araneae) and Ants (Hymenoptera: Formicidae) in Texas Sugarcane Fields. *The Florida Entomologist* 76: 645–650.

Breitling, R. (2015a). *Linyphia bilobata* Roy and al., 2015, is a junior synonym of *Chrysso scintillans* (Thorell, 1895) (Araneae: Linyphiidae, Theridiidae). *Contributions to Natural History* 30: 1-7.

Brignoli, P. M. (1969c). Notizie sui Theridiidae della Calabria. *Memorie del Museo Civico di Storia Naturale di Verona* 16: 261-269.

Brignoli, P. M. (1983c). *A catalogue of the Araneae described between 1940 and 1981*. Manchester University Press, 755 pp.

Bristowe, W. S. (1941). The Community of Spiders, vol. 2. *Ray Society*.

Buchar, J. and Dolejš, P. (2021). Lycosidae from Bhutan 2: Lycosinae, Pardosinae, and Hippasinae (Arachnida: Araneae). *Arachnology* 18(8): 935-953.

Bush, A. A., Yu, D. W., and Herberstein, M. E. (2008). Function of bright coloration in the wasp spider Argiope bruennichi (Araneae: Araneidae). *Proceedings of the Royal Society B: Biological Sciences,* 275(1640), 1337-1342.

Butler, A. G. (1883). On some new or little known spiders from Madagascar. *Proceedings of the Zoological Society of London* 50(4, 1882): 763-768, pl. 57.

Butt, A. and Siraj, A. (2006). Some orb weaver spiders from Punjab, Pakistan. *Pakistan Journal of Zoology* 38: 215-220.

Butt, A., and Tahir, H. M. (2010). Resource partitioning among five agrobiont spiders of a rice ecosystem. *Zoological Studies*, 49(4), 470-480.

Caleb, J. T. D. (2014). A new species of *Phintella* Strand (Araneae: Salticidae) from India. *Munis Entomology and Zoology* 9(2): 605-608.

Caleb, J. T. D. (2016a). A discovery and redescription of *Curubis erratica* Simon, 1902 (Araneae: Salticidae) from India. *Arthropoda Selecta* 25(2): 207-211.

Caleb, J. T. D. (2016b). New data on the jumping spiders (Araneae: Salticidae) from India. *Arthropoda Selecta* 25(3): 271-277.

Caleb, J. T. D. (2016b). New data on the jumping spiders (Araneae: Salticidae) from India. *Arthropoda Selecta* 25(3): 271-277.

Caleb, J. T. D. (2016c). Taxonomic notes on some ant-mimicking jumping spiders (Araneae: Salticidae) from India. *Arthropoda Selecta* 25(4): 403-420.

Caleb, J. T. D. (2016c). Taxonomic notes on some ant-mimicking jumping spiders (Araneae: Salticidae) from India. *Arthropoda Selecta* 25(4): 403-420.

Caleb, J. T. D. (2018a). First record of *Micaria dives* (Lucas, 1846) (Araneae: Gnaphosidae) from India. *Indian Journal of Arachnology* 6(2017): 51-54.

Caleb, J. T. D. (2018b). Redescription of the tropical huntsman spider *Olios lamarcki* (Latreille, 1806) (Aranei: Sparassidae). *Arthropoda Selecta* 27(4): 339-343.

Caleb, J. T. D. (2018b). Redescription of the tropical huntsman spider *Olios lamarcki* (Latreille, 1806) (Aranei: Sparassidae). *Arthropoda Selecta* 27(4): 339-343.

Caleb, J. T. D. (2019a). The Indian net-casting spider name *Deinopis goalparaensis* Tikader and Malhotrais a nomen dubium (Araneae: Deinopidae). *Zootaxa* 4668(1): 148-150.

Caleb, J. T. D. (2019b). *An annotated checklist of jumping spiders (Araneae: Salticidae) of India*. AkiNik Publications, New Delhi, 75 pp.

Caleb, J. T. D. (2020a). A new jumping spider genus from South and Southeast Asia (Araneae: Salticidae: Plexippini: *Orientattus*). *Peckhamia* 200.1: 1-5.

Caleb, J. T. D. (2020b). Spider (Arachnida: Araneae) fauna of the scrub jungle in the Madras Christian College campus, Chennai, India. *Journal of Threatened Taxa* 12(7): 15711-15766.

Caleb, J. T. D. (2023). Deciphering mysteries: on the identity of five enigmatic jumping spiders from northeast India, China and Philippines (Araneae, Salticidae). *Zootaxa* 5230(3): 391-400.

Caleb, J. T. D. and Acharya, S. (2019). First record of the genus *Schenkelia* Lessert 1927 (Araneae: Salticidae) from India. *Acta Arachnologica* 68(2): 73-75.

Caleb, J. T. D. and Acharya, S. (2020). Jumping spiders of the genus *Phintelloides* from India, with the description of a new species (Araneae: Salticidae: Chrysillini). *Revue Suisse de Zoologie* 127(1): 95-100.

Caleb, J. T. D. and Benjamin, S. P. (2017). On the type of *Myrmarachne uniseriata* Narayan, 1915 (Araneae: Salticidae), with notes on its synonymy. *Arachnology* 17(6): 294-296.

Caleb, J. T. D. and Karthikeyani, R. (2015). A new jumping spider of the genus *Cosmophasis* Simon 1901 (Araneae: Salticidae) from Maharashtra, India. *Acta Arachnologica* 64(2): 97-99.

Caleb, J. T. D. and Karthikeyani, R. (2015). A new jumping spider of the genus *Cosmophasis* Simon 1901 (Araneae: Salticidae) from Maharashtra, India. *Acta Arachnologica* 64(2): 97-99.

Caleb, J. T. D. and Kumar, V. (2018). *Pellenes iva* sp. n. (Araneae: Salticidae) with a distinct M-shaped central epigynal pocket from India. *Halteres* 9: 6-11.

Caleb, J. T. D. and Mathai, M. T. (2013). New species of *Poecilochroa* Westring and *Zelotes* Gistel (Araneae: Gnaphosidae) from Tamil Nadu, India. *Indian Journal of Arachnology* 2(2): 1-6.

Caleb, J. T. D. and Mathai, M. T. (2014a). A new species of *Deinopis* MacLeay (Araneae: Deinopidae) from India. *Indian Journal of Arachnology* 3(1): 1-7.

Caleb, J. T. D. and Mathai, M. T. (2014b). Description of some interesting jumping spiders (Araneae: Salticidae) from South India. *Journal of Entomology and Zoology Studies* 2(5): 63-71.

Caleb, J. T. D. and Mathai, M. T. (2014c). Record of *Araneus viridisomus* Gravely, 1921 (Araneae: Araneidae) from Tamil Nadu, India. *Indian Journal of Arachnology* 3(2): 1-5.

Caleb, J. T. D. and Mathai, M. T. (2015). Description of a new species of *Harmochirus* Simon (Araneae: Salticidae) from South India. *Munis Entomology and Zoology* 10(1): 117-121.

Caleb, J. T. D. and Mathai, M. T. (2015). Description of a new species of *Harmochirus* Simon (Araneae: Salticidae) from South India. *Munis Entomology and Zoology* 10(1): 117-121.

Caleb, J. T. D. and Sanap, R. V. (2016). Lessert's rainbow spider, *Stenaelurillus lesserti* Reimoser (Araneae: Salticidae: Aelurillina) from new localities in South India. *Acta Arachnologica* 65(2): 83-87.

Caleb, J. T. D. and Sanap, R. V. (2017). Rediscovery of *Piranthus decorus* Thorell 1895 (Araneae: Salticidae) after 122 years since the original description. *Acta Arachnologica* 66(1): 25-29.

Caleb, J. T. D. and Wijesinghe, D. P. (2022). On three new synonyms of *Oxyopes hindostanicus* Pocock 1901 (Araneae: Oxyopidae). *Acta Arachnologica* 71(1): 13-20.

Caleb, J. T. D., Acharya, S. and Kumar, V. (2018). From a century ago: a new spartaeine species from the Eastern Himalayas (Aranei: Salticidae). *Arthropoda Selecta* 27(3): 232-236.

Caleb, J. T. D., Bera, C. and Acharya, S. (2020). New species and synonymies in the genus *Carrhotus* Thorell, 1891 from India (Aranei: Salticidae: Salticini). *Arthropoda Selecta* 29(1): 51-66.

Caleb, J. T. D., Bera, C. and Acharya, S. (2020). New species and synonymies in the genus *Carrhotus* Thorell, 1891 from India (Aranei: Salticidae: Salticini). *Arthropoda Selecta* 29(1): 51-66.

Caleb, J. T. D., Bera, C., Acharya, S. and Kumar, V. (2019a). Jumping spiders of the genus *Pancorius* Simon, 1902 (Araneae: Salticidae: Plexippini) from eastern India, with a description of a new species. *Arthropoda Selecta* 28(2): 261-266.

Caleb, J. T. D., Chatterjee, S., Tyagi, K., Kundu, S. and Kumar, V. (2017c). Two new jumping spiders of the genera *Epocilla* Thorell, 1887 and *Mogrus* Simon, 1882 from India (Araneae: Salticidae). *Arthropoda Selecta* 26(4): 329-334.

Caleb, J. T. D., Chatterjee, S., Tyagi, K., Kundu, S. and Kumar, V. (2018b). A new generic record and two new species of jumping spiders (Araneae: Salticidae) from India. *Acta Arachnologica* 67(1): 7-12.

Caleb, J. T. D., Christudhas, A., Laltanpuii, K. and Chitra, M. (2014). New species of *Hyllus* C. L. Koch (Araneae: Salticidae) from India. *Munis Entomology and Zoology* 9(2): 634-637.

Caleb, J. T. D., Francis, C. and Bhat, V. K. (2021). A new baviine species of the genus *Maripanthus* Maddison from India (Araneae: Salticidae). *Revue Suisse de Zoologie* 128(1): 199-205.

Caleb, J. T. D., Francis, C., Bhat, V. K. and Packiam, S. M. (2022b). A new species and two new synonyms in the genus *Plexippus* C.L. Koch, 1846 from India (Araneae: Salticidae: Plexippina). *Arthropoda Selecta* 31(3): 312-318.

Caleb, J. T. D., Francis, C., Bhat, V. K. and Packiam, S. M. (2022b). A new species and two new synonyms in the genus *Plexippus* C.L. Koch, 1846 from India (Araneae: Salticidae: Plexippina). *Arthropoda Selecta* 31(3): 312-318.

Caleb, J. T. D., Ghosh, D. and Kumar, V. (2018). On two new synonyms of the orb-weaving spider *Orsinome vethi* (Hasselt, 1882) (Araneae, Tetragnathidae). *Zootaxa* 4444(3): 342-346.

Caleb, J. T. D., Karthikeyani, R. and Muthuchelian, K. (2014). Description of *Drassodes luridus* O. P. Cambridge (Araneae: Gnaphosidae): First record from Tamil Nadu, India. *Journal of Entomology and Zoology Studies* 2(4): 135-138.

Caleb, J. T. D., Karthikeyani, R. and Muthuchelian, K. (2016). Social spiders (Araneae: Eresidae: *Stegodyphus*) in Tamil Nadu, India. *International Journal of Applied Bioresearch* 27: 4-6.

Caleb, J. T. D., Lohit, Y. T., Abhijith, A. P. C. and Packiam, S. M. (2022c). A new species and new synonym in the genus *Colopsus* Simon, 1902 (Araneae: Salticidae: Plexippina) from India. *Arthropoda Selecta* 31(4): 470-476.

Caleb, J. T. D., Mondal, K. and Kumar, V. (2018). A new species of the huntsman spider genus *Pseudopoda* Jäger (Araneae: Sparassidae) from the Eastern Himalayas, India. *Halteres* 9: 170-175.

Caleb, J. T. D., Mungkung, S. and Mathai, M. T. (2015). Four new species of jumping spider (Araneae: Salticidae: Aelurillinae) with the description of a new genus from South India. *Peckhamia* 124.1: 1-18.

Caleb, J. T. D., Parag, A. and Datta-Roy, A. (2023). A new species of the genus *Siler* Simon, 1889 (Araneae, Salticidae, Chrysillini) from India. *Zoosystematics and Evolution* 99(1): 209-216.

Caleb, J. T. D., Prajapati, D. A. and Ali, P. A. (2019). Redescription of *Rudakius ludhianaensis* (Tikader, 1974) (Aranei: Salticidae), with notes on its synonymy and distribution. *Arthropoda Selecta* 28(3): 417-423.

Caleb, J. T. D., Prajapati, D. A., Rameshwar Maheshwari, N. and Sanap, R. V. (2017b). Redescription and synonymy of *Stenaelurillus arambagensis* (Biswas et Biswas, 1992) comb. n. (Araneae: Salticidae). *Arthropoda Selecta* 26(2): 119-123.

Caleb, J. T. D., Pravalikha, G. B., Johnson, B. E., Manyu, M., Mungkung, S. and Mathai, M. T. (2017a). *Hersilia aadi* Pravalikha, Srinivasulu and Srinivasulu, 2014 a junior synonym of *Hersilia savignyi* Lucas, 1836 (Araneae: Hersiliidae). *Zootaxa* 4254(3): 396-400.

Caleb, J. T. D., Pravalikha, G. B., Johnson, B. E., Manyu, M., Mungkung, S. and Mathai, M. T. (2017a). *Hersilia aadi* Pravalikha, Srinivasulu and Srinivasulu, 2014 a junior synonym of *Hersilia savignyi* Lucas, 1836 (Araneae: Hersiliidae). *Zootaxa* 4254(3): 396-400.

Caleb, J. T. D., Sajan, S. K. and Kumar, V. (2018). New jumping spiders from the alpine meadows of the Valley of Flowers, western Himalayas, India (Araneae, Salticidae). *ZooKeys* 783: 113-124.

Caleb, J. T. D., Sanap, R. V., Prajapati, D. A. and Bambhaniya, P. (2021). Taxonomic notes on two jumping spider species of the genus *Epocilla* Thorell, 1887 (Araneae: Salticidae: Chrysillini) from India and Pakistan. *Arthropoda Selecta* 30(2): 221-229.

Caleb, J. T. D., Sanap, R. V., Tripathi, R., Sampathkumar, M., Dharmara, J. and Packiam, S. M. **(2022a)**. Taxonomic notes on some South and Southeast Asian members of the genus *Rhene* Thorell, 1869 (Aranei, Salticidae, Dendryphantini). *Zootaxa* 5125(4): 389-407.

Caleb, J. T. D., Sanap, R. V., Tripathi, R., Sampathkumar, M., Dharmara, J. and Packiam, S. M. (2022a). Taxonomic notes on some South and Southeast Asian members of the genus *Rhene* Thorell, 1869 (Aranei, Salticidae, Dendryphantini). *Zootaxa* 5125(4): 389-407.

Caleb, J. T. D., Sanap, R. V., Tripathi, R., Sampathkumar, M., Dharmara, J. and Packiam, S. M. (2022a). Taxonomic notes on some South and Southeast Asian members of the genus *Rhene* Thorell, 1869 (Aranei, Salticidae, Dendryphantini). *Zootaxa* 5125(4): 389-407.

Caleb, J. T. D., Sankaran, P. M., Nafin, K. S. and Acharya, S. (2019b)**.** *Indopadilla*, a new jumping spider genus from India (Araneae: Salticidae). *Arthropoda Selecta* 28(4): 567-574.

Caleb, J.T.D. (2015). Diversity and systematics of spiders (Arachnida: Araneae) from the Madras Christian College campus, Tambaram, India [Doctoral Dissertation, University of Madras]. Shodhganga (http://hdl.handle.net/10603/184173).

Caleb, J.T.D. and Sankaran, P.M. (2024). Araneae of India. Version 2024, online at http://www.indianspiders.in, accessed on 06/06/2024.

Canning, G., Reilly, B. K., and Dippenaar-Schoeman, A. S. (2014). Burrow structure and microhabitat characteristics of Nesiergus insulanus (Araneae: Theraphosidae) from Frégate Island, Seychelles. *The Journal of Arachnology*, 42(3), 293-298.

Cardoso, P., Pekár, S., Jocqué, R., and Coddington, J. A. (2011). Global patterns of guild composition and functional diversity of spiders. *PloS one*, *6*(6), e21710.

Chamberlin, R. V. (1924a). Descriptions of new American and Chinese spiders, with notes on other Chinese species. *Proceedings of the United States National Museum* 63(13): 1-38.

Chang, Y. H. and Tso, I. M. (2004). Six newly recorded spiders of the genera *Araneus*, *Larinia*, *Eriophora*, *Thanatus*, *Portia* and *Dolichognatha* (Araneae : Araneidae, Philodromidae, Salticidae and Tetragnathidae) from Taiwan. *Acta Arachnologica* 53(1): 27-33.

Chatterjee, S., Caleb, J. T. D., Tyagi, K., Kundu, S. and Kumar, V. (2017)**.** First report of *Menemerus nigli* (Araneae: Salticidae) from India. *Halteres* 8: 109-111.

Chatterjee, S., Caleb, J. T. D., Tyagi, K., Kundu, S. and Kumar, V**.** (2018a)**.** First report of *Hyptiotes affinis* Bösenberg and Strand, 1906 (Araneae: Uloboridae) from India. *Munis Entomology and Zoology* 13(1): 211-213.

Chatterjee, S., Caleb, J. T. D., Tyagi, K., Kundu, S. and Kumar, V. (2018b)**.** First report of *Psechrus Inflatus* Bayer (Araneae: Psechridae) from India. *Records of the Zoological Survey of India* 117(4, for 2017): 391-393.

Chatterjee, S., Caleb, J. T. D., Tyagi, K., Kundu, S. and Kumar, V. (2018a)**.** First report of *Hyptiotes affinis* Bösenberg and Strand, 1906 (Araneae: Uloboridae) from India. *Munis Entomology and Zoology* 13(1): 211-213.

Chatterjee, S., Isaia, M., and Venturino, E. (2009). Spiders as biological controllers in the agroecosystem. *Journal of Theoretical Biology*, *258*(3), 352-362.

Chen, K.-M., Lin, T.-Y. and Ueng, Y.-T. (2021). Three new species and six newly recorded species of jumping spiders (Araneae: Salticidae) in Taiwan. *Natural Resources* 12: 290-320.

Chen, K.-M., Lin, T.-Y. and Ueng, Y.-T. (2021). Three new species and six newly recorded species of jumping spiders (Araneae: Salticidae) in Taiwan. *Natural Resources* 12: 290-320.

Chen, X. E. and Gao, J. C. (1990). *The Sichuan farmland spiders in China*. Sichuan Science and Technology Publishing House, Chengdu, 226 pp.

Chen, Z. F. and Zhang, Z. H. (1991). *Fauna of Zhejiang: Araneida*. Zhejiang Science and Technology Publishing House, Hangzhou, 356 pp.

Chetia, P., and Kalita, D. K. (2012). Diversity and distribution of spiders from gibbon wildlife sanctuary, Assam, India. *Asian Journal of Conservation Biology*, Vol. 1, pp. 5-15.

Chikuni, Y. (1989b). *Pictorial encyclopedia of spiders in Japan*. Kaisei-sha Publishing Co., Tokyo, 310 pp.

Chotwong, W. and Tanikawa, A. (2013). Four spider species of the families Theridiidae, Araneidae, and Salticidae (Arachnida; Araneae) new to Thailand. *Acta Arachnologica* 62(1): 1-5.

Choudhury, A. U. (2002) Golden langur Trachypithecus geei threatened by habitat fragmentation. *Zoo's Print Journal* 17 (2): 699-703.

Choudhury, J.C.B. (1962). Preliminary investigaton on the insect pests of cashew plants in Kerala. *Indian Forester* 88: 516–522.

Choudhury, K. (2014). Population status and distribution of butterfly fauna (Order: Lepidoptera) with special reference to their conservation in the Manas Biosphere Reserve, North East India. A Technical Report submitted to University Grants Commission, New Delhi.

Chrysanthus, P. (1959). Spiders from south New Guinea II. *Nova Guinea N.S.* 10: 197-206.

Chrysanthus, P. (1960). Spiders from south New Guinea III. *Nova Guinea, Zoology* 3: 23-42.

Chrysanthus, P. (1961b). Spiders from south New Guinea IV. *Nova Guinea, Zoology* 10: 195-214.

Chrysanthus, P. (1963). Spiders from south New Guinea V. *Nova Guinea, Zoology* 24: 727-750.

Chrysanthus, P. (1968). Spiders from south New Guinea X. *Tijdschrift voor Entomologie* 111: 49-74.

Chrysanthus, P. (1971). Further notes on the spiders of New Guinea I (Argyopidae). *Zoologische Verhandelingen* 113: 1-52.

Chrysanthus, P. (1975). Further notes on the spiders of New Guinea II (Araneae, Tetragnathidae, Theridiidae). *Zoologische Verhandelingen* 140: 1-50.

Chu, Y. I. and Okuma, C. (1970). Preliminary survey on the spider-fauna of the paddy fields in Taiwan. *Mushi* 44: 65-88.

Corlett, R. T. (2020). Safeguarding our future by protecting biodiversity. *Plant diversity*, *42*(4), 221-228.

Critical Ecosystem Partnership Fund. (n.d.). Himalaya. Retrieved from https://www.cepf.net/our-work/biodiversity-hotspots/himalaya#:~:text=CEPF%20played%20an%20instrumental%20role,Areas%20in%20the%20Eastern%20Himalayas, accessed on 06/06/2024.

Critical Ecosystem Partnership Fund. (n.d.). Sundaland. Retrieved from https://www.cepf.net/our-work/biodiversity-hotspots/sundaland, accessed on 06/06/2024.

Dahl, F. (1912a). Seidenspinne und Spinneseide. *Mitteilungen aus dem Zoologischen Museum in Berlin* 6(1): 1-90.

Dahl, F. (1914). Die Gasteracanthen des Berliner Zoologischen Museums und deren geographische Verbreitung. *Mitteilungen aus dem Zoologischen Museum in Berlin* 7: 235-301.

Dankittipakul, P. and Singtripop, T. (2008a). Five new species of the spider genus *Clubiona* Latreille (Araneae: Clubionidae) from Thailand. *Zootaxa* 1747: 34-60.

Dankittipakul, P., Tavano, M. L., Chotwong, W. and Singtripop, T. (2012). New synonym and descriptions of two new species of the spider genus *Clubiona* Latreille, 1804 from Thailand (Araneae, Clubionidae). *Zootaxa* 3532: 51-63.

Das, K., Bazbarua, P., Sarma, G. C., and Baruah, C. K. (2008). Orchids in Manas Biosphere Reserve: Survey and their perspective distribution. *Pleione* 2(1), 111-117.

Das, L.C. (1966). Working Plan for the Reserve Forests of Haltugaon Division, 1966-67 to 1981-82.

Das, S., Sharma, D., Deb, D., Dey, A., Ghosh, A. C., Deb, M., Datta, A., Nath, S., deb, B., Singha, H.R., Debnath, R., Nautiyal, S., Sláma, P. and Roychoudhury, S. (2021). Diversity and distribution of the spiders (arachnida: araneae) from Kailashahar: first record of nine species from Tripura, India. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*.

Davies, V. T. (1988b). An illustrated guide to the genera of orb-weaving spiders in Australia. *Memoirs of the Queensland Museum* 25: 273-332.

Davies, V. T. (1988b). An illustrated guide to the genera of orb-weaving spiders in Australia. *Memoirs of the Queensland Museum* 25: 273-332.

Davies, V. T. and Gallon, J. A. (1986). Type specimens of spiders (Araneae) in the Queensland Museum. *Memoirs of the Queensland Museum* 22: 225-236.

Davies, V. T. and Żabka, M. (1989). Illustrated keys to the genera of jumping spiders (Araneae: Salticidae) in Australia. *Memoirs of the Queensland Museum* 27(2): 189-266.

Davis, S., Sudhikumar, A. V., Sunil Jose, K. and Sebastian, P. A. (2005). New record of the salticid spider *Thiania bhamoensis* Thorell (Araneae: Salticidae) from Kerala, India with its redescription and field notes on behavior. *Journal of the Bombay Natural History Society* 102: 245-249.

Deeleman-Reinhold, C. L. (1989a). Spiders from Niah Cave, Sarawak, East Malaysia, collected by P. Strinati. *Revue Suisse de Zoologie* 96(3): 619-627.

Deeleman-Reinhold, C. L. (1993b). A new spider genus from Thailand with a unique ant-mimicking device, with description of some other castianeirine spiders (Araneae: Corinnidae: Castianeirinae). *Natural History Bulletin of the Siam Society* 40: 167-184.

Deeleman-Reinhold, C. L. (2001). *Forest spiders of South East Asia: with a revision of the sac and ground spiders (Araneae: Clubionidae, Corinnidae, Liocranidae, Gnaphosidae, Prodidomidae and Trochanterriidae [sic])*. Brill, Leiden, 591 pp.

Deeleman-Reinhold, C. L. (2009a). Description of the lynx spiders of a canopy fogging project in northern Borneo (Araneae: Oxyopidae), with description of a new genus and six new species of *Hamataliwa*. *Zoologische Mededelingen* 83(17): 673-700.

Deeleman-Reinhold, C. L. (2009b). Spiny theridiids in the Asian tropics. Systematics, notes on behaviour and species richness (Araneae: Theridiidae: *Chrysso*, *Meotipa*). *Contributions to Natural History* 12: 403-436.

Deng, Z. W., Agnarsson, I., Chen, Z. Q. and Liu, J. (2022). *Meotipa* species (Araneae, Theridiidae) from China. *ZooKeys* 1082: 153-178.

Deshmukh, U.S. and Raut, N.M. (2014). Seasonal Diversity and Status of Spiders (Arachnida: Araneae) in Salbardi forest (Satpura Range), Maharashtra, India. *Journal of Entomology and Zoology Studies* 2 (6): 278-281.

Devasahayam, S. and C.P.R. Nair (1986). The tea mosquito bug, Helopelts antonii Signoret on cashew in India. Journal of Plantaton Crops 14: 1–10.

Dhali, D. C., Roy, T. K., Saha, S. & Raychaudhuri, D. (2014)**.** On two *Euophrys* C. L. Koch species new to India (Araneae: Salticidae). *Munis Entomology and Zoology,* 9(1): 143-149.

Dhali, D. C., Roy, T. K., Saha, S. and Raychaudhuri, D**.** (2016a)**.** On the new sac spiders (Araneae: Clubionidae) of Dooars, West Bengal, India. *World Scientific News*, 50: 278-305.

Dhali, D. C., Roy, T. K., Saha, S. and Raychaudhuri, D. (2016b)**.** A new name for *Clubiona serrata* Dhali, Roy, Saha et Raychaudhuri, 2016 (Araneae: Clubionidae). *World Scientific News,* 56: 263-266.

Dhali, D. C., Roy, T. K., Sen, S., Saha, S. and Raychaudhuri, D. (2012)**.** Wolf spiders (Araneae: Lycosidae) of the reserve forests of Dooars, West Bengal, India. *Munis Entomology and Zoology,* 7(2): 1199-1213.

Dhali, D. C., Saha, S. and Raychaudhuri, D**.** (2015)**.** A new litter dwelling *Oxyopes* Latreille (Araneae: Oxyopidae) species from Jaldapara Wild Life Sanctuary, India. *Species,* 12(32): 24-29.

Dhali, D. C., Saha, S. and Raychaudhuri, D. (2017). Litter and ground dwelling spiders (Araneae: Arachnida) of reserve forests of Dooars, West Bengal. *World Scientific News* 63: 1-242.

Dhali, D. C., Saha, S. and Raychaudhuri, D. (2017). Litter and ground dwelling spiders (Araneae: Arachnida) of reserve forests of Dooars, West Bengal. *World Scientific News* 63: 1-242.

Dias, S. C., Carvalho, L. S., Bonaldo, A. B., and Brescovit, A. D. (2009). Refining the establishment of guilds in Neotropical spiders (Arachnida: Araneae). Journal of Natural History, 44(3-4), 219-239.

Dimitrov, D. and Hormiga, G. (2009). Revision and cladistic analysis of the orbweaving spider genus *Cyrtognatha* Keyserling, 1881 (Araneae, Tetragnathidae). *Bulletin of the American Museum of Natural History* 317: 1-140.

Dippenaar-Schoeman, A. S. (2002). Baboon and trapdoor spiders of southern Africa: an identification manual. Plant Protection Research Institute Handbook no. 13. Agricultural Research Council, Pretoria.

Dippenaar-Schoeman, A. S., Haddad, C. R., Foord, S. H. and Lotz, L. N. (2020t). *The Tetragnathidae of South Africa*. Version 1. South African National Survey of Arachnida Photo Identification Guide, Irene, 46 pp.

Dippenaar-Schoeman, A. S., Haddad, C. R., Foord, S. H. and Lotz, L. N. (2023a). *The Tetragnathidae of South Africa*. Version 2. South African National Survey of Arachnida Photo Identification Guide, Irene, 50 pp.

Dippenaar-Schoeman, A. S., Haddad, C. R., Foord, S. H., Lotz, L. N. and Webb, P. (2022e). *The Araneidae of South Africa*. Version 2: part 2 (E-Ne). South African National Survey of Arachnida Photo Identification Guide, Irene, 64 pp.

Dippenaar-Schoeman, A. S., Haddad, C. R., Van Zyl, J. and Webb, P. (2021a). First record of *Eriovixia excelsa* (Simon, 1889) from South Africa (Araneae: Araneidae). *SANSA Newsletter* 39(Supplement): 21-23.

Dobroruka, L. J. (2004). One new species and one new record of jumping spiders (Araneae: Salticidae) from India. *Acta Arachnologica Sinica,* 13: 14-17.

Doleschall, L. (1857). Bijdrage tot de kennis der Arachniden van den Indischen Archipel. *Natuurkundig Tijdschrift voor Nederlandsch-Indie* 13: 339-434, pl. 1-2.

Doleschall, L. (1857). Bijdrage tot de kennis der Arachniden van den Indischen Archipel. *Natuurkundig Tijdschrift voor Nederlandsch-Indie* 13: 339-434, pl. 1-2.

Doleschall, L. (1859). Tweede Bijdrage tot de kennis der Arachniden van den Indischen Archipel. *Acta Societatis Scientiarum Indo-Neerlandicae* 5(5): 1-60, pl. 1-17.

Doleschall, L. (1859). Tweede Bijdrage tot de kennis der Arachniden van den Indischen Archipel. *Acta Societatis Scientiarum Indo-Neerlandicae* 5(5): 1-60, pl. 1-17.

Duffey, E. (1998). Aerial dispersal in spiders. *In Proceedings of the 17th European Colloquium of Arachnology* (Vol. 1937, pp. 187-191).

Dutta, A. (2018). Rural informalities and forest squatters in the reserved forests of Assam, India. *Critical Asian Studies*, *50*(3), 353-374.

Dutta, S. U. and Sarma, G. C. (2013). Orchid diversity at the Chirang Reserve Forest of BTAD, Assam. *Global Research Analysis*, 2(5), 9-10.

Dyal, S. (1935). Fauna of Lahore. 4.–Spiders of Lahore. *Bulletin of the Department of Zoology of the Panjab University* 1: 119-252, pl. 11-17.

Dzulhelmi, M. N., Suriyanti, S., Zulqarnain, M. and Norma, C. Y. (2015). Two new *Opadometa* species (Araneae: Tetragnathidae) from Sarawak, Malaysia. *Annales Zoologici, Warszawa* 65(1): 101-107.

Eberhard, W. G. and Huber, B. A. (2010). Spider genitalia: precise maneuvers with a numb structure in a complex lock. In: Leonard, J. L. & A. Córdoba-Aguilar (eds.) The Evolution of Primary Sexual Characters in Animals. *Oxford University Press, Oxford*, pp. 249-284.

Edmunds, M. and Prószyński, J. (2003). On a collection of *Myrmarachne* spiders (Araneae: Salticidae) from peninsular Malaya. *Bulletin of the British Arachnological Society* 12: 297-323.

Edwards, G. B. and Benjamin, S. P. (2009). A first look at the phylogeny of the Myrmarachninae, with rediscovery and redescription of the type species of *Myrmarachne* (Araneae: Salticidae). *Zootaxa* 2309: 1-29.

Engel, M. S., Ceríaco, L. M., Daniel, G. M., Dellapé, P. M., Löbl, I., Marinov, M., Reis, R.E., Young, M.T., Dubois, A., Agarwal, I., Lehmann, P.A., Alvarado, M., Alvarez, N., Andreone, F. Vieira, K.A., Ascher, J.S., Baêta, D., Baldo, D., Bandeira, S.A., Barden, P., Barrasso, D.A.,.... and Zacharie, C. K. (2021). The taxonomic impediment: a shortage of taxonomists, not the lack of technical approaches. *Zoological Journal of the Linnean Society*, *193*(2), 381-387.

Fabricius, J. C. (1775). *Systema entomologiae, sistens insectorum classes, ordines, genera, species, adiectis, synonymis, locis descriptionibus observationibus*. Libraria Kortii, Flensbvrgi et Lipsiae [= Kortensche Buchhandlung, Flensburg & Leipzig], 832 pp. (Araneae, pp. 431-441).

Fabricius, J. C. (1781). *Species insectorum exhibentes eorum differentias specificas, synonyma auctorum, loca natalia, metamorphos in adiectis observationibus, descriptionibus*. Hamburgi and Kilonii, 1, 1-552 (Araneae, pp. 536-549).

Fabricius, J. C. (1793). *Entomologiae systematica emendata et aucta, secundum classes, ordines, genera, species adjectis synonimis, locis, observationibus, descriptionibus.* Tom. II. Christian Gottlieb Proft, Hafniae [= Copenhagen], 519 pp. [Aranea pp. 407-428].

Fabricius, J. C. (1798). *Supplementum entomologiae systematicae*. Christian Gottlieb Proft, Hafniae [= Copenhagen], 572 pp. (Araneae, pp. 291-294).

Fage, L. (1924). Araneids from the Siju Cave, Garo Hills, Assam. *Records of the Indian Museum, Calcutta,* 26: 63-67.

Feng, Z. Q. (1990). *Spiders of China in colour*. Hunan Science and Technology Publishing House, 256 pp.

Forbes, H. O. (1884). On the habits of *Thomisus decipiens*, a spider from Sumatra. *Proceedings of the Zoological Society of London* 51(4, 1883): 586-588, pl. 51.

Fox, I. (1935). Chinese spiders of the family Lycosidae. *Journal of the Washington Academy of Sciences* 25: 451-456.

Fox, I. (1938b). Notes on Chinese spiders chiefly of the family Argiopidae. *Journal of the Washington Academy of Sciences* 28: 364-371.

Framenau, V. W. (2008b). The male of the orb-weaving spider *Cyrtophora unicolor* (Araneae, Araneidae). *Journal of Arachnology* 36(1): 131-135.

Framenau, V. W. and Scharff, N. (2008). The orb-weaving spider genus *Larinia* in Australia (Araneae: Araneidae). *Arthropod Systematics & Phylogeny* 66: 227-250.

Franganillo B., P. (1936b). Arácnidos recogidos durante el verano de 1934 (Prosigue). *Revista Belen* 1936(57-58): 75-82.

Freiberg, J. A., de Sales Dambros, C., Rodrigues, E. N. L., Teixeira, R. A., Vieira, Â. D. H. N., de Almeida, H. S., ... and Jacques, R. J. S. (2020). Increased grazing intensity in pastures reduces the abundance and richness of ground spiders in an integrated crop-livestock system. *Agronomy for Sustainable Development*, 40, 1-10.

Fu, L. N. (2018). Linyphiidae, Phrurolithidae, Salticidae. In: Zhang, F. and Xue, X. F. (eds.) *Fauna of Tianmu Mountain. Volume II. Arachnida. Araneae Eriophyoidea*. Zhejiang University Press, Hangzhou, pp. 34-46, 102-104, 129-160, pl. 8-11, 21-22, 27-34.

Gajbe, P. U. (2004d). Spiders of Jabalpur, Madhya Pradesh (Arachnida: Araneae). *Records of the Zoological Survey of India, Occasional Paper* 227: 1-154.

Gajbe, U. A. (1979). Studies on some spiders of the genus *Sosticus* from India (Araneae: Gnaphosidae). *Bulletin of the Zoological Survey of India,* 2: 69-74.

Gajbe, U. A. (1983). A new *Pterotricha* spider from India (Araneae: Gnaphosidae). *Bulletin of the Zoological Survey of India,* 5: 95-97.

Gajbe, U. A. (1984). On three new species of spiders of the genus *Callilepis* Westring (Family: Gnaphosidae) from India. *Records of the Zoological Survey of India,* 81: 127-133.

Gajbe, U. A. (1987a). A new *Haplodrassus* spider from India (Araneae: Gnaphosidae). *Bulletin of the Zoological Survey of India,* 8: 277-279.

Gajbe, U. A. (1987b). A new *Rachodrassus* spider from India (Araneae: Gnaphosidae). *Bulletin of the Zoological Survey of India,* 8: 281-283.

Gajbe, U. A. (1987c). A new *Scopodes* spider from India (Araneae: Gnaphosidae). *Bulletin of the Zoological Survey of India,* 8: 285-287.

Gajbe, U. A. (1987d). A new *Drassyllus* spider from India (Araneae: Gnaphosidae). *Bulletin of the Zoological Survey of India,* 8: 289-290.

Gajbe, U. A. (1989). On two new species of the genera *Scotophaeus* Simon and *Echemus* Simon from India (Araneae: Gnaphosidae). *Records of the Zoological Survey of India,* 84: 557-562.

Gajbe, U. A. (1992a). Taxonomic studies on some spiders of the genera *Gnaphosa* Latreille, *Haplodrassus* Chamberlin and *Scotophaeus* Simon (family: Gnaphosidae) from India. *Records of the Zoological Survey of India,* 91: 303-311.

Gajbe, U. A. (1992b). On two new species of *Haplodrassus* spiders from India (Araneae: Gnaphosidae). *Records of the Zoological Survey of India,* 91: 313-317.

Gajbe, U. A. (1992c). A new species of *Oxyopes* Latreille and one of *Peucetia* Thorell from Uttar Pradesh, India (Araneae, family: Oxyopidae). *Records of the Zoological Survey of India,* 91: 389-393.

Gajbe, U. A. (1992d). A new *Mimetus* spider from India (Araneae: Mimetidae). *Records of the Zoological Survey of India,* 91: 427-429.

Gajbe, U. A. (1993a). New record of spider *Hersilia savignyi* Lucas (family: Hersiliidae) from Madhya Pradesh India with a description of male. *Records of the Zoological Survey of India,* 90: 117-119.

Gajbe, U. A. (1993b). A new *Sosticus* spider from India (Araneae: Gnaphosidae). *Records of the Zoological Survey of India,* 91: 181-183.

Gajbe, U. A. (1993c). A new *Apodrassodes* spider from India (Araneae: Gnaphosidae). *Records of the Zoological Survey of India,* 91: 227-229.

Gajbe, U. A. (1993d). A new *Megamyrmecion* spider from India (Araneae: Gnaphosidae). *Records of the Zoological Survey of India,* 91: 231-233.

Gajbe, U. A. (1993e). Description of the male of *Uloborus danolius* Tikader (Araneae: Uloboridae). *Records of the Zoological Survey of India,* 91: 235-237.

Gajbe, U. A. (1993f). A new *Liodrassus* spider from India (Araneae: Gnaphosidae). *Records of the Zoological Survey of India,* 91: 247-250.

Gajbe, U. A. (1999). Studies on some spiders of the family Oxyopidae (Araneae: Arachnida) from India. *Records of the Zoological Survey of India,* 97(3): 31-79.

Gajbe, U. A. (2004a). Studies on some spiders of the family Lycosidae (Araneae: Arachnida) from Madhya Pradesh, India. Records of the Zoological Survey of India, Occasional Paper 221: 1-40.

Gajbe, U. A. (2004b). Studies on some spiders of the families Oecobiidae, Eresidae, Hersiliidae, Urocteidae and Uloboridae (Araneae: Arachnida) from Madhya Pradesh, India. *Records of the Zoological Survey of India,* 103(1-2): 131-142.

Gajbe, U. A. (2004c). Studies on some spiders of the family Lycosidae (Araneae: Arachnida) from Madhya Pradesh, India. *Records of the Zoological Survey of India, Occasional Paper,* 221: 1-40.

Gajbe, U. A. (2005a). Studies on some spiders of the family Araneidae (Araneae: Arachnida) from Madhya Pradesh, India. *Records of the Zoological Survey of India,* 105(1-2): 45-60.

Gajbe, U. A. (2005b). Studies on some spiders of the family Philodromidae (Araneae: Arachnida) from Madhya Pradesh, India. *Records of the Zoological Survey of India,* 105(1-2): 61-72.

Gajbe, U. A. (2005c). Studies on some spiders of the family Thomisidae (Araneae: Arachnida) from Madhya Pradesh, India. *Records of the Zoological Survey of India,* 105(3-4): 57-80.

Gajbe, U. A. (2005d). Studies on some spiders of the family Gnaphosidae (Araneae: Arachnida) from Madhya Pradesh, India. *Records of the Zoological Survey of India,* 105(3-4): 111-140.

Gajbe, U. A. (2007). Araneae: Arachnida. In: Fauna of Madhya Pradesh (including Chhattisgarh), State Fauna Series. Zoological Survey of India, Kolkata 15(1), 419-540.

Gajbe, U. A. **(2007)**. Araneae: Arachnida. In: Fauna of Madhya Pradesh (including Chhattisgarh), State Fauna Series. Zoological Survey of India Kolkata 15(1), 419-540.

Gajbe, U. A. (2008a). A new species of *Dieta* spider (Araneae: Philodromidae) from Jabalpur, Madhya Pradesh, India. *Records of the Zoological Survey of India,* 108(1): 59-61.

Gajbe, U. A. (2008b). A new species of *Misumena* spider (Araneae: Thomisidae) from Jabalpur, Madhya Pradesh, India. *Records of the Zoological Survey of India,* 108(1): 63-65.

Gajbe, U. A. (2008c). *Fauna of India and the adjacent countries: Spider (Arachnida: Araneae: Oxyopidae)*. Zoological Survey of India Kolkata, 3, 1-117.

Gajbe, U. A. and Bhadra, S. (1978). *Uroctea indica* Pocock (family: Urocteidae) as a new record from Rajasthan, India. *Journal of the Bombay Natural History Society,* 75: 933-934.

Gajbe, U. A. and Gajbe, P. (1999a). Two new species of *Peucetia* Thorell (Araneae: Oxyopidae) from Jabalpur, Madhya Pradesh, India. *Geobios new Reports,* 18: 9-12.

Gajbe, U. A. and Gajbe, P. (1999b). Two new species of *Oxyopes* Latreille (Araneae: Oxyopidae) from Jabalpur, Madhya Pradesh, India. *Geobios new Reports,* 18: 13-16.

Gajbe, U. A. and Gajbe, P. (1999c). A new species of spider of the genus *Tmarus* Simon (Araneae: Thomisidae) from Madhya Pradesh, India. *Records of the Zoological Survey of India,* 97(3): 141-143.

Gajbe, U. A. and Gajbe, P. (1999d). On two new species of spiders of the genus *Xysticus* Koch (Araneae: Thomisidae) from Madhya Pradesh, India. *Records of the Zoological Survey of India,* 97(3): 145-148.

Gajbe, U. A. and Gajbe, P. (1999e). A new species of spider of the genus *Tibellus* Simon (Araneare [sic]: Philodromidae) from Madhya Pradesh, India. *Records of the Zoological Survey of India,* 97(3): 191-193.

Gajbe, U. A. and Gajbe, P. (1999f). A new species of spider of the genus *Philodromus* Walckenaer (Araneae: Philodromidae) from Madhya Pradesh, India. *Records of the Zoological Survey of India,* 97(3): 195-197.

Gajbe, U. A. and Gajbe, P. (1999g). A new species of spider of the genus *Thanatus* Koch (Araneae: Philodromidae) from Madhya Pradesh, India. *Records of the Zoological Survey of India,* 97(3): 199-201.

Gajbe, U. A. and Gajbe, P. (1999h). On three new species of spiders of the genus *Hippasa* Simon (Araneae: Lycosidae) from Jabalpur, Madhya Pradesh, India. *Records of the Zoological Survey of India,* 97(4): 23-28.

Gajbe, U. A. and Gajbe, P. (1999i). A new *Cyrtophora* spider (Araneae: Araneidae) from Jabalpur, Madhya Pradesh, India. *Records of the Zoological Survey of India,* 97(4): 29-31.

Gajbe, U. A. and Gajbe, P. (2000a). A new species of spider of the genus *Philodromus* Walckenaer (Araneae: Philodromidae) from Madhya Pradesh, India. *Records of the Zoological Survey of India,* 98: 51-53.

Gajbe, U. A. and Gajbe, P. (2000b). A new species of spider of the genus *Thomisus* Walckenaer (Araneae: Thomisidae) from Madhya Pradesh, India. *Records of the Zoological Survey of India,* 98: 55-57.

Gajbe, U. A. and Gajbe, P. (2000c). A new species of the genus *Neoscona* Simon (Araneae: Araneidae) from Madhya Pradesh, India. *Records of the Zoological Survey of India,* 98: 119-121.

Gajbe, U. A. and Gajbe, P. (2000d). A new species of the genus *Oxyopes* Latreille (Araneae: Oxyopidae) from Jabalpur, Madhya Pradesh, India. *Records of the Zoological Survey of India,* 98: 123-125.

Gajbe, U. A. and Gajbe, P. (2000e). A new species of the genus *Runcinia* Simon (Araneae: Thomisidae) from Madhya Pradesh, India. *Records of the Zoological Survey of India,* 98: 155-157.

Gajbe, U. A. and Gajbe, P. (2004a). A new species of *Larinia* spider (Araneae: Araneidae) from Jabalpur, Madhya Pradesh, India. *Records of the Zoological Survey of India,* 102(3-4): 113-115.

Gajbe, U. A. and Gajbe, P. (2004b). A new species of *Chorizopes* spider (Araneae: Araneidae) from Jabalpur, Madhya Pradesh, India. *Records of the Zoological Survey of India,* 102(3-4): 117-119.

Galiano, M. E. (1963a). Las especies americanas de arañas de la familia Salticidae descriptas por Eugène Simon: Redescripciones basadas en los ejemplares típicos. *Physis, Revista de la Sociedad Argentina de Ciencias Naturales* (C) 23: 273-470.

GALLÉ, R., and Schweger, S. (2014). Habitat and landscape attributes influencing spider assemblages at lowland forest river valley (Hungary). *North-Western Journal of Zoology*, 10(1).

Ganesh Kumar, M. and Mohanasundaram, M. (1998). A new species of ant-like spider from cotton fields of Tamil Nadu (Araneae: Salticidae). *Zoo's Print Journal* 13(11): 27-28.

Gerdes A.B.M., Uhl G., Alpers G. W. (2009). Spiders are special: fear and disgust evoked by pictures of arthropods. *Evolution and Human Behaviour*. 66-77pp.

Gertsch, W. J. and Archer, A. F. (1942). Descriptions of new American Theridiidae. *American Museum Novitates* 1171: 1-16.

Gong, J. X. (1989). First record of *Clubiona filicata* Cambridge for China (Araneae: Clubionidae). *Wuyi Science Journal* 7: 109-113.

Goswami, P., and Singh, S. Seasonal Diversity of Spiders (Arachnida: Araneae) and Collection Methods in Barpeta District, Assam, India. *Journal of Advanced Zoology*, Vol 44(2): 233-239.

Grasshoff, M. (1970b). Die Tribus Mangorini. I. Die Gattungen *Eustala*, *Larinia* s. str., *Larinopa* n. gen. (Arachnida: Araneae: Araneidae-Araneinae). *Senckenbergiana Biologica* 51(3/4): 209-234.

Grasshoff, M. (1973b). Konstruktions- und Funktionsanalyse an Kopulationsorganen einiger Radnetzspinnen. *Aufsätze und Reden der Senckenbergischen Naturforschenden Gesellschaft* 24: 129-151.

Grasshoff, M. (1984). Die Radnetzspinnen-Gattung *Caerostris* (Arachnida: Araneae). *Revue Zoologique Africaine* 98: 725-765.

Grasshoff, M. (1986). Die Radnetzspinnen-Gattung *Neoscona* in Afrika (Arachnida: Araneae). *Annalen Zoologische Wetenschappen* 250: 1-123.

Grasshoff, M. (1986). Die Radnetzspinnen-Gattung *Neoscona* in Afrika (Arachnida: Araneae). *Annalen Zoologische Wetenschappen* 250: 1-123.

Gravely, F. H. (1915). Notes on Indian mygalomorph Spiders. *Records of the Indian Museum, Calcutta,* 11: 257-287.

Gravely, F. H. (1921a). The spiders and scorpions of Barkuda Island. *Records of the Indian Museum, Calcutta* 22: 399-421, pl. 17-19.

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

Gravely, F. H. (1922). Common Indian spiders. *Journal of the Bombay Natural History Society,* 28: 1045-1050.

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

Gravely, F. H. (1931). Some Indian spiders of the families Ctenidae, Sparassidae, Selenopidae and Clubionidae. *Records of the Indian Museum, Calcutta,* 33: 211-282.

Gravely, F. H. (1931). Some Indian spiders of the families Ctenidae, Sparassidae, Selenopidae and Clubionidae. *Records of the Indian Museum, Calcutta* 33(3): 211-282.

Gravely, F. H. (1935a)**.** Notes on Indian mygalomorph spiders. II. *Records of the Indian Museum, Calcutta,* 37: 69-84.

Gravely, F. H. (1935b)**.** The male of *Ornithoctonus minax* (Thorell). *Records of the Indian Museum, Calcutta*, 37: 211-212.

Grinsted, L., Agnarsson, I. & Bilde, T. (2012). Subsocial behaviour and brood adoption in mixed-species colonies of two theridiid spiders. *Naturwissenschaften* 99(12): 1021-1030.

Grismado, C. J., Deeleman-Reinhold, C. L., Piacentini, L. N., Izquierdo, M. A. and Ramírez, M. J. (2014). Taxonomic review of the goblin spiders of the genus *Dysderoides* Fage and their Himalayan relatives of the genera *Trilacuna* Tong and Li and *Himalayana*, new genus (Araneae, Oonopidae). *Bulletin of the American Museum of Natural History* 387: 1-108.

Grismado, C. J., Deeleman, C. and Baehr, B. (2011). The goblin spider genus *Aprusia* Simon, 1893 (Araneae: Oonopidae). *American Museum Novitates* 3706: 1-21.

Guo, J. F. (ed.) (1985). [*Farm spiders from Shaanxi Province*]. Shaanxi Science and Technology Press.

Gupta, N. and Siliwal, M. (2012). A checklist of spiders (Arachnida: Araneae) of Wildlife Institute of India campus, Dehradun, Uttarakhand, India. *Indian Journal of Arachnology* 1(2): 73-91.

Gupta, R., Devi, O. S., and Islam, M. (2015). Common spiders from select protected areas of upper Assam. Assam State Biodiversity Board Rehabari, Guwahati, 186.

Han, G. X. and Zhu, M. S. (2010b). Taxonomy and biogeography of the spider genus *Eriovixia* (Araneae: Araneidae) from Hainan Island, China. *Journal of Natural History* 44(43-44): 2609-2635.

Harmon, J. P., Hladilek, E. E., Hinton, J. L., Stodola, T. J., and Andow, D. A. (2003). Herbivore response to vegetational diversity: spatial interaction of resources and natural enemies. *Population Ecology*, 45(2), 75-81.

Harvey, M. S., Austin, A. D. and Adams, M. (2007). The systematics and biology of the spider genus *Nephila* (Araneae: Nephilidae) in the Australasian region. *Invertebrate Systematics* 21(5): 407-451.

Hasselt, A. W. M. van (1877). Araneae exoticae, quas quondam in India Orientali (praesertim Insula Amboina) collegit Cel. Dr. C. L. Doleschall, ac, pro Museo Lugdunensi. *Tijdschrift voor Entomologie* 20: 51-56.

Hasselt, A. W. M. van (1882). *Araneae*. In: Veth, P. J. (ed.) Midden-Sumatra 4 A(11). Reizen en onderzoekingen der Sumatra-expeditie, uitgerust door het aardrijkskundig genootschap, 1877-1879. Brill, Leiden, pp. 1-56, pl. 1-5.

Hauke, T. J., and Herzig, V. (2017). Dangerous arachnids—Fake news or reality?. *Toxicon*, *138*, 173-183.

Hawes, T. C. (2020). A new record of the nocturnal orb-weaving spider *Poltys illepidus* (Araneae: Araneidae) from northern Thailand. *Entomologist's Monthly Magazine* 156(4): 271-275.

Hemm, V., and Höfer, H. (2012). Effects of grazing and habitat structure on the epigeic spider fauna in an open xerothermic area in southern Germany. Arachnology, 15(8), 260-268.

Herman, B. E., and Skokan, E. G. (1999). Bites that poison: A tale of spiders, snakes, and scorpions. *CONTEMPORARY PEDIATRICS-MONTVALE*- 16, 41-66.

Hill, D. E. and Otto, J. C. (2015). Exasperating taxonomy of the colourful ant-mimic *Myrmarachne exasperans* (Araneae: Salticidae: Astioida: Myrmarachinae [sic]). *Peckhamia* 131.1: 1-5.

Hogg, H. R. (1915a). Report on the spiders collected by the British Ornithologists' Union Expedition and the Wollaston Expedition in Dutch New Guinea. *Transactions of the Zoological Society of London* 20: 425-484.

Hogg, H. R. (1915b). On spiders of the family Salticidae collected by the British Ornithologists' Union Expedition and the Wollaston Expedition in Dutch New Guinea. *Proceedings of the Zoological Society of London* 85(3): 501-528.

Hogg, H. R. (1919). Spiders collected in Korinchi, West Sumatra by Messrs H. C. Robinson and C. Boden Kloss. *Journal of the Federated Malay States Museums* 8(3): 81-106.

Hormiga, G., Eberhard, W. G. and Coddington, J. A. (1995). Web-construction behaviour in Australian *Phonognatha* and the phylogeny of nephiline and

tetragnathid spiders (Araneae: Tetragnathidae). *Australian Journal of Zoology* 43(4): 313-364.

Horváth, R., Lengyel, S., Szinetár, C., and Honti, S. (2004). The effect of exposition time and temperature on spiders (Araneae) overwintering on the bark of black pine (Pinus nigra).

Hu, J. L. (1984). *The Chinese spiders collected from the fields and the forests*. Tianjin Science and Technology Press, 482 pp.

Hu, J. L. (2001). *Spiders in Qinghai-Tibet Plateau of China*. Henan Science and Technology Publishing House, 658 pp.

Hu, J. L. and Li, A. H. (1987b). The spiders collected from the fields and the forests of Xizang Autonomous Region, China. (II). *Agricultural Insects, Spiders, Plant Diseases and Weeds of Xizang* 2: 247-353.

Hu, J. L. and Li, A. H. (1987b). The spiders collected from the fields and the forests of Xizang Autonomous Region, China. (II). *Agricultural Insects, Spiders, Plant Diseases and Weeds of Xizang* 2: 247-353.

Hu, J. L. and Li, A. H. (1987b). The spiders collected from the fields and the forests of Xizang Autonomous Region, China. (II). *Agricultural Insects, Spiders, Plant Diseases and Weeds of Xizang* 2: 247-353.

Hu, J. L. and Ru, Y. C. (1988). On two species of Heteropodidae (Araneae) from Guangxi Zhuang Autonomous Region, China. *Journal of Shadong University* 23: 92-98.

Hu, J. L. and Wu, W. G. (1989). *Spiders from agricultural regions of Xinjiang Uygur Autonomous Region, China*. Shandong University Publishing House, Jinan, 435 pp.

Hu, J. L., Wang, Z. Y. and Wang, Z. G. (1991). Notes on nine species of spiders from natural conservation of Baotianman in Henan Province, China (Arachnoidea: Araneida). *Henan Science* 9: 37-52.

Hu, Y. J. and Zhang, Y. Q. (1984). A description to the male of *Oxyopes sikkimensis* Tikader 1970 (Araneae: Oxyopidae). *Journal of Hunan Normal University* 4: 49-50.

Hu, Y. J., Wang, H. Z. and Chen, X. O. (1987). Two new records of spiders of the genus *Peucetia* in China (Araneae, Oxyopidae). *Journal of Natural Science of Hunan Normal University* 10: 69-72.

Hu, Y. J., Zhang, Y. J. and Li, F. J. (1983). [New records of two species of lynx-spiders from China (Araneae: Oxyopidae)]. *Journal of Hunan Teachers College* (nat. Sci. Ed.) 1983(suppl.): 9-10.

Hubert, M. (1973a). Araignées du Népal 1. Description d'*Amaurobius milloti* n. sp. (Amaurobiidae) et répartition de *Psechrus himalayanus* Sim. (Psechridae). *Bulletin du Muséum National d'Histoire Naturelle de Paris* (3) 125(Zoologie 97): 675-682.

Islam, N., Borkataki, U.K., Chetri, T. Basumatary, S., Rahman, M., Barman, R., Choudhury, B., Deka, S., Sinha, S.K. and Kaul, R. (2021). A baseline survey of flora and fauna in Raimona National Park, Assam, India. Unpublished Technical Report. Wildlife Trust of India, Pp. 67.

Jacobson, E. (1921). *Thomisus decipiens* Forbes, a spider supposed to imitate the excrement of birds. *Tijdschrift voor Entomologie* 64: 186-190, pl. 12.

Jaffry, K. H., Butt, A. and Zahra, K. (2024). Orb-weavers (Araneae: Araneidae, Nephilidae) from the Margalla Hills National Park, Pakistan with comments on morphological variation in *Neoscona mukerjei* Tikader, 1980 and emasculation in *Nephila pilipes* (Fabricius, 1793). *Lahore Garrison University Journal of Life Sciences* 7(4, 2023): 407-432.

Jäger, P. (2001). Diversität der Riesenkrabbenspinnen im Himalaya — die Radiation zweier Gattungen in den Schneetropen (Araneae, Sparassidae, Heteropodinae). *Courier Forschungsinstitut Senckenberg,* 232: 1-136.

Jäger, P. (2006). *Martensopoda* gen. nov. from southern Indian mountain ranges, the first genus of huntsman spiders with a cymbial spur (Araneae: Sparassidae: Heteropodinae). *Zootaxa,* 1325: 335-345.

Jäger, P. (2007). Spiders from Laos with descriptions of new species (Arachnida: Araneae). *Acta Arachnologica* 56(1): 29-58.

Jäger, P. (2008). Three new *Pseudopoda* species from northern India (Araneae, Sparassidae, Heteropodinae). *Revue Suisse de Zoologie,* 115: 515-526.

Jäger, P. (2011). Revision of the spider genera *Nilus* O. Pickard-Cambridge 1876, *Sphedanus* Thorell 1877 and *Dendrolycosa* Doleschall 1859 (Araneae: Pisauridae). *Zootaxa* 3046: 1-38.

Jäger, P. (2012c). A review on the spider genus *Argiope* Audouin 1826 with special emphasis on broken emboli in female epigynes (Araneae: Araneidae:

Jäger, P. (2014b). *Heteropoda* Latreille, 1804: new species, synonymies, transfers and records (Araneae: Sparassidae: Heteropodinae). *Arthropoda Selecta* 23(2): 145-188.

Jäger, P. (2020). The spider genus *Olios* Walckenaer, 1837 (Araneae: Sparassidae) – Part 1: species groups, diagnoses, identification keys, distribution maps and revision of the *argelasius*-, *coenobitus*– and *auricomis*-groups. *Zootaxa,* 4866(1): 1-119.

Jäger, P. (2022). *Bowie* gen. nov., a diverse lineage of ground-dwelling spiders occurring from the Himalayas to Papua New Guinea and northern Australia (Araneae: Ctenidae: Cteninae). *Zootaxa,* 5170(1): 1-200.

Jäger, P. (2022a). *Bowie* gen. nov., a diverse lineage of ground-dwelling spiders occurring from the Himalayas to Papua New Guinea and northern Australia (Araneae: Ctenidae: Cteninae). *Zootaxa* 5170(1): 1-200.

Jäger, P. and Kulkarni, S. (2016). An unexpected new species of the genus *Pseudopoda* (Araneae, Sparassidae, Heteropodinae) from the Western Ghats in India. *ZooKeys,* 577: 55-62.

Jäger, P. and Praxaysombath, B. (2009). Spiders from Laos: new species and new records (Arachnida: Araneae). *Acta Arachnologica* 58(1): 27-51.
Jäger, P. and Praxaysombath, B. (2009). Spiders from Laos: new species and new records (Arachnida: Araneae). *Acta Arachnologica* 58(1): 27-51.

Jäger, P. and Praxaysombath, B. (2009). Spiders from Laos: new species and new records (Arachnida: Araneae). *Acta Arachnologica* 58(1): 27-51.
Jäger, P. and Praxaysombath, B. (2011b). Spiders from Laos with forty-three new records and first results from the provinces Bolikhamsay and Champasak (Arachnida: Araneae). *Acta Arachnologica* 60(1): 9-31.

Jäger, P. and Yin, C. M. (2001). Sparassidae in China. 1. Revised list of known species with new transfers, new synonymies and type designations (Arachnida: Araneae). *Acta Arachnologica* 50(2): 123-134.

Jäger, P., Sudhikumar, A. V. and Tripathi, R. (2022). Three species of Sparassidae from India, with the first description of the males of *Olios kiranae* Sethi and Tikader, 1988 and *Thelcticopis moolampilliensis* Sunil Jose and Sebastian, 2007 (Araneae: Sparassidae). *Arachnology,* 19(3): 621-627.

Järvi, T. H. (1912). Das Vaginalsystem der Sparassiden. I. Allgemeiner Teil. *Annales Academiae Scientiarum Fennicae* (A) 4: 1-131, pl. 1-11.

Järvi, T. H. (1914). Das Vaginalsystem der Sparassiden. II. Spezieller Teil. *Annales Academiae Scientiarum Fennicae* (A) 4: 118-235.

Jastrzębski, P. (1997a)**.** Salticidae from the Himalayas. Genus *Menemerus* Simon, 1868 (Araneae: Salticidae). *Entomologica Basiliensis,* 20: 33-44.

Jastrzębski, P. (1997b)**.** Salticidae from the Himalayas. Genus *Rhene* Thorell, 1869 (Araneae: Salticidae). *Entomologica Basiliensis,* 20: 45-56.

Jastrzębski, P. (1997c). Salticidae from the Himalayas. Subfamily Spartaeinae Wanless, 1984 (Araneae: Salticidae). *Genus* 8: 701-713.

Jastrzębski, P. (1999). Salticidae from the Himalaya: The genus *Carrhotus* Thorell 1891 (Araneae, Salticidae). *Senckenbergiana Biologica,* 79: 1-9.

Jastrzębski, P. (2007b). Salticidae from the Himalayas. The genus *Bianor* Peckham and Peckham 1885 (Arachnida: Araneae). *Acta Arachnologica,* 56: 25-28.

Jastrzębski, P. (2010a). Salticidae from the Himalayas. The genus *Epeus* Peckham and Peckham, 1885 (Araneae: Salticidae). *Genus* 21: 115-120.

Javed, S. M. M., Foord, S. H. and Tampal, F. (2010). A new species of *Hersilia* Audouin, 1826 (Araneae: Hersiliidae) from India, with notes on its natural history. *Zootaxa,* 2613: 40-50.

Javed, S. M. M., Raven, R. J., Tampal, F. and Rao, K. T. (2010). Occurrence and redescription of *Sipalolasma arthrapophysis* (Gravely, 1915) (Araneae: Barychelidae: Barychelinae) from India. *Journal of Threatened Taxa,* 2: 867-875.

JIMÉNEZ-VALVERDE, A. L. B. E. R. T. O., and Lobo, J. M. (2007). Determinants of local spider (Araneidae and Thomisidae) species richness on a regional scale: climate and altitude vs. habitat structure. *Ecological Entomology*, *32*(1), 113-122

Jin, C. (2018). Theridiidae, Ctenidae, Liocranidae. In: Zhang, F. and Xue, X. F. (eds.) *Fauna of Tianmu Mountain. Volume II. Arachnida. Araneae Eriophyoidea*. Zhejiang University Press, Hangzhou, pp. 11-33, 79-80, 90-91, pl. 2-7, 17, 19.

Jo, T. H. (1981). On the spiders from Geomun Island, Korea. *Korean Journal of Zoology* 24: 77-85.

Juario, J. V., Nuñeza, O. M., and Dupo, A. L. B. (2016). Species diversity and guild composition of spiders in Tawi-tawi and Basilan Philippines. Asian Journal of Biological and Life Sciences, 5(1).

Kanesharatnam, N. and Benjamin, S. P. (2019). Multilocus genetic and morphological phylogenetic analysis reveals a radiation of shiny South Asian jumping spiders (Araneae, Salticidae). *ZooKeys* 839: 1-81.

Karsch, F. (1878c). Exotisch-araneologisches. *Zeitschrift für die Gesammten Naturwissenschaften* 51: 322-333, 771-826.

Karsch, F. (1879d). Arachnologische Beiträge. *Zeitschrift für die Gesammten Naturwissenschaften* 52: 534-562.

Karsch, F. (1880c). Arachnologische Blätter (Decas I). *Zeitschrift für die Gesammten Naturwissenschaften, Dritte Folge* 5: 373-409, pl. 12.

Karsch, F. (1880c). Arachnologische Blätter (Decas I). *Zeitschrift für die Gesammten Naturwissenschaften, Dritte Folge* 5: 373-409, pl. 12.

Karsch, F. (1892). Arachniden von Ceylon und von Minikoy gesammelt von den Herren Doctoren P. und F. Sarasin. *Berliner Entomologische Zeitschrift* 36(2, 1891): 267-310, pl. 10-12.

Karthikeyani, R. and Kannan, S. (2013). A new *Plexippus* spider from the western Ghats, Kumbakarai Falls, Theni District, Tamil Nadu, south India (Arachnida: Araneae: Salticidae). *Indian Journal of Arachnology* 2(2): 42-46.

Keswani, S. (2013). Revision of spiders from the genus *Cyclosa* (Araneae: Araneidae) with description of two new species and the first record of male of *C. moonduensis* Tikader, 1963 from India. *Indian Journal of Arachnology* 2(1): 61-80.

Keswani, S. and Vankhede, G. (2012)**.** Re-description of little known theraphosid spider, *Chilobrachys assamensis* Hirst, 1909. *Indian Journal of Arachnology* 1(2): 24-29.

Keswani, S. and Vankhede, G**.** (2013)**.** *Lipocrea epeiroides* (O. P. Cambridge, 1872) (Araneae: Araneidae) a new record from India. *Indian Journal of Arachnology* 2(2): 66-72.

Keswani, S. and Vankhede, G. (2014). Description of one new species of the genus *Clubiona* (Araneae: Clubionidae) from India. *Indian Journal of Arachnology* 3(1): 35-40.

Keyserling, E. (1864). Beschreibungen neuer und wenig bekannter Arten aus der Familie Orbitelae Latr. oder Epeiridae Sund. *Sitzungs-Berichte der naturwissenschaftlichen Gesellschaft Isis in Dresden* 1863: 63-98, 119-154, pl. 1-7.

Keyserling, E. (1865). Beiträge zur Kenntniss der Orbitelae Latr. *Verhandlungen der Kaiserlich-Königlichen Zoologisch-Botanischen Gesellschaft in Wien* 15: 799-856, pl. 18-21.

Keyserling, E. (1886a). *Die Arachniden Australiens, nach der Natur beschrieben und abgebildet. Zweiter Theil [Lieferung 33-34]*. Bauer and Raspe, Nürnberg, 87-152, pl. 7-12.

Keyserling, E. (1886b). *Die Spinnen Amerikas. Theridiidae*. Bauer and Raspe, Nürnberg 2, 1-295.

Keyserling, E. (1887a). *Die Arachniden Australiens, nach der Natur beschrieben und abgebildet. Zweiter Theil [Lieferung 35-36]*. Bauer and Raspe, Nürnberg, 153-232, pl. 12-20.

Kim, B. W. and Kim, J. P. (2007). Taxonomic study of the spider subfamily Argyrodinae (Arachnida: Araneae: Theridiidae) in Korea. *Korean Journal of Systematic Zoology* 23: 213-228.

Kim, J. M. and Kim, J. P. (2002). A revisional study of family Araneidae Dahl, 1912 (Arachnida, Araneae) from Korea. *Korean Arachnology* 18: 171-266.

Kim, J. P. (2006). Redescription of *Nephila maculata* (Fabricius), 1793 from Cambodia (Araneae, Nephilidae). *Korean Arachnology* 22: 203-209.

Kim, J. P. and Cho, J. H. (2002). *Spider: Natural Enemy and Resources*. Korea Research Institute of Bioscience and Biotechnology (KRIBB), 424 pp.

Kim, J. P. and Park, Y. C. (2007). Redescription of *Gasteracantha kuhlii* (C.L. Koch), 1838 from Vietnam (Araneae, Araneus [sic]). *Korean Arachnology* 23: 119-122.

Kim, S. T. (2021). Spiders V. Arthropoda: Arachnida: Araneae: Theridiidae, Amaurobiidae, Eresidae, Zoropsidae, Anyphaenidae. *Invertebrate Fauna of Korea* 21(47): 1-230.

Kim, S. T. and Lee, S. Y. (2012b). Arthropoda: Arachnida: Araneae: Araneidae. Araneid spiders. *Invertebrate Fauna of Korea* 21(16): 1-146.

King, N. J., Eleonora, G., and Ollendick, T. H. (1998). Etiology of childhood phobias: Current status of Rachman's three pathways theory. *Behaviour research and Therapy*, *36*(3), 297-309.

Kirchner, W. (1987). Behavioural and physiological adaptations to cold. In Ecophysiology of spiders (pp. 66-77). Berlin, Heidelberg: *Springer Berlin Heidelberg.*

Koch, C. L. (1837a). *Die Arachniden*. C. H. Zeh'sche Buchhandlung, Nürnberg, Dritter Band, pp. 105-119, pl. 106-118 (f. 246-252); Vierter Band, pp. 1-108, pl. 119-138 (f. 253-318).

Koch, C. L. (1839a). *Die Arachniden*. C. H. Zeh'sche Buchhandlung, Nürnberg, Fünfter Band, pp. 125-158, pl. 175-180 (f. 418-431); Sechster Band, pp. 1-156, pl. 181-216 (f. 432-540); Siebenter Band, pp. 1-106, pl. 217-246 (f. 541-584).

Koch, C. L. (1843). *Die Arachniden*. C. H. Zeh'sche Buchhandlung, Nürnberg, Zehnter Band, pp. 37-142, pl. 337-360 (f. 777-849).

Koch, C. L. (1844). *Die Arachniden*. C. H. Zeh'sche Buchhandlung, Nürnberg, Elfter Band, pp. 1-174, pl. 361-396 (f. 850-959).

Koch, C. L. (1846). *Die Arachniden*. J. L. Lotzbeck, Nürnberg, Dreizehnter Band, pp. 1-234, pl. 433-468 (f. 1078-1271); Vierzehnter Band, pp. 1-88, pl. 467-480 (f. 1272-1342).

Koch, L. (1871). *Die Arachniden Australiens, nach der Natur beschrieben und abgebildet [Erster Theil, Lieferung 1-2]*. Bauer and Raspe, Nürnberg, 1-104, pl. 1-8.

Koch, L. (1872a). *Die Arachniden Australiens, nach der Natur beschrieben und abgebildet [Erster Theil, Lieferung 3-7]*. Bauer and Raspe, Nürnberg, 105-368, pl. 8-28.

Koch, L. (1875a). *Die Arachniden Australiens, nach der Natur beschrieben und abgebildet [Erster Theil, Lieferung 12-16]*. Bauer & Raspe, Nürnberg, 577-740, pl. 44-65.

Koh, J. K. H. (1991). Spiders of the family Araneidae in Singapore mangroves. *Raffles Bulletin of Zoology* 39: 169-182.

Korai, S. K. and Wang, K. (2023a). Six *Heteropoda* spiders (Araneae: Sparassidae) from Xishuangbanna Dai Autonomous Prefecture, China. *Plant Protection* 7(1): 33-53.

Kostanjšek, R. (2010). A contribution to the Slovenian spider fauna – I. *Natura Sloveniae* 12(2): 23-33.

Kralj-Fiser, S. and M. Gregoric (2019). Spider welfare, pp.105–118. In: Carere, C. & J. Mather (eds.). *The Welfare of Invertebrate Animals*. Vol. 18. Springer, Cham, 248pp.

Kujur, R. (2019). Mapping of Spatial and Temporal Diversity of Spiders In Raigarh Chhattisgarh [Doctoral Dissertation, Pt. Ravishankar Shukla University]. Shodhganga (http://hdl.handle.net/10603/464376).

Kulczyński, W. (1910). Araneae et Arachnoidea Arthrogastra. In: Botanische und zoologische Ergebnisse einer wissenschaftlichen Forschungreise nach den Samoainsiln, dem Neuguinea-Archipel und den Solomon inseln von Marz bis Dezember 1905 von Dr Karl Rechinger. III Teil. Denkschrift der Akademie der Wissenschaften in Wien 85, 389-411.

Kulczyński, W. (1911c). *Spinnen aus Nord-Neu-Guinea*. In: Résultats de l'expédition scientifique néerlandaise à la Nouvelle-Guinée en 1903 sous les auspices de Arthur Wichmann. *Nova Guinea* 5(Zoologie, Lief. 4): 423-518, pl. 19-20.

Kulkarni, M. L. and Dupérré, N. (2019). Description of a new species of *Althepus* (Araneae: Ochyroceratidae) from Maharashtra State, India. *Munis Entomology and Zoology* 14(1): 158-164.

Kulkarni, S. (2014). A new species of the genus *Tylorida* Simon, 1894 (Araneae: Tetragnathidae) from a rocky outcrop in the northern Western Ghats, India. *Journal of Threatened Taxa* 6(3): 5558-5561.

Kulkarni, S. and Deshpande, V. (2012a). A new species of the genus *Oxyopes* Latreille (Araneae: Oxyopidae) from Sahyadri ranges of western Ghats. *Records of the Zoological Survey of India* 112(2): 35-37.

Kulkarni, S. and Deshpande, V. (2012b). New record of the spider *Arachnura angura* from Maharashtra with additional morphological description (Araneae: Araneidae). *Records of the Zoological Survey of India* 112(2): 113-115.

Kulkarni, S. and Deshpande, V. (2012b). New record of the spider *Arachnura angura* from Maharashtra with additional morphological description (Araneae: Araneidae). *Records of the Zoological Survey of India* 112(2): 113-115.

Kulkarni, S. and Joseph, S. (2015). First record of genus *Siler* Simon, 1889 (Araneae: Salticidae) from India. *Journal of Threatened Taxa* 7(10): 7701-7703.

Kulkarni, S. and Joseph, S. (2015). First record of genus *Siler* Simon, 1889 (Araneae: Salticidae) from India. *Journal of Threatened Taxa* 7(10): 7701-7703.

Kulkarni, S. and Smith, H. (2013). First record of *Poltys columnaris* Thorell, 1890 (Araneae: Araneidae) from western Ghats, India. *Journal of Threatened Taxa* 5(10): 4524-4526.

Kulkarni, S. and Yadav, S. (2015). Bridging the distributional gap of *Tylorida striata* (Thorell, 1877) and new synonymy (Araneae: Tetragnathidae). *Biodiversity Data Journal* 3(e4878): 1-12.

Kulkarni, S. and Yadav, S. (2015). Bridging the distributional gap of *Tylorida striata* (Thorell, 1877) and new synonymy (Araneae: Tetragnathidae). *Biodiversity Data Journal* 3(e4878): 1-12.

Kulkarni, S. S. and Lewis, T. R. (2015). Description of male *Tylorida sataraensis* Kulkarni, 2014 (Araneae, Tetragnathidae) with notes on habits and conservation status. *Biodiversity Data Journal* 3(e4451): 1-11.

Kulkarni, S., Vartak, A., Deshpande, V. and Halali, D. (2017). The spiny theridiid genus *Meotipa* Simon, 1895 in India, with description of a strange new species with translucent abdomen and a phylogenetic analysis about the genus placement (Araneae, Theridiidae). *Zootaxa* 4291(3): 504-520.

Kundu, M., Biswas, V. and Raychaudhuri, D. (1999). New huntsman spiders (Heteropodidae: Araneae) from Buxa Tiger Reserve, Jalpaiguri, West Bengal. *Journal of the Bombay Natural History Society*, 96: 98-105.

Kuntner, M. (2005a). A revision of *Herennia* (Araneae: Nephilidae: Nephilinae), the Australasian 'coin spiders'. *Invertebrate Systematics* 19(5): 391-436.

Kuntner, M. (2007). A monograph of *Nephilengys*, the pantropical 'hermit spiders' (Araneae, Nephilidae, Nephilinae). *Systematic Entomology* 32(1): 95-135.

Kuntner, M., Coddington, J. A. and Hormiga, G. (2008). Phylogeny of extant nephilid orb-weaving spiders (Araneae, Nephilidae): testing morphological and ethological homologies. *Cladistics* 24(2): 147-217.

Kuntner, M., Coddington, J. A. and Schneider, J. M. (2009). Intersexual arms race? Genital coevolution in nephilid spiders (Araneae, Nephilidae). *Evolution* 63: 1451-1463.

Kuntner, M., Kralj-Fišer, S., Schneider, J. M. and Li, D. Q. (2009). Mate plugging via genital mutilation in nephilid spiders: an evolutionary hypothesis. *Journal of Zoology, London* 277: 257-266.

Labanon, K. K. O., and Nuñeza, O. M. (2020). Species Diversity of Salticid Spiders (Araneae: Salticidae) according to Elevation and Vegetation Type in Western Mindanao State University–Experimental Forest Area, Upper La Paz, Zamboanga City, Philippines. *Bull. Env. Pharmacol. Life Sci*, 9(5), 53-64.

Lahkar, B. P., Das, J. P., Nath, N. K., Dey, S., Brahma, N., and Sarma, P. K. (2007). A study of habitat utilization patterns of Asian elephant Elephas maximus and current

status of human elephant conflict in Manas National Park within Chirang-Ripu Elephant Reserve, Assam. *Report, Aaranyak, Guwahati, Assam, India*.

Latreille, P. A. (1806). *Genera crustaceorum et insectorum*. Paris, tome 1, 302 pp. (Araneae, pp 82-127).

Le Peru, B. (2011). The spiders of Europe, a synthesis of data: Volume 1 Atypidae to Theridiidae. *Mémoires de la Société Linnéenne de Lyon* 2: 1-522.

Leach, W. E. (1815). *Zoological miscellany; being descriptions of new and interesting animals*. London, 2, 1-154 (Araneae, pp. 131-134).

Lecigne, S. (2018b). Récits de chasses aranéologiques récentes dans plusieurs départements de France. Redécouverte de *Philodromus buchari* Kubcová, 2004 (Araneae: Philodromidae) et confirmation de la présence de *Theridion harmsi* Wunderlich, 2011 (Araneae: Theridiidae). *Nieuwsbrief van de Belgische Arachnologische Vereniging* 33(2): 59-99.

Lee, C. L. (1966). [*Spiders of Formosa (Taiwan)*]. Taichung Junior Teachers College Publisher, 84 pp.

Lessert, R. de (1915a). Arachnides de l'Ouganda et de l'Afrique orientale allemande. Voyage du Dr J. Carl dans la région des lacs de l'Afrique centrale. *Revue Suisse de Zoologie* 23(1): 1-89, pl. 1-3.

Levi, H. W. (1954c). The spider genus *Theridula* in North and Central America and the West Indies (Araneae: Theridiidae). *Transactions of the American Microscopical Society* 73(4): 331-343.

Levi, H. W. (1962b). More American spiders of the genus *Chrysso* (Araneae, Theridiidae). *Psyche, Cambridge* 69(4): 209-237.

Levi, H. W. (1967c). Cosmopolitan and pantropical species of theridiid spiders (Araneae: Theridiidae). *Pacific Insects* 9: 175-186.

Levi, H. W. (1968a). The spider genera *Gea* and *Argiope* in America (Araneae: Araneidae). *Bulletin of the Museum of Comparative Zoology* 136: 319-352.

Levi, H. W. (1974a). The orb-weaver genus *Zygiella* (Araneae: Araneidae). *Bulletin of the Museum of Comparative Zoology* 146(5): 267-290.

Levi, H. W. (1980a). The orb-weaver genus *Mecynogea*, the subfamily Metinae and the genera *Pachygnatha*, *Glenognatha* and *Azilia* of the subfamily Tetragnathinae north of Mexico (Araneae: Araneidae). *Bulletin of the Museum of Comparative Zoology* 149: 1-74.

Levi, H. W. (1982). The spider genera *Psechrus* and *Fecenia* (Araneae: Psechridae). *Pacific Insects* 24: 114-138.

Levi, H. W. (1983). The orb-weaver genera *Argiope*, *Gea*, and *Neogea* from the western Pacific region (Araneae: Araneidae, Argiopinae). *Bulletin of the Museum of Comparative Zoology* 150(5): 247-338.

Levi, H. W. (2003). The bolas spiders of the genus *Mastophora* (Araneae: Araneidae). *Bulletin of the Museum of Comparative Zoology* 157(5): 309-382.

Levi, H. W. and Levi, L. R. (1962). The genera of the spider family Theridiidae. *Bulletin of the Museum of Comparative Zoology* 127: 1-71.

Lewark, R. (2019). Araneae Biodiversity in the Amazonian Foothills: An analysis of family and guild presence across habitat types. Independent Study Project (ISP) Collection. 3265 (https://digitalcollections.sit.edu/isp_collection/3265).

Li Qiao, Chen Youqing, Xu Zhenghui, 2009b. Methods of ant community research. *Journal of Ecology*, 28 (9) 1862-1870.

Lin, Y. C. and Li, S. Q. (2008a). Description of a new *Philoponella* species (Araneae, Uloboridae), the first record of social spiders from China. *Acta Zootaxonomica Sinica* 33: 260-263.

Lin, Y. J., Wu, L. B., Cai, D. C., Li, S. Q., Barrion, A. T. and Heong, K. L. (2023a). Review of 43 spider species from Hainan Island, China (Arachnida, Araneae). *Zootaxa* 5351(5): 501-533.

Linnaeus, C. (1767). *Systema naturae per regna tria naturae, secundum classes, ordines, genera, species, cum characteribus differentiis, synonymis, locis. Editio duodecima, reformata*. Laurentius Salvius, Holmiae [= Stockholm], 533-1327 (*Araneae*, pp. 1030-1037).

Lo, Y. Y., Cheng, R. C. and Lin, C. P. (2024). Integrative species delimitation and five new species of lynx spiders (Araneae, Oxyopidae) in Taiwan. *PLoS One* 19(5,

e0301776): 1-46. [N.B.: this is an electronic journal and the Zoobank registration is missing, see ICZN Article 8.5.3; therefore the five described species are not valid.]

Logunov, D. V. (2001). A redefinition of the genera *Bianor* Peckham & Peckham, 1885 and *Harmochirus* Simon, 1885, with the establishment of a new genus *Sibianor* gen. n. (Aranei: Salticidae). *Arthropoda Selecta,* 9: 221-286.

Logunov, D. V. (2001a). A redefinition of the genera *Bianor* Peckham and Peckham, 1885 and *Harmochirus* Simon, 1885, with the establishment of a new genus *Sibianor* gen. n. (Aranei: Salticidae). *Arthropoda Selecta* 9(4, 2000): 221-286.

Logunov, D. V. (2004). On the taxonomic position of "*Lyssomanes*" *karnatakaensis* and other Indian species formerly assigned to *Lyssomanes* (Araneae, Salticidae). *Bulletin of the British Arachnological Society,* 13: 73-75.

Logunov, D. V. (2010). A new species of *Yllenus* Simon, 1868 from northern India (Araneae, Salticidae). *Bulletin of the British Arachnological Society,* 15: 91-92.

Logunov, D. V. (2017). New species and records in the genus *Synagelides* Strand in Bösenberg et Strand, 1906 (Aranei: Salticidae) from the Oriental region. *Arthropoda Selecta,* 26(4): 315-322.

Logunov, D. V. (2019). Taxonomic notes on the *Harmochirina* Simon, 1903 from South and South-East Asia (Aranei: Salticidae). *Arthropoda Selecta,* 28(1): 99-112.

Logunov, D. V. (2021a). Notes on the genus *Chinattus* Logunov, 1999 from India, Pakistan and Nepal (Arachnida: Araneae: Salticidae). *Zootaxa,* 5006(1): 110-120.

Logunov, D. V. (2021b). New species and records of the jumping spiders from India and Nepal (Aranei: Salticidae). *Arthropoda Selecta,* 30(3): 351-361.

Logunov, D. V. (2021c). Jumping spiders (Araneae: Salticidae) of the Na Hang Nature Reserve, Tuyen Quang Province, Vietnam. *Arachnology,* 18(9): 1021-1055.

Logunov, D. V. (2024a). Salticidae (Araneae) imported to the United Kingdom, with description of a new, non-native, species of *Anasaitis* Bryant, 1950. *Arachnology* 19(7): 1036-1042.

Logunov, D. V. and Azarkina, G. N. (2018). Redefinition and partial revision of the genus *Stenaelurillus* Simon, 1886 (Arachnida, Araneae, Salticidae). *European Journal of Taxonomy,* 430: 1-126.

Logunov, D. V. and Hereward, J. (2006). New species and synonymies in the genus *Synagelides* Strand in Bösenberg and Strand, 1906 (Araneae: Salticidae). *Bulletin of the British Arachnological Society,* 13: 281-292.

Logunov, D. V., Tripathi, R. and Jangid, A. K. (2022). First record of *Pseudomogrus* Simon, 1937 (Araneae: Salticidae) from India, with description of a new species. *Arachnology,* 19(1): 72-76.

Logunov, D.V. (2020). Further notes on the genus *Stenaelurillus* Simon, 1885 from India (Araneae: Salticidae). *Zootaxa,* 4899(1): 201-214.

Longino JT, (2000). What to do with the data//Agosti D, Majer JD, Alonso LE, Schultz TR (eds.). Ants: Standard Methods for Measuring and Monitoring Biodiversity.Washington and London: *Smithsonian Institution Press.*186-203

Lubin, Y. D. (1978). Seasonal abundance and diversity of web-building spiders in relation to habitat structure on Barro Colorado Island, Panama. *Journal of Arachnology*, 31-51.

Lucas, H. (1836a). Observations sur les Araneides du genre *Hersilia* et description de deux espèces nouvelles appartenant a ce genre. *Magasin de Zoologie* 6(Cl. 8, pl. 12-13): 1-11, pl. 12-13.

Ma, N., Gong, D., Mao, A., Zhao, Y., Jiao, X. G., Liu, J., Peng, Y. and Zhang, S. C. (2023a). Traumatic mating causes strict monandry in a wolf spider. *Zoological Research* 44(1): 101-104.

Macharoenboon, K., Siriwut, W. and Jeratthitikul, E. (2021). A review of the taxonomy of spiny-backed orb-weaving spiders of the subfamily Gasteracanthinae (Araneae, Araneidae) in Thailand. *ZooKeys* 1032: 17-62.

Majumder, S. C. (2004c). Taxonomic studies of some spiders from mangrove and semi-mangrove areas of Sundarban. *Memoirs of the Zoological Survey of India* 20(2): 1-42.

Majumder, S. C. and Tikader, B. K. (1991). Studies on some spiders of the family Clubionidae from India. *Records of the Zoological Survey of India, Occasional Paper,* 102: 1-175.

Majumder, S.C., and Talukdar, S. (2013): Studies on Taxonomy and Diversity of spiders from Darjeeling Hills with special reference to family Clubionidae in light of conservation. *Records of Zoological Survey, India*, 1-96.

Malamel, J. J. (2018). Species increments to the Indian Araneofauna (Arachnida, Araneae) from Pathiramanal Island. *Revista Ibérica de Aracnología* 32: 112-116.

Malamel, J. J. and Sebastian, P. A. (2018). On the taxonomic status of *Leucauge granulata* (Walckenaer, 1841); *Leucauge argentata* (Cambridge, 1869); *Leucauge bengalensis* Gravely, 1921; *Leucauge tuberculata* Wang, 1991: a case of synonymy (Araneae: Tetragnathidae). *Journal of Asia-Pacific Biodiversity* 11(3): 408-415.

Malamel, J. J. and Sudhikumar, A. V. (2017). First record of *Epidius parvati* Benjamin, 2000 (Araneae: Thomisidae) from Pathiramanal Island, India. *Check List,* 13(3, 2114): 1-4.

Malamel, J. J., Nafin, K. S., Sankaran, P. M. and Sebastian, P. A. (2018). First record of the spider genus *Wolongia* Zhu, Kim and Song, 1997 from India with the description of a new species (Araneae, Tetragnathidae). *Zootaxa,* 4407(1): 145-150.

Malamel, J. J., Nafin, K. S., Sankaran, P. M. and Sebastian, P. A. (2019a). Taxonomic revision of the monotypic genus *Psellonus* Simon, 1897 (Araneae, Philodromidae). *Zootaxa*, 4543(3): 442-450.

Malamel, J. J., Nafin, K. S., Sudhikumar, A. V. and Sebastian, P. A. (2019b). Two new species of the jumping spiders (Araneae: Salticidae) from the genera *Epeus* Peckham et Peckham, 1886 and *Piranthus* Thorell, 1895 from India. *Arthropoda Selecta,* 28(2): 267-276.

Malamel, J. J., Pradeep, M. S. and Sebastian, P. A. (2013). *Fecenia travancoria* Pocock is recognised as a junior synonym of *Fecenia protensa* Thorell (Araneae: Psechridae): a case of intraspecific variation. *Zootaxa,* 3741: 359-368.

Malamel, J. J., Prajapati, D. A., Sudhikumar, A. V. and Sebastian, P. A. (2019). Two new species of the tribe Ballini Banks, 1892 from India (Araneae: Salticidae). *Arthropoda Selecta,* 28(3): 424-434.

Malamel, J. J., Sankaran, P. M. and Sebastian, P. A. (2015). First record of the jumping spider genus *Bavia* Simon, 1877 from India, with the description of a new species. *Zootaxa,* 4007(4): 596-599.

Malamel, J. J., Sankaran, P. M., Joseph, M. M. and Sebastian, P. A. (2015a). First record of the wolf spider genus *Lysania* Thorell, 1890 from India with the description of a new species (Araneae: Lycosidae: Zoicinae). *Zootaxa,* 3904(2): 293-297.

Malamel, J. J., Sankaran, P. M., Joseph, M. M. and Sebastian, P. A. (2015b). *Cyrtarachne keralensis* Jose, 2011 is a junior synonym of *Anepsion maritatum* (O. Pickard-Cambridge, 1877) (Araneae, Araneidae). *Zootaxa,* 4039(3): 478-482.

Manriquez, R. S., Torres, M. A. J., and Demayo, C. G. (2024). Arts-based approach to describe the perceptions of spiders by local people. *Arthropods*, 13(1): 27-53.

Marapao, B. P. (1965). Three species of spiders of the subfamily Argiopidae [*sic*] from Cebu. *Junior Philippine Scientist* 2: 43-55.

Marathe, K., Sanap, R., Joglekar, A., Caleb, J. T. D. and Maddison, W. P. (2022). Three new and notes on two other jumping spider species of the genus *Stenaelurillus* Simon, 1886 (Salticidae: Aelurillina) from the Deccan Plateau, India. *Zootaxa* 5125(1): 1-19.

Marc, P., A. Canard and F. Ysnel (1999). Spiders (Araneae) useful for pest limitaton and bioindicaton. *Agriculture, Ecosystems and Environment* 74: 229–273.

Marusik, Y. M. (1987c). The orb-weaver genus *Larinia* Simon in the USSR (Aranei, Araneidae). *Spixiana* 9: 245-254.

Marusik, Y. M., Ballarin, F. and Omelko, M. M. (2012). On the spider genus *Amaurobius* (Araneae, Amaurobiidae) in India and Nepal. *ZooKeys,* 168: 55-64.

Marusik, Y. M., Ballarin, F., Omelko, M. M. and Koponen, S. (2014). On new and interesting records of spiders from northern Pakistan and India (Aranei). *Arthropoda Selecta,* 23(4): 415-424.

Marusik, Y. M., Omelko, M. M. and Simmons, Z. M. (2020). Redescription of two west Himalayan *Cheiracanthium* (Aranei: Cheiracanthiidae). *Arthropoda Selecta,* 29(3): 339-347.

Marusik, Y. M., Otto, S. and Japoshvili, G. (2020). Taxonomic notes on *Amaurobius* (Araneae: Amaurobiidae), including the description of a new species. *Zootaxa,* 4718(1): 47-56.

McCook, H. C. (1894). *American spiders and their spinningwork*. *A natural history of the orbweaving spiders of the United States with special regard to their industry and habits.* Vol. III. Philadelphia, 285 pp., 30 pls.

Melic, A. (2000b). *Theridula gonygaster* (Simon, 1873) en España (Araneae: Theridiidae). *Revista Ibérica de Aracnología* 1: 49-50.

Merian, P. (1911). Die Spinnenfauna von Celebes. Beiträge zur Tiergeographie im Indoaustralischen Archipel. *Zoologische Jahrbücher, Abteilung für Systematik, Geographie und Biologie der Tiere* 31: 165-354.

Mi, X. Q., Peng, X. J. and Yin, C. M. (2010b). The orb-weaving spider genus *Eriovixia* (Araneae: Araneidae) in the Gaoligong mountains, China. *Zootaxa* 2488: 39-51.

Millidge, A. F. (1988c). The relatives of the Linyphiidae: phylogenetic problems at the family level (Araneae). *Bulletin of the British Arachnological Society* 7: 253-268.

Mirza, Z. A. (2022). A new species of trapdoor spider of the genus *Conothele* Thorell, 1878 (Mygalomorphae: Halonoproctidae) from the Eastern Ghats, India. *ZooNova,* 17: 1-7.

Mirza, Z. A. (2023). Notes on the trapdoor spider genus *Tigidia* Simon 1892 (Araneae: Barychelidae: Barychelinae) with the description of three new species from India. *Journal of Natural History,* 57(1-4): 159-174.

Mirza, Z. A. and Mondal, A. (2018). A new genus *Gravelyia* with two species of the family Nemesiidae (Araneae: Mygalomorphae) from India. *Acta Arachnologica,* 67(1): 43-48.

Mirza, Z. A. and Sanap, R. (2013). Revalidation of the tarantula genus *Phlogiodes* Pocock, 1899 (Araneae: Theraphosidae: Thrigmopoeinae). *Indian Journal of Arachnology,* 2(2): 17-21.

Mirza, Z. A. and Sanap, R. V. (2012). A new species of the genus *Idiops* and notes on *Idiops bombayensis* Siliwal et al. 2005 (Araneae: Idiopidae) from northern Western Ghats of Maharastra, India. *Journal of Arachnology,* 40: 85-95.

Mirza, Z. A., Sanap, R. V. and Bhosale, H. (2014a). Preliminary review of Indian Eumenophorinae (Araneae: Theraphosidae) with description of a new genus and five new species from the Western Ghats. *PLoS One,* 9(2): e87928.

Mirza, Z. A., Sanap, R. V. and Bhosale, H. (2014b). Description of a new species of arboreal tarantula of the genus *Poecilotheria* Simon, 1885 (Araneae: Theraphosidae) from Satpura Hills, Central India. *Journal of the British Tarantula Society,* 29(2): 60-65.

Mirza, Z. A., Sanap, R. V. and Kunte, K. (2017). A new genus and new species of diplurid spider (Araneae: Mygalomorphae: Dipluridae) from northeast India. *Journal of Asia-Pacific Biodiversity,* 10(1): 32-38.

Mirza, Z. A., Sanap, R. V. and Siliwal, M. (2011). Robust trapdoor tarantula *Haploclastus validus* Pocock, 1899: notes on taxonomy, distribution and natural history (Araneae: Theraphosidae: Thrigmopoeinae). *Journal of Threatened Taxa,* 3(10): 2109-2119.

Mirza, Z. A., Vaze, V. V. and Sanap, R. V. (2012). A new species of the trapdoor spiders genus *Idiops* Perty, 1833 (Araneae: Idiopidae) from the western Ghats, with a key to the *Idiops* of India. *Revista Ibérica de Aracnología,* 21: 9-14.

Mirza, Z. A., Zende, J. Y. and Patil, V. K. (2016). Notes on the trapdoor spider genus *Tigidia* Simon, 1892 (Araneae: Mygalomorphae: Barychelidae) with description of a new species from Western Ghats, India. *Arachnology,* 17(2): 92-94.

Monga, K. and Singh, J. P. (1989). A new species of *Theridion* Walckenaer (Araneae: Theridiidae) from India. *Journal of the Bombay Natural History Society,* 86: 81-82.

Monga, K., Sadana, G. L. and Singh, J. P. (1988). A new species of *Heteropoda* Latreille (Araneida: Heteropodidae). *Haryana Agricultural University Journal of Research,* 18: 266-268.

Monga, K., Singh, J. P. and Sadana, G. L. (1989). A new species of *Marpissa* Koch (Araneae: Salticidae) from India. *Journal of the Bombay Natural History Society,* 85: 592-593.

Moracco, J. C., and Camilleri, J. (1983). A study of fears in elementary school children. *Elementary School Guidance and Counseling*, *18*(2), 82-87.

Mukhtar, M. K. (2012). Spiders of the genus *Neoscona* (Araneae: Araneidae) from Punjab, Pakistan. *Pakistan Journal of Zoology* 44(6): 1711-1720.

Murphy, J. and Murphy, F. (1983b). The orb weaver genus *Acusilas* (Araneae, Araneidae). *Bulletin of the British Arachnological Society* 6: 115-123.

Murthappa, P. S., Malamel, J. J., Prajapati, D. A., Sebastian, P. A. and Venkateshwarlu, M. (2017). First description of the male of the type species *Meotipa picturata* Simon, 1895 and description of a new *Meotipa* species (Araneae, Theridiidae) from India. *Zootaxa* 4344(3): 589-596.

Myers, N., Mittermeier, R. A., Mittermeier, C. G., Da Fonseca, G. A., and Kent, J. (2000). Biodiversity hotspots for conservation priorities. *Nature*, *403*(6772), 853-858.

N, Basumatary and Sarma, C.M. (2004). Epiphytic Orchid Flora of Chirang Reserve Forest. *Journal of Phytological Research*, 17(1), 33-37.

Nakatsudi, K. (1942a). Arachnida from Izu-Sitito. *Journal of Agricultural Science Tokyo Nogyo Daigaku* 1(4): 287-328, pl. 11-12.

Nakatsudi, K. (1943a). Some Arachnida from Micronesia. *Journal of Agricultural Science Tokyo Nogyo Daigaku* 2: 147-180, pl. 12-14.

Namkung, J. (1964). Spiders from Chungjoo, Korea. *Atypus* 33-34: 31-50.

Namkung, J. (2003). *The Spiders of Korea*, 2nd. ed. Kyo-Hak Publishing Co., Seoul, 648 pp.

Namkung, J. (2002). *The spiders of Korea*. Kyo-Hak Publishing Co., Seoul, 648 pp.

Namkung, J. (2003). *The Spiders of Korea*, 2nd. ed. Kyo-Hak Publishing Co., Seoul, 648 pp.

Narayan, K. (1915). Notes on ant-like spiders of the family Attidae in the collection of the Indian Museum. *Records of the Indian Museum, Calcutta* 11: 393-406.

Nath, N.K., Singha, H., Das, J.P., Brahma, N., Dey, S., Lahkar, B.P. and Ahmed, F. (2008). Checklist of birds of Chirang-Ripu Reserve Forest, Assam, India. *Newsletter for BirdWatchers* 48(3), pp.33-36.

Nenilin, A. B. (1984a). [Materials on the fauna of the spider family Salticidae of the USSR. I. Catalog of the Salticidae of central Asia]. In: Fauna and Ecology of Arachnids. University of Perm, pp. 6-37.

Nenilin, A. B. (1984b). On the taxonomy of spiders of the family Salticidae of the fauna of the USSR and adjacent countries. *Zoologicheskiĭ Zhurnal* 43: 1175-1180.

Nentwig, W., Blick, T., Gloor, D., Jäger, P. and Kropf, C. (2019). Tackling taxonomic redundancy in spiders: the infraspecific spider taxa described by Embrik Strand (Arachnida: Araneae). *Arachnologische Mitteilungen* 58: 29-51.

Ochi, O. and Shinta, R. (2021). [*Nephila pilipes* and *Dictis striatipes* in Kimotsuki-gun, Kagoshima Prefecture]. *Kishidaia* 118: 108-109.

Okuma, C. (1968b). Preliminary survey on the spider-fauna of the paddy fields in Thailand. *Mushi* 42: 89-117.

Okuma, C. (1988b). A revision of the genus *Tetragnatha* Latreille (Araneae, Tetragnathidae) of Asia, Part I. *Journal of the Faculty of Agriculture Kyushu University* 32: 165-181.

Okuma, C., Kamal, N. Q., Hirashima, Y., Alam, M. Z. and Ogata, K. (1993). *Illustrated Monograph of the Rice Field Spiders of Bangladesh.* Institute of Postgraduate Studies in Agriculture (Salna, Gazipur, Bangladesh). Japan International Cooperation Agency Project Publication, 1, 93 pp.

Olivier, G. A. (1789). Araignée, Aranea. In: *Encyclopédie Méthodique, Histoire Naturelle, Insectes. Tome quatrième*. Panckoucke, Paris, pp. 173-240.

Omelko, M. M. and Marusik, Y. M. (2020). A new species and new records of wolf spiders (Araneae: Lycosidae) from Laos. *Raffles Bulletin of Zoology* 68: 479-487.

Omelko, M. M. and Marusik, Y. M. (2023). Ride on female for "prima nocta" or close attachment in the araneid spider *Caerostris sumatrana* Strand, 1915 (Araneae: Araneidae). *Zootaxa* 5311(2): 281-288.

Ono, H. (2009a). *The spiders of Japan with keys to the families and genera and illustrations of the species*. Tokai University Press, Kanagawa, 739 pp.

Ono, H., Ikeda, H. and Kono, R. (2009). Salticidae. In: Ono, H. (ed.) *The spiders of Japan with keys to the families and genera and illustrations of the species*. Tokai University Press, *Kanagawa*, pp. 558-588.

Paik, W. H. and Namkung, J. (1979). [Studies on the rice paddy spiders from Korea]. Seoul National Univ., 101 pp.

Pandit, A. K. (2019). Diversity of common garden and house spider in Tinsukia district. *Journal of Entomology and Zoology Studies*, *7*(4), 1432-1439.

Patel, B. H. (1973). Some interesting theridiid spiders (Araneae: Theridiidae) from Gujarat, India. Bulletin of the British Arachnological Society 2: 149-152.

Patel, B. H. (1975a). Two new spiders of the genus *Larinia* (Araneae: Argiopidae) from India. *Oriental Insects,* 9: 111-116.

Patel, B. H. (1975b). Studies on some spiders of the family Argiopidae (Arachnida: Araneae) from Gujarat, India. *Vidya,* 18: 153-167.

Patel, B. H. (1975c). Some spiders of the families Filistatidae and Scytodidae from Gujarat, India. *Oriental Insects,* 9: 425-429.

Patel, B. H. (1978a). A new species of spider of the family Oxyopidae from Gujarat, India, with notes on other species of the family. *Journal of the Bombay Natural History Society,* 74: 327-330.

Patel, B. H. (1978b). Studies on Indian filistatid spiders (Araneae: Arachnida). *Journal of the Bombay Natural History Society,* 75: 183-189.

Patel, B. H. and Patel, H. K. (1972). New species of *Cyllognatha* Koch and *Thwaitesia* Cambridge (Theridiidae: Araneida) from Gujarat, India. *Oriental Insects,* 6: 293-297.

Patel, B. H. and Patel, H. K. (1973a). Descriptions of some new species of spiders from India. *Oriental Insects,* 7(1): 127-132.

Patel, B. H. and Patel, H. K. (1973b). On some new species of spiders of family Clubionidae (Araneae: Arachnida) with a record of genus *Castianeira* Keyserling from Gujarat, India. *Proceedings of the Indian Academy of Science,* 78(B): 1-9.

Patel, B. H. and Patel, H. K. (1975a). On some new species of spiders of family Gnaphosidae (Araneae: Arachnida) from Gujarat, India. *Records of the Zoological Survey of India,* 68: 33-39.

Patel, B. H. and Patel, H. K. (1975b). A new record of the family Amaurobiidae (Arachnida: Araneae) from India. *Journal of the Bombay Natural History Society,* 72: 800-803.

Patel, B. H. and Reddy, T. S. (1988). Two new species of genus *Ctenus* Walckenaer (Araneae: Ctenidae) from coastal Andhra Pradesh, India. *Entomon,* 13: 103-107.

Patel, B. H. and Reddy, T. S. (1989). On some rare spiders of the family Zodariidae (Araneae: Arachnida) from coastal Andhra Pradesh, India. *Journal of the Bombay Natural History Society,* 86: 221-225.

Patel, B. H. and Reddy, T. S. (1990a). Two new species of the genus *Pisaura* Simon (Araneae: Pisauridae) from coastal Andhra Pradesh, India. *Entomon,* 15: 37-40.

Patel, B. H. and Reddy, T. S. (1990b). A new species of *Amaurobius* Koch (Araneae: Amaurobiidae) from coastal Andhra Pradesh, India. *Entomon,* 15: 41-43.

Patel, B. H. and Reddy, T. S. (1990c). An addition to the araneid fauna (Araneae: Arachnida) of India. *Records of the Zoological Survey of India,* 87: 157-164.

Patel, B. H. and Reddy, T. S. (1991a). A rare new species of *Homalonychus* Marx (Araneae: Homalonychidae) from coastal Andhra Pradesh, India. *Records of the Zoological Survey of India,* 89: 205-207.

Patel, B. H. and Reddy, T. S. (1991b). On some new species of *Cheiracanthium* C. L. Koch and *Simalio* Simon (Araneae: Clubionidae) from coastal Andhra Pradesh, India. *Records of the Zoological Survey of India,* 89: 269-276.

Patel, B. H. and Reddy, T. S. (1993a). Two new species of the genera *Meta* C. L. Koch and *Neoscona* Simon of the family Araneidae (Arachnida: Araneae) from coastal Andhra Pradesh, India. *Records of the Zoological Survey of India,* 90: 1-6.

Patel, B. H. and Reddy, T. S. (1993b). On some new species of spiders of the genera *Hippasa* Simon, *Lycosa* Latreille, *Pardosa* Koch and *Trochosa* Koch (family: Lycosidae) from coastal Andhra Pradesh, India. *Records of the Zoological Survey of India,* 90: 121-133.

Patil, V. K. and Uniyal, V. P. (2018a). Important notes on the spider *Brettus cingulatus* Thorell, 1895 (Araneae: Salticidae) from India. *Advanced Agricultural Research and Technology Journal* 2(1): 104-107.

Peckham, E. G. (1889). Protective resemblances in spiders. Occasional papers of the natural history society of Wisconsin, 1(2), 61-113.

Peckham, G. W. and Peckham, E. G. (1886). Genera of the family Attidae: with a partial synonymy. *Transactions of the Wisconsin Academy of Sciences, Arts and Letters* 6: 255-342, tab. 1-4.

Peckham, G. W. and Peckham, E. G. (1892). Ant-like spiders of the family Attidae. *Occasional Papers of the Natural History Society of Wisconsin* 2(1): 1-84, pl. 1-7.

Peckham, G. W. and Peckham, E. G. (1901a). Spiders of the *Phidippus* group of the family Attidae. *Transactions of the Wisconsin Academy of Sciences, Arts and Letters* 13: 282-358.

Peckham, G. W., Peckham, E. G. and Wheeler, W. H. (1889). Spiders of the subfamily Lyssomanae. *Transactions of the Wisconsin Academy of Sciences, Arts and Letters* 7: 221-256, pl. 11-12.

Peng, X. J. (1989). New records of Salticidae from China (Arachnida, Araneae). *Journal of Natural Science of Hunan Normal University* 12: 158-165.

Peng, X. J. (2020). *Fauna Sinica, Invertebrata 53, Arachnida: Araneae: Salticidae*. *Science Press, Beijing*, 612 pp.

Peng, X. J. and Kim, J. P. (1998). Four species of jumping spiders (Araneae: Salticidae) from China. *Korean Journal of Biological Sciences* 2: 411-414.

Peng, X. J., Xie, L. P., Xiao, X. Q. and Yin, C. M. (1993). *Salticids in China (Arachnida: Araneae)*. Hunan Normal University Press, 270 pp.

Perree, W.F. (1905). Working Plan for the Reserve Forests of Haltugaon Division, 1905-06 to 1920-21.

Petrunkevitch, A. (1930a). The spiders of Porto Rico. Part two. *Transactions of the Connecticut Academy of Arts and Sciences* 30: 159-356.

Phanuel, G. J. (1963). *Stegodyphus tibialis* (Cambridge) (Family Eresidae: Araneida) from Madras. *Journal of the Madras University, Section B*, 33(3): 305-310.

Pickard-Cambridge, F. O. (1897). On the cteniform spiders of Ceylon, Burmah and the Indian archipelago, west and north of Wallace's line; with bibliography and list of those from Australia, south and east of Wallace's line. *Annals and Magazine of Natural History*, 20(6): 329-356.

Pickard-Cambridge, F. O. (1897c). On the cteniform spiders of Ceylon, Burmah and the Indian archipelago, west and north of Wallace's line; with bibliography and list of those from Australia, south and east of Wallace's line. *Annals and Magazine of Natural History* (6) 20(118): 329-356, pl. 4.

Pickard-Cambridge, F. O. (1898). On the cteniform spiders of Africa, Arabia and Syria. *Proceedings of the Zoological Society of London* 66(1): 13-32, pl. 3-4.

Pickard-Cambridge, F. O. (1901a). Arachnida - Araneida and Opiliones. In: *Biologia Centrali-Americana,* Zoology. London, 2, pp. 193-312, pl. 15-30.

Pickard-Cambridge, F. O. (1902a). Arachnida - Araneida and Opiliones. In: *Biologia Centrali-Americana*, Zoology. London 2, 313-424.

Pickard-Cambridge, O. (1869a). Descriptions of a new genus and six new species of spiders. *Journal of the Linnean Society of London, Zoology* 10(45): 264-276, pl. 9.

Pickard-Cambridge, O. (1869b). Catalogue of a collection of Ceylon Araneida lately received from Mr J. Nietner, with descriptions of new species and characters of a new genus. I. *Journal of the Linnean Society of London, Zoology* 10(46): 373-397, pl. 11-13.

Pickard-Cambridge, O. (1869c). Descriptions and sketches of some new species of Araneida, with characters of a new genus. *Annals and Magazine of Natural History* (4) 3(13): 52-74, pl. 4-6.

Pickard-Cambridge, O. (1871d). Notes on some Arachnida collected by Cuthbert Collingwood, Esq., M. D., during rambles in the China Sea, etc. *Proceedings of the Zoological Society of London* 39(2): 617-622, pl. 49.

Pickard-Cambridge, O. (1873d). On some new genera and species of Araneida. *Proceedings of the Zoological Society of London* 41(1): 112-129, pl. 12-14.

Pickard-Cambridge, O. (1874a). On some new species of Drassides. *Proceedings of the Zoological Society of London* 42(3): 370-419, pl. 51-52.

Pickard-Cambridge, O. (1879c). On some new and little known species of Araneidea, with remarks on the genus *Gasteracantha*. *Proceedings of the Zoological Society of London* 47(2): 279-293, pl. 26-27.

Pickard-Cambridge, O. (1880b). On some new and little known spiders of the genus *Argyrodes*. *Proceedings of the Zoological Society of London* 48(2): 320-344, pl. 28-30.

Pickard-Cambridge, O. (1881d). On some new genera and species of Araneidea. *Proceedings of the Zoological Society of London* 49(3): 765-775, pl. 66.

Pickard-Cambridge, O. (1884a). On two new genera of spiders. *Proceedings of the Zoological Society of London* 52(2): 196-205, pl. 40.

Pickard-Cambridge, O. (1892a)**.** On a new spider from Calcutta. *Annals and Magazine of Natural History* (6) 10(60): 417-419, pl. 22.

Pickard-Cambridge, O. (1894a). Arachnida. Araneida. In: Biologia Centrali-Americana, Zoology. London 1, 121-144.

Pickard-Cambridge, O. (1896a). Arachnida. Araneida. In: Biologia Centrali-Americana, Zoology. London 1, 161-224.

Pickard-Cambridge, O. (1899b). On some new species of exotic Araneidea. *Proceedings of the Zoological Society of London* 67(2): 518-532, pl. 29-30.

Pocock, R. I. (1895). On a new and natural grouping of some of the Oriental genera of Mygalomorphae, with descriptions of new genera and species. *Annals and Magazine of Natural History,* (6) 15: 165-184.

Pocock, R. I. (1897c). Spinnen (Araneae). In: Kükenthal, W. (ed.) Ergebnisse einer zoologische Forschungsreise in dem Molukken und Borneo. *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft* 23: 591-629.

Pocock, R. I. (1898j). Scorpions, pedipalpi and spiders collected by Dr Willey in New Britain, the Solomon Islands, Loyalty Islands, etc. In: Willey, A. (ed.) *Zoological results based on material from New Britain, New Guinea, Loyalty Islands and elsewhere, collected during the years 1895, 1896 and 1897. Part I*. University Press, Cambridge, pp. 95-120, pl. 10-11.

Pocock, R. I. (1899a). Diagnoses of some new Indian Arachnida. *Journal of the Bombay Natural History Society*, 12(4), 744-753.

Pocock, R. I. (1899a). The genus *Poecilotheria*: its habits, history and species. *Annals and Magazine of Natural History,* 3 (7): 82-96.

Pocock, R. I. (1899b). Diagnoses of some new Indian Arachnida. *Journal of the Bombay Natural History Society,* 12: 744-753.

Pocock, R. I. (1899b). The genus Poecilotheria: its habits, history and species. Annals and Magazine of Natural History, 3(7), 82-96.

Pocock, R. I. (1900a). Great Indian spiders. The genus Poecilotheria: its habits, history and species. Journal of the Bombay Natural History Society, 13, 121-133.

Pocock, R. I. (1900a). *The fauna of British India, including Ceylon and Burma. Arachnida*. Taylor and Francis, London, 279 pp.

Pocock, R. I. (1900b). Great Indian spiders. The genus *Poecilotheria*: its habits, history and species. *Journal of the Bombay Natural History Society,* 13: 121-133.

Pocock, R. I. (1900b). The fauna of British India, including Ceylon and Burma. Arachnida. Taylor and Francis, London, 279.

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

Pocock, R. I. (1904). Arachnida. In: *Fauna and geography of the Maldive and Laccadive Archipelagoes. London* 2, 797-805.

Polák, J., Sedláčková, K., Nácar, D., Landová, E., and Frynta, D. (2016). Fear the serpent: A psychometric study of snake phobia. *Psychiatry research*, *242*, 163-168.

Potts, L.J. (2020). Physiological Ecology of Overwintering and Cold-Adapted Arthropods. [Doctoral Dissertation, University of Kentucky]. UKnowledge (https://uknowledge.uky.edu/entomology_etds/53/).

Prajapati, D. A. (2019). A new species of the jumping spider genus *Phlegra* Simon, 1876 from India (Aranei: Salticidae: Aelurillina). *Arthropoda Selecta* 28(4): 575-578.

Prajapati, D. A. (2021). Additional distribution records of *Zimiris doriae* Simon, 1882 (Araneae: Gnaphosidae) from India. *Journal of Threatened Taxa* 13(6): 18667-18670.

Prajapati, D. A. and Dudhatra, A. V. (2022). First record of the spider genus *Tanzania* Koçak and Kemal, 2008 from Asia, with the description of a new species (Araneae: Salticidae). *Revue Suisse de Zoologie* 129(2): 369-374.

Prajapati, D. A. and Kamboj, R. D. (2020a). Additional morphological notes on the male of *Icius alboterminus* (Caleb, 2014) (Aranei: Salticidae) with new distribution records from India. *Journal of Threatened Taxa* 12(4): 15475-15480.

Prajapati, D. A. and Kamboj, R. D. (2020b). First description of the female of *Phintelloides undulatus* (Caleb and Karthikeyani, 2015) (Araneae: Salticidae: Chrysillini). *Arachnology* 18(6): 602-606.

Prajapati, D. A., Hun, N. K. and Raval, J. V. (2021). A new species and a new combination in *Palpimanus* Dufour, 1820 from India (Aranei: Palpimanidae). *Arthropoda Selecta* 30(4): 541-545.

Prajapati, D. A., Kumbhar, S. B., Caleb, J. T. D., Sanap, R. V. and Kamboj, R. D. (2021). Description of two new species of the tribe Chrysillini Simon, 1901 from India (Araneae: Salticidae). *Arthropoda Selecta* 30(2): 230-238.

Prajapati, D. A., Malamel, J. J. and Sebastian, P. A. (2020). First record of *Uroballus* Simon, 1902 from India, with description of a new species (Araneae: Salticidae: Simaethina). *Arachnology* 18(6): 629-631.

Prajapati, D. A., Malamel, J. J., Sudhikumar, A. V. and Sebastian, P. A. (2018). A new species of the jumping spider genus *Icius* Simon, 1876 from India (Aranei: Salticidae: Chrysillini). *Arthropoda Selecta* 27(4): 330-334.

Prajapati, D. A., Murthappa, P. S., Sankaran, P. M. and Sebastian, P. A. (2016a). Two new species of the ant-eating spider genus *Tropizodium* Jocqué and Churchill, 2005 (Araneae, Zodariidae, Zodariinae) from India. *Zootaxa* 4061(5): 575-584.

Prajapati, D. A., Murthappa, P. S., Sankaran, P. M. and Sebastian, P. A. (2016b). Two new species of *Stenaelurillus* Simon, 1886 from India (Araneae: Salticidae: Aelurillina). *Zootaxa* 4171(2): 321-334.

Prajapati, D. A., Patel, K. R., Munjpara, S. B., Chettiar, S. S. and Jhala, D. D. (2016c). Spiders (Arachnida: Araneae) of Gujarat University Campus, Ahmedabad, India with additional description of *Eilica tikaderi* (Platnick, 1976). *Journal of Threatened Taxa* 8(11): 9327-9333.

Prajapati, D. A., Tatu, K. and Kamboj, R. D. (2021a). Redescription and junior synonyms of *Plexippus clemens* (O. Pickard-Cambridge, 1872) (Araneae: Salticidae). *Arachnology* 18(8): 809-811.

Prajapati, D. A., Tatu, K. and Kamboj, R. D. (2021b). First record of *Afraflacilla* Berland and Millot, 1941 from India, with description of a new species (Araneae: Salticidae). *Arachnology* 18(9): 990-992.

Prasad, P., Saha, G. K., Kumar, V. and Tyagi, K. (2021b). Rediscovery and redescription of crab spider *Thomisus granulifrons* Simon 1906 (Araneae: Thomisidae) from India. *Acta Arachnologica,* 70(1): 21-23.

Prasad, P., Saha, G. K., Kumar, V. and Tyagi, K. (2022). First report of the wolf spider *Pardosa parathompsoni* (Araneidae: Lycosidae) from India. *Munis Entomology and Zoology,* 17: 1590-1595.

Prasad, P., Kumar, V. & Tyagi, K. (2022). Resolving an ambiguity on the geographical distribution of *Evarcha flavocincta* (C. L. Koch, 1846) from India. *Munis Entomology and Zoology* **17**(2): 1020-1026.

Prasad, P., Tyagi, K. and Kumar, V**.** (2020)**.** First report of the cob-web spider *Coleosoma blandum* O. Pickard-Cambridge (Araneae: Theridiidae) with comments on its distribution from India. *Munis Entomology and Zoology* 15(1): 96-99.

Prasad, P., Tyagi, K., Caleb, J. T. D. and Kumar, V**.** (2019)**.** A new species of the cob web spider genus *Theridion* from India (Araneae: Theridiidae). *Ecologica Montenegrina* 26: 108-117.

Prasad, P., Tyagi, K., Kumar, V. and Saha, G. K. (2021a). Redescription of *Lycosa bistriata* Gravely, 1924 (Araneae: Lycosidae) from India. *Munis Entomology and Zoology,* 16(2): 819-822.

Pravalikha, G. B. and Srinivasulu, C. (2015)**.** A new species of genus *Thomisus* Walckenaer, 1805 (Araneae: Thomisidae) from Telangana, India and a detailed description of *Thomisus projectus* Tikader, 1960. *Journal of Threatened Taxa* 7(3): 7000-7006. [attached vol. 7(9): 7605-7608:

Pravalikha, G. B., Srinivasulu, C. and Srinivasulu, B. (2013)**.** First Report of *Hersilia orvakalensis* Javed et al., 2010 (Araneae, Hersiliidae) from Telangana, India. *Universal Journal of Environmental Research and Technology* 3(6): 685-689.

Pravalikha, G. B., Srinivasulu, C. and Srinivasulu, B. (2014). New species of genus *Hersilia* Audouin, 1826 (Araneae: Hersiliidae) from India. *Journal of Threatened Taxa* 6(3): 5553-5557.

Próchniewicz, M. (1990). Salticidae aus Nepal und Bhutan. Genera *Telamonia* Thorell 1887 und *Plexippoides* Prószyński 1976 (Arachnida: Araneae). *Senckenbergiana Biologica* 70: 151-160.

Prószyński, J. (1971e). Catalogue of Salticidae (Aranei) specimens kept in major collections of the world. *Annales Zoologici, Warszawa* 28: 367-519.

Prószyński, J. (1983b). Redescriptions of types of Oriental and Australian Salticidae (Aranea) in the Hungarian Natural History Museum, Budapest. *Folia Entomologica Hungarica* 44(2): 283-297.

Prószyński, J. (1984a). Atlas rysunków diagnostycznych mniej znanych Salticidae (Araneae). *Zeszyty Naukowe Wyższej Szkoły Rolniczo-Pedagogicznej w Siedlcach* 2: 1-177.

Prószyński, J. (1984c). Remarks on *Viciria* and *Telamonia* (Araneae, Salticidae). *Annales Zoologici, Warszawa* 37: 417-436.

Prószyński, J. (1985). On *Siler*, *Silerella*, *Cyllobelus* and *Natta* (Araneae, Salticidae). *Annales Zoologici, Warszawa* 39: 69-85.

Prószyński, J. (1990). *Catalogue of Salticidae (Araneae): synthesis of quotations in the world literature since 1940, with basic taxonomic data since 1758*. Wyższa Szkola Rolniczo-Pedagogiczna w Siedlcach, 366 pp.

Prószyński, J. (1992a)**.** Salticidae (Araneae) of the Old World and Pacific Islands in several US collections. *Annales Zoologici, Warszawa* 44: 87-163.

Prószyński, J. (1992b). Salticidae (Araneae) of India in the collection of the Hungarian National Natural History Museum in Budapest. *Annales Zoologici, Warszawa* 44: 165-277.

Prószyński, J. (2016). Delimitation and description of 19 new genera, a subgenus and a species of Salticidae (Araneae) of the world. *Ecologica Montenegrina* 7: 4-32.

Prószyński, J. (2017b). Pragmatic classification of the world's Salticidae (Araneae). *Ecologica Montenegrina* 12: 1-133.

Prószyński, J. (2017c). Remarks on the genus *Plexippus* C. L. Koch, 1846 (Araneae: Salticidae). *Ecologica Montenegrina* 13: 39-69.

Prószyński, J. (2018a). Review of the genus *Hasarius* (Araneae: Salticidae) - a taxonomic fiasco. *Ecologica Montenegrina* 16: 16-31.

Prószyński, J. (2018b). Review of genera *Evarcha* and *Nigorella*, with comments on *Emertonius*, *Padilothorax* [sic], *Stagetillus*, and description of five new genera and two new species (Araneae: Salticidae). *Ecologica Montenegrina* 16: 130-179.

Prószyński, J. (2018b). Review of genera *Evarcha* and *Nigorella*, with comments on *Emertonius*, *Padilothorax* [sic], *Stagetillus*, and description of five new genera and two new species (Araneae: Salticidae). *Ecologica Montenegrina* 16: 130-179.

Prószyński, J. and Deeleman-Reinhold, C. L. (2010). Description of some Salticidae (Araneae) from the Malay Archipelago. I. Salticidae of the Lesser Sunda Islands, with comments on related species. *Arthropoda Selecta* 19(3): 153-188.

Prószyński, J. and Deeleman-Reinhold, C. L. (2012). Description of some Salticidae (Aranei) from the Malay archipelago. II. Salticidae of Java and Sumatra, with comments on related species. *Arthropoda Selecta* 21(1): 29-60.

Prószyński, J. and Żabka, M. (1980). Remarks on Oligocene amber spiders of the family Salticidae. *Acta Palaeontologica Polonica* 25(2): 213-223.

Quasin, S. and Uniyal, V. P. (2012)**.** First record of the genus *Phylloneta* from India with description of *P. impressa* L. Koch, 1881 (Araneae: Theridiidae). *Biosystematica* 5: 59-61.

Quasin, S., Sarkar, I. D., Siliwal, M. and Uniyal, V. P. (2022)**.** First reports of two cribellate spiders from India (Araneae: Agelenidae, Titanoecidae). *Munis Entomology and Zoology* 17(supplement): 1761-1767.

Quasin, S., Siliwal, M. and Uniyal, V. P. (2015). New species of *Himalmartensus* Wang and Zhu, 2008 (Araneae: Amaurobiidae) with the first description of a male from the Nanda Devi Biosphere Reserve, Western Himalaya, India. *Journal of Asia-Pacific Biodiversity* 8: 247-250.

Quasin, S., Siliwal, M. and Uniyal, V. P. (2018). New species of *Trachelas* (Araneae: Trachelidae) from Nanda Devi Biosphere Reserve-Western Himalaya, India. *Journal of Asia-Pacific Biodiversity* 11(1): 158-160.

Quasin, S., Siliwal, M. Uniyal, V. P. (2019). First report of *Steatoda cingulata* (Thorell, 1890) (Araneae: Theridiidae) from Nanda Devi Biosphere Reserve, Western Himalaya. *Munis Entomology and Zoology* 14(2): 638-642.

Quasin, S., Siliwal, M., Patil, V. and Uniyal, V. P. (2017). First record of *Ruborridion musivum* Simon, 1873 (Araneae: Theridiidae) from India. *Munis Entomology and Zoology* 12(1): 27-30.

Quasin, S., Uniyal, V. P. and Sunil Jose, K. (2012). First report of *Episinus affinis* (Araneae: Theridiidae) from India. *Records of the Zoological Survey of India* 111(4): 97-98.

Rainbow, W. J. (1898a). Contribution to a knowledge of the arachnidan fauna of British New Guinea. *Proceedings of the Linnean Society of New South Wales* 23: 328-356, pl. 7.

Rainbow, W. J. (1898b). Description of a new araneiad [sic]. *Records of the Australian Museum* 3(4): 82-83, pl. 18.

Rainbow, W. J. (1902b). Arachnida from the South Seas. *Proceedings of the Linnean Society of New South Wales* 26: 521-532, pl. 28.

Rainbow, W. J. (1916a). Arachnida from northern Queensland. *Records of the Australian Museum* 11: 33-64, 79-119, pl. 14-16, 21-23.

Rainbow, W. J. (1916a). Arachnida from northern Queensland. *Records of the Australian Museum* 11: 33-64, 79-119, pl. 14-16, 21-23.

Rainbow, W. J. (1920b). Arachnida from Lord Howe and Norfolk Islands. *Records of the South Australian Museum* 1(3): 229-272, pl. 28-31.

Rajeshwaran, J.P., P. Duraimurugan and P.S. Shanmugam (2005). Role of spiders in agriculture and hortculture ecosystem. Journal of Food, Agriculture and Environment 3: 147–152.

Rao, K. T., Bastawade, D. B., Javed, S. M. M. and Krishna, I. S. R. (2006a). Description of two new species of spiders of the genus *Poecilotheria* Simon (Araneae: Theraphosidae) and *Tmarus* Simon (Araneae: Thomisidae) from Nallamalai Hills, eastern Ghats, Andhra Pradesh, India. *Records of the Zoological Survey of India,* 106(1): 49-54.

Rao, K. T., Bastawade, D. B., Javed, S. M. M. and Krishna, I. S. R. (2006b). Description of *Argiope lobata* Pallas (Araneae: Araneidae) from Nallamalai region, eastern Ghats, Andhra Pradesh, India. *Records of the Zoological Survey of India,* 106(2): 51-54.

Raub, F., Höfer, H., Scheuermann, L., de Britez, R. M., and Brandl, R. (2015). Conserving landscape structure–conclusions from partitioning of spider diversity in southern Atlantic forests of Brazil. Studies on neotropical fauna and environment, 50(3), 158-174.

Raven, R. J. (2015). A revision of ant-mimicking spiders of the family Corinnidae (Araneae) in the Western Pacific. *Zootaxa* 3958(1): 1-258.

Reddy, T. S. and Patel, B. H. (1992a). Two new species of the genus *Thomisus* Walckenaer (Araneae: Thomisidae) from coastal Andhra Pradesh. *Journal of the Bombay Natural History Society,* 88: 268-272.

Reddy, T. S. and Patel, B. H. (1992b). Redescription of *Araneus fulvus* Dyal (Araneae: Araneidae) from coastal Andhra Pradesh. *Journal of the Bombay Natural History Society,* 89: 138-140.

Reddy, T. S. and Patel, B. H. (1992c). A rare new *Tegenaria* Latreille spider (Araneae: Agelenidae) from coastal Andhra Pradesh, India. *Entomon,* 17: 125-127.

Reddy, T. S. and Patel, B. H. (1992d). A new species of *Neoscona* Simon (Araneae: Araneida) from coastal Andhra Pradesh, India. *Entomon,* 17: 129-130.

Reddy, T. S. and Patel, B. H. (1993a). Two new species of the genus *Oedignatha* Thorell (Araneae: Clubionidae) from coastal Andhra Pradesh, India. *Entomon,* 18: 47-51.

Reddy, T. S. and Patel, B. H. (1993b). Two new species of the genus *Chorizopes* O. P. Cambridge (Araneae: Araneidae) from India. *Entomon,* 18: 53-56.

Reddy, T. S. and Patel, B. H. (1993c). Two new species of the genera *Pisaura* Simon and *Tinus* Cambridge (Araneae: Pisauridae) from India. *Entomon,* 18: 181-184.

Reddy, T. S. and Patel, B. H. (1993d). A rare new spider *Lutica* Marx (Araneae: Zodariidae) from India. *Records of the Zoological Survey of India,* 92: 173-175.

Reddy, T. S. and Patel, B. H. (1994). A new species of genus *Ctenus* Walckenaer (Araneae: Ctenidae) from India. *Entomon,* 19: 131-133.

Reimoser, E. (1925). Fauna sumatrensis (Beitrag Nr.7). Araneina. *Supplementa Entomologica* 10: 89-94.

Reimoser, E. (1934). Araneae aus Sud Indiaen. *Revue Swisse de Zoologie*, 41: 465- 511.

Rio, S. and Matsumoto, O. (2020). [Spiders collected on Yonaguni Island]. *Kishidaia* 117: 84-86.

Roberts, M. J. (1983). Spiders of the families Theridiidae, Tetragnathidae and Araneidae (Arachnida: Araneae) from Aldabra atoll. *Zoological Journal of the Linnean Society* 77(3): 217-291.

Roewer, C. F. (1938). Araneae. In: Résultats scientifiques du Voyage aux indes orientales néerlandaises de la SS. AA. RR. le Prince et la Princesse Leopold de Belgique. *Mémoires du Musée Royal d'Histoire Naturelle de Belgique* 3(19): 1-94.

Roewer, C. F. (1942a). *Katalog der Araneae von 1758 bis 1940. 1. Band (Mesothelae, Orthognatha, Labidognatha: Dysderaeformia, Scytodiformia, Pholciformia, Zodariiformia, Hersiliaeformia, Argyopiformia)*. Natura, Buchhandlung für Naturkunde und exakte Wissenschaften Paul Budy, Bremen, 1040 pp.

Roewer, C. F. (1955c). *Katalog der Araneae von 1758 bis 1940, bzw. 1954. 2. Band, Abt. a (Lycosaeformia, Dionycha [excl. Salticiformia]). 2. Band, Abt. b (Salticiformia, Cribellata) (Synonyma-Verzeichnis, Gesamtindex)*. Institut royal des Sciences naturelles de Belgique, Bruxelles, 1751 pp.

Roewer, C. F. (1965). Die Lyssomanidae und Salticidae-Pluridentati der Äthiopischen Region (Araneae). *Annales, Musée Royal de l'Afrique Centrale, Sciences zoologiques* 139: 1-86.

Rosas-Ramos, N., Baños-Picón, L., Tormos, J., and Asís, J. D. (2020). Farming system shapes traits and composition of spider assemblages in Mediterranean cherry orchards. *PeerJ*, *8*, e8856

Roy, G. C., Chakraborty, K., and Banerjee, S. (2021). A study on the Guild Interaction of predator natural Enemies in a rice field. Ecology, *Environment and Conservation Paper*, 27(35), 1-5.

Roy, T. K., Dhali, D. C., Saha, S. and Raychaudhuri, D. (2010)**.** Resurrection of the endemic bird dung crab spiders, *Phrynarachne* Thorell (Araneae: Thomisidae) of 19th century India. *Munis Entomology and Zoology*, 5: 543-550.

Roy, T. K., Dhali, D. C., Saha, S. and Raychaudhuri, D. (2014a)**.** A newly recorded genus *Evarcha* Simon, 1902 (Araneae: Salticidae) from India. *Munis Entomology and Zoology,* 9(1): 379-383.

Roy, T. K., Saha, S. and Raychaudhuri, D. (2015). A new *Gibbaranea* Archer, 1951 (Araneae: Araneidae) from West Bengal, India with a note on biogeography of the genus. *Species,* 16(52): 1-5.

Roy, T. K., Saha, S. and Raychaudhuri, D. (2016). A treatise on the jumping spiders (Araneae: Salticidae) of tea ecosystem of Dooars, West Bengal, India. *World Scientific News,* 53(1): 1-66.

Roy, T. K., Saha, S. and Raychaudhuri, D. (2016). A treatise on the jumping spiders (Araneae: Salticidae) of tea ecosystem of Dooars, West Bengal, India. *World Scientific News* 53(1): 1-66.

Roy, T. K., Saha, S. and Raychaudhuri, D. (2017). On the araneid fauna (Araneae: Araneidae) of the tea estates of Dooars, West Bengal, India. *World Scientific News,* 67(1): 1-67.

Roy, T. K., Sen, S., Saha, S. and Raychaudhuri, D. (2014b)**.** A new *Chorizopes* O.P.-Cambridge, 1870 (Araneae: Araneidae) from West Bengal, India. *Romanian Journal of Biology – Zoology,* 59(1): 3-9.

Roy, T. K., Sen, S., Saha, S. and Raychaudhuri, D. (2015). A new *Linyphia* Latreille, 1804 (Araneae: Linyphiidae) from West Bengal, India. *Munis Entomology and Zoology* 10(1): 61-64.

Saaristo, M. I. (2006). Theridiid or cobweb spiders of the granitic Seychelles islands (Araneae, Theridiidae). *Phelsuma* 14: 49-89.

Saaristo, M. I. (2010). Araneae. In: Gerlach, J. and Marusik, Y. M. (eds.) *Arachnida and Myriapoda of the Seychelles islands*. *Siri Scientific Press, Manchester*, pp. 8-306.

Sadana, G. L. (1969). A new species of the spider of the genus *Lycosa* Latreille (family: Zoology Lycosidae) from India. *Science and Culture,* 35: 416-418.

Sadana, G. L. (1971a). Description of a new species of *Pardosa* Koch (Lycosidae: Araneida) from India. *Entomologist's Monthly Magazine,* 107: 226-227.

Sadana, G. L. (1980). A new Indian species of *Phlegra* Simon (Araneida: Salticidae). *Entomologist's Monthly Magazine*, 115: 229-230.

Sadana, G. L. (1991). A new species of the spider of the genus *Zygoballus* Peckhams, 1885 (Salticidae) from India. *Entomon,* 16: 73-75.

Sadana, G. L. and Bajaj, K. (1980). A new Indian species of *Cheiracanthium* Koch (Araneida, Clubionidae). *Entomologist's Monthly Magazine,* 115: 131-132.

Sadana, G. L. and Goel, N. K. (1995). New species of spider of the genus *Oxyopes* Latreille from India. *Entomon,* 20: 71-73.

Sadana, G. L. and Gupta, A. (1995). A new species of oxyopid spider from India. *Journal of the Bombay Natural History Society,* 92: 242-243.

Sadana, G. L. and Gupta, A. (1998). A new salticid spider from India. *Journal of the Bombay Natural History Society,* 95: 469-472.

Sadana, G. L. and Kaur, M. (1974a). A new species of *Chorizopes* O.P.-C. (Araneida: Argiopidae) from India. *Entomologist's Monthly Magazine,* 109: 162-163.

Sadana, G. L. and Kaur, M. (1974b). A new species of spider of the genus *Marpissa* C. L. Koch (Salticidae) from India. *Bulletin of the British Arachnological Society,* 3(2): 49-50.

Saha, S. and Raychaudhuri, D. (2003). New lynx spider, Oxyopes Latreille (Oxyopidae) from Buxa Tiger Reserve, Jalpaiguri, West Bengal. *Entomon* 28: 321- 327.

Saha, S. and Raychaudhuri, D. (2004a). A new species of spider of the genus *Peucetia* Thorell (Oxyopidae: Araneae) from Digha, Midnapore, West Bengal, India. *Journal of the Bombay Natural History Society,* 101: 288-290.

Saha, S. and Raychaudhuri, D. (2004b). A survey of spiders (Araneae: Araneidae) of Jaldapara Wildlife Sanctuary, West Bengal, with description of a new *Zilla* species. *Entomon,* 29: 245-252.

Saha, S. and Raychaudhuri, D. (2004c). Hitherto unknown genera of spiders, *Ordgarius* Keyserling, *Pasilobus* Simon (Araneidae) and *Strigoplus* Simon (Thomisidae) from eastern India. *Journal of the Bombay Natural History Society,* 101: 425-428.

Saha, S. and Raychaudhuri, D. (2007a). Heteropodine spiders (Sparassidae: Araneae) from Jaldapara Wildlife Sanctuary, Jalpaiguri, West Bengal. *Journal of the Bombay Natural History Society,* 103(1): 82-86.

Saha, S. and Raychaudhuri, D. (2007b). Lynx spiders (Oxyopidae: Araneae) from Betla Forest, Jharkhand, India. *Journal of the Bombay Natural History Society,* 103(1): 87-89.

Saha, S. and Raychaudhuri, D. (2007c). New crab spider of the genus *Thomisus* Walckenaer from Kolkata, West Bengal. *Munis Entomology and Zoology,* 2: 439-442.

Saha, S. and Raychaudhuri, D. (2007d). Crab spiders (Araneae: Thomisidae) of Jaldapara Wildlife Sanctuary, Jalpaiguri, West Bengal – I. *Journal of the Bombay Natural History Society,* 104: 58-63.

Saha, S., Biswas, V. and Raychaudhuri, D. (1994). Heteropodidae and Lycosidae of Buxa Tiger Reserve, West Bengal. *Acta Arachnologica,* 43: 43-48.

Saha, S., Biswas, V. and Raychaudhuri, D. (1995). A new name for *Heteropoda acuta* Saha, Biswas et Raychaudhuri, 1994 (Araneae: Heteropodidae). *Acta Arachnologica,* 44: 15-16.

Saha, S., Biswas, V., Majumder, S. C. and Raychaudhuri, D. (1995). Araneidae of Buxa Tiger Reserve, West Bengal. *Acta Arachnologica* 44: 11-14.

Saikia, M. K., and Saikia, P. K. (2015). New records of forest birds in North and South Bank Landscapes of Assam, India. *Journal on New Biological Reports*, 4(2), 169-176.

Saitō, S. (1933b). Notes on the spiders from Formosa. *Transactions of the Sapporo Natural History Society* 13(1): 32-60, pl. 3.

Saitō, S. (1939). On the spiders from Tohoku (northernmost part of the main island), Japan. *Saito Ho-On Kai Museum Research Bulletin* 18(Zool. 6): 1-91.

Saitō, S. (1959). *The Spider Book Illustrated in Colours*. Hokuryukan, Tokyo, 194 pp.

Saitō, S. and Kishida, K. (1947). Araneae. In: Illustrated Encyclopedia of the Fauna of Japan (Exclusive of Insects). *Hokuryukan, Tokyo*, pp. 978-1001.

Sajid, M., Zahid, M., Butt, A., Khan, M. T., Shah, M., Attaullah, S., Khan, M. I. and Ahmad, R. (2023). Faunistic and DNA barcoding of the recorded spiders (Araneae: Gnaphosidae, Hersiliidae and Salticidae) from Lower Dir (Pakistan). *International Journal of Agriculture and Biology* 29(1): 23-30.

Sampathkumar, M., Reang, B., Caleb, J. T. D., Mahendiran, G. and Shaw, S. S. (2022). The spitting spider, *Scytodes fusca* Walckenaer (Araneae, Scytodidae): its distribution in South India and natural history notes. *Journal of Entomological Research* 46(2): 347-350.

Sampathkumar, M., Reang, B., Caleb, J. T. D., Mahendiran, G. and Shaw, S. S. (2023). Distributional notes on the long-jawed spider *Tetragnatha nitens* (Audouin, 1826) (Araneae, Tetragnathidae) from India. *Journal of Entomological Research* 47(4): 818-823.

Samu, F., Sunderland, K. D., and Szinetar, C. (1999). Scale-dependent dispersal and distribution patterns of spiders in agricultural systems: a review. *Journal of Arachnology*, 325-332

Sanap, R. V. and Caleb, J. T. D. (2022)**.** A new species of *Langelurillus* Próchniewicz, 1994 (Araneae, Salticidae, Aelurillina) from western India. *Evolutionary Systematics,* 6(1): 65-70.

Sanap, R. V. and Mirza, Z. A. (2011). Two new trapdoor spider species of the genus Scalidognathus Karsch, 1891 (Araneae: Idiopidae) from the southern western Ghats of India. *Acta Zoologica Lituanica* 21: 96-102.

Sanap, R. V. and Mirza, Z. A. (2013)**.** First description of female *Plesiophrictus millardi* Pocock, 1899 (Araneae: Theraphosidae). *Taprobanica*, 5(1): 6-11.

Sanap, R. V. and Mirza, Z. A. (2014)**.** A new iridescent tarantula of the genus *Thrigmopoeus* Pocock, 1899 from Western Ghats, India. *Comptes Rendus Biologies,* 337(7-8): 480-486.

Sanap, R. V. and Mirza, Z. A. (2015)**.** A new large trapdoor spider species of the genus *Heligmomerus* Simon 1892 (Araneae, Mygalomorphae, Idiopidae) from Western Ghats, India. *Journal of Asia-Pacific Biodiversity,* 8: 242-246.

Sanap, R. V., Caleb, J. T. D. and Joglekar, A. (2019)**.** A new species of the hisponine jumping spiders from India (Araneae: Salticidae), with some observations on its life history. *Arthropoda Selecta,* 28(1): 113-124.

Sanap, R. V., Joglekar, A., Prajapati, D. A. and Caleb, J. T. D. (2017)**.** Two new species of *Langelurillus* Próchniewicz, 1994 from India (Araneae: Salticidae: Aelurillina). *Zootaxa,* 4318(1): 135-146.

Sanap, R., Pawaria, S., Joglekar, A. and Khandekar, A. (2022)**.** A new species of *Conothele* Thorell, 1878 (Aranei: Halonoproctidae) from the northern Western Ghats, India. *Arthropoda Selecta,* 31(1): 79-89.

Sankaran, P. M**.** (2021a)**.** Transfer of *Homalonychus raghavai* Patel and Reddy, 1991 to *Storenomorpha* Simon, 1884 (Araneae: Zodariidae). *Zootaxa,* 5039(2): 299-300.

Sankaran, P. M. (2021b). A review of the Indian species of *Apochinomma* Pavesi, 1881 and *Corinnomma* Karsch, 1880, synonymy of *Castianeira quadrimaculata* Reimoser, 1934, and a catalogue of the Indian corinnid fauna (Arachnida: Araneae). *Zootaxa,* 5072(6): 541-559.

Sankaran, P. M. (2022a). On Indian Palpimanidae Thorell, 1870, with the first record of the genus *Boagrius* Simon, 1893 from South Asia (Arachnida: Araneae). *Journal of Natural History,* 55(35-36, 2021): 2173-2185.

Sankaran, P. M. (2022b). Remarks on the spider genus *Koppe* Deeleman-Reinhold, 2001 (Araneae: Liocranidae), including the first records from India. *Zootaxa,* 5104(3): 436-440.

Sankaran, P. M. (2022c). On the synonymy of *Aracus* Thorell, 1887 with *Zelotes* Gistel, 1848 (Araneae, Gnaphosidae, Zelotinae). *Zootaxa,* 5105(1): 145-147.

Sankaran, P. M. (2023a). An update on the ant-mimicking genus *Corinnomma* Karsch, 1880 (Araneae, Corinnidae, Castianeirinae). *Zootaxa* 5254(4): 534-544.

Sankaran, P. M. (2023b). Taxonomic notes on the ant-eating spider genera *Asceua* Thorell, 1887 and *Cydrela* Thorell, 1873 from India, with comment on Indian species of *Euryeidon* Dankittipakul & Jocqué, 2004 (Araneae: Zodariidae). *Zootaxa,* 5296(3): 381-405.

Sankaran, P. M. and Caleb, J. T. D. (2021). On the taxonomic validity of Indian ground spiders: V. Genera *Megamyrmaekion* Reuss, 1834, *Sosticus* Chamberlin, 1922 and *Gaviphosa* gen. nov. (Araneae: Gnaphosidae). *Zootaxa,* 5040(4): 539-564.

Sankaran, P. M. and Joseph, M. M. (2022). On the identity of *Cryptothele collina* Pocock, 1901, and comment on the preepigyne and pre-vulva

in *Cryptothele* L. Koch, 1872 (Araneae, Zodariidae, Cryptothelinae). *Zootaxa,* 5124(3): 397-400.

Sankaran, P. M. and Joseph, M. M. (2023). The hitherto unknown male of *Bowie indicus* (Gravely, 1931) (Araneae: Ctenidae). *Journal of Natural History,* 57(1-4): 19-24.

Sankaran, P. M. and Sebastian, P. A. (2016). A checklist of Indian armored spiders (Araneae, Tetrablemmidae) with the description of a new species from the Western Ghats. *Zootaxa* 4084(3): 443-450.

Sankaran, P. M. and Sebastian, P. A. (2017a). Redescription of *Zoica puellula* (Simon, 1898) (Araneae: Lycosidae: Zoicinae) and transfer of *Zoica harduarae* (Biswas and Roy, 2008) to Agelenidae C.L. Koch, 1837. *Zootaxa* 4276(1): 145-150.

Sankaran, P. M. and Sebastian, P. A. (2017b). *Anaxibia folia* spec. nov.—a new litter-dwelling dictynid spider from India (Araneae: Dictynidae: Dictyninae). *Zootaxa* 4363(3): 441-444.

Sankaran, P. M. and Sebastian, P. A. (2018a). First record of *Africactenus* Hyatt, 1954 and redescriptions of two poorly known species of *Ctenus* Walckenaer, 1805 (Araneae, Ctenidae, Cteninae) from India. *Zootaxa,* 4388(3): 395-406.

Sankaran, P. M. and Sebastian, P. A. (2018b). A new synonym in the subfamily Thrigmopoeinae Pocock, 1900 (Araneae, Theraphosidae). *ZooKeys,* 749: 81-86.

Sankaran, P. M. and Sebastian, P. A. (2018c). *Phonognatha vicitra* Sherriffs, 1928—a taxonomic misidentification of the orb-weaving spider *Acusilas coccineus* Simon, 1895 (Araneae, Araneidae). *Zootaxa,* 4434(2): 391-395.

Sankaran, P. M. and Sebastian, P. A. (2018d). New species of gnaphosid spiders (Araneae: Gnaphosidae) from the Western Ghats of India. *Journal of Natural History,* 52(27-28): 1733-1744.

Sankaran, P. M. and Sebastian, P. A. (2019). *Systaria barkudensis* (Gravely, 1931) is a junior synonym of *Palicanus caudatus* Thorell, 1897 (Araneae: Miturgidae, Systariinae). *Zootaxa,* 4585(1): 192-196.

Sankaran, P. M. and Tripathi, R. (2023)**.** First record of the genus *Hongkongia* Song and Zhu, 1998 from India, with the description of a new species (Araneae, Gnaphosidae). *Zootaxa* 5389(4): 497-500.

Sankaran, P. M., Caleb, J. T. D. and Sebastian, P. A. (2019a). New synonymies and transfers in *Castianeira* Keyserling, 1879 (Araneae, Corinnidae, Castianeirinae) from India. *Zootaxa,* 4623(2): 331-340.

Sankaran, P. M., Caleb, J. T. D. and Sebastian, P. A. (2019a). New synonymies and transfers in *Castianeira* Keyserling, 1879 (Araneae, Corinnidae, Castianeirinae) from India. *Zootaxa* 4623(2): 331-340.

Sankaran, P. M., Caleb, J. T. D. and Sebastian, P. A. (2019b). On the taxonomic validity of Indian ground spiders: I. Genus *Scopoides* Platnick, 1989 (Araneae: Gnaphosidae). *Zootaxa,* 4648(1): 155-164.

Sankaran, P. M., Caleb, J. T. D. and Sebastian, P. A. (2019c). Transfer of the Indian species formerly included in the genus *Lutica* Marx, 1891 to *Tropizodium* Jocqué and Churchill, 2005 and *Zodarion* Walckenaer, 1826 (Araneae, Zodariidae). *Zootaxa,* 4658(1): 168-174.

Sankaran, P. M., Caleb, J. T. D. and Sebastian, P. A. (2020a). On the taxonomic validity of Indian ground spiders: II. Genera *Drassyllus* Chamberlin, 1922

and *Nodocion* Chamberlin, 1922 (Araneae: Gnaphosidae). *European Journal of Taxonomy,* 673: 1-14.

Sankaran, P. M., Caleb, J. T. D. and Sebastian, P. A. (2020b). A new Indian species of the orb-weaving spider genus *Glenognatha* Simon, 1887, with a new combination and a new synonymy of *Tylorida marmorea* (Pocock, 1901) (Araneae, Tetragnathinae). *Zootaxa,* 4808(1): 196-200.

Sankaran, P. M., Caleb, J. T. D. and Sebastian, P. A. (2020c). A review of the Indian species formerly assigned to the genus *Storena* Walckenaer, 1805 (Araneae: Zodariidae) with the description of a new genus. *European Journal of Taxonomy,* 707: 1-23.

Sankaran, P. M., Caleb, J. T. D. and Sebastian, P. A. (2020d). The species of the genus *Plator* Simon, 1880 in India (Araneae: Trochanteriidae). *Zootaxa,* 4852(1): 133-141.

Sankaran, P. M., Caleb, J. T. D. and Sebastian, P. A. (2020e). On the taxonomic validity of Indian ground spiders: III. Genus *Phaeocedus* Simon, 1893 (Araneae: Gnaphosidae). *Journal of Natural History,* 54(21-22): 1325-1336.

Sankaran, P. M., Caleb, J. T. D. and Sebastian, P. A. (2020f). A review of the genus *Sphingius* Thorell, 1890 from India (Araneae: Liocranidae). *Zootaxa,* 4896(4): 505-522.

Sankaran, P. M., Caleb, J. T. D. and Sebastian, P. A. (2020g). Taxonomic notes on the genus *Makdiops* Crews and Harvey, 2011 in India (Araneae: Selenopidae). *Zootaxa,* 4896(4): 595-600.

Sankaran, P. M., Caleb, J. T. D. and Sebastian, P. A. (2021c). Correction to the article 'On the taxonomic validity of Indian ground spiders: III. Genus *Phaeocedus* Simon, 1893 (Araneae: Gnaphosidae)'. *Journal of Natural History* 54(45-46): 3003-3004.

Sankaran, P. M., Caleb, J. T. D., Joseph, M. M. and Sebastian, P. A. (2020). On a new synonymy in the spider genus *Nephila* Leach, 1815 (Araneidae, Nephilinae) from India with supplementary notes on colour polymorphism in the genus. *Zootaxa* 4786(4): 592-596.

Sankaran, P. M., Jobi, M. J. and Sebastian, P. A. (2015). Redescription of the orb-weaving spider *Gasteracantha geminata* (Fabricius, 1798) (Araneae, Araneidae). *Zootaxa* 3915(1): 147-150.

Sankaran, P. M., Jobi, M. J., Joseph, M. M. and Sebastian, P. A. (2014). On the genus *Hermippus* Simon, 1893 (Araneae: Zodariidae, Zodariinae) in India with the description of three new species from the Western Ghats and proposing a new biogeographical hypothesis for the distribution of the genus. *Zootaxa,* 3893(1): 114-126.

Sankaran, P. M., Kadam, G., Sudhikumar, A. V. and Tripathi, R. (2022). First record of *Siamspinops* Dankittipakul and Corronca, 2009 from India, first description of the female of *Makdiops shevaroyensis* (Gravely, 1931), and a catalogue of Indian selenopid fauna (Araneae, Selenopidae). *Zootaxa,* 5194(1): 109-121.

Sankaran, P. M., Malamel, J. J. and Sebastian, P. A. (2017). On the new monotypic wolf spider genus *Ovia* gen. nov. (Araneae: Lycosidae, Lycosinae). *Zootaxa,* 4221(3): 366-376.

Sankaran, P. M., Malamel, J. J., Joseph, M. M. and Sebastian, P. A. (2015a). An updated review of the genus *Martensopoda* Jäger, 2006 (Araneae: Sparassidae: Heteropodinae). *Zootaxa,* 3937(3): 577-590.

Sankaran, P. M., Malamel, J. J., Joseph, M. M. and Sebastian, P. A. (2015b). *Castianeira furva* sp. nov. (Araneae, Corinnidae, Castianeirinae), a new polymorphic ground sac spider from the southern Western Ghats of India. *Zootaxa,* 3964(5): 569-576.

Sankaran, P. M., Malamel, J. J., Joseph, M. M. and Sebastian, P. A. (2015c). *Theridion echinatum* Gao and Li, 2014, a junior synonym of *Theridion zonulatum* Thorell, 1890 (Araneae, Theridiidae) with comments on its web architecture. *Zootaxa,* 4007(1): 138-142.

Sankaran, P. M., Malamel, J. J., Joseph, M. M. and Sebastian, P. A. (2017a)**.** A new species of *Paratus* Simon, 1898 (Araneae: Liocranidae, Paratinae) from India. *Zootaxa,* 4286(1): 139-144.

Sankaran, P. M., Malamel, J. J., Joseph, M. M. and Sebastian, P. A. (2017b). On the genus *Tylorida* Simon, 1894 with the first record of the genus *Atelidea* Simon, 1895 from India (Araneae: Tetragnathidae, Leucauginae). *Zootaxa,* 4353(2): 294-326.

Sankaran, P. M., Malamel, J. J., Joseph, M. M. and Sebastian, P. A. (2018). Redescription of *Castianeira zetes* Simon, 1897 (Araneae, Corinnidae, Castianeirinae). *Zootaxa,* 4457(3): 487-490.

Sankaran, P. M., Malamel, J. J., Joseph, M. M. and Sebastian, P. A. **(2019)**. New species of *Habrocestum* Simon, 1876 and a redescription of *Curubis tetrica* Simon, 1902 (Araneae: Salticidae: Salticinae: Hasariini) from India. *Journal of Natural History,* 53(1-2): 1-15.

Sankaran, P. M., Malamel, J. J., Joseph, M. M. and Sebastian, P. A. (2017b). On the genus *Tylorida* Simon, 1894 with the first record of the genus *Atelidea* Simon, 1895 from India (Araneae: Tetragnathidae, Leucauginae). *Zootaxa* 4353(2): 294-326.

Sankaran, P.M., Caleb, J.T.D. and Sebastian, P.A. (2021a). Revision of Indian wolf spiders: I. Genus *Arctosa* C.L. Koch, 1847 (Araneae: Lycosidae, Tricassinae). *Zootaxa,* 4908(4): 489-504.

Sankaran, P.M., Caleb, J.T.D. and Sebastian, P.A. (2021b). On the taxonomic validity of Indian ground spiders: IV. Genera *Apodrassodes* Vellard, 1924, *Herpyllus* Hentz, 1832 and *Sergiolus* Simon, 1892 (Araneae: Gnaphosidae). *Journal of Natural History,* 54(43-44): 2839-2857.

Sankaran, P.M., Caleb, J.T.D. and Sebastian, P.A. (2021d). Notes on Indian wolf spiders: I. Genus *Evippa* Simon, 1882 (Araneae: Lycosidae, Evippinae). Zootaxa, 4975(1): 159-175.

Sankari, A., and Thiyagesan, K. (2010). Population and predatory potency of spiders in brinjal and snake-gourd. *Journal of Biopesticides*, *3*(1), 28.

Satkunanathan, A. and Benjamin, S. P. (2022). Phylogenetic placement of *Carrhotus* Thorell, 1891 with three new species from Sri Lanka (Araneae: Salticidae). *European Journal of Taxonomy* 817: 78-110.

Sato, M. (2012). [New records of spiders from Akita Prefecture, Japan]. *Kishidaia* 101: 66-68.

Schenkel, E. (1936b). Schwedisch-chinesische wissenschaftliche Expedition nach den nordwestlichen Provinzen Chinas, unter Leitung von Dr. Sven Hedin und Prof. Sü Ping-chang. Araneae gesammelt vom schwedischen Arzt der Expedition Dr. David Hummel 1927–1930. *Arkiv för Zoologi* 29(A1): 1-314.

Schenkel, E. (1963). Ostasiatische Spinnen aus dem Muséum d'Histoire naturelle de Paris. *Mémoires du Muséum National d'Histoire Naturelle de Paris* (A, Zool.) 25: 1-481.

Schmidt, J. B. and Scharff, N. (2008). A taxonomic revision of the orb-weaving spider genus *Acusilas* Simon, 1895 (Araneae, Araneidae). *Insect Systematics and Evolution* 39(1): 1-38.

Schultheiss, P., Nooten, S. S., Wang, R., Wong, M. K., Brassard, F., and Guénard, B. (2022). The abundance, biomass, and distribution of ants on Earth. *Proceedings of the National Academy of Sciences*, *119*(40), e2201550119.

Sebastian, P. A., and Peter, K. V. (Eds.). (2009). Spiders of India. Universities press.

Sebastian, P. A., Sudhikumar, A. V., Mathew, M. J., and Sunish, E. (2012). Diversity of spiders (Araneae) in the Western Ghats–an overview. *Invertebrate diversity and conservation in the Western Ghats*, 235-247.

Secretariat of the Convention on Biological Diversity. (n.d.). What is the Problem? https://www.cbd.int/gti/problem.shtml.

Sekhar, R. and Sunil Jose, K. (2016). First record of *Parasteatoda celsabdomina* (Zhu, 1998) (Aranaea [sic]: Theridiidae) from India. *Species* 17(57): 187-191.

Sekhar, R. and Sunil Jose, K. (2020). Additional observations on *Chrysso angula* (Tikader) from Kerala (Araneae: Theridiidae). *Indian Journal of Entomology* 81(4, 2019): 880-882.

Sekhar, R. and Sunil Jose, K. (2021a). First record of two *Theridula* Emerton, 1882 species (Aranaea: Theridiidae) from India. In: Indu, M. S., Sebastian, H. and Joseph, P. (eds.) *Modern trends in biological research*. Vimala College, Thrissur, India, pp. 71-74.

Sen, J. K. (1963). On a new species of the genus *Thomisus* Walckenaer, 1805, (Thomisidae: Arachnida) from India. *Science and Culture,* 29: 610-612.

Sen, J. K. (1964). On a new spider of the genus *Stiphropus* Gerstaecker, 1873, from India (Thomisidae: Arachnida). *Journal of the Zoological Society of India*,16: 65-67.

Sen, J. K. and Basu, B. D. (1963)**.** *Thomisus mimae*, a new species (Thomisidae: Arachnida) from Calcutta. *Science and Culture,* 29: 515-516.

Sen, J. K. and Basu, K. C. (1973). A new spider of the genus *Runcinia* Simon, 1875 (Thomisidae: Archanida [sic], from India. *Journal of the Zoological Society of India,* 24: 103-104.

Sen, S. and Sureshan, P. M. (2021a). New record of nursery web spider, *Polyboea vulpina* Thorell, 1895 (Araneae: Pisauridae) from India with a key to Indian species. *Romanian Journal of Biology - Zoology* 65(1-2, 2020): 55-59.

Sen, S., Caleb, J. T. D. and Acharya, S. (2021). First record of the orb-weaving spider *Araneus tubabdominus* Zhu and Zhang, 1993 (Araneae: Araneidae) from India. *Journal of Threatened Taxa* 13(12): 19864-19866.

Sen, S., Dhali, D. C., Saha, S. and Raychaudhuri, D. (2015). Spiders (Araneae: Arachnida) of reserve forests of Dooars: Gorumara National Park, Chapramari Wildlife Sanctuary and Mahananda Wildlife Sanctuary. *World Scientific News* 20: 1-339.

Sen, S., Roy, T. K., Dhali, D. C., Saha, S. and Raychaudhuri, D. (2011). First record of the genus *Tukaraneus* Barrion and Litsinger and *Neoscona yptinika* Barrion and Litsinger (Araneae: Araneidae) from India. *Journal of Asia-Pacific Entomology,* 14: 367-371.

Sen, S., Saha, S. and Raychaudhuri, D. (2010a). New and hitherto unknown nursery web spider species (Araneae: Pisauridae) from the reserve forests of Dooars, West Bengal, India. *Munis Entomology and Zoology,* 5: 225-231.

Sen, S., Saha, S. and Raychaudhuri, D. (2010b). A new spider genus of the tribe Smodicinini (Araneae: Thomisidae) from India. *Munis Entomology and Zoology,* 5: 344-349.

Sen, S., Saha, S. and Raychaudhuri, D. (2010c). Two tailed spiders (Araneae: Hersiliidae) from the reserve forests of north Bengal, India. *Munis Entomology and Zoology,* 5(Suppl.): 1168-1175.

Sen, S., Saha, S. and Raychaudhuri, D. (2010d). Crab spiders (Araneae: Thomisidae) of Bandhavgarh National Park, with first record of *Stiphropus sangayus* Barrion and Litsinger from India. *Current Biotica,* 4(3): 278-284.

Sen, S., Saha, S. and Raychaudhuri, D. (2011a). Proposition of a new combination, *Chrysso angula* (Tikader) for the Indian endemic *Theridula* Emerton and a new synonymy of *Chrysso pseudotheridula* Siliwal (Araneae: Theridiidae). *Munis Entomology and Zoology,* 6: 877-881.

Sen, S., Saha, S. and Raychaudhuri, D. (2011b). A new species of the genus *Theridion* Walckenaer, 1805 (Araneae: Theridiidae) from West Bengal, India. *Romanian Journal of Biology – Zoology,* 56: 127-131.

Sen, S., Saha, S. and Raychaudhuri, D. (2011c). New species and new combination of *Oxyopes* Latreille 1804 (Araneae: Oxyopidae) females from India. *World Journal of Zoology,* 6(4): 339-345.

Sen, S., Saha, S. and Raychaudhuri, D. (2012a). On the mygalomorphs (Araneae: Mygalomorphae) in the collection of Entomology Laboratory, University of Calcutta. *Munis Entomology and Zoology,* 7: 200-214.

Sen, S., Saha, S. and Raychaudhuri, D. (2012b). A new *Cyclosa* Menge, 1866 (Araneae: Araneidae) from India. *Romanian Journal of Biology – Zoology,* 57: 9-14.

Sen, S., Saha, S. and Raychaudhuri, D. (2012c). Addition to the crab spider (Araneae: Thomisidae) fauna of India. *Munis Entomology and Zoology,* 7(2): 909-919.

Sen, S., Saha, S. and Raychaudhuri, D. (2013). A new species of the genus *Miagrammopes* O. P. Cambridge, 1870 (Araneae: Uloboridae) from India. *Munis Entomology and Zoology,* 8(1): 42-45.

Sen, S., Saha, S. and Raychaudhuri, D. (2013). A new species of the genus *Miagrammopes* O. P. Cambridge, 1870 (Araneae: Uloboridae) from India. *Munis Entomology and Zoology* 8(1): 42-45.

Sethi, V. D. and Tikader, B. K. (1988). Studies on some giant crab spiders of the family Heteropodidae from India. *Records of the Zoological Survey of India, Miscellaneous Publications, Occasional Paper,* 93: 1-94.

Sharma, A., Deka, B., Bishaya, P., Kumar, R., and Sharma, N. (2024). Impact of urbanisation on the taxonomic and functional diversity of spider assemblages in Guwahati City, Assam, India. *Urban Ecosystems*, *27*(1), 239-249.

Sheldon, K. S., Zhao, L., Chuang, A., Panayotova, I. N., Miller, L. A., and Bourouiba, L. (2017). Revisiting the physics of spider ballooning. In Women in Mathematical Biology: Research Collaboration Workshop, NIMBioS, Knoxville, June 2015 (pp. 163-178). *Springer International Publishing.*

Sherriffs, W. R. (1919). A contribution to the study of south Indian arachnology. *Annals and Magazine of Natural History,* 4 (9): 220-253.

Sherriffs, W. R. (1927). South Indian Arachnology. Part II. *Annals and Magazine of Natural History,* 19 (9): 533-542.

Sherriffs, W. R. (1928). South Indian Arachnology. Part III. *Annals and Magazine of Natural History* (10) 2(8): 177-192.

Sherriffs, W. R. (1929). South Indian Arachnology. Part IV. *Annals and Magazine of Natural History,* 4 (10): 233-246.

Sherriffs, W. R. (1931). South Indian arachnology. Part V. *Annals and Magazine of Natural History*, 7(10): 537-546.

Sherriffs, W. R. (1934). Hong-kong spiders. I. *Hong-kong Naturalist* 5: 85-90.

Sherriffs, W. R. (1939b). Hong-Kong spiders. Part VI. *Hong-kong Naturalist* 9: 193-198.

Sherriffs, W. R. (1951). Some oriental spiders of the genus *Oxyopes*. *Proceedings of the Zoological Society of London,* 120(4): 651-677.

Sherriffs, W. R. (1955). More Oriental spiders of the genus *Oxyopes*. *Proceedings of the Zoological Society of London,* 125(2): 297-308.

Shimojana, M. (1967). Spider fauna of the Ryukyu Islands. *Biological Magazine Okinawa* 4: 16-25.

Shimojana, M. (1977b). The spider fauna of the Tokara Islands. *Ecological Studies of Nature Conservation of the Ryukyu Islands* 3: 103-126.

Shin, H. K. (2007). A systematic study of the araneid spiders (Arachnida: Araneae) in Korea (1). *Korean Arachnology* 23: 127-171.

Sibi, K. K., Gigi, P. and Sudhikumar, A. V. (2022). First report of the kleptoparasitic spider *Argyrodes miniaceus* (Doleschall, 1857) (Araneae: Theridiidae) from India. *Serket* 19(1): 90-94.

Sierwald, P. (1987). Revision der Gattung *Thalassius* (Arachnida, Araneae, Pisauridae). *Verhandlungen des Naturwissenschaftlichen Vereins in Hamburg (NF)* 29: 51-142.

Sierwald, P. (1997). Phylogenetic analysis of pisaurine nursery web spiders, with revisions of *Tetragonophthalma* and *Perenethis* (Araneae, Lycosoidea, Pisauridae). *Journal of Arachnology* 25: 361-407.

Siliwal, M. (2009a). Revalidating the taxonomic position of the Indian *Ischnocolus* spp. (Araneae: Theraphosidae). *Journal of Threatened Taxa* 1(10): 533-534.

Siliwal, M. (2009b). A new species of the genus *Chrysso* O. P.-Cambridge (Araneae: Theridiidae) from Arunachal Pradesh, India. *Biosystematica* 3: 5-9.

Siliwal, M. and Molur, S. (2009a). Redescription, distribution and status of the Karwar large burrowing spider *Thrigmopoeus truculentus* Pocock, 1899 (Araneae: Theraphosidae), a Western Ghats endemic ground mygalomorph. *Journal of Threatened Taxa* 1(6): 331-339.

Siliwal, M. and Molur, S. (2009b). A new species of the genus *Sason* (Araneae: Barychelidae) from Rameshwaram Island, Tamil Nadu, India. *Zootaxa* 2283: 60-68.

Siliwal, M. and Raven, R. J. (2010). Taxonomic change of two species in the genus *Haploclastus* Simon, 1892 (Araneae, Theraphosidae). *ZooKeys* 46: 71-75.

Siliwal, M., Gupta, N. and Molur, S. (2013). The striated parachute spider *Poecilotheria striata* Pocock, 1895 (Araneae: Theraphosidae): a note on taxonomy, distribution and conservation status. *Journal of Threatened Taxa* 5(12): 4630-4640.

Siliwal, M., Gupta, N. and Raven, R. (2012). A new genus of the family Theraphosidae (Araneae: Mygalomorphae) with description of three new species from the Western Ghats of Karnataka, India. *Journal of Threatened Taxa* 4(14): 3233-3254.

Siliwal, M., Gupta, N., Sanap, R. V., Mirza, Z. A. and Raven, R. (2011). First record of the genus *Tigidia* Simon, 1892 (Araneae: Barychelidae) from India with description of three new species from the Western Ghats, India. *Journal of Threatened Taxa* 3(12): 2229-2241.

Siliwal, M., Hippargi, R., Yadav, A. and Kumar, D. (2020). Five new species of trap-door spiders (Araneae: Mygalomorphae: Idiopidae) from India. *Journal of Threatened Taxa* 12(13): 16775-16794.

Siliwal, M., Kananbala, A., Bhubaneshwari, M. and Raven, R. (2015). Natural history and two new species of the trapdoor spider genus *Conothele* Thorell 1878 (Araneae: Ctenizidae) from India. *Journal of Arachnology* 43(1): 34-39.

Siliwal, M., Kumar, R. S. and Raven, R. (2014). A new species of *Atypus* Latreille, 1804 (Araneae: Atypidae) from northern India. *Arthropoda Selecta* 23(2): 221-224.

Siliwal, M., Molur, S. and Biswas, B. K. (2005). Indian spiders (Arachnida, Araneae): updated checklist 2005. *Zoo's Print Journal* 20: 1999-2049.

Siliwal, M., Molur, S. and Raven, R. (2007). A new species of the genus *Plesiophrictus* (Araneae: Theraphosidae: Ischnocolinae) from western Ghats, India. *Zoo's Print Journal* 22: 2853-2860.

Siliwal, M., Molur, S. and Raven, R. (2009). Two new species of the genus *Diplothele* (Araneae, Barychelidae) from Orissa, India with notes on *D. walshi*. *Journal of Arachnology* 37(2): 178-187.

Siliwal, M., Molur, S. and Raven, R. (2010). Transfer of two Indian *Idiops* spp. to the genus *Heligmomerus* Simon, 1892 (Araneae: Idiopidae) with redescription of *H. barkudensis* (Gravely, 1921). *Journal of Threatened Taxa* 2(6): 940-947.

Siliwal, M., Molur, S. and Raven, R. (2015). New genus with two new species of the family Nemesiidae (Araneae: Mygalomorphae) from Arunachal Pradesh, India. *Journal of Asia-Pacific Biodiversity* 8: 43-48.

Siliwal, M., Nair, M. V., Molur, S. and Raven, R. (2009). First record of the trapdoor spider genus *Conothele* (Araneae, Ctenizidae) from India, with a description of two new species. *Journal of Arachnology* 37: 1-9.

Siliwal, M., Yadav, A. and Kumar, D. (2017). Three new species of tube-dwelling spider genus *Ariadna* Audouin, 1826 (Araneae: Segestriidae) from India. *Zootaxa* 4362(3): 433-441.

Simon, E. (1864). *Histoire naturelle des araignées (aranéides)*. Paris, 540 pp.
Simon, E. (1864). *Histoire naturelle des araignées (aranéides)*. Paris, 540 pp.

Simon, E. (1873a). Aranéides nouveaux ou peu connus du midi de l'Europe. (2e mémoire). *Mémoires de la Société Royale des Sciences de Liège* (2) 5(8): 1-174, pl. 1-3.

Simon, E. (1877b). Etudes arachnologiques. 5e Mémoire. IX. Arachnides recueillis aux îles Philippines par MM. G.-A Baer et Laglaise. *Annales de la Société Entomologique de France* (5) 7: 53-96, pl. 3.

Simon, E. (1880a). Révision de la famille des Sparassidae (Arachnides). *Actes de la Société Linnéenne de Bordeaux* 34(2/3/4): 223-351.

Simon, E. (1880l). Synonymie de plusieurs espèces d'Arachnides. *Annales de la Société Entomologique de France* (5) 10(Bull.): 115-116.

Simon, E. (1884n). Arachnides recueillis en Birmanie par M. le chevalier J. B. Comotto et appartenant au Musée civique d'histoire naturelle de Gènes. *Annali del Museo Civico di Storia Naturale di Genova* 20: 325-372.

Simon, E. (1885a). Arachnides recueillis par M. Weyers à Sumatra. Premier envoi. *Annales de la Société Entomologique de Belgique* 29(C.R.): 30-39.

Simon, E. (1885a). Matériaux pour servir à la faune arachnologiques de l'Asie méridionale. I. Arachnides recueillis à Wagra-Karoor près Gundacul, district de Bellary par M. M. Chaper. II. Arachnides recueillis à Ramnad, district de Madura par M. l'abbé Fabre. *Bulletin de la Société Zoologique de France,* 10: 1-39.

Simon, E. (1885b). Matériaux pour servir à la faune arachnologiques de l'Asie méridionale. III. Arachnides recueillis en 1884 dans la presqu'île de Malacca, par M. J. Morgan. IV. Arachnides recueillis à Collegal, district de Coimbatoore, par M. A. Theobald G. R. *Bulletin de la Société Zoologique de France,* 10: 436-462.

Simon, E. (1885h). Matériaux pour servir à la faune arachnologiques de l'Asie méridionale. I. Arachnides recueillis à Wagra-Karoor près Gundacul, district de Bellary par M. M. Chaper. II. Arachnides recueillis à Ramnad, district de Madura par M. l'abbé Fabre. *Bulletin de la Société Zoologique de France* 10(1): 1-39.

Simon, E. (1886a). Arachnides recueillis par M. A. Pavie (sous chef du service des postes au Cambodge) dans le royaume de Siam, au Cambodge et en Cochinchine. *Actes de la Société Linnéenne de Bordeaux* 40: 137-166.

Simon, E. (1886c). Matériaux pour servir à la faune arachnologiques de l'Asie méridionale. III. Arachnides recueillis en 1884 dans la presqu'île de Malacca, par M. J. Morgan. IV. Arachnides recueillis à Collegal, district de Coimbatoore, par M. A. Theobald G. R. *Bulletin de la Société Zoologique de France* 10(4-6, 1885): 436-462, pl. 10.

Simon, E. (1887). Etude sur les arachnides de l'Asie méridionale faisant partie des collections de l'Indian Museum (Calcutta). I. Arachnides recueillis à Tavoy (Tenasserim) par Moti Ram. *Journal of the Asiatic Society of Bengal,* 56: 101-117.

Simon, E. (1887i). Etude sur les arachnides de l'Asie méridionale faisant partie des collections de l'Indian Museum (Calcutta). I. Arachnides recueillis à Tavoy (Tenasserim) par Moti Ram. *Journal of the Asiatic Society of Bengal, part II (Natural History)* 56(1): 101-117.

Simon, E. (1888). Etudes sur le arachnides de l'Asie méridionale faisant partie des collections de l'Indian Museum (Calcutta). II. Arachnides recueillis aux îles Andaman par M. R. D. Oldham. *Journal of the Asiatic Society of Bengal,* 56: 282-287.

Simon, E. (1888b). Etudes arachnologiques. 21e Mémoire. XXIX. Descriptions d'espèces et de genres nouveaux de l'Amérique centrale et des Antilles. *Annales de la Société Entomologique de France* (6) 8: 203-216.

Simon, E. (1889). Arachnides de l'Himalaya, recueillis par MM. Oldham et Wood-Mason, et faisant partie des collections de l'Indian Museum. Première partie. *Journal of the Asiatic Society of Bengal,* 58: 334-344.

Simon, E. (1889d). Etudes arachnologiques. 21e Mémoire. XXXIII. Descriptions de quelques espèces receillies au Japon, par A. Mellotée. *Annales de la Société Entomologique de France* (6) 8: 248-252.

Simon, E. (1889i). Arachnides de l'Himalaya, recueillis par MM. Oldham et Wood-Mason, et faisant partie des collections de l'Indian Museum. Première partie. *Journal of the Asiatic Society of Bengal, part II (Natural History)* 58(4): 334-344.

Simon, E. (1893a). *Histoire naturelle des araignées. Deuxième édition, tome premier*. Roret, Paris, pp. 257-488.

Simon, E. (1894a). *Histoire naturelle des araignées. Deuxième édition, tome premier*. Roret, Paris, pp. 489-760.

Simon, E. (1895a). *Histoire naturelle des araignées. Deuxième édition, tome premier*. Roret, Paris, pp. 761-1084.

Simon, E. (1895g). Etudes arachnologiques. 26e. XLI. Descriptions d'espèces et de genres nouveaux de l'ordre des Araneae. *Annales de la Société Entomologique de France* 64: 131-160.

Simon, E. (1897). Arachides recueillis par M. M. Maindron à Kurrachee et à Matheran (près Bombay) en 1896. *Bulletin du Muséum National d'Histoire Naturelle de Paris,* 1897: 289-297.

Simon, E. (1897a). *Histoire naturelle des araignées. Deuxième édition, tome second*. Roret, Paris, pp. 1-192. [

Simon, E. (1898a). *Histoire naturelle des araignées. Deuxième édition, tome second*. Roret, Paris, pp. 193-380.

Simon, E. (1899a). Contribution à la faune de Sumatra. Arachnides recueillis par M. J. L. Weyers, à Sumatra. (Deuxiéme mémoire). *Annales de la Société Entomologique de Belgique* 43: 78-125.

Simon, E. (1900d). Etudes arachnologiques. 30e Mémoire. XLVII. Descriptions d'espèces nouvelles de la famille des Attidae. *Annales de la Société Entomologique de France* 69: 27-61.

Simon, E. (1900d). Etudes arachnologiques. 30e Mémoire. XLVII. Descriptions d'espèces nouvelles de la famille des Attidae. *Annales de la Société Entomologique de France* 69: 27-61.

Simon, E. (1901a). *Histoire naturelle des araignées. Deuxième édition, tome second*. Roret, Paris, pp. 381-668.

Simon, E. (1901c). Descriptions d'arachnides nouveaux de la famille des Attidae (suite). *Annales de la Société Entomologique de Belgique* 45: 141-161.

Simon, E. (1901k). On the Arachnida collected during the Skeat expedition to the Malay Peninsula. *Proceedings of the Zoological Society of London* 71(1): 45-84.

Simon, E. (1903a). *Histoire naturelle des araignées. Deuxième édition, tome second*. Roret, Paris, pp. 669-1080.

Simon, E. (1903g). Etudes arachnologiques. 33e Mémoire. LIII. Arachnides recueillis à Phuc-Son (Annam) par M. H. Fruhstorfer (nov-dec. 1899). *Annales de la Société Entomologique de France* 71(4, 1902): 725-736.

Simon, E. (1904). Arachnides recueillis par M. A. Pavie en Indochine. In: Mission Pavie en Indochine 1879-1895. III. *Recherches sur l'histoire naturells de l'Indochine Orientale*. Paris, 270-295.

Simon, E. (1904b). Arachnides recueillis par M. A. Pavie en Indochine. In: Mission Pavie en Indochine 1879-1895. III. Recherches sur l'histoire naturells de l'Indochine Orientale. Paris, pp. 270-295.

Simon, E. (1905). Arachnides (1re partie). In: Voyage de M. Maurice Maindron dans l'Inde méridionale. 7e Mémoire. *Annales de la Société Entomologique de France,* 74: 160-180.

Simon, E. (1905c). Arachnides de Java, recueillis par le Prof. K. Kraepelin en 1904. *Mitteilungen aus dem Naturhistorischen Museum in Hamburg* 22: 49-73.

Simon, E. (1906). Arachnides (2e partie). In: Voyage de M. Maurice Maindron dans l'Inde méridionale. 8e Mémoire. *Annales de la Société Entomologique de France,* 75: 279-314.

Simon, E. (1906c). Voyage de M. Maurice Maindron dans l'Inde méridionale (mai à novembre 1901). 8me Mémoire. Arachnides (2e partie). *Annales de la Société Entomologique de France* 75(3): 279-314.

Simon, E. (1909e). Etude sur les arachnides du Tonkin (1re partie). *Bulletin Scientifique de la France et de la Belgique* 42: 69-147.

Singh, S., Borkotoki, A., and Sarmah, C. K. (2012). Species distribution of spiders in barpeta district of Assam: a diversity measure. *International Scientific Research Journal*, *4*(1), 47-57.

Sinha, T. B. (1951a). On the collection of lycosid spiders in the Zoological Survey of India. *Records of the Indian Museum, Calcutta,* 48: 9-52.

Sinha, T. B. (1951b). Some Indian spiders of the family Hersiliidae. *Records of the Indian Museum, Calcutta,* 48: 121-126.

Sinha, T. B. (1952). Some Indian spiders of the family Argiopidae. *Records of the Indian Museum, Calcutta,* 49: 67-88.

Smith, C., Cotter, A., Grinsted, L., Bowolaksono, A., Watiniasih, N. L. & Agnarsson, I. (2019). In a relationship: sister species in mixed colonies, with a description of new *Chikunia* species (Theridiidae). *Zoological Journal of the Linnean Society* 186(2): 337-252.

Smith, H. M. (2005). A preliminary study of the relationships of taxa included in the tribe Poltyini (Araneae, Araneidae). *Journal of Arachnology* 33: 468-481.

Smith, H. M. (2006b). A revision of the genus *Poltys* in Australasia (Araneae: Araneidae). *Records of the Australian Museum* 58: 43-96.

Smitha, M. S., and Sudhikumar, A. V. (2020). A diversity of spiders (Arachnida: Araneae) from a cashew ecosystem in Kerala, India. *Journal of Threatened Taxa*, *12*(13), 16879-16884.

Song, D. X. (1987). *Spiders from agricultural regions of China (Arachnida: Araneae)*. *Agriculture Publishing House, Beijing*, 376 pp.

Song, D. X. (1991b). On lynx spiders of the genus *Oxyopes* (Araneae: Oxyopidae) from China. *Sinozoologia* 8: 169-181.

Song, D. X. (ed.) (1980). [*Farm Spiders*]. *Science Press, Beijing*, 247 pp

Song, D. X. and Chai, J. Y. (1991). New species and new records of the family Salticidae from Hainan, China (Arachnida: Araneae). In: Qian, Y. W. et al. (ed.) Animal Science Research. *China Forestry Publishing House, Beijing*, pp. 13-30.

Song, D. X. and Li, S. Q. (1997). Spiders of Wuling Mountains area. In: Song, D. X. (ed.) Invertebrates of Wuling Mountains Area, Southwestern China. *Science Press, Beijing*, pp. 400-448.

Song, D. X. and Zhu, M. S. (1992a). A new species of the genus *Castianeira* (Araneae: Corinnidae) from Hubei, China. *Sinozoologia* 9: 107-109.

Song, D. X. and Zhu, M. S. (1997). *Fauna Sinica: Arachnida: Araneae: Thomisidae, Philodromidae*. Science Press, Beijing, 259 pp.

Song, D. X., Chen, J. and Zhu, M. S. (1997). Arachnida: Araneae. In: Yang, X. K. (ed.) Insects of the Three Gorge Reservoir area of Yangtze River. *Chongqing Publishing House*, 2, pp. 1704-1743.

Song, D. X., Shang, D. W., Wang, R. M., Cheng, C. F. and Cheng, S. X. (1978). [On the wolf spiders from farm fields in Chekiang province]. *Dongwuxue zazhi (Chinese Journal of Zoology)* 1978(2): 1-5.

Song, D. X., Zhou, N. L. and Chen, Y. G. (1992). [On two species of the genus *Larinia* (Araneae: Araneidae) from Xinjiang, China]. *Sichuan Journal of Zoology* 11(3): 9-10.

Song, D. X., Zhu, M. S. and Chen, J. (1999). *The spiders of China*. Hebei Science and Technology Publishing House, Shijiazhuang, 640 pp.

Song, D. X., Zhu, M. S. and Chen, J. (2001). *The Fauna of Hebei, China: Araneae*. Hebei Science and Technology Publishing House, Shijiazhuang, 510 pp.

Song, D. X., Zhu, M. S. and Li, S. Q. (1993). Arachnida: Araneae. In: Huang, C. M. (ed.) *Animals of Longqi Mountain*. China Forestry Publishing House, Beijing, pp. 852-890.

Srinivasulu, C., Srinivasulu, B., Javed, S. M. M., Seetharamaraju, M., Jyothi, S. A., Srinivasulu, C. A. and Tampal, F. (2013). Additions to the araneofauna of Andhra Pradesh, India – Part II. Records of interesting species of the comb-footed genera *Latrodectus*, *Rhomphaea* and *Coleosoma* (Araneae: Theridiidae). *Journal of Threatened Taxa,* 5: 4483-4491.

Srivathsan, A., Ang, Y., Heraty, J. M., Hwang, W. S., Jusoh, W. F., Kutty, S. N., ... and Meier, R. (2023). Convergence of dominance and neglect in flying insect diversity. *Nature ecology & evolution*.

Stoliczka, F. (1869). Contribution towards the knowledge of Indian Arachnoidea. *Journal of the Asiatic Society of Bengal,* 38(4): 201-251.

Stoliczka, F. (1869). Contribution towards the knowledge of Indian Arachnoidea. *Journal of the Asiatic Society of Bengal, part II (Physical Science)* 38(4): 201-251, pl. 18-20.

Strand, E. (1906c). Über einige Vogelspinnen und afrikanische Spinnen des naturhistorischen Museums zu Wiesbaden. *Jahrbücher des Nassauischen Vereins für Naturkunde* 59: 1-45.

Strand, E. (1906d). Sumatra und Neu-Guinea Spinnen des naturhistorischen Museums zu Wiesbaden. *Jahrbücher des Nassauischen Vereins für Naturkunde* 59: 257-278.

Strand, E. (1907b). Vorläufige Diagnosen süd- und ostasiatischer Clubioniden, Ageleniden, Pisauriden, Lycosiden, Oxyopiden und Salticiden. *Zoologischer Anzeiger* 31: 558-570.

Strand, E. (1907m). Spinnen des Zoologischen Instituts in Tübingen. *Zoologische Jahrbücher, Abteilung für Systematik, Geographie und Biologie der Tiere* 24: 391-468.

Strand, E. (1909f). Süd- und ostasiatische Spinnen. II. Fam. Clubionidae. Fam. Salticidae. *Abhandlungen der Naturforschenden Gesellschaft Görlitz* 26: 1-128.

Strand, E. (1911b). Vorläufige Diagnosen neuer Spinnen, insbesondere aus der Südsee, des Senckenbergischen Museums. *Archiv für Naturgeschichte* 77(I, 2): 202-207.

Strand, E. (1911d). Araneae von den Aru- und Kei-Inseln. *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft* 34: 127-199.

Strand, E. (1912a). Über einige Spinnen aus Travancore in Indien. *Archiv für Naturgeschichte* 78(A8): 144-148.

Strand, E. (1913d). Neue indoaustralische und polynesische Spinnen des Senckenbergischen Museums. *Archiv für Naturgeschichte* 79(A6): 113-123.

Strand, E. (1915d). Indoaustralische, papuanische und polynesische Spinnen des Senckenbergischen Museums, gesammelt von Dr E. Wolf, Dr J. Elbert u. a. In: Wissenschaftliche Ergebnisse der Hanseatischen Südsee-Expedition 1909. *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft* 36(2): 179-274, pl. 13-19.

Strand, E. (1918). Zur Kenntnis japanischer Spinnen, I und II. *Archiv für Naturgeschichte* 82(A11, 1916): 73-113, pl. 1-2.

Sudhikumar, A. V., Jocqué, R. and Sebastian, P. A. (2009). A new species of the ant spider genus *Suffasia* (Araneae: Zodariidae) from the Western Ghats, India with a key to the species of the genus. *Zootaxa,* 2203: 59-64.

Sudhikumar, A. V., Mathew, M. J. and Sebastian, P. A. (2004). Hitherto unknown genus *Trigonobothrys* Simon (Theridiidae: Araneae) from India with description of the female of *Trigonobothrys martinae*. *Entomon,* 29: 51-55.

Sudhin, P. P. and Sen, S. (2023a)**.** Spiders (Arachnida: Araneae) of the Shendurney Wildlife Sanctuary, Kerala, India. *Records of the Zoological Survey of India,* 123(iS2): 409-419.

Sudhin, P. P. and Sen, S. (2023b)**.** Taxonomic notes on the crab spider genus *Oxytate* L. Koch, 1878 (Araneae: Thomisidae) from India. *Zootaxa,* 5315(6): 549-558.

Sudhin, P. P., Caleb, J. T. D. and Sen, S. (2024). Additions to the knowledge on the genus *Phintella* Strand, 1906 (Araneae, Salticidae, Chrysillini) from India. *Zoosystematics and Evolution* 100(1): 31-48.

Sudhin, P. P., Nafin, K. S. and Sudhikumar, A. V. (2017). Revision of *Hindumanes* Logunov, 2004 (Araneae: Salticidae: Lyssomaninae), with description of a new species from the Western Ghats of Kerala, India. *Zootaxa,* 4350(2): 317-330.

Sudhin, P. P., Nafin, K. S., Benjamin, S. P. and Sudhikumar, A. V. (2019b)**.** Two new species of the genus *Marengo* Peckham et Peckham, 1892 (Araneae: Salticidae) from Western Ghats of India. *Arthropoda Selecta*, 28(3): 435-444.

Sudhin, P. P., Nafin, K. S., Caleb, J. T. D. and Sudhikumar, A. V. (2020)**.** Redescription of *Asemonea cristata* Thorell, 1895 (Araneae: Salticidae: Asemoneinae), with notes on its synonymy and distribution. *Arthropoda Selecta,* 29(2): 251-256.

Sudhin, P. P., Nafin, K. S., Caleb, J. T. D. and Sudhikumar, A. V. (2021). A new spider species of the genus *Carrhotus* Thorell, 1891 (Aranei: Salticidae: Salticini) from Western Ghats of India. *Arthropoda Selecta,* 30(4): 551-556.

Sudhin, P. P., Nafin, K. S., Simmons, Z. M. and Sudhikumar, A. V. (2016). On the type species of the genus *Aetius* O. Pickard-Cambridge, 1896: the first description of male with notes on cymbial notch and mating plug (Araneae: Corinnidae: Castianeirinae). *Zootaxa,* 4154(4): 489-500.

Sudhin, P. P., Nafin, K. S., Sumesh, N. V. and Sudhikumar, A. V. (2019a). A new spider species of the genus *Cocalus* C.L. Koch, 1846 (Araneae: Salticidae: Spartaeinae) from Western Ghats of India. *Arthropoda Selecta,* 28(1): 125-130.

Sudhin, P. P., Nafin, K. S., Tripathi, R., Jangid, A. K., Prajapati, D. A., Siliwal, M. and Sudhikumar, A. V. (2022a). Description of two new species of the genus *Afraflacilla* Berland et Millot, 1941 (Araneae: Salticidae) from India. *Arthropoda Selecta,* 31(3): 326-334.

Sudhin, P. P., Sen, S. and Caleb, J. T. D. (2022). Taxonomic notes on the placement of *Tibellus elongatus* Tikader, 1960 and *Apollophanes bangalores* Tikader, 1963 (Araneae: Philodromidae). *Zootaxa,* 5182(3): 288-296.

Sudhin, P. P., Sen, S. and Caleb, J. T. D. (2023a). Two new *Stenaelurillus* species (Araneae, Salticidae, Aelurillina) from Western Ghats, India. *Zoosystematics and Evolution,* 99(1): 123-133.

Sudhin, P. P., Sen, S. and Caleb, J. T. D. (2023b). New species and records in the genus *Phintella* Strand, 1906 (Araneae: Salticidae: Chrysillini) from India. *Arthropoda Selecta,* 32(1): 80-88.

Sudhin, P. P., Sen, S. and Caleb, J. T. D. (2023c). A new spider species of the genus *Colopsus* Simon, 1902 (Araneae: Salticidae) from the Western Ghats of India. *Revue Suisse de Zoologie,* 130(2): 285-289

Sudhin, P. P., Sen, S. and Jäger, P. (2023). Taxonomic notes on the nursery-web spider genus *Dendrolycosa* Doleschall, 1859 (Araneae: Pisauridae) from India, with the description of a new species. *Zootaxa,* 5353(1): 67-74.

Sudhin, P. P., Sen, S., Caleb, J. T. D. and Hegde, V. D. (2022b). New species of *Cocalus* C.L. Koch, 1846 and *Habrocestum* Simon, 1876 (Araneae: Salticidae) from the south Western Ghats of India. *Arthropoda Selecta,* 31(4): 486-492.

Sumesh, N.V. (2021). Diversity and guild structure of spiders in the selected sacred groves of northern Kerala [Doctoral Dissertation, University of Calicut]. Shodhganga (http://hdl.handle.net/10603/354769).

Sunil Jose, K. (2011). A new species of the genus *Cyrtarachne* (Araneae: Araneidae) from Western Ghats, India. *Munis Entomology and Zoology,* 6: 321-324.

Sunil Jose, K. (2013). New species of *Yaginumaella* Proszynski from India (Araneae: Salticidae). *Munis Entomology and Zoology*, 8(1): 63-66.

Sunil Jose, K. (2014). First record of *Dolichognatha longiceps* (Thorell, 1895) from India (Araneae: Tetragnathidae). *Munis Entomology and Zoology,* 9(1): 473-477.

Sunil Jose, K. (2017a). New records of *Poecilotheria hanumavilasumica* Smith, 2004 from Western Ghats, Kerala (Araneae: Theraphosidae). *Species,* 18(58): 57-61.

Sunil Jose, K. (2017b). Redescription of *Haploclastus kayi* Gravely, 1915 (Araneae: Theraphosidae). *Biosystematica*, 10(for 2016): 5-10.

Sunil Jose, K. (2017c). A new species of *Sahydroaraneus* (Theraphosidae) from Western Ghats of Kerala, India. *Journal of Entomology and Zoology Studies,* 5(3): 186-189.

Sunil Jose, K. (2020). A new species of megalomorph [sic] spider *Neoheterophrictus* from Western Ghats. *Indian Journal of Entomology,* 81(4, 2019): 667-669.

Sunil Jose, K. (2021a). A new species of the trapdoor spider genus *Conothele* Thorell, 1878 (Araneae: Halonoproctidae) from Western Ghats, Kerala, India. *Zoological Systematics,* 46(3): 258-263.

Sunil Jose, K. (2021b). Slate-red tarantula (*Poecilotheria rufilata*) in the Western Ghats, India. *Taprobanica,* 10(2): 123, pl. 26.

Sunil Jose, K. and Prasanth, M. T. (2015). New information on *Annandaliella travancorica* Hirst, 1909 from Western Ghats of India (Araneae: Theraphosidae). *Munis Entomology and Zoology,* 10(1): 188-193.

Sunil Jose, K. and Sebastian, P. A. (2001a). Occurrence of *Psechrus alticeps* Pocock (Araneae: Psechridae) in Western Ghats, Kerala with a redescription and notes on its habit and habitat. *Journal of the Bombay Natural History Society,* 98: 304-306.

Sunil Jose, K. and Sebastian, P. A. (2001b). New report on some crab spiders (Araneae: Thomisidae) from Kerala, India. *Entomon,* 26: 183-189.

Sunil Jose, K. and Sebastian, P. A. (2007). New species of *Thelcticopis* (Araneae: Sparassidae) from India. *Entomon,* 32: 41-46.

Sunil Jose, K. and Sebastian, P. A. (2008). Description of two mygalomorph spiders from south India (Araneae: Barychelidae, Theraphosidae). *Revista Ibérica de Aracnología,* 15: 29-34.

Sunil Jose, K., Davis, S., Sudhikumar, A. V. and Sebastian, P. A. (2003). Description of female *Amyciaea forticeps* (Cambridge), Araneae: Thomisidae, with a redescription

of its male from Kerala, India. *Journal of the Bombay Natural History Society,* 100: 157-160.

Sunil Jose, K., Davis, S., Sudhikumar, A. V. and Sebastian, P. A. (2004). Redescription of *Tetragnatha viridorufa* Gravely from Kerala, India, Araneae: Tetragnathidae. *Journal of the Bombay Natural History Society,* 101: 182-184.

Sunil Jose, K., Davis, S., Sudhikumar, A. V. and Sebastian, P. A. (2003a). Description of female *Amyciaea forticeps* (Cambridge), Araneae: Thomisidae, with a redescription of its male from Kerala, India. *Journal of the Bombay Natural History Society* 100: 157-160.

Sunil Jose, K., Sebastian, P. A., Davis, S. and Varghese, A. P. (2003b). First record of *Thalassius albocinctus* (Doleschall) (Araneae: Pisauridae) from India. *Entomon* 28: 309-314.

Sunil Jose, K., Sudhikumar, A. V. and Sebastian, P. A. **(2007)**. First record of *Perenethis unifasciata* (Doleschall) from India (Araneae: Pisauridae). *Journal of the Bombay Natural History Society*, 103: 126-129.

Sutherland, W. J. (1996). 1 Why census?. Ecological census techniques: a handbook, 1.

Suzuki, Y., Petcharad, B., Into, T. and Tanikawa, A. (2020a). Field observation on predation of an orb web spider (Araneae: Araneidae) by the corinnid sac spider, *Corinnomma severum* (Araneae: Corinnidae). *Acta Arachnologica* 69(2): 75-76.

Szombathy, C. (1913). Adatok a hangyantánzó ugrópókok pontosabb ismeretéhez. *Állatani Közlemények* 12: 22-40, 55-57.

Tam, T. V., Huy, L. N. Q., Phuc, N. T., Nhan, V. H. and Khang, L. V. (2021). First record for *Brettus cingulatus* in Vietnam (Araneae: Salticidae: Spartaeini). *Peckhamia* 229.1: 1-2.

Tam, T. V., Nhan, V. H. and Khang, L. V. (2020). First record for *Asemonea tenuipes* in Vietnam (Araneae: Salticidae: Asemoneinae). *Peckhamia* 227.1: 1-2.

Tan, J., Chan, Z. J., Ong, C. A. and Yong, H. S. (2019a). Phylogenetic relationships of *Actinacantha* Simon, *Gasteracantha* Sundevall, *Macracantha* Hasselt and *Thelacantha* Simon spiny orbweavers (Araneae: Araneidae) in Peninsular Malaysia. *Raffles Bulletin of Zoology* 67: 32-55.

Tanaka, H. (1993a). Lycosid spiders of Japan IX. The genus *Pardosa* C. L. Koch - *amentata*-group. *Sonoda Women's College Studies* 27: 261-318.

Tanaka, H. (2009). Lycosidae. In: Ono, H. (ed.) *The spiders of Japan with keys to the families and genera and illustrations of the species*. Tokai University Press, Kanagawa, pp. 222-248.

Tang, G. and Li, S. Q. (2012a). Lynx spiders from Xishuangbanna, Yunnan, China (Araneae: Oxyopidae). *Zootaxa* 3362: 1-42.

Tang, L. R. and Song, D. X. (1988b). New records of spiders of the family Thomisidae from China (Araneae). *Sichuan Journal of Zoology* 7(3): 13-15.

Tang, G. and Li, S. Q. (2012a). Lynx spiders from Xishuangbanna, Yunnan, China (Araneae: Oxyopidae). *Zootaxa* 3362: 1-42.

Tanikawa, A. (1989). Japanese spiders of the genus *Larinia* Simon (Araneae: Araneidae). *Acta Arachnologica* 38(2): 31-47.

Tanikawa, A. (1990a). Two newly recorded spiders, *Tetragnatha chauliodus* (Thorell, 1890) and *Leucauge decorata* (Blackwall, 1864) (Araneae: Tetragnathidae), from Japan. *Atypus* 95: 8-13.

Tanikawa, A. (1997b). Japanese spiders of the genus *Ordgarius* (Araneae: Araneidae). *Acta Arachnologica* 46(2): 101-110.

Tanikawa, A. (1999a). Japanese spiders of the genus *Eriovixia* (Araneae: Araneidae). *Acta Arachnologica* 48(1): 41-48.

Tanikawa, A. (2001c). Two new synonymies of the spider genus *Cyrtarachne* (Araneae: Araneidae). *Acta Arachnologica* 50(1): 87-89.

Tanikawa, A. (2001c). Two new synonymies of the spider genus *Cyrtarachne* (Araneae: Araneidae). *Acta Arachnologica* 50(1): 87-89.

Tanikawa, A. (2005a). Japanese spiders of the genus *Tylorida* (Araneae: Tetragnathidae). *Acta Arachnologica* 53(2, 2004): 151-154.

Tanikawa, A. (2007c). *An identification guide to the Japanese spiders of the families Araneidae, Nephilidae and Tetragnathidae*. Arachnological Society of Japan, 121 pp.

Tanikawa, A. (2009). Hersiliidae. Nephilidae, Tetragnathidae, Araneidae. In: Ono, H. (ed.) *The spiders of Japan with keys to the families and genera and illustrations of the species*. Tokai University Press, Kanagawa, pp. 149, 403-463.

Tanikawa, A. (2013b). Two new species of the genus *Cyrtarachne* (Araneae: Araneidae) from Japan hitherto identified as *C. inaequalis*. *Acta Arachnologica* 62(2): 95-101.

Tanikawa, A., Chang, Y. H. and Tso, I. M. (2010). Taxonomic revision of Taiwanese and Japanese *Cyrtophora* spiders hitherto identified with *C. moluccensis* (Arachnida, Araneae), using molecular and morphological data. *Acta Arachnologica* 59(1): 31-38.

Tanikawa, A., Chida, T. and Kumada, K. I. (1996). New records of *Argyrodes flavescens* (Araneae: Theridiidae) from Japan. *Acta Arachnologica* 45(1): 47-52.

Tanikawa, A., Yamasaki, T. and Petcharad, B. (2021). Two new genera of Araneidae (Arachnida: Araneae). *Acta Arachnologica* 70(2): 87-101.

Tews, J., Brose, U., Grimm, V., Tielbörger, K., Wichmann, M. C., Schwager, M., and Jeltsch, F. (2004). Animal species diversity driven by habitat heterogeneity/diversity: the importance of keystone structures. *Journal of biogeography*, *31*(1), 79-92

Thorell, T. (1859). Nya exotiska Epeirider. *Öfversigt af Kongliga Vetenskaps-Akademiens Förhandlingar* 16: 299-304.

Thorell, T. (1877b). Studi Sui Ragni Malesi e Papuani. I. Ragni di Selebes raccolti nel 1874 dal Dott. O. Beccari. *Annali del Museo Civico di Storia Naturale di Genova* 10: 341-637.

Thorell, T. (1878b). Studi Sui ragni Malesi e Papuani. II. Ragni di Amboina raccolti Prof. O. Beccari. *Annali del Museo Civico di Storia Naturale di Genova* 13: 5-317.

Thorell, T. (1881). Studi sui Ragni Malesi e Papuani. III. Ragni dell'Austro Malesia e del Capo York, conservati nel Museo civico di storia naturale di Genova. *Annali del Museo Civico di Storia Naturale di Genova* 17: 1-720.

Thorell, T. (1887). Viaggio di L. Fea in Birmania e regioni vicine. II. Primo saggio sui ragni birmani. *Annali del Museo Civico di Storia Naturale di Genova* 25: 5-417.

Thorell, T. (1890a). Studi sui ragni Malesi e Papuani. IV, 1. *Annali del Museo Civico di Storia Naturale di Genova* 28: 5-421.

Thorell, T. (1890b). Aracnidi di Nias e di Sumatra raccolti nel 1886 dal Sig. E. Modigliani. *Annali del Museo Civico di Storia Naturale di Genova* 30: 5-106.

Thorell, T. (1890c). Diagnoses aranearum aliquot novarum in Indo-Malesia inventarum. *Annali del Museo Civico di Storia Naturale di Genova* 30: 132-172.

Thorell, T. (1891). Spindlar från Nikobarerna och andra delar af södra Asien. *Kongliga Svenska Vetenskaps-Akademiens Handlingar* 24(2): 1-149.

Thorell, T. (1892a). Studi sui ragni Malesi e Papuani. IV, 2. *Annali del Museo Civico di Storia Naturale di Genova* 31: 1-490.

Thorell, T. (1894). Förteckning öfver arachnider från Java och närgrändsande öar, insamlade af Carl Aurivillius; jemte beskrifningar å några sydasiatiska och sydamerikanska spindlar. *Bihang till Kongliga Svenska Vetenskaps-Akademiens Handlingar* 20(IV, 2): 1-63.

Thorell, T**.** (1895)**.** *Descriptive catalogue of the spiders of Burma, based upon the collection made by Eugene W. Oates and preserved in the British Museum*. London, 406.

Thorell, T. (1895b). *Descriptive catalogue of the spiders of Burma, based upon the collection made by Eugene W. Oates and preserved in the British Museum*. London, 406 pp.

Thumar, R. H., Dholakia, A. H. and Ade, P. P. (2016). Indian spiders of the genus *Ordgarius* (Araneae: Araneidae). *Global Journal for Research Analysis* 5(9): 223-226.

Tikader B. K. (1987). Handbook of Indian Spiders. Zoological Survey of India, 1-251.

Tikader, B. K. (1960). On some new species of spiders (Arachnida) of the family Thomisidae from India. *Journal of the Bombay Natural History Society,* 57: 173-183.

Tikader, B. K. (1961a). Revision of Indian spiders of the genus *Cyrtarachne* (Argiopidae: Arachnida). *Journal of the Bombay Natural History Society,* 57: 547-556.

Tikader, B. K. (1961a). Revision of Indian spiders of the genus *Cyrtarachne* (Argiopidae: Arachnida). *Journal of the Bombay Natural History Society* 57: 547-556.

Tikader, B. K. (1961b). On two new species of spider of the genus *Oxyptila* (family Thomisidae) from India. *Proceedings of the Zoological Society, Calcutta,* 13: 115-118.

Tikader, B. K. (1962a). Studies on some spiders of the genus *Oecobius* (family Oecobiidae) from India. *Journal of the Bombay Natural History Society,* 59: 682-685.

Tikader, B. K. (1962b). Studies on some Indian spiders (Araneae: Arachnida). *Journal of the Linnean Society of London, Zoology* 44(300): 561-584.

Tikader, B. K. (1962c). On two new species of spider of the genus *Philodromus* (family Thomisidae) from India. *Proceedings of the Zoological Society, Calcutta*,15: 39-42.

Tikader, B. K. (1962d). On some new species of spiders of the genus *Tibellus* (family Thomisidae) from India. *Journal of the University of Poona* (Sci. Tech.), 22: 133-137.

Tikader, B. K. (1963a). Further studies on Indian spiders of the genus *Cyrtarachne* (Family Argiopidae). *Journal of the Bombay Natural History Society,* 60: 268-276.

Tikader, B. K. (1963b). Studies on some spider fauna of Maharashtra and Mysore states-Part I. *Journal of the University of Poona* (Sci. Tech.), 24: 29-54.

Tikader, B. K. (1963c). On two new species of spiders of the genera *Pasilobus* Simon and *Cladomelea* Simon of the family Argiopidae from India. *Proceedings of the Indian Academy of Science,* 57(B): 96-98.

Tikader, B. K. (1963d). On some new species of spiders of the genus *Argyrodes* Simon (Family: Theridiidae) from India. *Proceedings of the Indian Academy of Science,* 57(B): 99-105.

Tikader, B. K. (1963e). Studies on interesting south Indian crab-spiders (Family: Thomisidae). *Proceedings of the Indian Academy of Science,* 58(B): 249-262.

Tikader, B. K. (1963f). On a new species of spider of the genus *Loxosceles* (Family Scytodidae) from India. *Proceedings of the Zoological Society, Calcutta,* 16: 23-25.

Tikader, B. K. (1964a). Zoological results of the Indian Cho-Oyu Expedition (1958) in Nepal. Part 8.-Arachnida. *Records of the Indian Museum, Calcutta,* 59: 257-267.

Tikader, B. K. (1964b). A new species of spider of the genus *Oxyptila* (family Thomisidae) from India. *Science and Culture,* 30: 152-153.

Tikader, B. K. (1965a). On some new species of spiders of the family Thomisidae from India. *Proceedings of the Indian Academy of Science,* 61(B): 277-289.

Tikader, B. K. (1965b). Studies on some little-known spiders of the family Argiopidae from India. *Proceedings of the Indian Academy of Science,* 62(B): 92-96.

Tikader, B. K. (1965c). On some new species of spiders of the family Oxyopidae from India. *Proceedings of the Indian Academy of Science,* 62(B): 140-144.

Tikader, B. K. (1965d). A new species of spider of the genus *Thanatus* (family Thomisidae) from India. *Science and Culture,* 31: 39-40.

Tikader, B. K. (1965e). A new species of spider of genus *Marpissa* (Salticidae) from India. *Science and Culture,* 31: 261-262.

Tikader, B. K. (1966a). A new species of spider of the genus *Triaeris* Simon (family Oonopidae) from India. *Current Science,* 35: 520.

Tikader, B. K. (1966b). Studies on spider fauna of Khasi and Jaintia Hills, Assam, India. *Journal of the Assam Science Society,* 9: 139-154.

Tikader, B. K. (1966c). On some new species of spiders of the genus *Philodromus* Walck. (Family: Thomisidae) from India. *Proceedings of the Linnean Society of London,* 177(1): 35-44.

Tikader, B. K. (1966d). Studies on some spiders of the genus *Dictyna* (family: Dictynidae) from India. *Proceedings of the Linnean Society of London*, 177(1): 45-53.

Tikader, B. K. (1966e). On a collection of spiders (Araneae) from the desert areas of Rajasthan (India). *Records of the Indian Museum, Calcutta,* 59: 435-443.

Tikader, B. K. (1966f). A new species of spider of the genus *Scytodes* (family Scytodidae) from India. *Current Science,* 35: 627-628.

Tikader, B. K. (1966g). Studies on some crab-spider (family: Thomisidae) from Khasi and Jaintia hills, Assam, India. *Proceedings of the Indian Academy of Science,* 64(B): 53-61.

Tikader, B. K. (1967). Studies on some Salticidae spider from Sikkim, Himalaya, India. *Proceedings of the Indian Academy of Science,* 66(B): 117-122.

Tikader, B. K. (1968a). Description of two new species of the genus *Xysticus* (family: Thomisidae) from India. *Journal of the Asiatic Society of Bengal,* 8: 249-252.

Tikader, B. K. (1968b). Studies on spider fauna of Khasi and Jaintia hills, Assam, India. Part-II. *Journal of the Assam Science Society,* 10: 102-122.

Tikader, B. K. (1968c). A new spider of the genus *Ischnothyreus* Simon (Family Oonopidae) from India. *Journal of the Bombay Natural History Society,* 65: 257-259.

Tikader, B. K. (1969a). Studies on some spiders of the family Oxyopidae from India. *Oriental Insects,* 3: 33-36.

Tikader, B. K. (1969b). Studies on spider fauna of Khasi and Jaintia hills, Assam, India. Part III. *Journal of the Assam Science Society,* 11: 154-163.

Tikader, B. K. (1969c). Studies of some rare spiders of the families Selenopidae and Platoridae from India. *Proceedings of the Indian Academy of Science,* 69(B): 252-255.

Tikader, B. K. (1969d). Two new spiders of the genus *Uloborus* of the family Uloboridae from India. *Proceedings of the Indian Academy of Science,* 70(B): 127-130.

Tikader, B. K. (1970). Spider fauna of Sikkim. Records of the Zoological Survey of India 64: 1-83.

Tikader, B. K. (1971a). Revision of Indian crab spiders (Araneae: Thomisidae). *Memoirs of the Zoological Survey of India,* 15(8): 1-90.

Tikader, B. K. (1971b). Descriptions of some little known spiders from India of the genus *Miagrammopes* Cambridge (Uloboridae). *Journal of the Asiatic Society of Bengal,* 213: 172-177.

Tikader, B. K. (1973a). Studies on some spiders of the family Gnaphosidae, from India. *Proceedings of the Indian Academy of Science,* 77(B): 186-189.

Tikader, B. K. (1973b). Studies on some ant-like spiders from India (family: Salticidae). *Proceedings of the Indian Academy of Science,* 78(B): 59-67.

Tikader, B. K. (1973c). Studies on some jumping spiders from India (family: Salticidae). *Proceedings of the Indian Academy of Science,* 78(B): 68-72.

Tikader, B. K. (1973d). A new species of rare spider of the genus *Ctenus* (family-Ctenidae) from Andaman Islands, India. *Current Science,* 42: 862-863.

Tikader, B. K. (1974a). Studies on some jumping spiders of the genus *Phidippus* from India (family-Salticidae). *Proceedings of the Indian Academy of Science*, 79(B): 120-126.

Tikader, B. K. (1974a). Studies on some jumping spiders of the genus *Phidippus* from India (family-Salticidae). *Proceedings of the Indian Academy of Science* 79(B): 120-126.

Tikader, B. K. (1974b). Studies on some jumping spiders of the genus *Marpissa* from India (family-Salticidae). *Proceedings of the Indian Academy of Science,* 79(B): 204-215.

Tikader, B. K. (1975a). A new species of spider of the genus *Cheiracanthium* Koch (family Clubionidae) from India. *Journal of the Bombay Natural History Society,* 72: 43-45.

Tikader, B. K. (1975b). Some new species of spiders of the family Argiopidae from India. *Proceedings of the Indian Academy of Science,* 81(B): 145-149.

Tikader, B. K. (1975c). Some jumping spiders of the genus *Zygoballus* from India (family: Salticidae). *Proceedings of the Indian Academy of Science,* 81(B): 150-153.

Tikader, B. K. (1976a). A new species of spider of the genus *Ctenus* (family: Ctenidae) from Meghalaya, India. *Journal of the Bombay Natural History Society,* 72: 791-793.

Tikader, B. K. (1976b). Two new species of spiders of the genera *Cheiracanthium* Koch and *Clubiona* Latreille (family: Clubionidae) from India. *Journal of the Bombay Natural History Society,* 73: 175-177.

Tikader, B. K. (1976c). A new genus and species of spider of the family Caponiidae from India. *Bulletin of the British Arachnological Society,* 3(6, for 1975): 174-176.

Tikader, B. K. (1976d). Redescription of a jumping spider *Harmochirus brachiatus* (Thorell) with a new record from India. *Journal of the Bombay Natural History Society,* 73: 410-411.

Tikader, B. K. (1977a). Studies on spider fauna of Andaman and Nicobar Islands, Indian Ocean. *Records of the Zoological Survey of India,* 72: 153-212.

Tikader, B. K. (1977b). Description of two new species of jumping-spider of the genus *Rhene* (family: Salticidae) from India. *Proceedings of the Indian Academy of Science,* 85(B): 274-277.

Tikader, B. K. (1977c). Description of two new species of jumping-spiders of the genus *Phidippus* (family: Salticidae) from India. *Entomon,* 2: 97-99.

Tikader, B. K. (1977d). Description of two new species of wolf-spider (family: Lycosidae) from Ladakh, India. *Journal of the Bombay Natural History Society,* 74: 144-146.

Tikader, B. K. (1977e). Studies on some mygalomorph spiders of the families Ctenizidae and Theraphosidae from India. *Journal of the Bombay Natural History Society,* 74: 306-319.

Tikader, B. K. (1980a). Thomisidae (Crab-spiders). *Fauna India* (Araneae), 1: 1-247.

Tikader, B. K. (1980b). Description of a new species of spider of the genus *Neoscona* (Family: Araneidae) from India and some observations on intraspecific colour variation. *Proceedings of the Indian Academy of Science* (Animal Science), 89: 247-252.

Tikader, B. K. (1981a). Studies on spiders of the genus *Lutica* Marx (Family-Zodariidae) from India. *Journal of the Bombay Natural History Society,* 78: 139-142.

Tikader, B. K. (1981b). A new species of rare spiders of the genus *Hyptiotes* (Family: Uloboridae) from India. *Current Science,* 50: 154-155.

Tikader, B. K. (1981c). A new species of high altitude spider of the genus *Erigone* Audouin (Family: Erigonidae) from India. *Journal of the Bombay Natural History Society,* 77: 490-492.

Tikader, B. K. (1981d). Studies on spiders of the genus *Castianeira* Keyserling (Family: Clubionidae) from India. *Bulletin of the Zoological Survey of India,* 4: 257-265.

Tikader, B. K. (1982a). Part 1. Family Araneidae (= Argiopidae). Typical orb-weavers. In: *The fauna of India. Spiders: Araneae. Vol. II*. Zoological Survey of India, Calcutta, pp. 1-293.

Tikader, B. K**.** (1982b)**.** Part 2. Family Gnaphosidae. In: *The fauna of India. Spiders: Araneae. Vol. II*. Zoological Survey of India, Calcutta, 295-536.

Tikader, B. K. (1987). *Handbook of Indian Spiders*. Zoological Survey of India, Calcutta, 251.

Tikader, B. K. and Bal, A. (1980). Studies on spiders of the genus *Zygiella* Cambridge from India (Araneae: Araneidae). *Proceedings of the Indian Academy of Science* (Anim. Sci.) 89: 243-246.

Tikader, B. K. and Bal, A. (1981). Studies on some orb-weaving spiders of the genera *Neoscona* Simon and *Araneus* Clerck of the family Araneidae (=Argiopidae) from India. *Records of the Zoological Survey of India, Occasional Paper* 24: 1-60.

Tikader, B. K. and Biswas, B. (1974). Some spiders of the genus *Xysticus* (family: Thomisidae) from Darjeeling, India. *Proceedings of the Indian Academy of Science,* 80(B): 262-266.

Tikader, B. K. and Biswas, B. (1978). Two new species of spiders of the family Lyssomanidae from India. *Proceedings of the Indian Academy of Science,* 87(B): 257-260.

Tikader, B. K. and Biswas, B. (1979). Two new species of spider of the genus *Tharpyna* Koch from India (Family: Thomisidae). *Journal of the Bombay Natural History Society,* 75: 903-905.

Tikader, B. K. and Biswas, B. (1981). Spider fauna of Calcutta and vicinity: Part-I. *Records of the Zoological Survey of India, Occasional Paper* 30: 1-149.

Tikader, B. K. and Gajbe, U. A. (1973). A new species of spider of genus *Plator* Simon (family-Platoridae) from India. *Current Science,* 42: 829.

Tikader, B. K. and Gajbe, U. A. (1975). New species of *Drassodes* spiders (Araneae: Gnaphosidae) from India. *Oriental Insects,* 9: 273-281.

Tikader, B. K. and Gajbe, U. A. (1976a). New spiders of *Drassyllus* from India (Gnaphosidae). *Oriental Insects,* 10: 431-434.

Tikader, B. K. and Gajbe, U. A. (1976b). Studies on some spiders of the genus *Zelotes* Gistel from India (family: Gnaphosidae). *Proceedings of the Indian Academy of Science,* 83(B): 109-122.

Tikader, B. K. and Gajbe, U. A. (1976c). On some new species of spiders of the genus *Sergiolus* Simon from India (family: Gnaphosidae). *Proceedings of the Indian Academy of Science,* 84(B): 185-191.

Tikader, B. K. and Gajbe, U. A. (1976d). A new species of spider of the genus *Plator* Simon (family: Platoridae) from India. *Journal of the Bombay Natural History Society,* 72: 797-799.

Tikader, B. K. and Gajbe, U. A. (1976e). A new species of spider of the genus *Plator* Simon (family-Platoridae) from Almora, India. *Journal of the Bombay Natural History Society,* 73: 178-179.

Tikader, B. K. and Gajbe, U. A. (1977a). Studies on some spiders of the genera *Scopodes* Chamberlin, *Megamyrmecion* Reuss, *Scotophaeus* Simon and *Liodrassus* Chamberlin (family: Gnaphosidae) from India. *Records of the Zoological Survey of India,* 73: 13-22.

Tikader, B. K. and Gajbe, U. A. (1977b). Studies on some spiders of the genera *Gnaphosa* Latreille and *Callilepis* Westring (family: Gnaphosidae) from India. *Records of the Zoological Survey of India* 73: 43-52.

Tikader, B. K. and Gajbe, U. A. (1977c). Taxonomic studies on some spiders of the genera *Drassodes* Westring, *Haplodrassus* Chamberlin, *Geodrassus* Chamberlin and *Nodocion* Chamberlin (family: Gnaphosidae) from India. *Records of the Zoological Survey of India,* 73: 63-76.

Tikader, B. K. and Gajbe, U. A. (1977d). A new species of spider of the genus *Eilica* (Gnaphosidae) from India. *Bulletin of the British Arachnological Society*, 3(9, for 1976): 252-253.

Tikader, B. K. and Gajbe, U. A. (1979). Further studies on some spiders of the genus *Zelotes* Gistel (Araneae: Gnaphosidae) from India. *Bulletin of the Zoological Survey of India,* 2: 83-89.

Tikader, B. K. and Malhotra, M. S. (1974). Studies on some rare spiders of the family Oonopidae from Maharashtra, India. *Oriental Insects,* 8: 495-501.

Tikader, B. K. and Malhotra, M. S. (1976a). A new species of spider of the genus *Lutica* (family Zodariidae) from India. *Journal of the Bombay Natural History Society,* 72: 794-796.

Tikader, B. K. and Malhotra, M. S. (1976b). Studies on some spiders of the genus *Pardosa* Koch from India (family: Lycosidae). *Proceedings of the Indian Academy of Science,* 83(3): 123-131.

Tikader, B. K. and Malhotra, M. S. (1978a). A new record of rare spider of the family Dinopidae from India with description of a new species. *Proceedings of the Indian Academy of Science,* 87(B): 157-159.

Tikader, B. K. and Malhotra, M. S. (1978b). Sexual dimorphism in the jumping spider *Phidippus pateli* Tikader (family: Salticidae). *Journal of the Bombay Natural History Society,* 74: 543-546.

Tikader, B. K. and Malhotra, M. S. (1980). Lycosidae (Wolf-spiders). *Fauna India* (Araneae), 1: 248-447.

Tikader, B. K. and Malhotra, M. S. (1981). Revision of spiders of the genus *Ctenus* Walckenaer from India (Araneae: Ctenidae). *Records of the Zoological Survey of India,* 79: 105-124.

Tikader, B. K. and Sethi, V. D. (1990). Studies of some giant crab spiders of the family Heteropodidae from India. Part II. *Records of the Zoological Survey of India,* 87: 165-186.

Tripathi, R., Henrard, A., Jangid, A. K., Dutta, S. and Sudhikumar, A. V. (2022)**.** First documentation of *Plexippus minor* Wesołowska and van Harten, 2010 (Araneae: Salticidae) from India. *Arachnology* 19(1): 66-71.

Tripathi, R., Jangid, A. K., Bhagirathan, U. and Sudhikumar, A. V. (2023c)**.** First record of the genus *Bassaniodes* Pocock, 1903 (Araneae, Thomisidae) from India. *Natura Somogyiensis* 40: 47-50.

Tripathi, R., Jangid, A. K., Bhagirathan, U. and Sudhikumar, A. V. (2023d). First record of the cobweb spider (*Steatoda erigoniformis*) from India. *Taprobanica* 12(1): 26-27, pl. 15-17.

Tripathi, R., Jangid, A. K., Siliwal, M., Dutta, S. and Sudhikumar, A. V. (2021). First record of *Menemerus marginatus* (Kroneberg, 1875) (Araneae: Salticidae: Chrysillini) from India. *Peckhamia* 231.1: 1-7.

Tripathi, R., Jangid, A. K., Sudhikumar, A. V., Siliwal, M. and Dutta, S. (2023b). *Steatoda albomaculata* (De Geer, 1778) (Araneae: Theridiidae): an addition to the spider fauna of India. *Journal of the Bombay Natural History Society* 119(3, 2022): 266-272.

Tripathi, R., Jose, A., Nafin, K. S., Babu, N. and Sudhikumar, A. V. (2023a). The first description of the female of *Myrmarachne uniseriata* Narayan, 1915 and the first report of *Myrmarachne spissa* (G. W. Peckham & E. G. Peckham, 1892) from India. *Peckhamia* 289.1: 1-10.

Tripathi, R., Joshi, P., Kasambe, R. and Sudhikumar, A. V. (2023e). A new species of *Hasarius* Simon, 1871 (Araneae: Salticidae) from Mumbai, India. *Arthropoda Selecta* 32(2): 213-219.

Tripathi, R., Kadam, G., Asha, T. J. and Sudhikumar, A. V. (2023g). First record of *Sparbambus* Zhang, Woon and Li, 2006 from India, with description of a new species (Araneae: Salticidae). *Zootaxa* 5352(3): 447-450.

Tripathi, R., Sankaran, P. M., Kuni, N. and Sudhikumar, A. V. (2023f). New species of *Palpimanus* Dufour, 1820 from India (Araneae: Palpimanidae, Palpimaninae), with a catalogue of the Indian palpimanid fauna. *European Journal of Taxonomy* 891: 26-50.

Tripathi, R., Sudhikumar, A. V. and Sherwood, D. (2023). A new species of *Oecobius* Lucas, 1846 from the Thar Desert, India (Araneae: Oecobiidae). *Zootaxa* 5389(4): 483-490.

Trotta, A. (2005). Introduzione al ragni italiani (Arachnida Araneae). *Memorie della Società Entomologica Italiana* 83: 3-178.

Tso, I. M. and Tanikawa, A. (2000). New records of five orb-web spiders of the genera *Leucauge*, *Mesida*, and *Eriovixia* (Araneae: Tetragnathidae and Araneidae) from Taiwan. *Acta Arachnologica* 49(2): 125-131.

Tyagi, K., Kumar, V., Kundu, S., Pakrashi, A., Prasad, P., Caleb, J. T. D. and Chandra, K. **(2019)**. Identification of Indian spiders through DNA barcoding: cryptic species and species complex. *Scientific Reports* 9(14033): 1-13 & Supplement.

Tyagi, K., Kumar, V., Kundu, S., Pakrashi, A., Prasad, P., Caleb, J. T. D. and Chandra, K. (2019). Identification of Indian spiders through DNA barcoding: cryptic species and species complex. *Scientific Reports* 9(14033): 1-13 and Supplement.
Tyagi, K., Kumar, V., Kundu, S., Pakrashi, A., Prasad, P., Caleb, J. T. D. and Chandra, K. (2019). Identification of Indian spiders through DNA barcoding: cryptic species and species complex. *Scientific Reports* 9(14033): 1-13 and Supplement.

Tyagi, K., Kumar, V., Kundu, S., Pakrashi, A., Prasad, P., Caleb, J. T. D. and Chandra, K. (2019). Identification of Indian spiders through DNA barcoding: cryptic species and species complex. *Scientific Reports* 9(14033): 1-13 and Supplement.

Tyagi, K., Kumar, V., Kundu, S., Pakrashi, A., Prasad, P., Caleb, J. T. D. and Chandra, K. (2019). Identification of Indian spiders through DNA barcoding: cryptic species and species complex. *Scientific Reports* 9(14033): 1-13 and Supplement.
Tyagi, K., Tyagi, I., and Kumar, V. (2021). Insights into the gut bacterial communities of spider from wild with no evidence of phylosymbiosis. *Saudi Journal of Biological Sciences*, *28*(10), 5913-5924.

Uetz, G. W. (1991). Habitat structure and spider foraging. Habitat structure: the physical arrangement of objects in space, 325-348.

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

Ugland, K. I., Gray, J. S., and Ellingsen, K. E. (2003). The species–accumulation curve and estimation of species richness. Journal of animal ecology, 72(5), 888-897.

Urquhart, A. T. (1890a). Description of a new species of *Argiope* from Fiji. *Transactions and Proceedings of the New Zealand Institute* 22: 234-236.

Uyemura, T. (1939b). [Habit and description of *Acusilas coccineus*]. *Acta Arachnologica* 4(4): 139-145.

Václav, R., and Prokop, P. (2006, January). Does the appearance of orbweaving spiders attract prey?. In *Annales Zoologici Fennici* (pp. 65-71). Finnish Zoological and Botanical Publishing Board.

Vankhede, G., Keswani, S. and Rajoria, A. **(2013)**. A new species of the spider genus *Hygropoda* (Araneae: Pisauridae) from India. *Indian Journal of Arachnology* 2(1): 52-60.

Vanuytven, H. (2021). The Theridiidae of the World. A key to the genera with their diagnosis and a study of the body length of all known species. *Newsletter of the Belgian arachnological Society* 35(Supplement): 1-363.

Villanueva-Bonilla, G. A., Salomão, A. T., and Vasconcellos-Neto, J. (2017). Trunk structural traits explain habitat use of a tree-dwelling spider (Selenopidae) in a tropical forest. Acta Oecologica, 85, 108-115.

Vink, C. (2014). The type specimen of *Argiope leucopicta* Urquhart, 1890 (Araneae: Araneidae). *Records of the Canterbury Museum* 28: 61-63.

Vinson, A. (1863). *Aranéides des îles de La Réunion, Maurice et Madagascar*. Librairie Classique Eugène Belin, Paris, 337 pp., pl. 1-14.

Vis, C. W. de (1911). A fisherman's spider. *Annals of the Queensland Museum* 10: 167-168.

Vishnudas, E. H., Anis, K. V. and Sudhikumar, A. V. (2022). First description of the male comb-footed spider, *Chrysso urbasae* (Tikader, 1970) (Araneae: Theridiidae) with redescription of the female. *Serket* 19(1): 85-89.

Walckenaer, C. A. (1805). *Tableau des aranéides ou caractères essentiels des tribus, genres, familles et races que renferme le genre Aranea de Linné, avec la désignation des espèces comprises dans chacune de ces divisions*. Dentu, Paris, 88 pp.

Walckenaer, C. A. (1837). *Histoire naturelle des insectes. Aptères. Tome premier*. Roret, Paris, 682 pp., pl. 1-15.

Walckenaer, C. A. (1837). *Histoire naturelle des insectes. Aptères. Tome premier*. Roret, Paris, 682 pp., pl. 1-15.

Walckenaer, C. A. (1841). *Histoire naturelle des Insects. Aptères. Tome deuxième*. Roret, Paris, 549 pp., pl. 16-22.

Walckenaer, C. A. (1847a). Dernier Supplément. In: Walckenaer, C. A. and Gervais, P. (eds.) *Histoire naturelles des Insects. Aptères. Tome quatrième*. Roret, Paris, pp. 365-596 [Araneae: -564].

Wang, H. Q. (1981). [*Protection and utilization of spiders in paddy fields*]. Hunan Press of Science and Technology, 188 pp.

Wang, J. F. (1991a). On the spiders of the family Tetragnathidae in south China (Arachnida: Araneae). *Acta Zootaxonomica Sinica* 16: 153-162.

Wang, L. Y., Lu, T., Cai, D. C., Barrion, A. T., Heong, K. L., Li, S. Q. and Zhang, Z. S. (2021a). Review of the wolf spiders from Hainan Island, China (Araneae: Lycosidae). *Zoological Systematics* 46(1): 16-74.

Wang, L. Y., Zhang, F. and Zhang, Z. S. (2012). Ant-like sac spiders from Jinyun Mountain Natural Reserve of Chongqing, China (Araneae: Corinnidae). *Zootaxa* 3431: 37-53.

Wang, X. P. and Zhu, M. S. (2008). *Himalmartensus*, a new genus of the spider family Amaurobiidae from Nepal (Araneae). *Journal of Arachnology* 36: 241-250.

Wanless, F. R. (1978f). A revision of the spider genus *Portia* (Araneae: Salticidae). *Bulletin of the British Museum of Natural History* (Zool.) 34: 83-124.

Wanless, F. R. (1979a). A revision of the spider genus *Brettus* (Araneae: Salticidae). *Bulletin of the British Museum of Natural History* (Zool.) 35(2): 183-190.

Wanless, F. R. (1980d). A revision of the spider genera *Asemonea* and *Pandisus* (Araneae: Salticidae). *Bulletin of the British Museum of Natural History* (Zool.) 39: 213-257.

Wanless, F. R. (1981b). A revision of the spider genus *Phaecius* (Araneae: Salticidae). *Bulletin of the British Museum of Natural History* (Zool.) 41: 199-212.

Wanless, F. R. (1981c). A revision of the spider genus *Cocalus* (Araneae: Salticidae). *Bulletin of the British Museum of Natural History* (Zool.) 41: 253-261.

Wanless, F. R. (1984a). A review of the spider subfamily Spartaeinae nom. n. (Araneae: Salticidae) with descriptions of six new genera. *Bulletin of the British Museum of Natural History* (Zool.) 46: 135-205.

Wanless, F. R. (1984b). A revision of the spider genus *Cyrba* (Araneae: Salticidae) with the description of a new presumptive pheromone dispersing organ. *Bulletin of the British Museum of Natural History* (Zool.) 47(7): 445-481.

Weeks Jr, R. D., and Holtzer, T. O. (2000). Habitat and season in structuring ground-dwelling spider (Araneae) communities in a shortgrass steppe ecosystem. *Environmental Entomology*, *29*(6), 1164-1172.

Wiehle, H. (1967b). *Meta*,-eine semientelegyne Gattung der Araneae (Arach.). *Senckenbergiana Biologica* 48: 183-196.

Wijesinghe, D. P. (1990). Spartaeine salticids: A summary and request for specimens. *Peckhamia* 2: 101-103.

Williams, S. H. (2017). New faunistic records of *Gasteracantha* Sundevall, 1833 and *Macracantha* Simon, 1864 species (Araneae: Araneidae) from Vietnam. *Arthropoda Selecta* 26(3): 249-252.

Wilson, E. O. (1987). The little things that run the world (the importance and conservation of invertebrates). *Conservation biology*, 344-346.

Workman, T. (1896). *Malaysian spiders*. Belfast, pp. 25-104.

Workman, T. and Workman, M. E. (1892). *Malaysian spiders*. Belfast, pp. 1-8.

Workman, T. and Workman, M. E. (1894). *Malaysian spiders*. Belfast, pp. 9-24.

World Spider Catalog (2024). World Spider Catalog. Version 24.5. Natural History Museum Bern, online at http://wsc.nmbe.ch, accessed on {06/06/2024}. doi: 10.24436/2

Wunderlich, J. (1986). *Spinnenfauna gestern und heute: Fossile Spinnen in Bernstein und ihre heute lebenden Verwandten*. Quelle & Meyer, Wiesbaden, 283 pp.

Wunderlich, J. (2008b). On extant and fossil (Eocene) European comb-footed spiders (Araneae: Theridiidae), with notes on their subfamilies, and with descriptions of new taxa. *Beiträge zur Araneologie* 5: 140-469, 792-794, 796-800, 803, 819-859.

Xie, L. P. (1993). New records of Salticidae from China (Arachnida: Araneae). *Acta Scientiarum Naturalium Universitatis Normalis Hunanensis* 16: 358-361.

Xiong, F., Liu, Z. P. and Zhang, Z. S. (2017). Review on the jumping spider genus *Hyllus* from China (Araneae Salticidae). *Acta Arachnologica Sinica* 26(1): 22-26.

Yaginuma, T. (1957b). Two new conopisthine spiders from Japan. *Acta Arachnologica* 15(1): 11-16.

Yaginuma, T. (1958c). Revision of Japanese spiders of family Argiopidae. II. Genus *Cyrtophora*. *Acta Arachnologica* 16(1): 10-17.

Yaginuma, T. (1958c). Revision of Japanese spiders of family Argiopidae. II. Genus *Cyrtophora*. *Acta Arachnologica* 16(1): 10-17.

Yaginuma, T. (1960). *Spiders of Japan in colour*. Hoikusha, Osaka, 186 pp.

Yaginuma, T. (1965b). [Spiders of paddy fields]. *Shokubutsu Boeki* 19: 361-368.

Yaginuma, T. (1968b). [The spider genus *Cyrtophora* of Japan]. *Kansaishizenkagaku* 20: 34-38. Yaginuma, T. (1986a). *Spiders of Japan in color* (new ed.). *Hoikusha Publishing Co., Osaka*, 305 pp., 64 pls.

Yaginuma, T. (1971). *Spiders of Japan in colour* (enlarged and revised edition). *Hoikusha, Osaka* (for 1969), 197 pp.

Yaginuma, T. (1986a). *Spiders of Japan in color* (new ed.). *Hoikusha Publishing Co., Osaka*, 305 pp., 64 pls.

Yaginuma, T. and Archer, A. F. (1959). Genera of the araneine Argiopidae found in the Oriental region, and generally placed under the comprehensive genus, *Araneus*. 1. *Acta Arachnologica* 16(2): 34-41.

Yaginuma, T. and Wen, Z. G. (1983). Chinese and Japanese spiders (II). *Faculty of Letters Revue, Otemon Gakuin University* 17: 187-205.

Yamasaki, T. (2015). [Studies on taxonomy, biogeography and mimicry of the genus *Myrmarachne* in Southeast Asia]. *Acta Arachnologica* 64(1): 49-56.

Yang, H., Y. Peng, J. Tian, J. Wang, B. Wei, C. Xie and Z. Wang. (2018). Rice feld spiders in China: A review of the literature. *Journal of Economic Entomology* 111(1): 53–64.

Yin, C. M. (1976). [A study on tetragnathids (Araneae: Tetragnathidae) from rice fields]. *Journal of Hunan Teachers College* (nat. Sci. Ed.) 1976(5): 119-141.

Yin, C. M. (1978). [A study on the general orb-weaver spiders and wolf-spiders (Araneae: Araneidae, Lycosidae) from rice fields]. *Journal of Hunan Teachers College* (nat. Sci. Ed.) 1978(10): 1-21.

Yin, C. M. (1994). A revision of some species of Chinese spiders of the genus *Larinia* Simon (Araneae: Araneidae). *Acta Arachnologica Sinica* 3: 135-136.

Yin, C. M. and Wang, J. F. (1979). [A classification of the jumping spiders (Araneae, Salticidae) collected from the agricultural fields and other habitats. *Journal of Hunan Teachers College* (nat. Sci. Ed.) 1979(1): 27-63.

Yin, C. M. and Wang, J. F. (1981b). On the female of three jumping spiders from China. *Acta Zootaxonomica Sinica* 6: 268-272.

Yin, C. M., Peng, X. J., Xie, L. P., Bao, Y. H. and Wang, J. F. (1997c). *Lycosids in China (Arachnida: Araneae)*. Hunan Normal University Press, 317 pp.

Yin, C. M., Peng, X. J., Yan, H. M., Bao, Y. H., Xu, X., Tang, G., Zhou, Q. S. and Liu, P. (2012). *Fauna Hunan: Araneae in Hunan, China*. Hunan Science and Technology Press, Changsha, 1590 pp.

Yin, C. M., Wang, J. F. and Hu, Y. J. (1983). Essential types and the evolution of palpal organ of spiders. *Journal of Hunan Teachers College* (nat. Sci. Ed.) 1983: 31-46.

Yin, C. M., Wang, J. F., Xie, L. P. and Peng, X. J. (1990). New and newly recorded species of the spiders of family Araneidae from China (Arachnida, Araneae). In: Spiders in China: One Hundred New and Newly Recorded Species of the Families Araneidae and Agelenidae. Hunan Normal University Press, pp. 1-171.

Yin, C. M., Wang, J. F., Zhang, Y. J., Peng, X. J. and Chen, X. O. (1989). The study of the subfamily *Argiope* [*sic*] from China (Araneae, Araneidae). *Acta Scientiarum Naturalium Universitatis Normalis Hunanensis* 12: 60-69.

Yin, C. M., Wang, J. F., Zhu, M. S., Xie, L. P., Peng, X. J. and Bao, Y. H. (1997d). *Fauna Sinica: Arachnida: Araneae: Araneidae*. *Science Press, Beijing*, 460 pp.

Yin, C. M., Peng, X. J., Yan, H. M., Bao, Y. H., Xu, X., Tang, G., Zhou, Q. S. and Liu, P. (2012). *Fauna Hunan: Araneae in Hunan, China*. Hunan Science and Technology Press, Changsha, 1590 pp.

Yin, C. M., Wang, J. F., Zhu, M. S., Xie, L. P., Peng, X. J. and Bao, Y. H. (1997d). *Fauna Sinica: Arachnida: Araneae: Araneidae*. *Science Press, Beijing*, 460 pp.

Yoo, J. C. and Kim, J. P. (2002a). Studies on basic pattern and evolution of male palpal organ (Arachnida: Araneae). *Korean Arachnology* 18: 13-31.

Yoshida, H. (1978a). On some Formosan spiders (1). *Atypus* 71: 21-28.

Yoshida, H. (1978b). On some Formosan spiders (2). *Atypus* 72: 8-13.

Yoshida, H. (1993c). East Asian species of the genus *Chrysso* (Araneae: Theridiidae). *Acta Arachnologica* 42(1): 27-34.

Yoshida, H. (2001c). A revision of the Japanese genera and species of the subfamily Theridiinae (Araneae: Theridiidae). *Acta Arachnologica* 50(2): 157-181.

Yoshida, H. (2003a). *The spider family Theridiidae (Arachnida: Araneae) from Japan*. Arachnological Society of Japan, 224 pp.

Yoshida, H. (2008). A revision of the genus *Achaearanea* (Araneae: Theridiidae). *Acta Arachnologica* 57(1): 37-40.

Yoshida, H. (2009b). Uloboridae, Theridiidae, Ctenidae. In: Ono, H. (ed.) *The spiders of Japan with keys to the families and genera and illustrations of the species*. Tokai University Press, Kanagawa, pp. 142-147, 356-393, 467-468.

Yoshida, H. (2009d). The spider genus *Leucauge* (Araneae: Tetragnathidae) from Taiwan. *Acta Arachnologica* 58(1): 11-18.

Yu, H., Zhang, J. S. and Chen, J. (2017b). Checklist of the *Clubiona japonica*-group spiders, with the description of a new species from China (Araneae, Clubionidae). *ZooKeys* 715: 1-16.

Yu, L. M. and Song, D. X. (1988c). A revision of the Chinese spiders of the family Lycosidae (Araneae). *Sinozoologia* 6: 113-121.

Yu, Y., Wang, C., Wang, W. H. and Zhang, J. X. (2021c). [Redescription of four species of the tribe Euophryini from southern China (Araneae: Salticidae)]. *Acta Arachnologica Sinica* 30(2): 131-138.

Żabka, M. (1985). Systematic and zoogeographic study on the family Salticidae (Araneae) from Viet-Nam. *Annales Zoologici, Warszawa* 39: 197-485.

Żabka, M. (1988). Salticidae (Araneae) of Oriental, Australian and Pacific regions, III. *Annales Zoologici, Warszawa* 41(14): 421-479.

Żabka, M. and Gardzińska, J. (2017). Salticidae of Thailand. Part 1, genera *Plexippus* C. L. Koch, 1846 and *Burmattus* Prószyński, 1992. *Annales Zoologici, Warszawa* 67(2): 229-242.

Zhang, F., Peng, J. Y. and Zhang, B. S. (2022). *Spiders of Mt. Xiaowutai*. Science Press, Beijing, 387 pp

Zhang, G. R. and Hu, Y. J. (1989). Arrangement of some Chinese species of *Clubiona* (Araneae: Clubionidae). *Journal of Xiangtan Normal University* 6: 53-61.

Zhang, J. S., Marusik, Y. M., Oketch, D. A, Kioko, E. N., Yu, H. and Li, S. Q. (2021a). Resurrection of the spider genus *Bucliona* Benoit, 1977, with a description of a new species from Kenya (Araneae, Clubionidae). *Zootaxa* 5006(1): 195-207.

Zhang, J. X. (2000a). Taxonomy studies on Chinese spiders of the genus *Pisaura* (Araneae: Pisauridae) I. *Acta Arachnologica Sinica* 9: 1-9.

Zhang, J. X. and Maddison, W. P. (2015). Genera of euophryine jumping spiders (Araneae: Salticidae), with a combined molecular-morphological phylogeny. *Zootaxa* 3938(1): 1-147.

Zhang, J. X., Zhu, M. S. and Song, D. X. (2004d). A review of the Chinese nursery-web spiders (Araneae, Pisauridae). *Journal of Arachnology* 32(3): 353-417.

Zhang, J. X., Zhu, M. S. and Song, D. X. (2005d). Revision of the spider genus *Hamataliwa* Keyserling from China (Araneae: Oxyopidae). *Zootaxa* 1017: 1-17.

Zhang, L., Jin, C. and Zhang, F. (2022). Two new species of *Corinnomma* Karsch, 1880 from Yunnan, China (Araneae: Corinnidae, Castianeirinae). *Zootaxa* 5222(3): 240-256.

Zhang, W. S. (ed.) (1987). [*Farm spiders from Hebei Province*]. Hebei University of Science and Technology Press, 299 pp.

Zhang, Y. J. and Kim, J. P. (1996). Three new species of the family Heteropodidae from China (Arachnida: Araneae). *Korean Arachnology* 12(1): 77-85.

Zhang, Z. S. and Wang, L. Y. (2017). *Chinese spiders illustrated*. Chongqing University Press, 954 pp.

Zhao, J. Z. (1993). *Spiders in the cotton fields in China*. Wuhan Publishing House, Wuhan, China, 552 pp.

Zhao, J. Z. (1995). Araneida. In: *Natural enemies of cotton pests in China*. Wuhan Publishing House, Wuhan, China, pp. 762-1155.

Zhu, M. S. (1998). *Fauna Sinica: Arachnida: Araneae: Theridiidae*. Science Press, Beijing, 436 pp.

Zhu, M. S. and Shi, J. G. (1985). [*Crop field spiders of Shanxi Province*]. Agriculture Planning Committee of Shanxi Province (for 1983), 239 pp.

Zhu, M. S. and Song, D. X. (1991). Notes on the genus *Argyrodes* from China (Araneae: Theridiidae). *Journal of Hebei Pedagogic College* (nat. Sci.) 1991(4): 130-146.

Zhu, M. S. and Zhang, B. S. (2011). *Spider Fauna of Henan: Arachnida: Araneae*. Science Press, Beijing, 558 pp.

Zhu, M. S. and Zhang, Y. Q. (1993). Records of some spiders of the family Araneidae from Guangxi (Arachnida: Araneae). *Journal of the Guangxi Agricultural College* 12: 36-43.

Zhu, M. S., Song, D. X. and Zhang, J. X. (2003). *Fauna Sinica: Invertebrata Vol. 35: Arachnida: Araneae: Tetragnathidae*. Science Press, Beijing, 418 pp.

Zhu, M. S., Song, D. X., Zhang, Y. Q. and Wang, X. P. (1994). On some new species and new records of spiders of the family Araneidae from China. *Journal of Hebei Normal University* (nat. Sci. Ed.) 1994(Suppl.): 25-52.

Zhu, M. S., Wu, C. and Song, D. X. (2002). A revision of the Chinese species of the genus *Tylorida* (Araneae: Tetragnathidae). *Acta Arachnologica Sinica* 11: 25-32.

Zhu, Y., Lin, Y. J. and Zhong, Y. (2020). Two new and one newly recorded species of *Thelcticopis* Karsch, 1884 (Araneae, Sparassidae) from China. *ZooKeys* 940: 105-115.

Zschokke, S., and Herberstein, M. E. (2005). Laboratory methods for maintaining and studying web-building spiders. *Journal of Arachnology*, 205-213.

Zsido, A. N., Arato, N., Inhof, O., Janszky, J., and Darnai, G. (2018). Short versions of two specific phobia measures: The snake and the spider questionnaires. *Journal of Anxiety Disorders*, *54*, 11-16.

Zsido, A. N., Coelho, C. M., and Polák, J. (2022). Nature relatedness: A protective factor for snake and spider fears and phobias. *People and Nature*, *4*(3), 669-682.

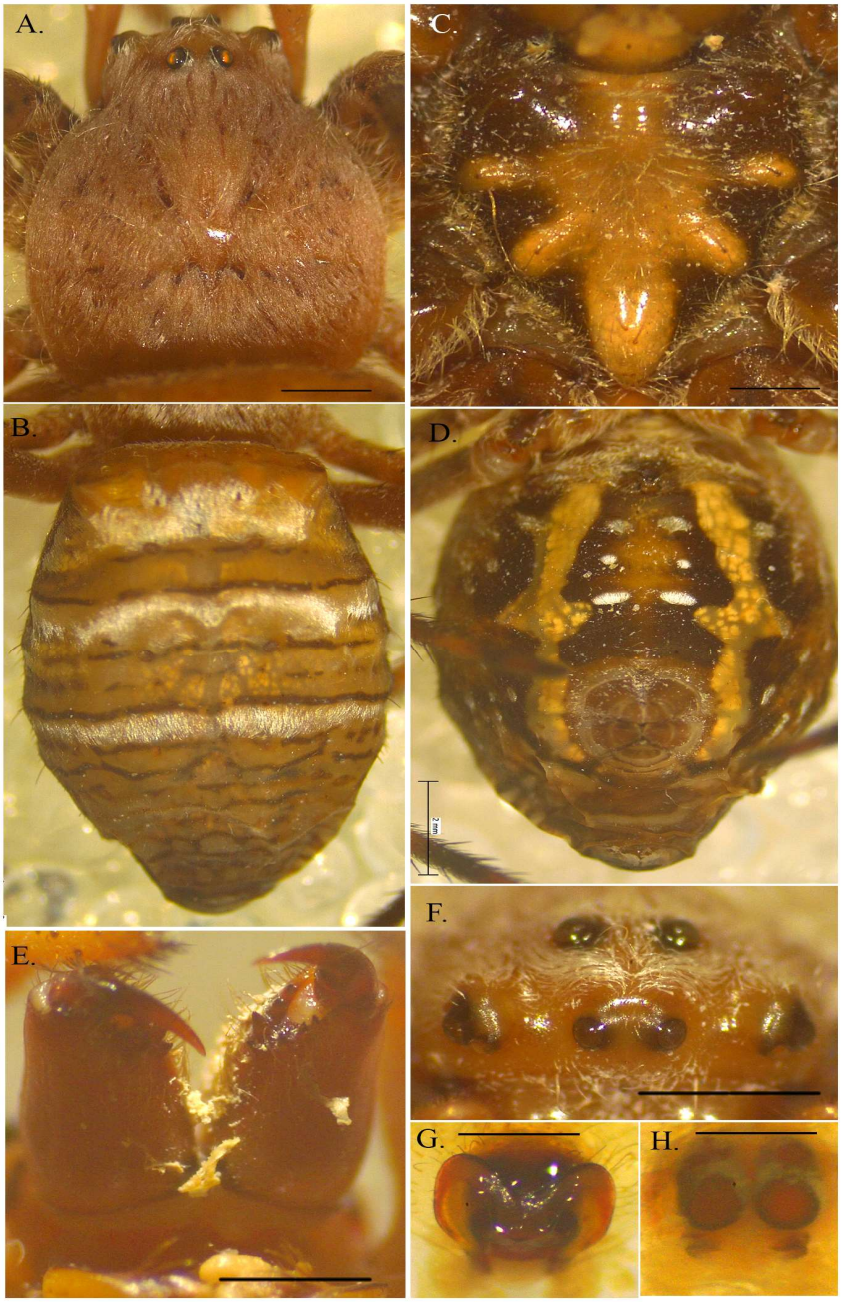
PLATE 12

Himalmartensus ausobskyi Wang and Zhu, 2008: **A**. Habitus, dorsal view; **B**. Habitus, ventral view; **C**. Habitus, lateral view; **D**. Chelicera, ventral view; **E**. Eyes, frontal view; **F**. Epigyne, dorsal view; **G**. Epigyne, ventral view. Scale bars = 5 mm (A, B, C); 2 mm (D, E); 1 mm (F, G).

PLATE 13

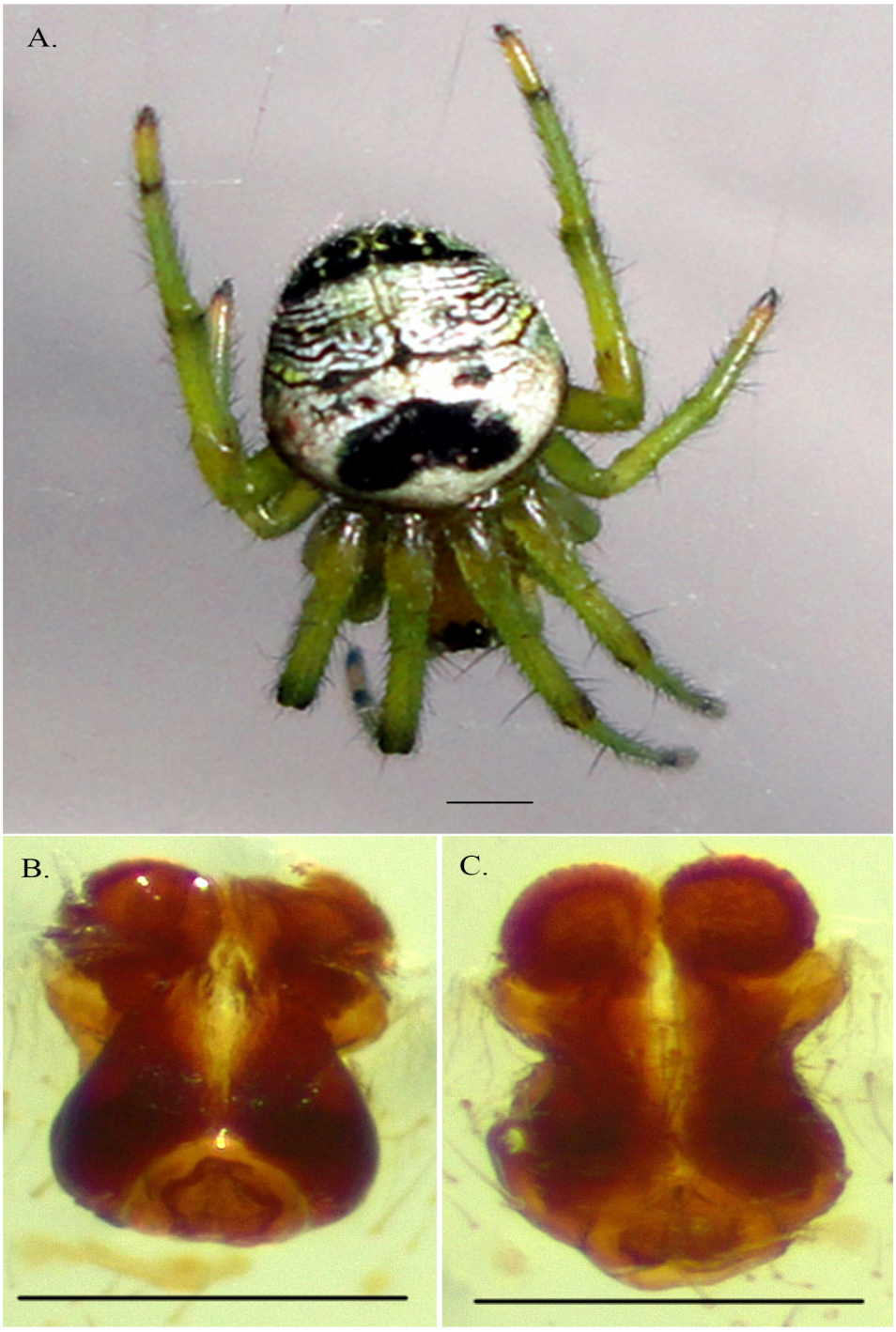
Acusilas coccineus Simon, 1895: **A.** Habitus, dorsal view; **B.** Habitus, lateral view; **C.** Sternum; **D.** Eyes, frontal view; **E.** Epigyne, ventral view; **F.** Epigyne, dorsal view. Scale bars = 1 mm (A, B); 0.5 mm (C, D); 0.2 mm (E, F).

PLATE 14



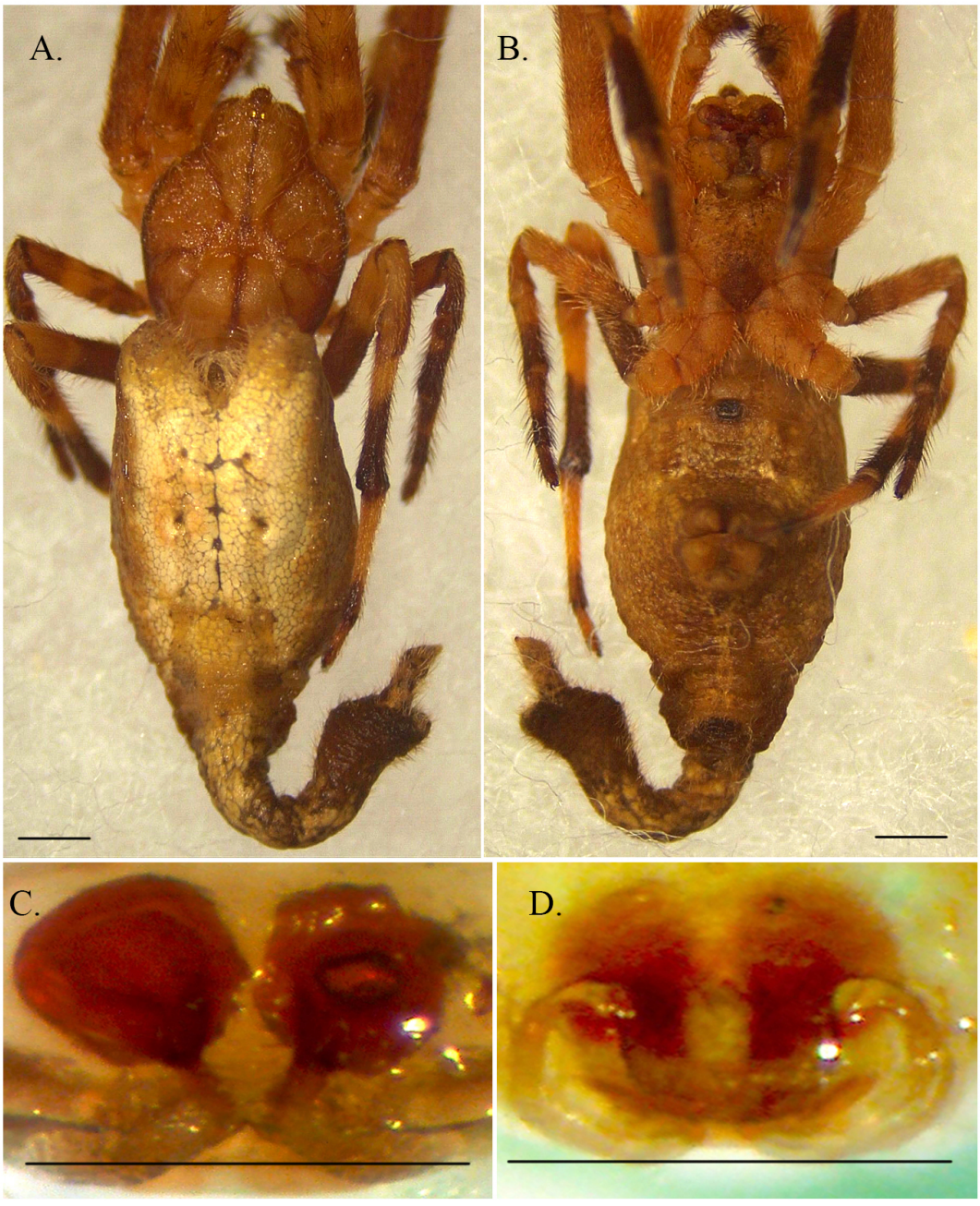
Argiope aemula (Walckenaer, 1841): **A.** Carapace, dorsal view; **B.** Abdomen, ventral view; **C.** Carapace, ventral view; **D.** Abdomen, ventral view; **E.** Chelicerae, ventral view; **F.** Eyes, frontal view; **G.** Epigyne, dorsal view; **H.** Epigyne, ventral view. Scale bars = 2 mm (A, B, C, D); 1 mm (E, F); 0.5 mm (G, H).

PLATE 15



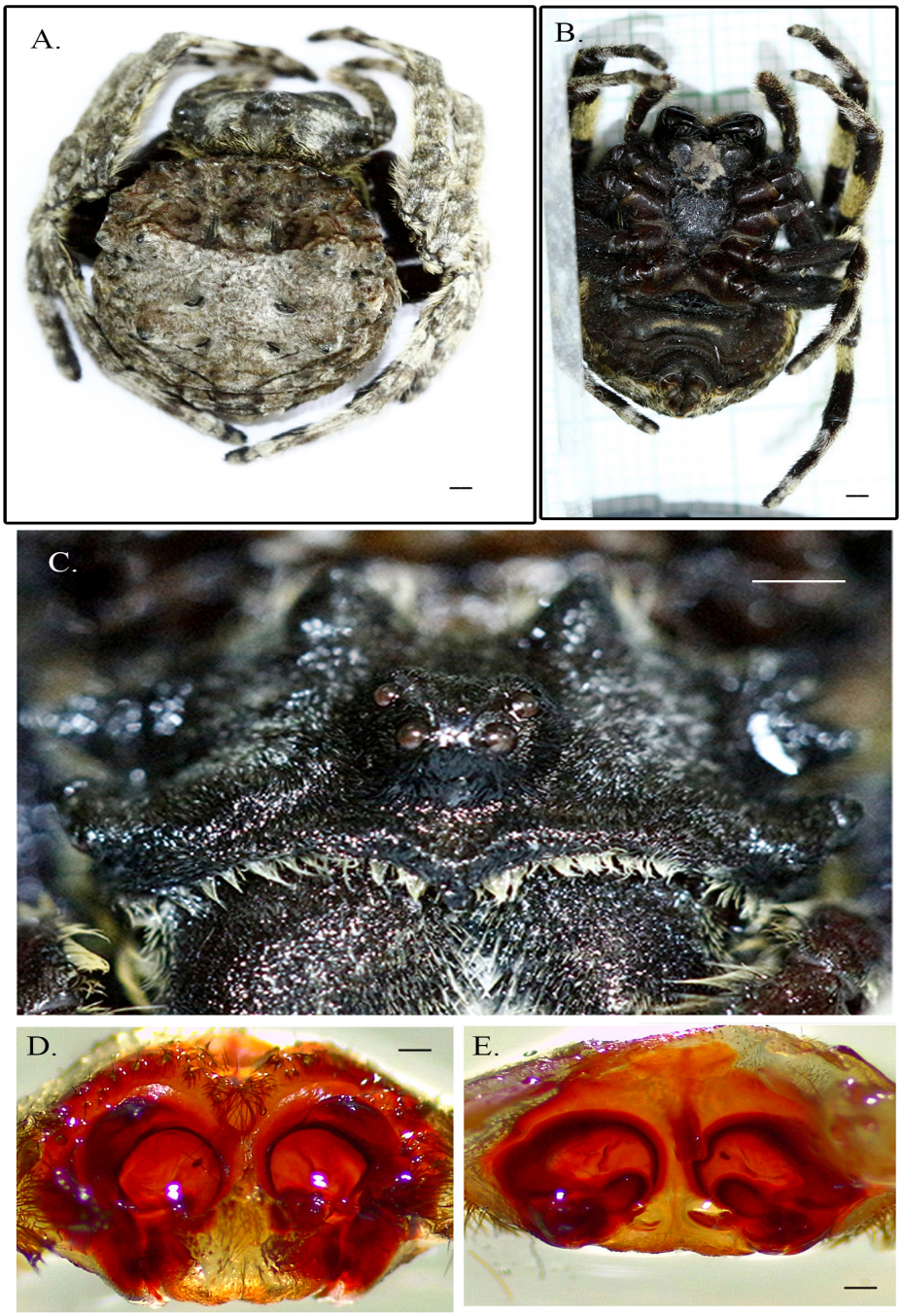
Bijoaraneus mitificus (Simon, 1886): **A.** Habitus, dorsal view; **B.** Epigyne, dorsal view; **C.** Epigyne, ventral view. Scale bars = 1 mm (A), 0.5 mm (B, C).

PLATE 16



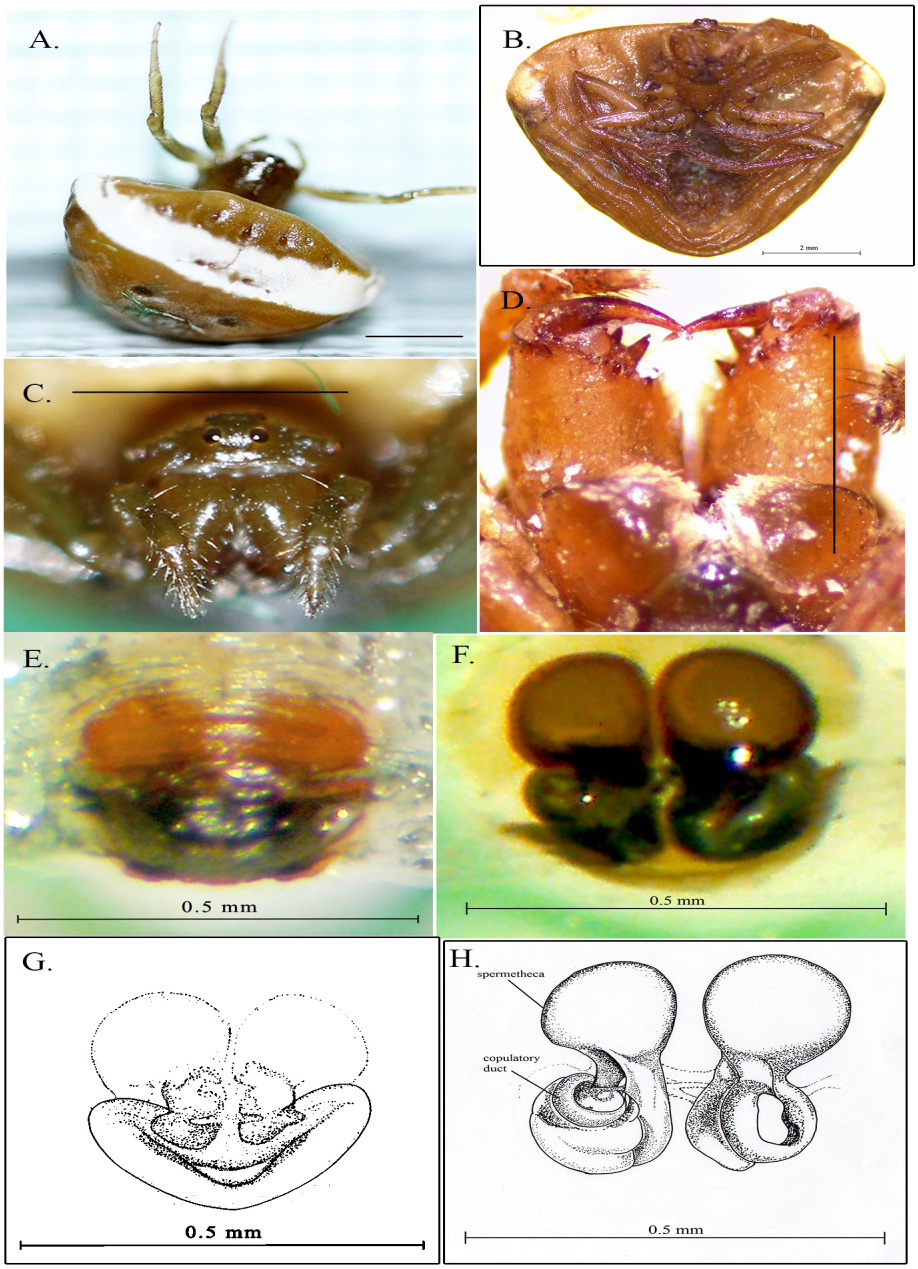
Arachnura angura Tikader, 1970: **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Epigyne, dorsal view; **D.** Epigyne, ventral view. Scale bars = 2 mm (A, B), 0.5 (C, D).

PLATE 17



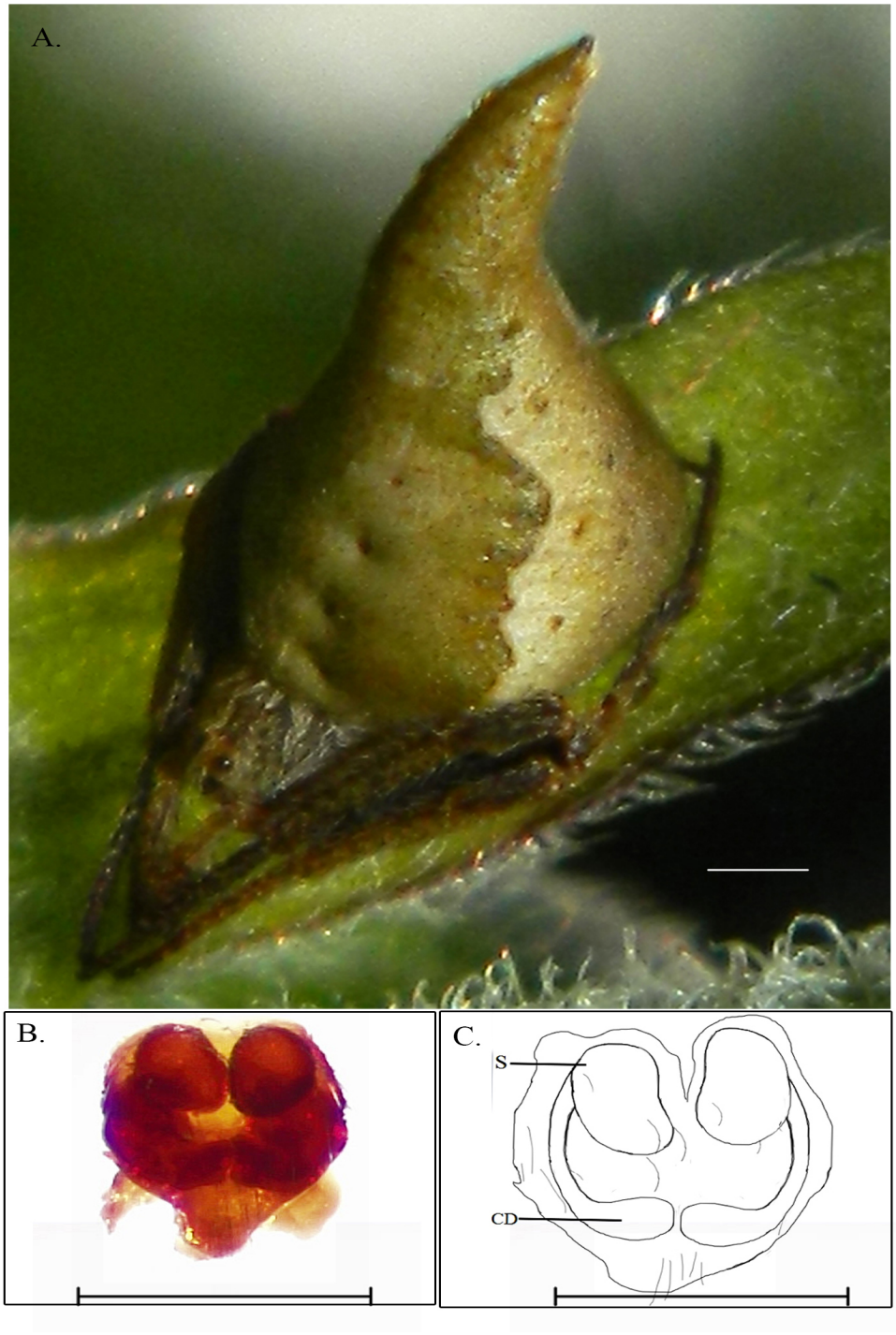
Caerostris sumatrana Strand, 1915: **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Carapace, frontal view; **D.** Epigyne, dorsal view; **E.** Epigyne, ventral view. Scale bars = 5 mm (A, B), 2 mm (C), 1 mm (D, E).

PLATE 18



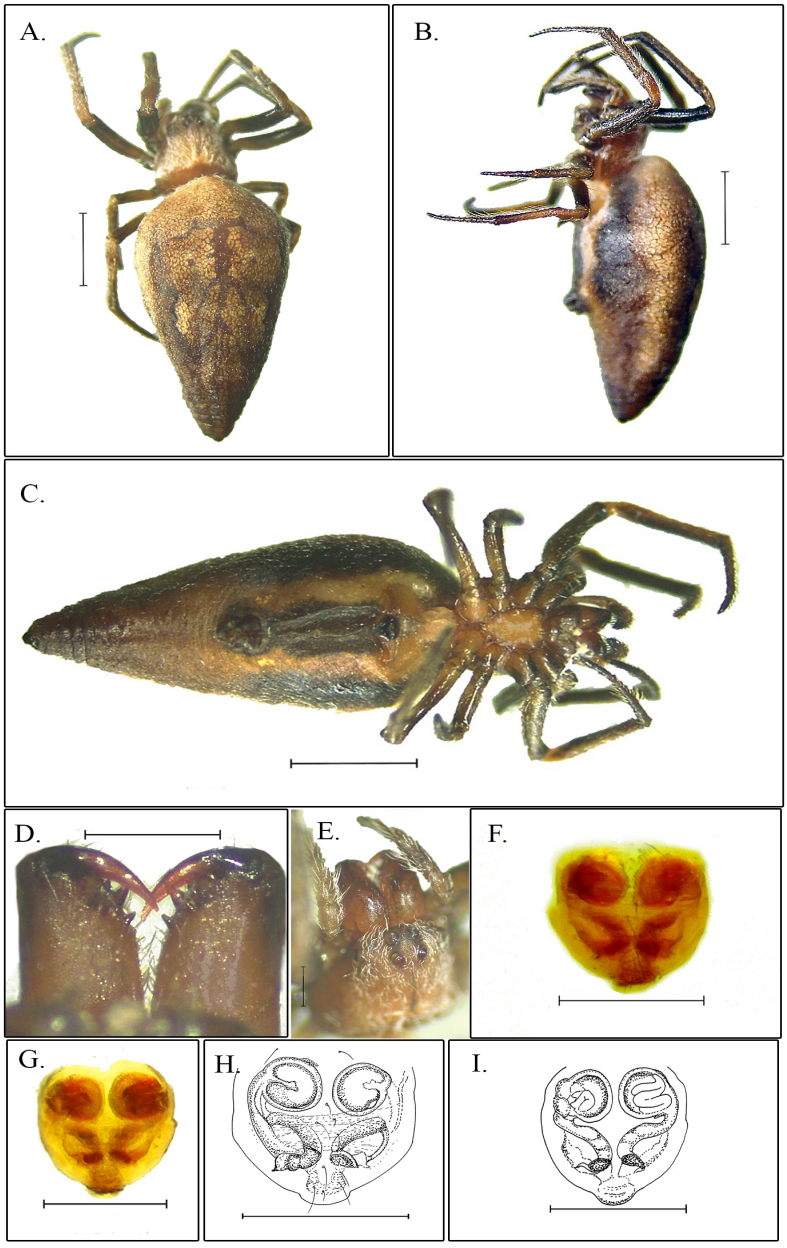
Cyrtarachne nagasakiensis Strand, 1918: **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Carapace, frontal view; **D.** Chelicerae, ventral view; **E.** Epigyne, dorsal view; **F.** Epigyne, ventral view; **G.** Diagrammatic representation of epigyne, dorsal view; **H.** Diagrammatic representation of epigyne, ventral view. Scale bars = 2 mm (A, B); 1 mm (C, D); 0.5 mm (E, F, G, H).

PLATE 19



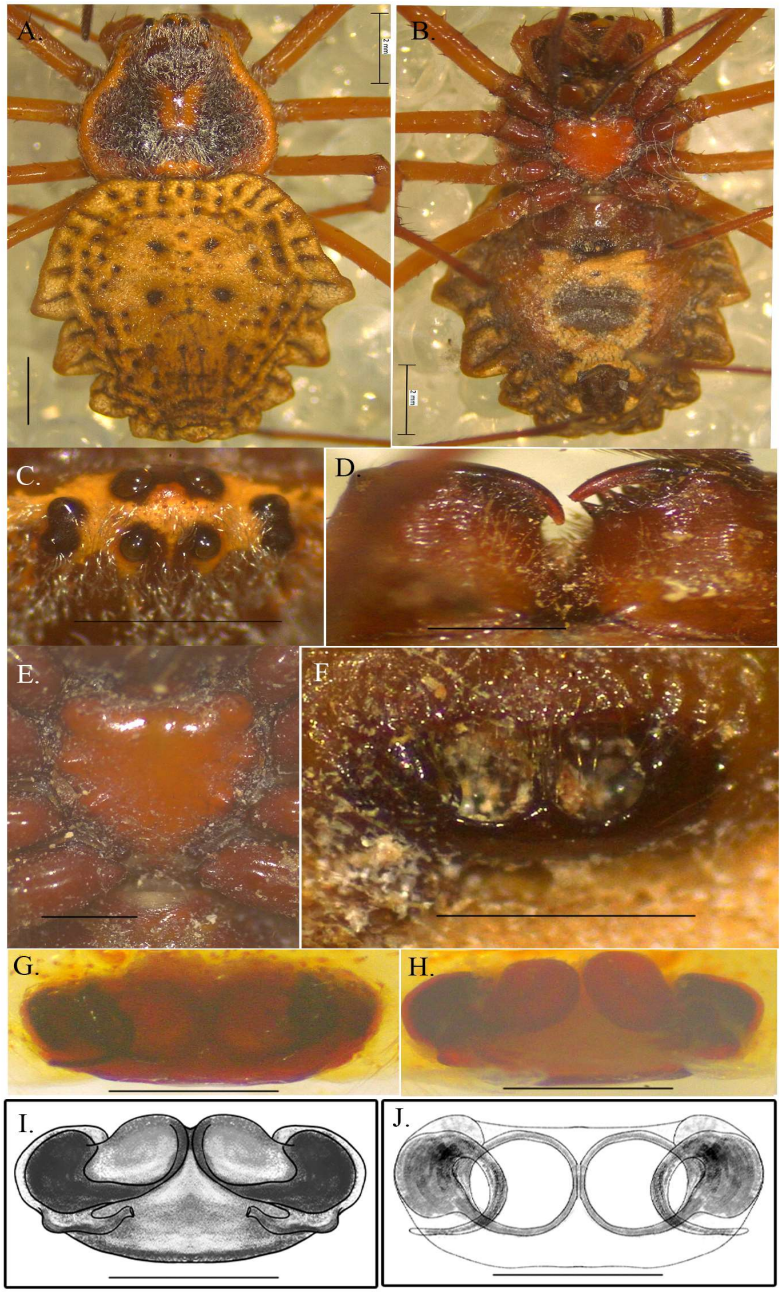
Eriovixia pseudocentrodes (Bösenberg and Strand, 1906): **A.** Habitus, dorsal view; **B.** Epigyne, ventral view; **C.** Diagrammatic representation of epigyne, ventral view (S – spermathecae, CD – copulatory ducts). Scale bars = 2 mm (A), 0.5 mm (B, C).

PLATE 20



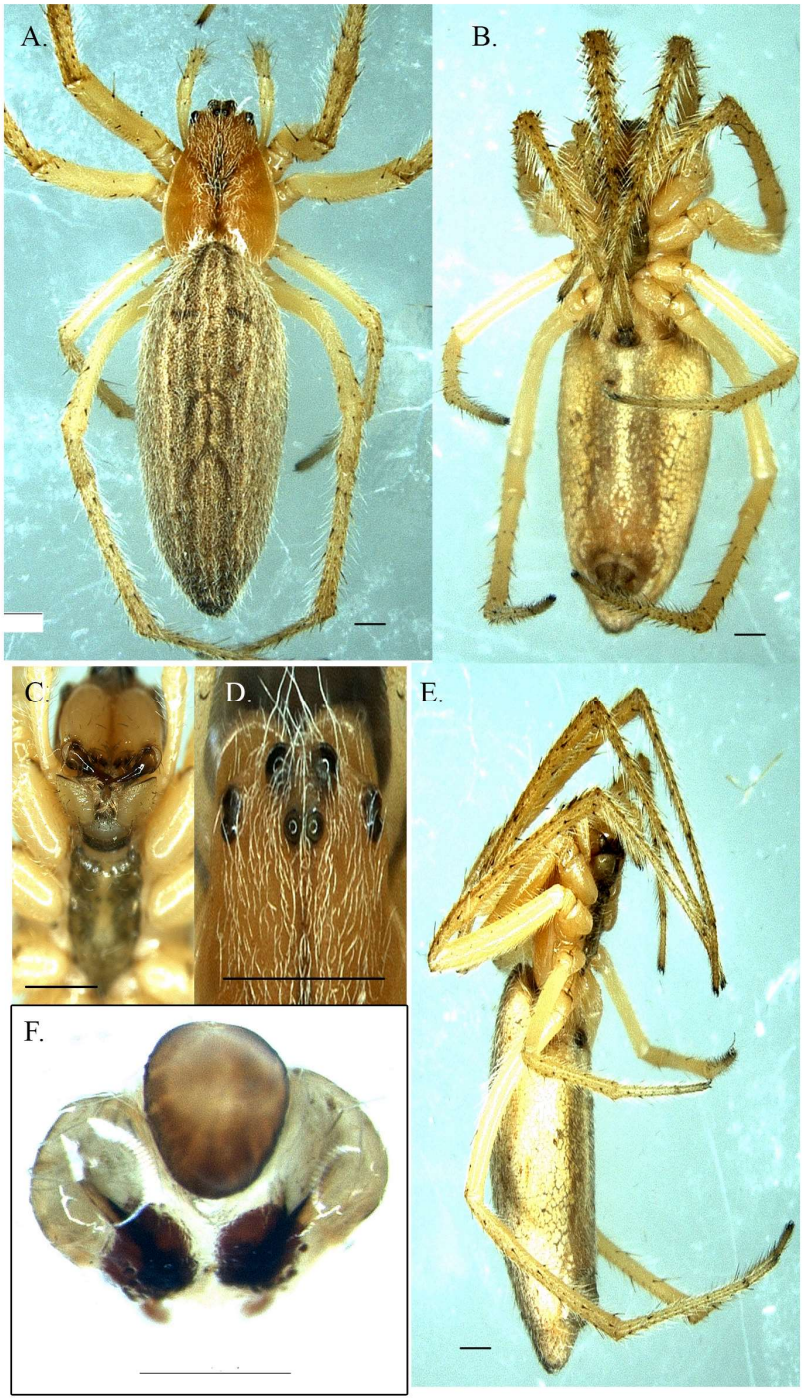
Eriovixia kachugaonensis Basumatary, Chanda, Das, Kalita, Brahma, Basumatary, Basumatary and Daimary, 2019: **A.** Habitus, dorsal view; **B.** Habitus, lateral view; **C.** Habitus, ventral view; **D.** Chelicerae, ventral view; **E.** Carapace, dorsal view; **F.** Epigyne, dorsal view; **G.** Epigyne, ventral view; **H.** Diagrammatic representation of epigyne, dorsal view; **I.** Diagrammatic representation of epigyne, ventral view. Scale bars = 2 mm (A, B, C), 1 mm (D, E), 0.5 mm (F, G, H, I).

PLATE 21



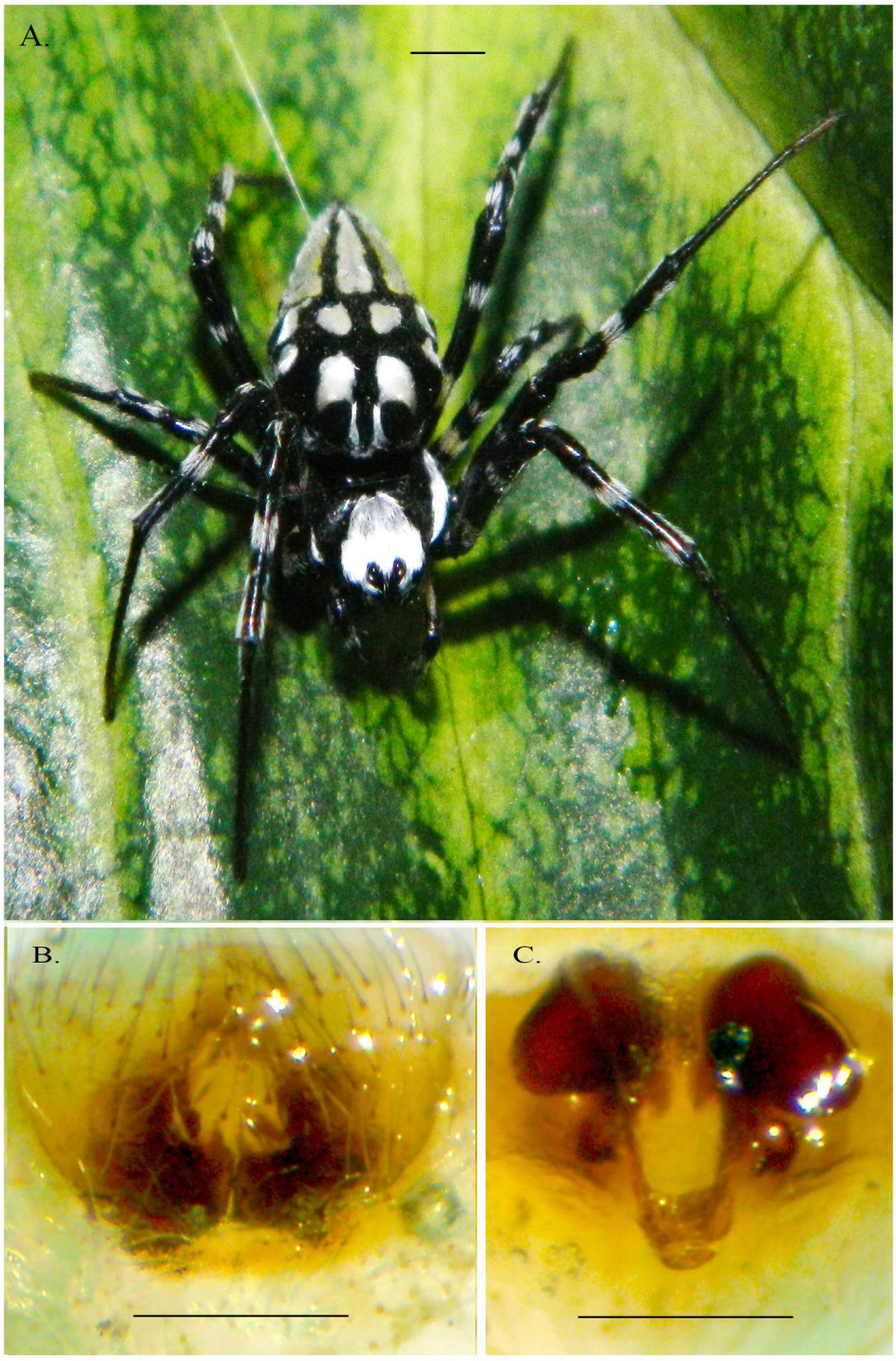
Herennia multipuncta (Doleschall, 1859): **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Eyes, frontal view; **D.** Chelicerae, ventral view; **E.** Sternum; **F.** Epigyne, dorsal view; **G.** Epigyne, dorsal view; **H.** Epigyne, ventral view; **I.** Diagrammatic representation of epigyne, dorsal view; **J.** Diagrammatic representation of epigyne, ventral view. Scale bars: 2 mm (A, B), 1 mm (C, D, E, F), 0.5 mm (G, H, I, J).

PLATE 22



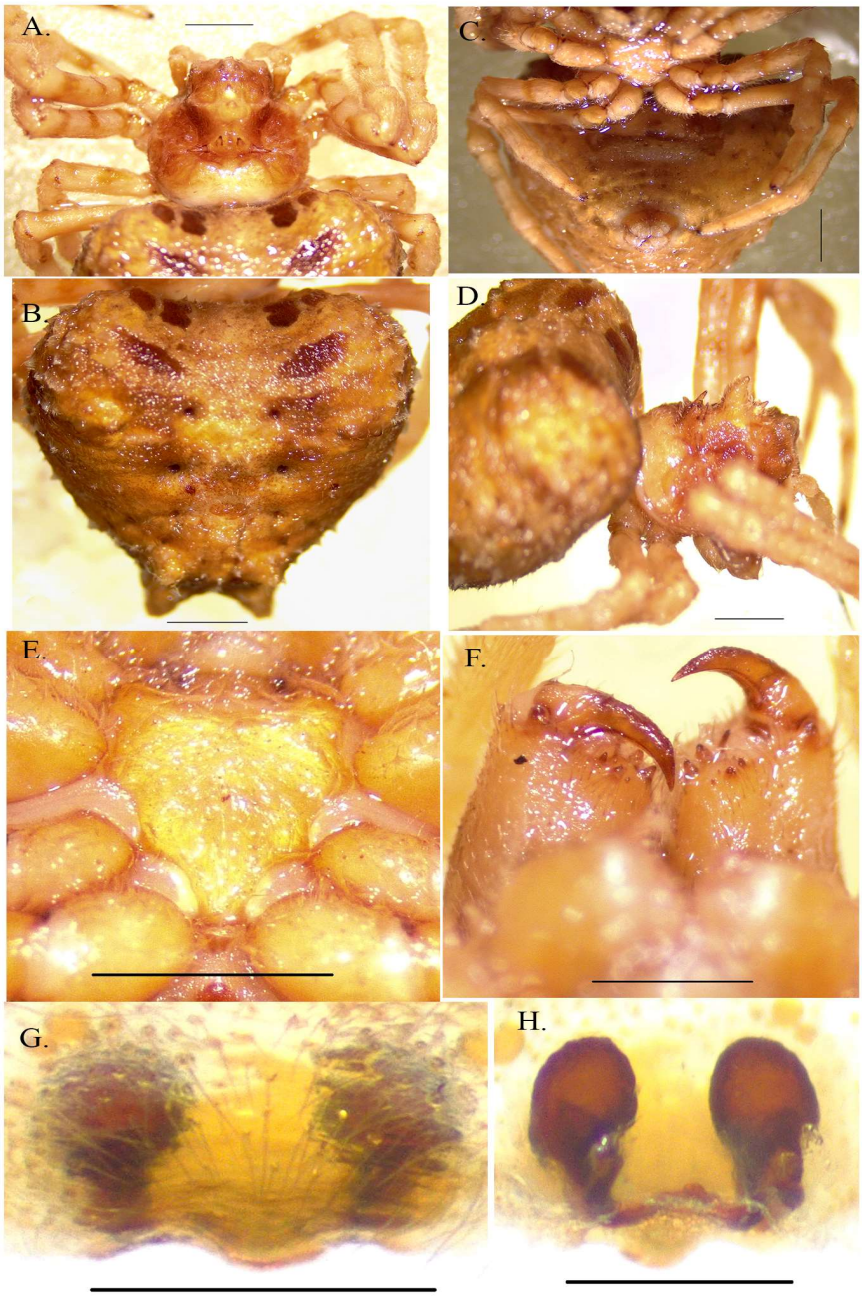
Larinia phthisica (L. Koch, 1871): **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Carapace, ventral view; **D.** Eyes, dorsal view; **E.** Habitus, lateral view; **F.** Epigyne, ventral view. Scale bars: 2 mm (A, B, E), 1 mm (C, D), 0.5 mm (F).

PLATE 23



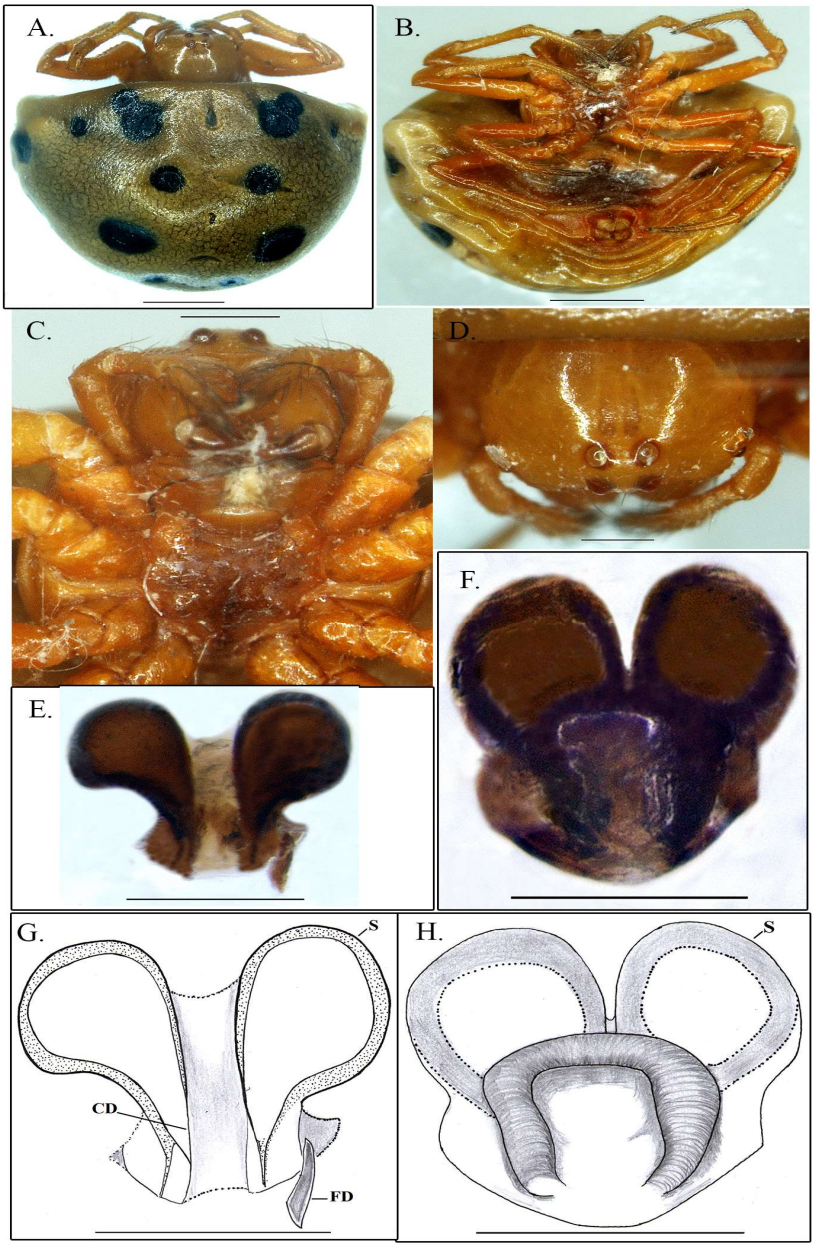
Neogea nocticolor (Thorell, 1887): **A.** Habitus, dorsal view; **B.** Epgiyne, dorsal view; **C.** Epigyne, ventral view. Scale bars: 2 mm (A), 0.5 mm (B, C).

PLATE 24



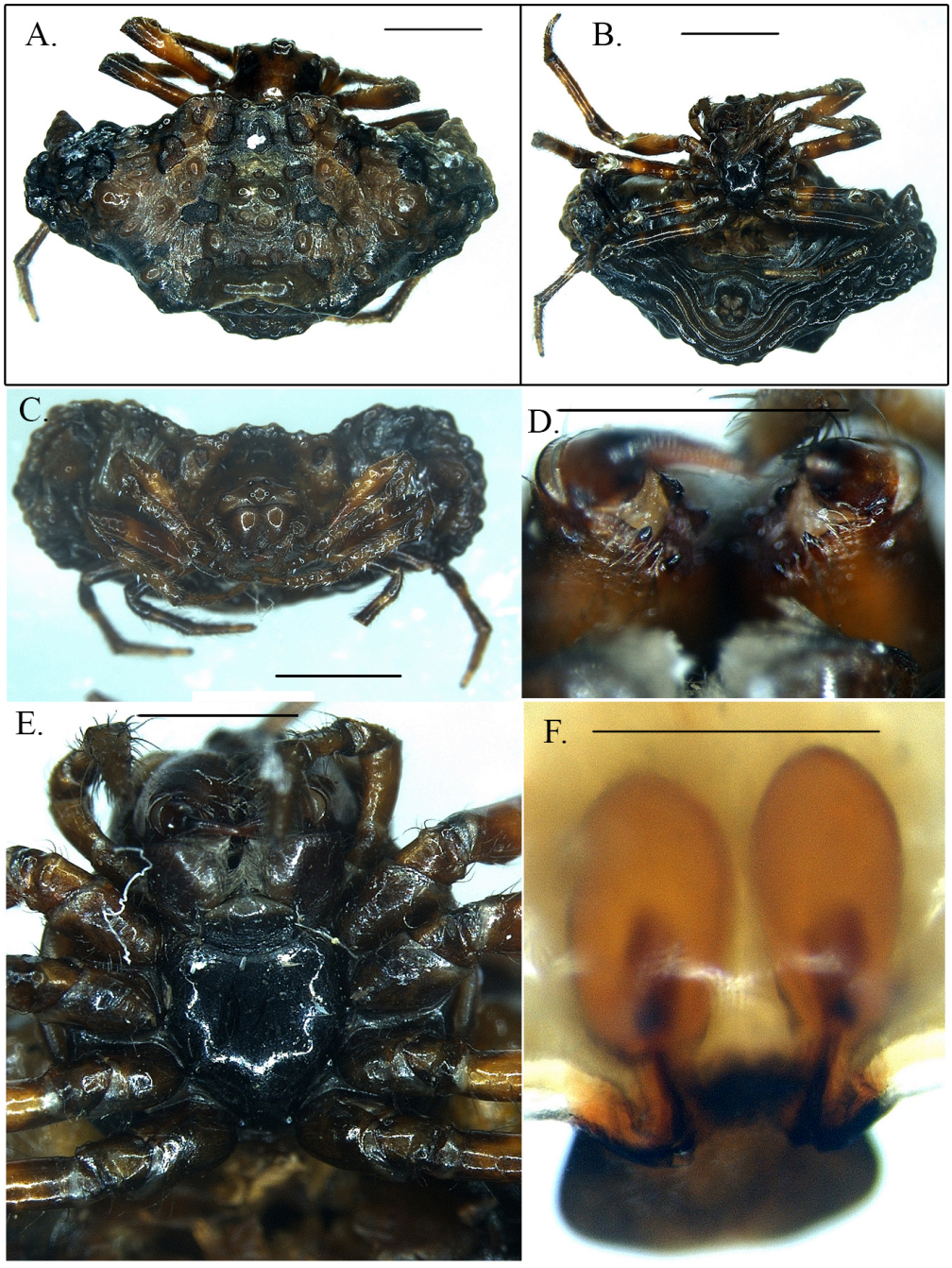
Ordgarius sexspinosus (Thorell, 1894): **A.** Carapace, dorsal view; **B.** Abdomen, ventral view; **C.** Abdomen, dorsal view; **D.** Abdomen, lateral view; **E.** Sternum; **F.** Chelicerae, ventral view; **G.** Epigyne, dorsal view; **H.** Epigyne, ventral view. Scale bars = 2 mm (A, B, C, D), 1 mm (E, F), 0.5 mm (G, H).

PLATE 25



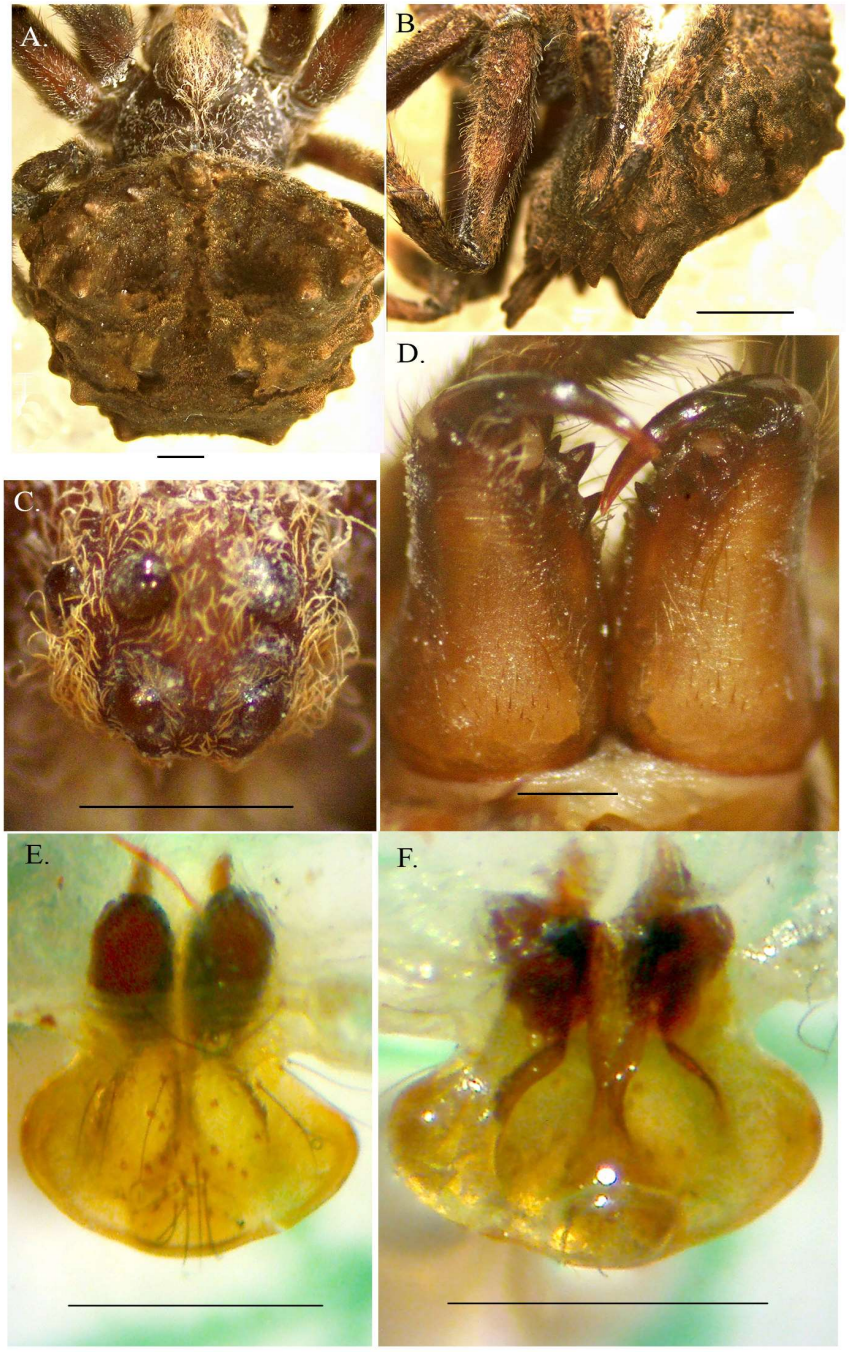
Paraplectana mamoniae Basumatary and Brahma, 2019: **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Carapace, ventral view; **D.** Carapace, dorsal view; **E.** Epigyne, ventral view; **F.** Epigyne, dorsal view; **G.** Diagrammatic representation of epigyne, ventral view; **H.** Diagrammatic representation of epigyne, dorsal view. Scale bars = 2 mm (A, B), 1 mm (C, D), 0.5 mm (E, F, G, H).

PLATE 26



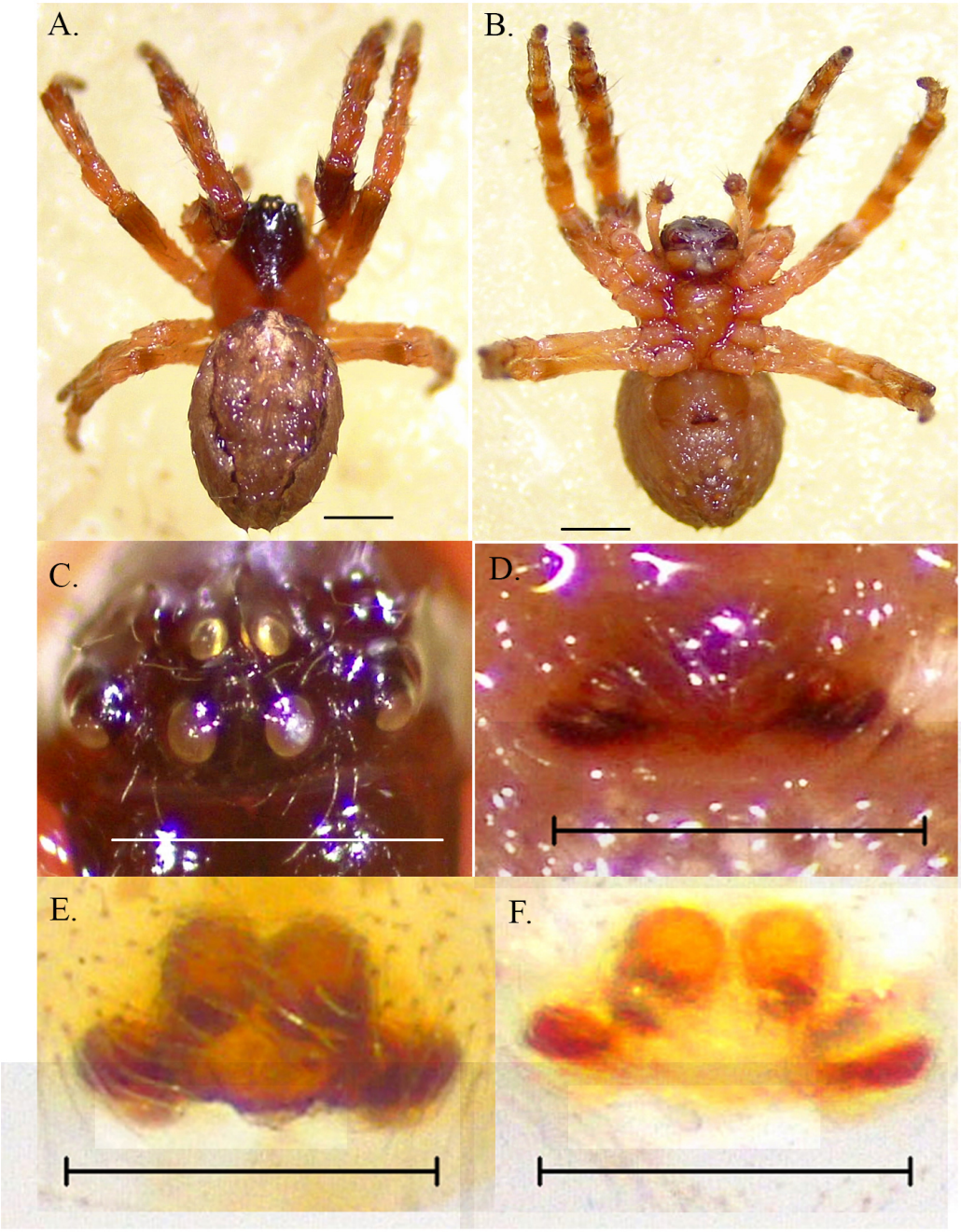
Pasilobus kotigeharus Tikader, 1963: **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Habitus, anterior view; **D.** Chelicerae, anterior view; **E.** Sternum, ventral view; **F.** Epigyne, ventral view. Scale bars = 2 mm (A, B, C), 1 mm (D, E), 0.5 mm (F).

PLATE 27



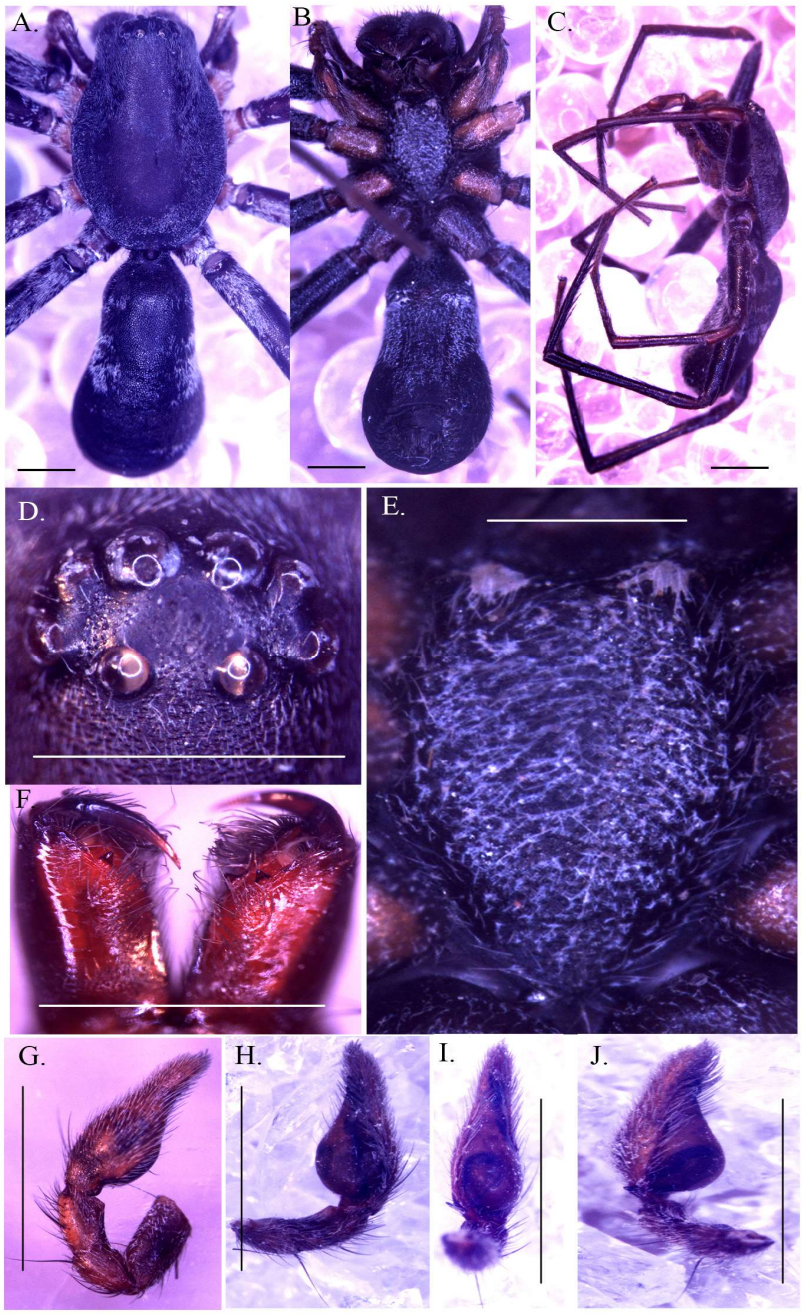
Poltys illepidus C. L. Koch, 1843: **A.** Habitus, dorsal view; **B.** Habitus, lateral view; **C.** Eye, anterior view; **D.** Chelicerae, ventral view; **E.** Epigyne, dorsal view; **F.** Epigyne, ventral view. Scale bars = 2 mm (A, B), 1 mm (C, D), 0.5 mm (E, F).

PLATE 28



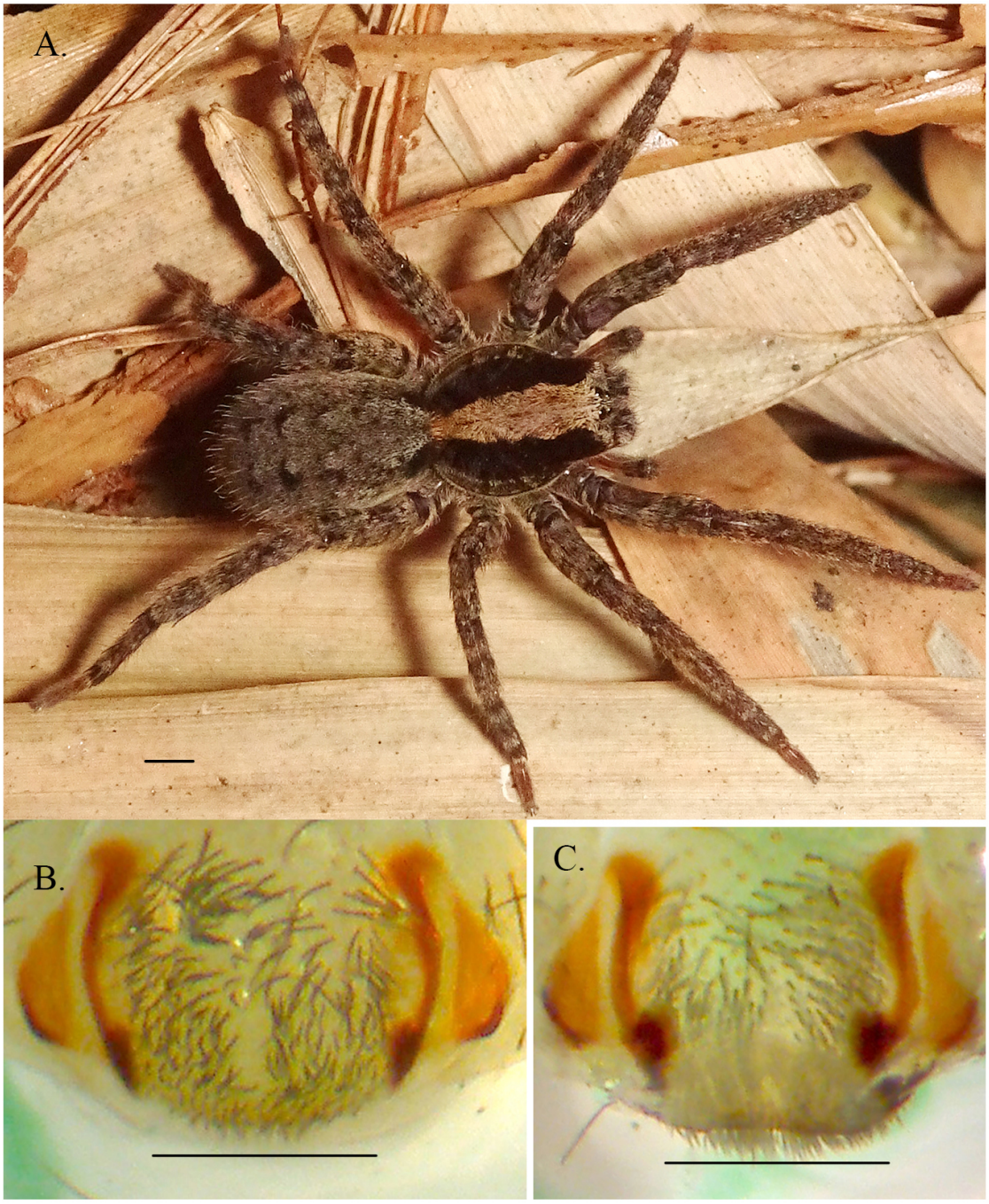
Guizygiella indica (Tikader and Bal, 1980): **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Eyes, frontal view; **D.** Epigyne, dorsal view; **E.** Epgiyne, dorsal view; **F.** Epigyne, ventral view. Scale bars: 2 mm (A, B), 1 mm (C), 0.5 mm (D, E).

PLATE 29



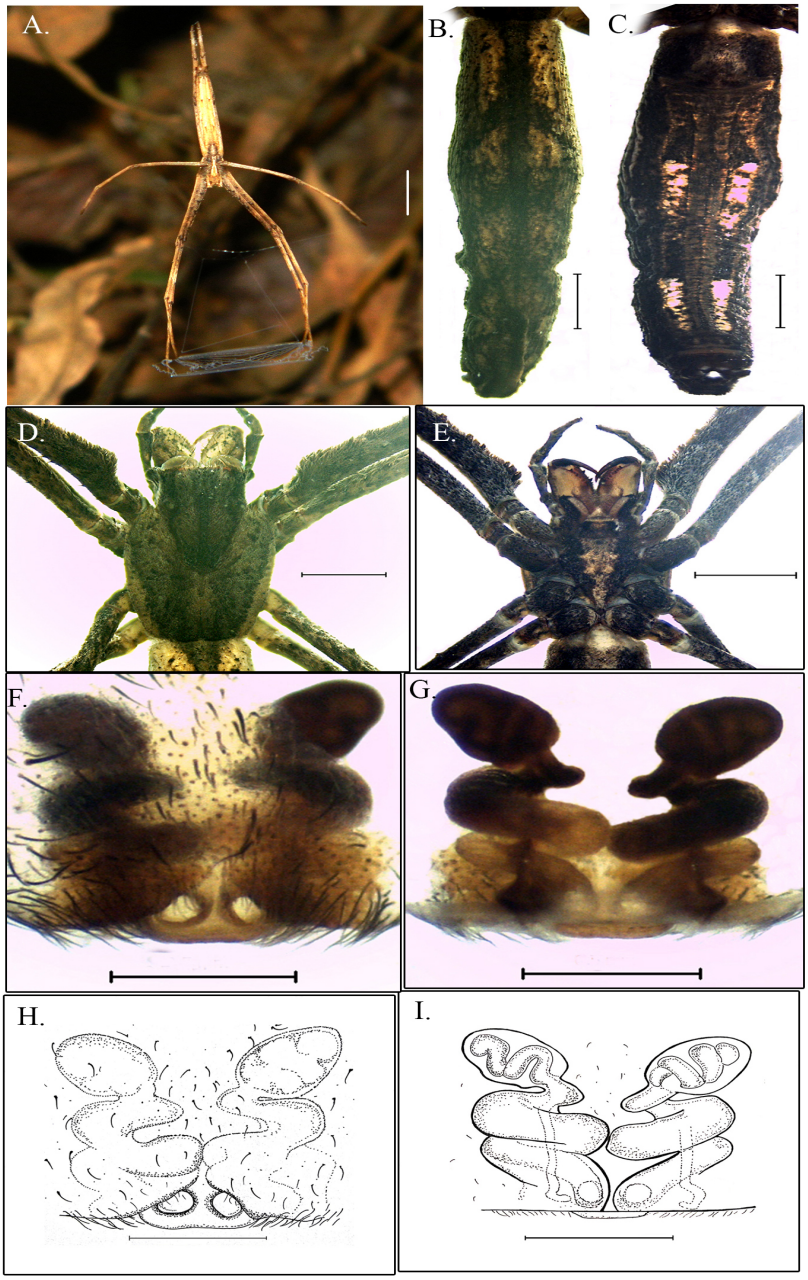
Corinnomma severum (Thorell, 1877): **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Habitus, lateral view; **D.** Eyes, frontal view; **E.** Sternum; **F.** Chelicerae, ventral view; **G.** Palp, dorsal view; **H.** Palp, lateral view; **I.** Palp, ventral view; **J.** Palp, dorsolateral view. Scale bars = 2 mm (A, B, C), 1 mm (D, E, F), 0.5 mm (G, H, I, J).

PLATE 30



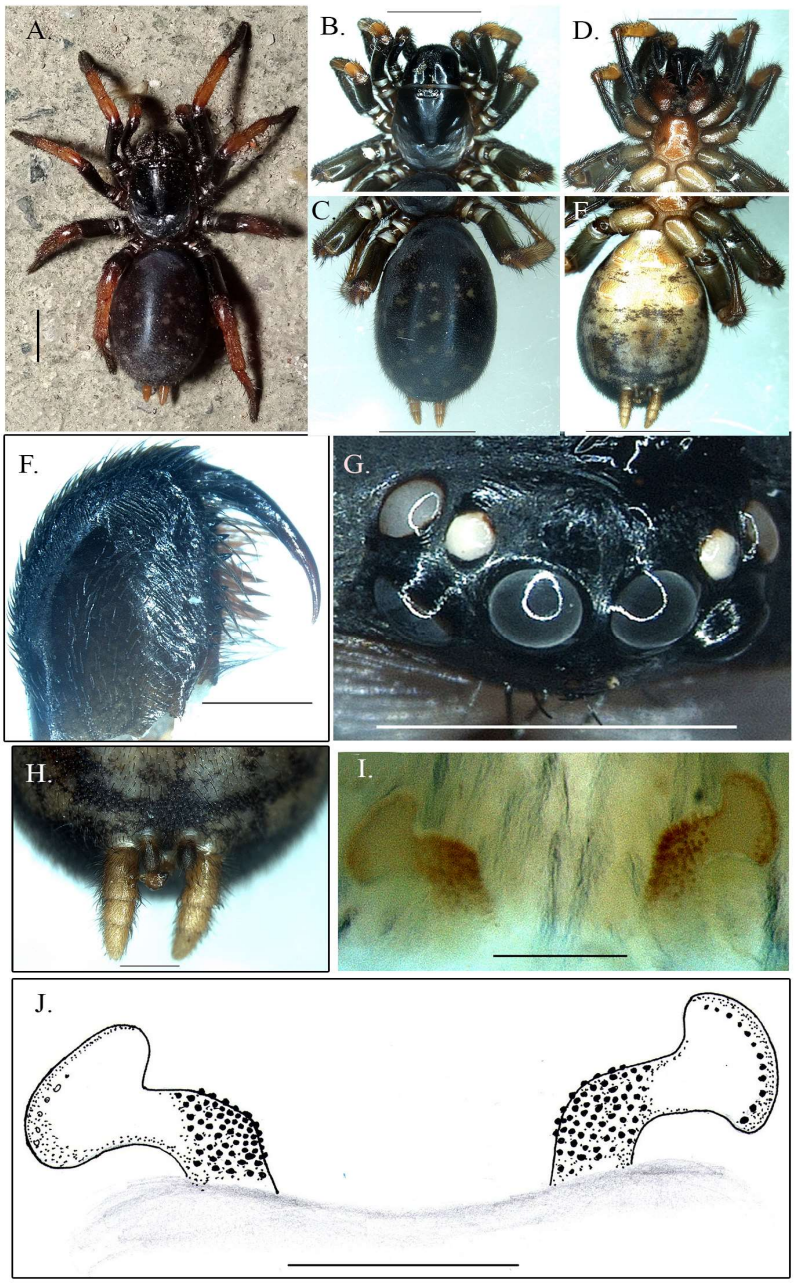
Bowie sikkimensis (Gravely, 1931): **A.** Habitus, dorsal view; **B.** Epigyne, dorsal view; **C.** Epigyne, ventral view. Scale bars: 2 mm (A), 0.5 mm (B, C).

PLATE 31



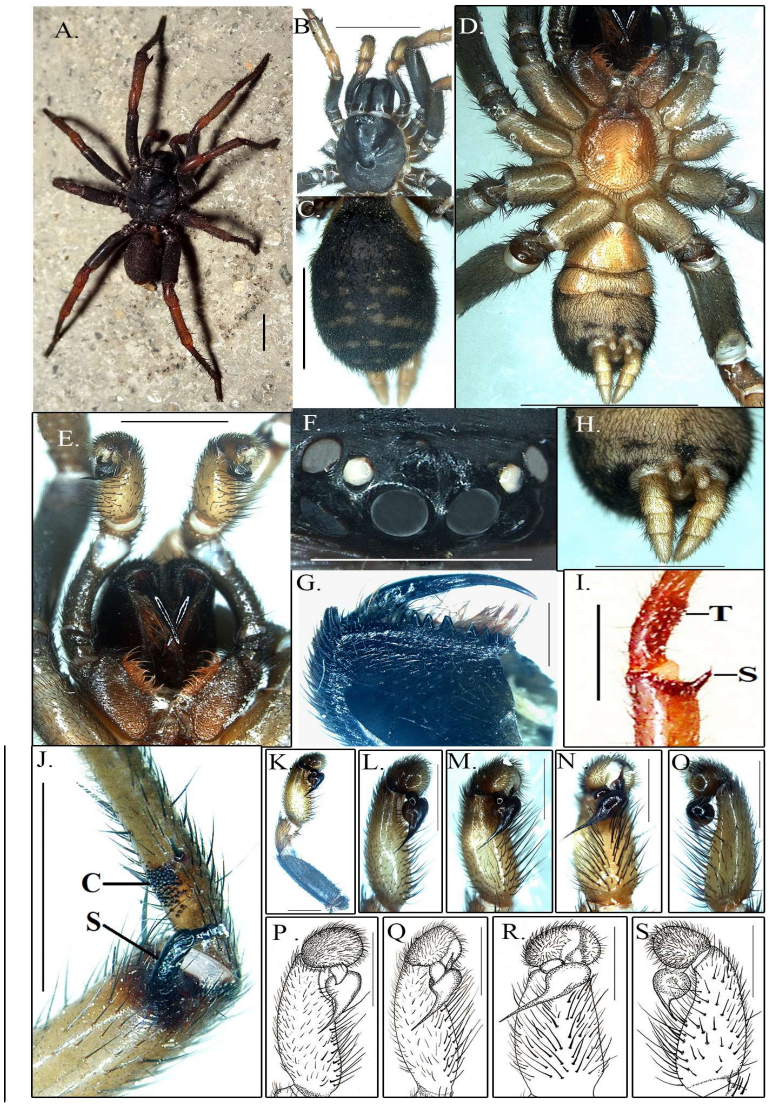
Asianopis goalparaensis (Tikader and Malhotra, 1978): **A.** Habitus, ventral view; **B.** Habitus, dorsal view; **C.** Habitus, ventral view; **D.** Carapace, dorsal view; **E.** Carapace, ventral view; **F.** Epigyne, dorsal view; **G.** Epigyne, ventral view; **H.** Diagrammatic representation of epigyne, dorsal view; **I.** Diagrammatic representation of epigyne, ventral view. Scale bars = 5 mm (A, B, C), 2 mm (D, E), 1 mm (F, G, H, I).

PLATE 32



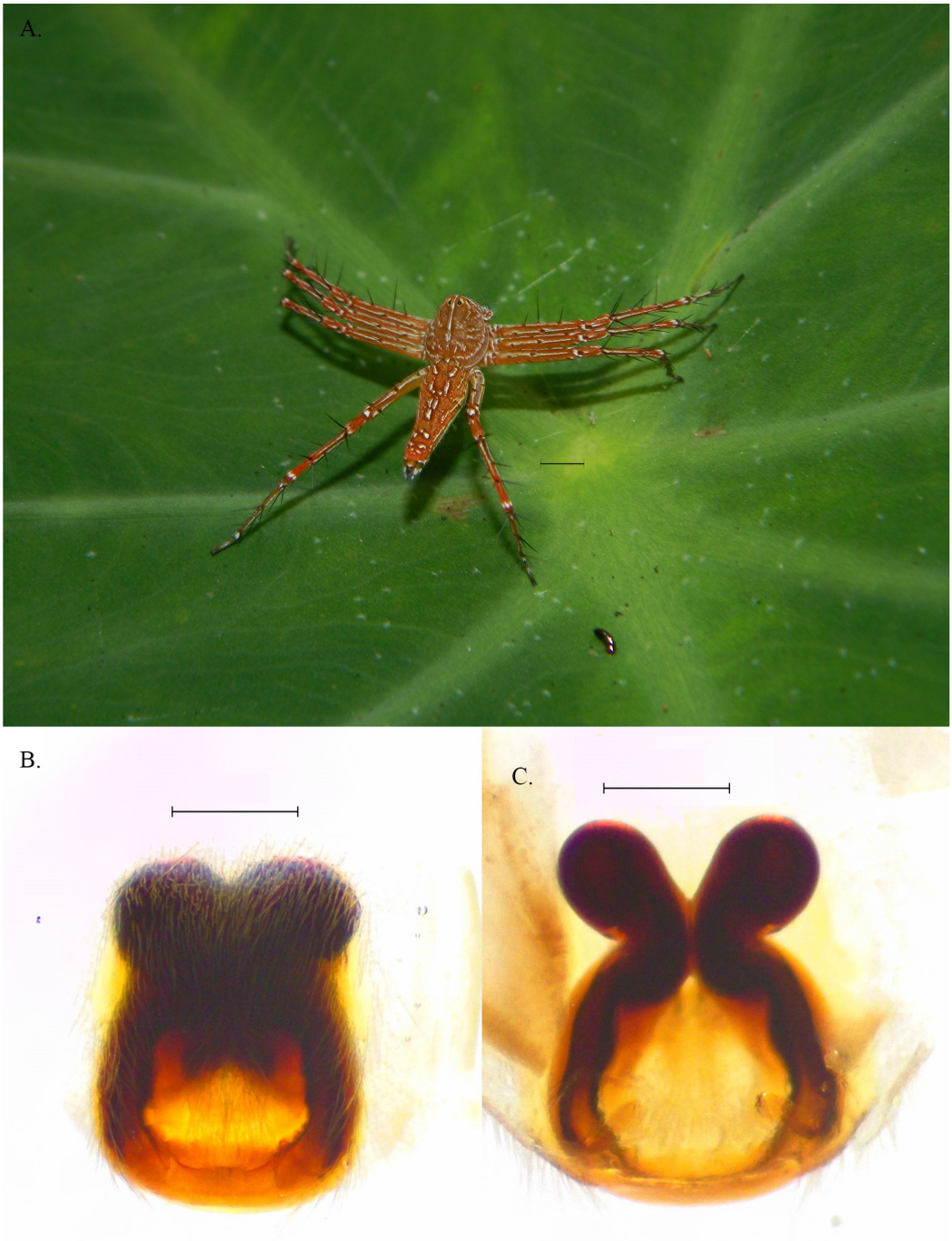
Gravelyia boro Basumatary and Brahma, 2021: **A.** Habitus, dorsal view; **B.** Carapace, dorsal view; **C.** Abdomen, ventral view; **D.** Carapace, dorsal view; **E.** Carapace, ventral view; **F.** Chelicerae, lateral view; **G.** Eyes, frontal view; **H.** Spinnerets, ventral view; **I.** Epigyne, ventral view; **J.** Diagrammatic representation of epigyne, ventral view. Scale bars = 5 mm (A, B, C, D, E), 2 mm (G), 1 mm (F, H), 0.2 mm (I, J).

PLATE 33



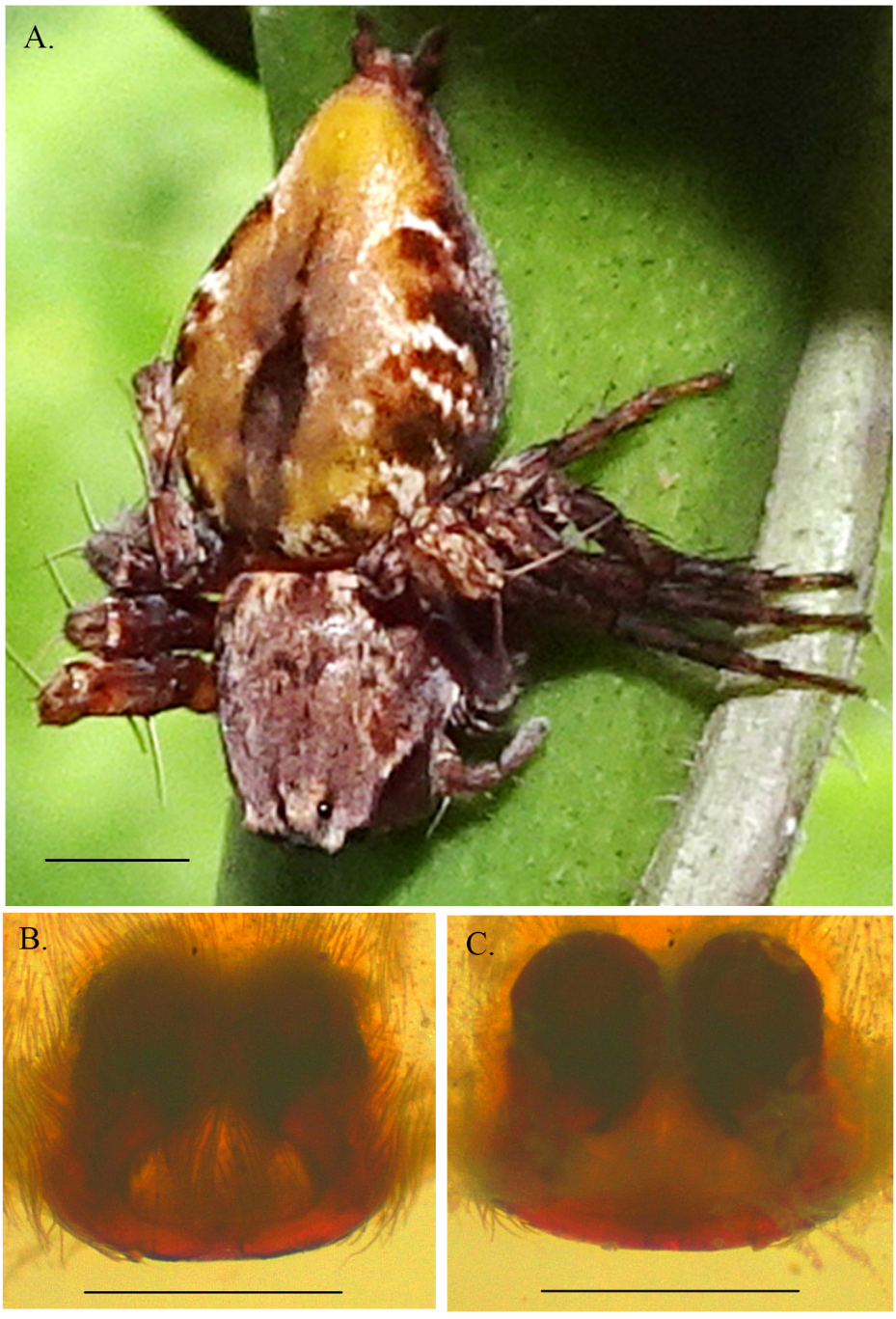
Gravelyia boro Basumatary and Brahma, 2021: **A.** Habitus, dorsal view; **B.** Carapace, dorsal view; **C.** Abdomen, ventral view; **D.** Habitus, ventral view; **E.** Male maxillae, labium and palp, ventral view; **F.** Eyes, frontal view; **G.** Chelicerae, prolateral view; **H.** Spinnerets; **I.** male tibia and metatarsus I, prolateral view, (S – Spur, T – Tubercle); **J.** Male tibia and metatarsus I, prolateral view, (S – Spur, C – Cuspules); **K.** Whole male palp, retrolateral view; **L.** Male palp, ventral view; **M.** Male palp, retrolateral view; **N.** Male palp, prolateral view; **O.** Male palp, dorsal view; **P.** Diagrammatic representation of male palp, dorsal view; **Q.** Diagrammatic representation of male palp, retrolateral view; **R.** Diagrammatic representation of male palp, prolateral view; **S.** Diagrammatic representation of male palp, dorsal view. Scale bars = 5 mm (A, B, C, D), 2 mm (E, F, J, K), 1 mm (L, M, N, O, P, Q, R, S).

PLATE 34



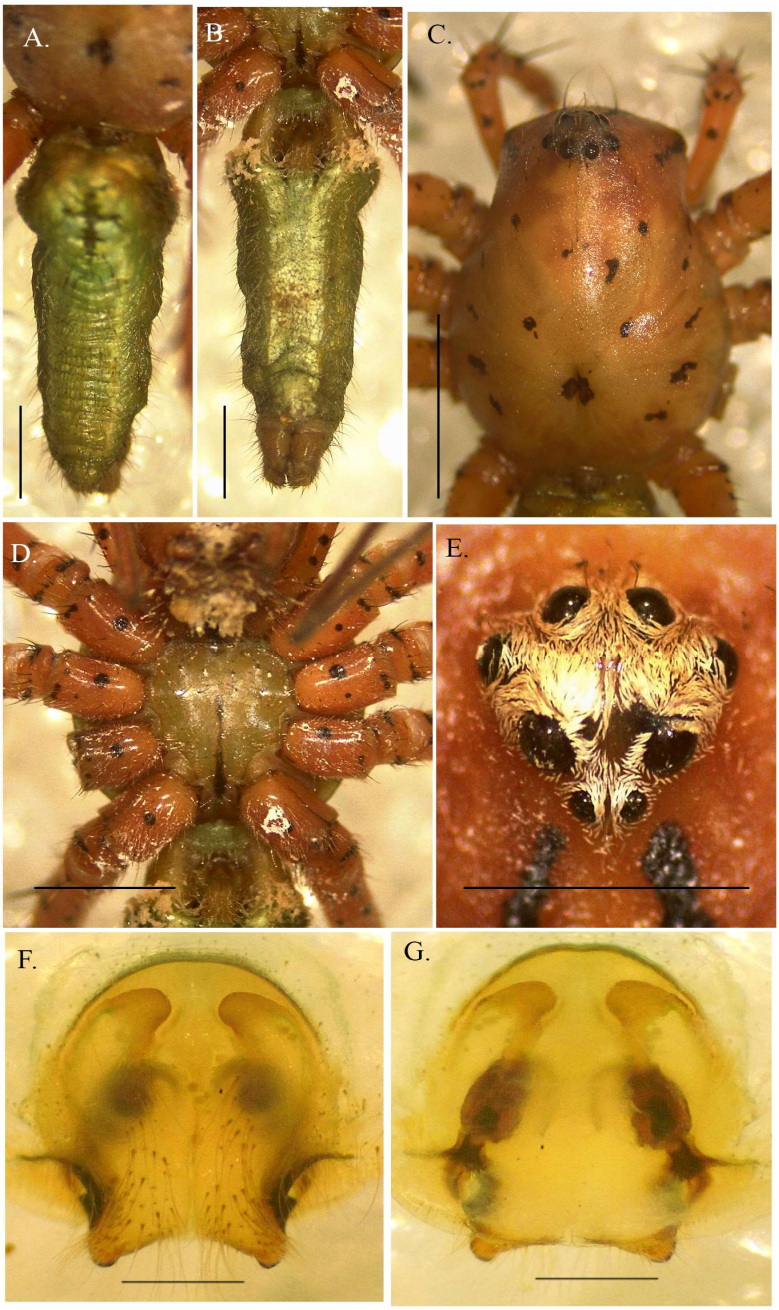
Hamadruas sikkimensis (Tikader, 1970): A. Habitus, dorsal view; B. Epigyne, dorsal view; C. Epigyne, ventral view. Scale bars = 2 mm (A), 0.5 mm (B, C).

PLATE 35



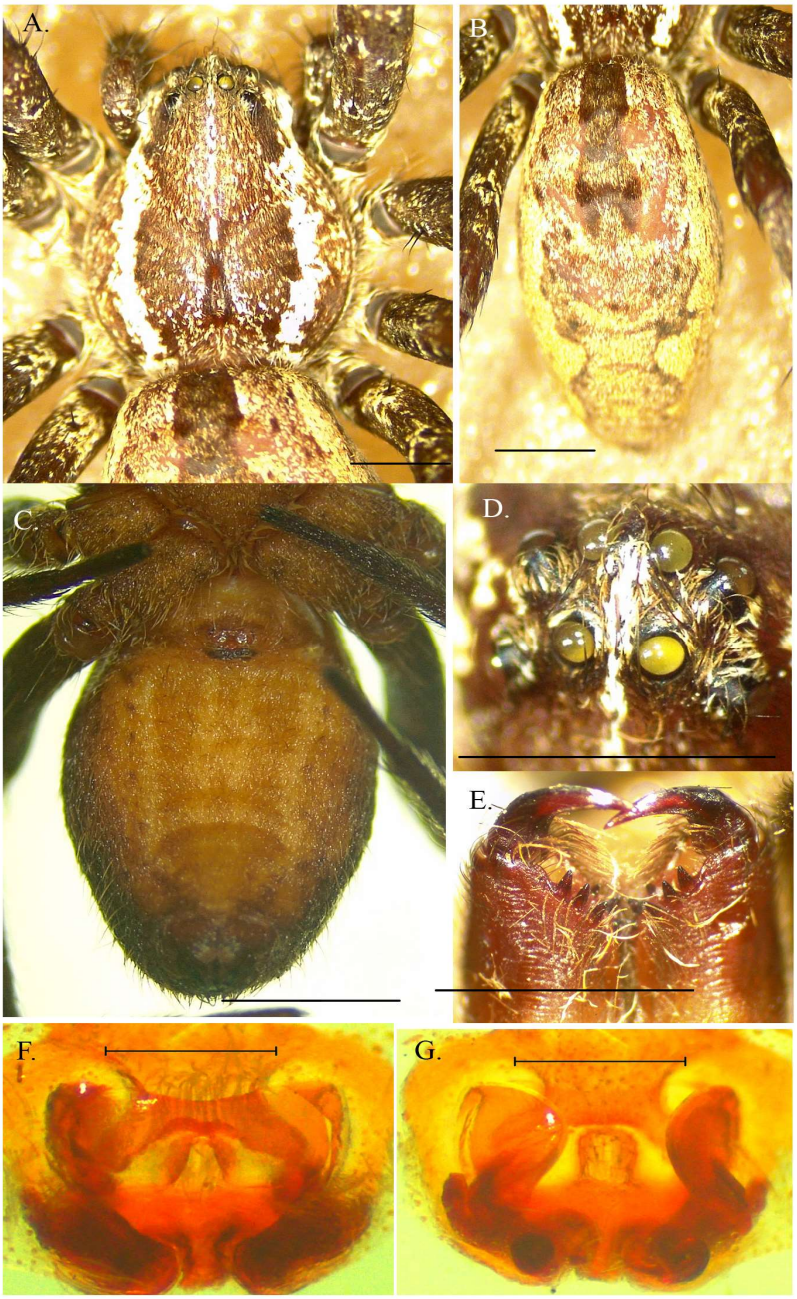
Hamataliwa pentagona Tang and Li, 2012: **A.** Habitus, dorsal view; **B.** Epigyne, dorsal view; **C.** Epigyne, ventral view. Scale bars = 2 mm (A), 0.5 mm (B, C).

PLATE 36



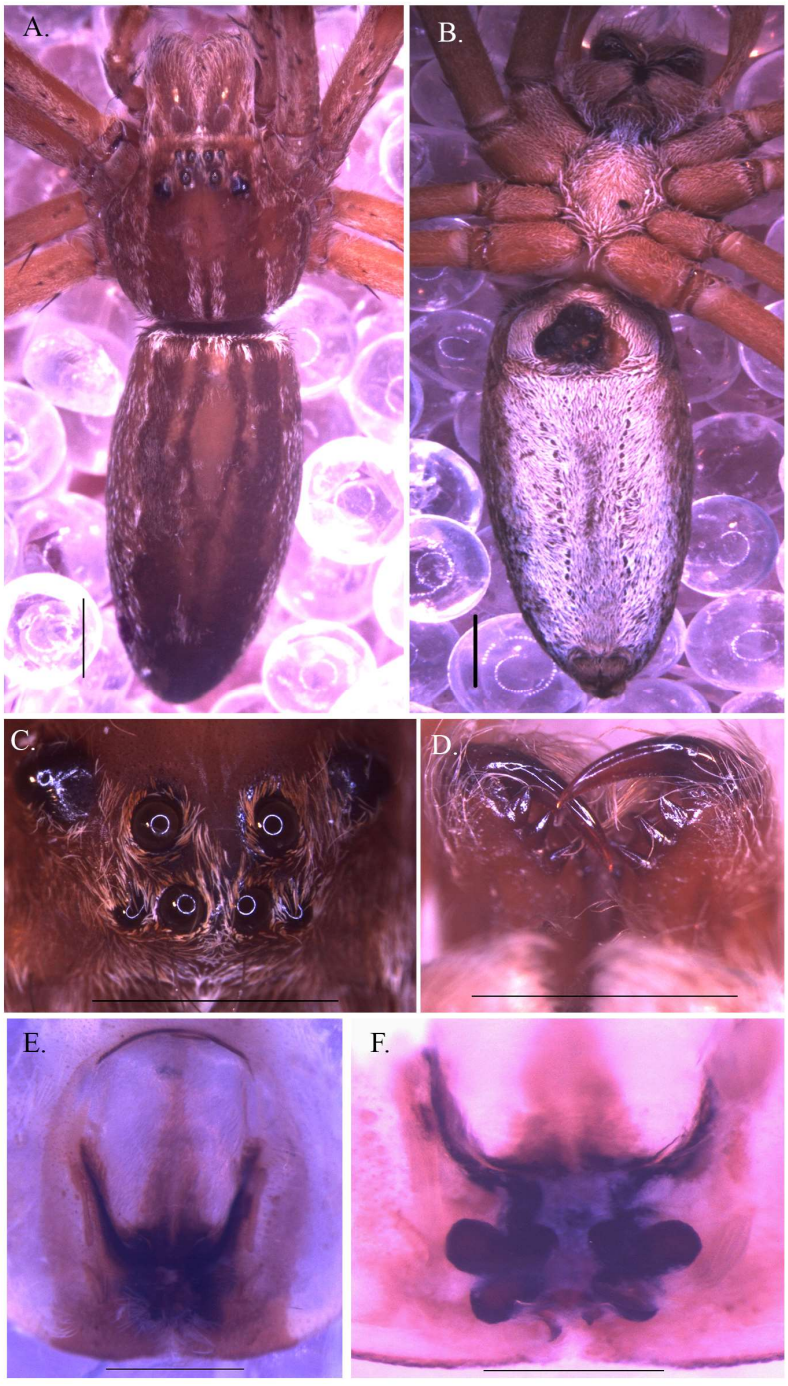
Peucetia latikae Tikader, 1970: **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Carapace, dorsal view; **D.** Carapace, ventral view; **E.** Eyes, frontal view; **F.** Epigyne, dorsal view; **G.** Epigyne, ventral view. Scale bars = 5 mm (A, B), 2 mm (C, D), 1 mm (E), 0.5 mm (F, G).

PLATE 37



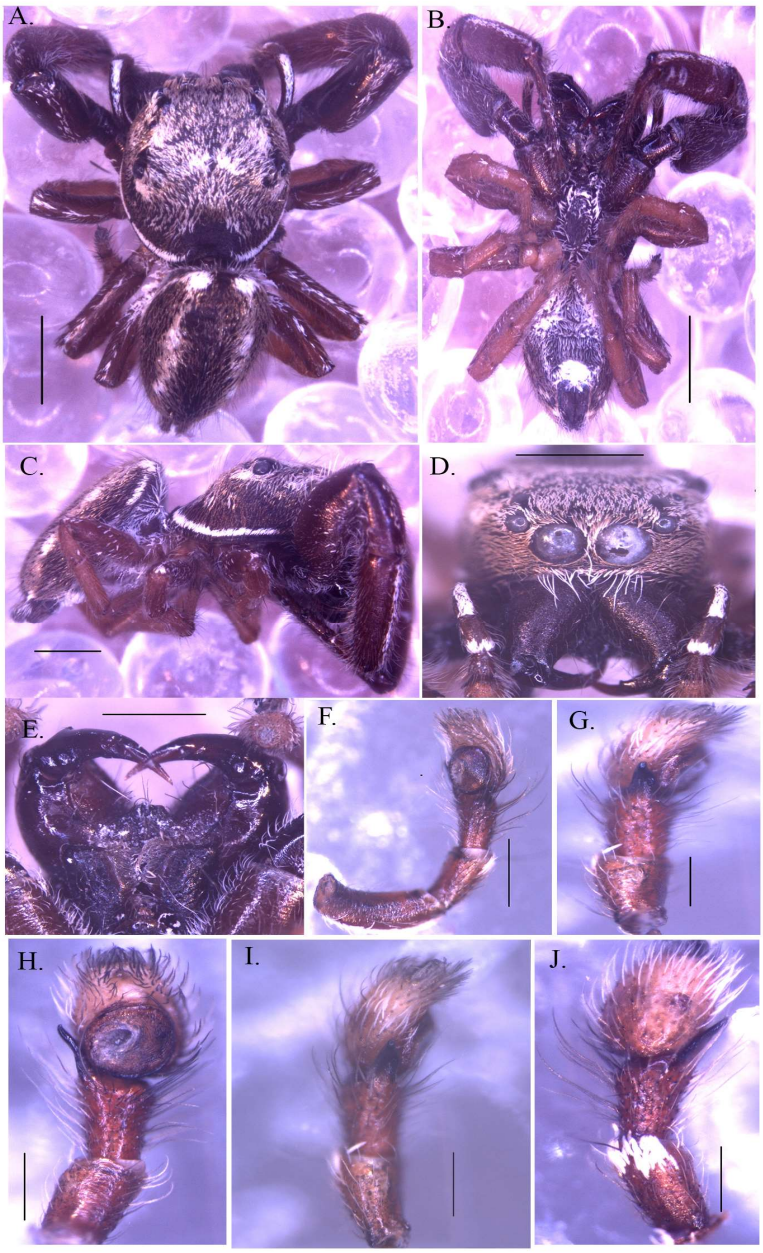
Dendrolycosa songi (Zhang, 2000): **A.** Carapace, dorsal view; **B.** Abdomen, dorsal view; **C.** Abdomen, ventral view; **D.** Eyes, frontal view; **E.** Chelicerae, ventral view; **F.** Epigyne, dorsal view; **G.** Epigyne, ventral view. Scale bars = 5 mm (A, B, C), 2 mm (D, E), 1 mm (F, G).

PLATE 38



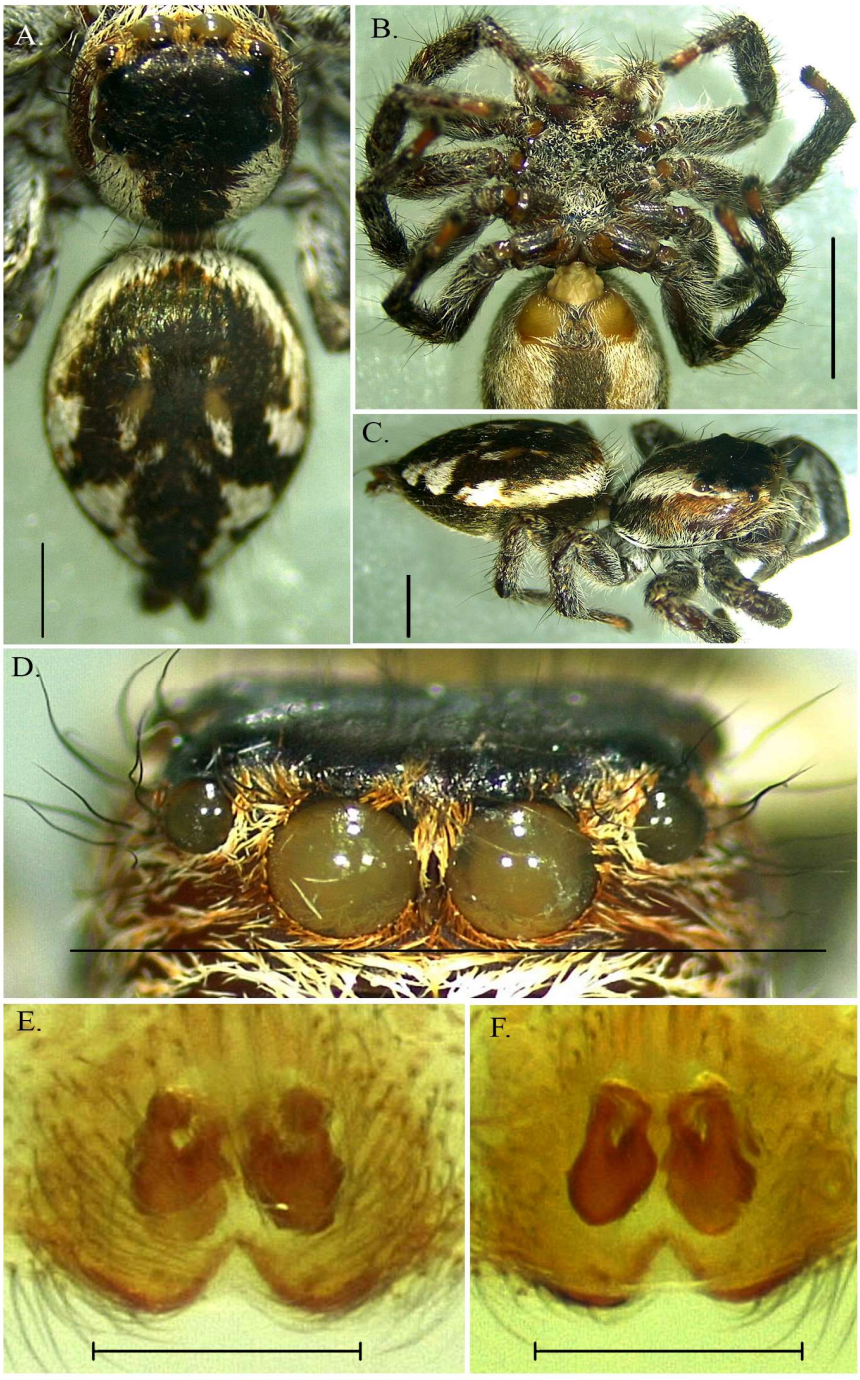
Hygropoda higenaga (Kishida, 1936): **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Eyes, frontal view; **D.** Chelicerae, ventral view; **E.** Epigyne, dorsal view; **F.** Epigyne, ventral view. Scale bars = 5 mm (A, B), 2 mm (C, D), 1 mm (E, F).

PLATE 39



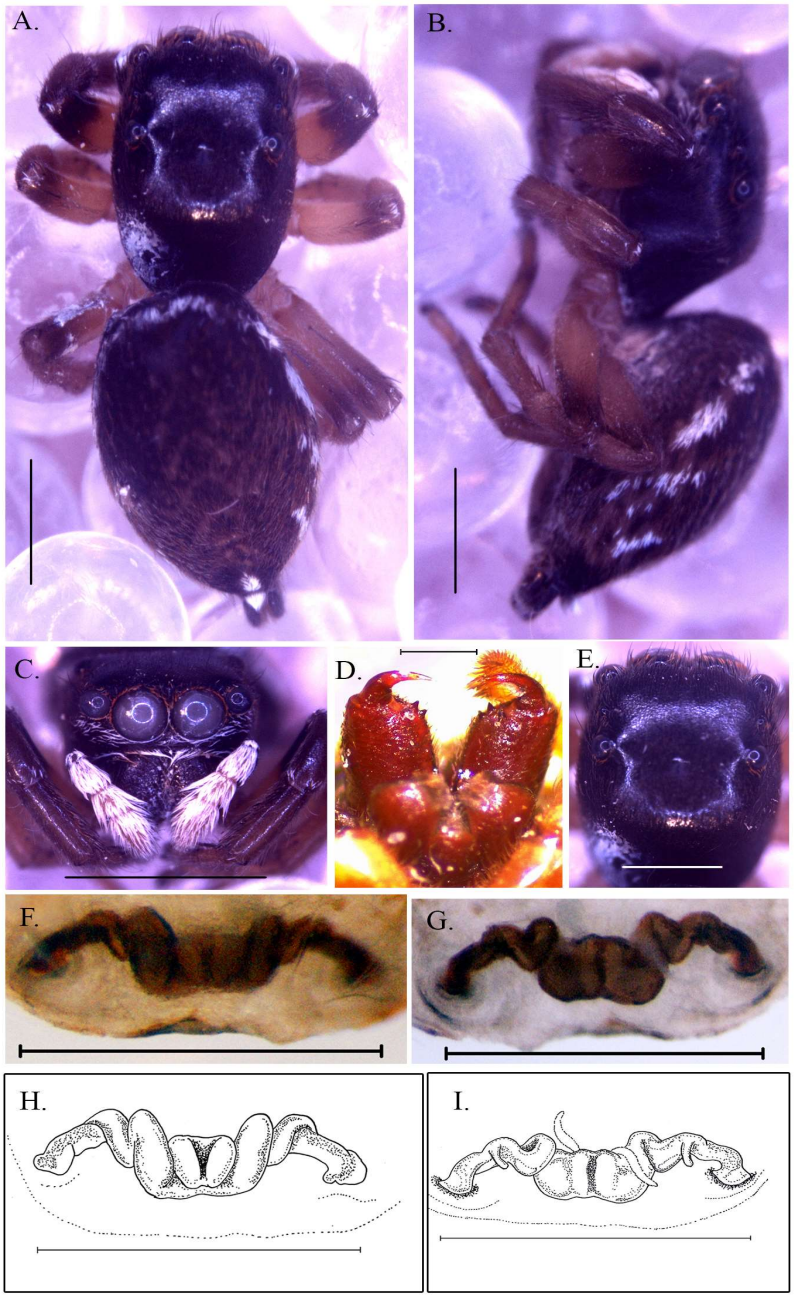
Bianor angulosus (Karsch, 1879): **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Habitus, lateral view; **D.** Eyes, frontal view; **E.** Chelicerae, ventral view; **F.** Femora, patella, tibia of male palp; **G.** Palp, retrolateral view; **H.** Palp, ventral view; **I.** Palp, lateral view; **J.** Palp, dorsal view. Scale bars = 2 mm (A, B, C), 1 mm (D, E, F), 0.5 mm (G, H, I, J).

PLATE 40



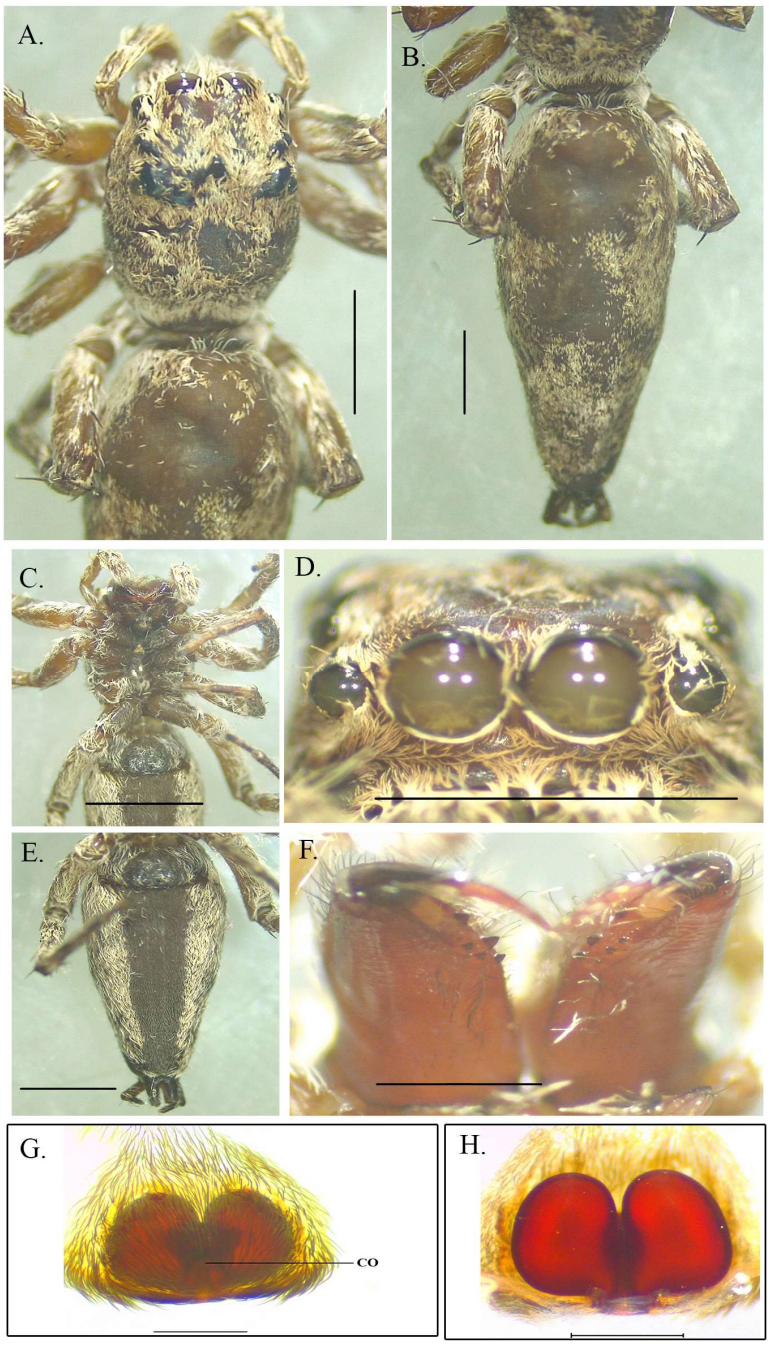
Carrhotus viduus (CL Koch, 1846): **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Habitus, lateral view; **D.** Eyes, frontal view; **E.** Epigyne, dorsal view; **F.** Epigyne, ventral view. Scale bars = 2 mm (A, B, C), 1 mm (D), 0.5 mm (E, F).

PLATE 41



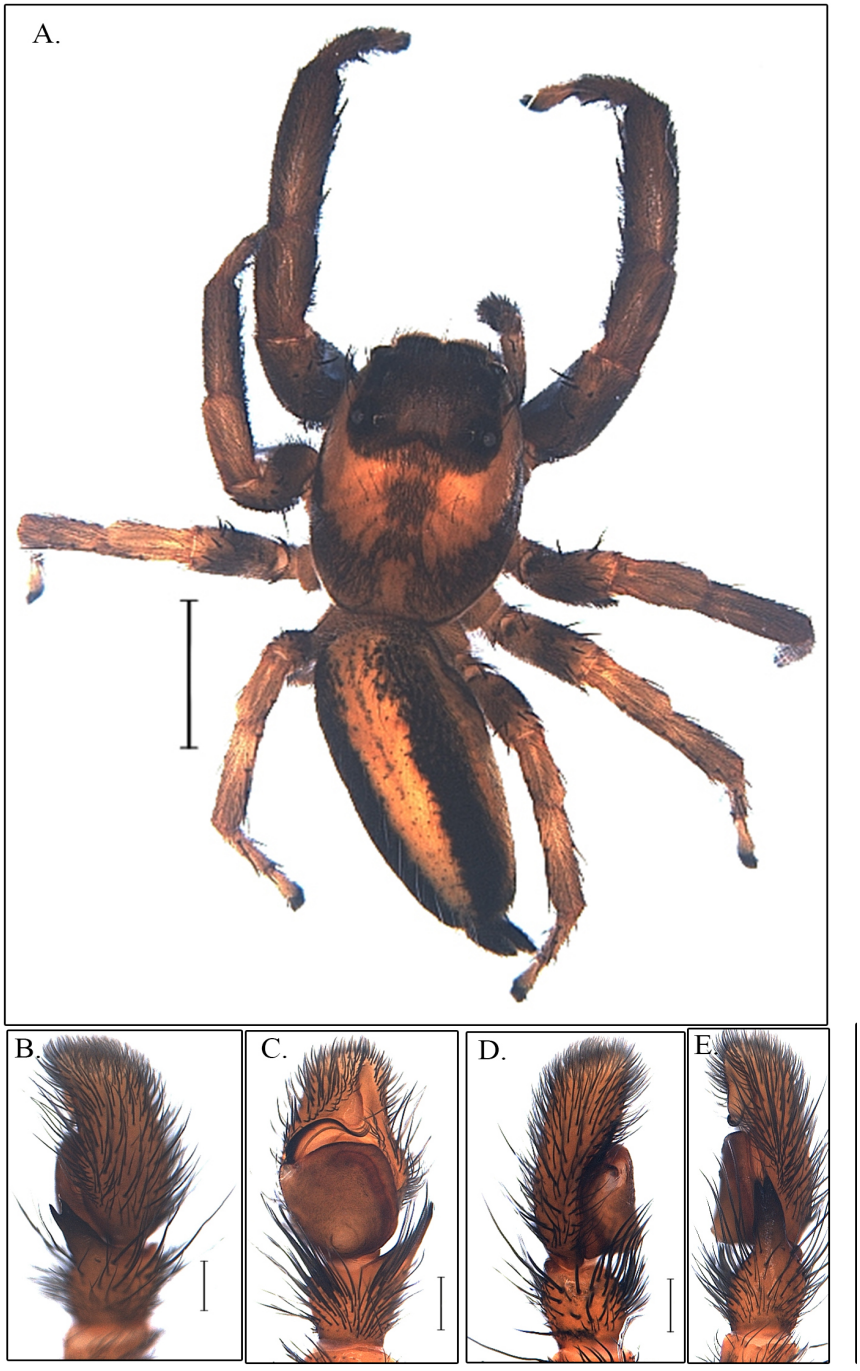
Chinattus prabodhi Basumatary, Das, Caleb and Brahma, 2020: **A.** Habitus, dorsal view; **B.** Habitus, lateral view; **C.** Eye, frontal view; **D.** Chelicerae, ventral view; **E.** Carapace, dorsal view; **F.** Epigyne, dorsal view; **G.** Epigyne, ventral view; **H.** Diagrammatic representation of epigyne, dorsal view; **I.** Diagrammatic representation of epigyne, ventral view. Scale bars = 2 mm (A, B), 1 mm (C, D, E), 0.5 mm (F, G, H, I).

PLATE 42



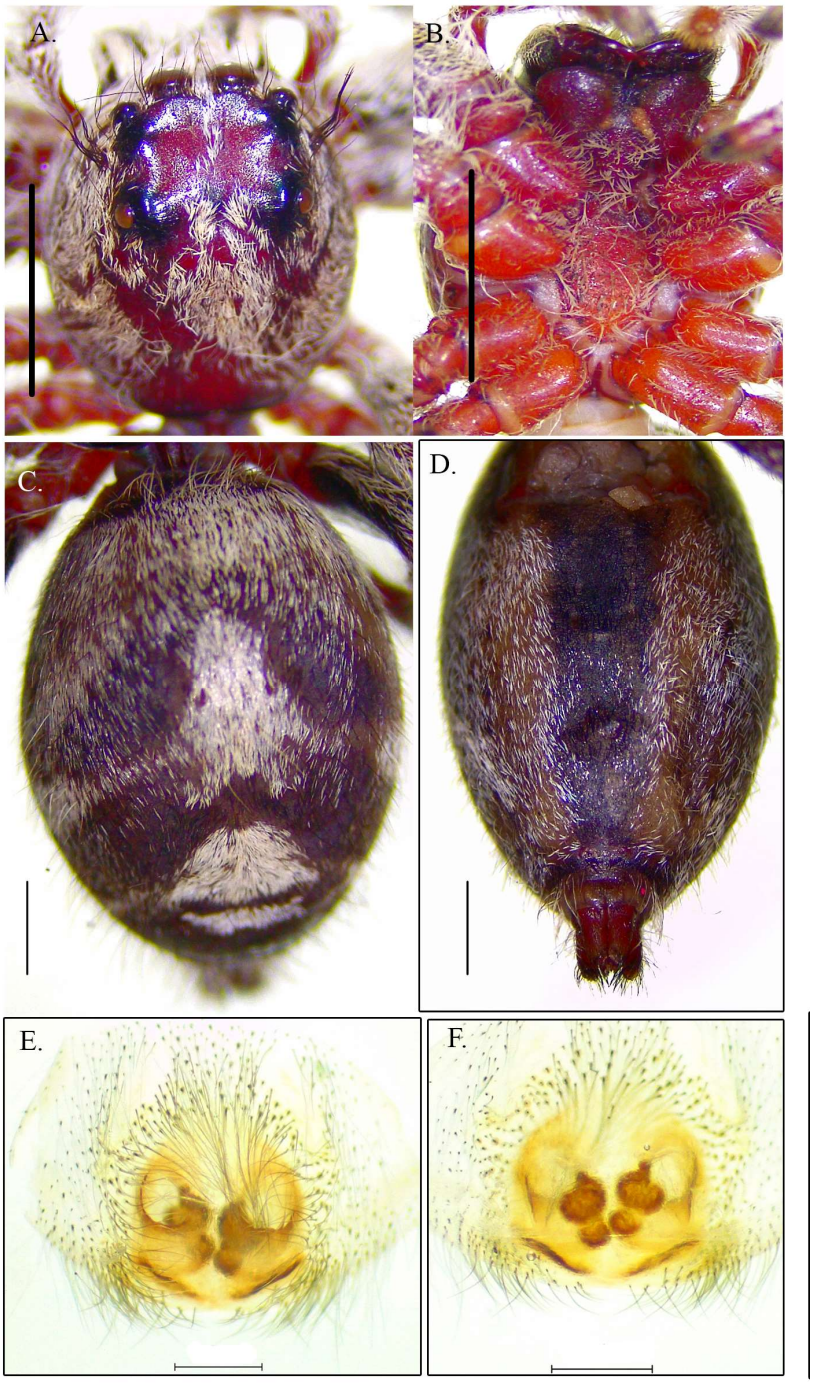
Cocalus murinus Simon, 1899: **A.** Carapace, dorsal view; **B.** Abdomen, dorsal view; **C.** Carapace, ventral view; **D.** Eyes, frontal view; **E.** Abdomen, ventral view; **F.** Chelicerae, ventral view; **G.** Epigyne, dorsal view; **H.** Epigyne, ventral view. Scale bars = 2 mm (A, B, C, E), 1 mm (D, F), 0.5 mm (G, H).

PLATE 43



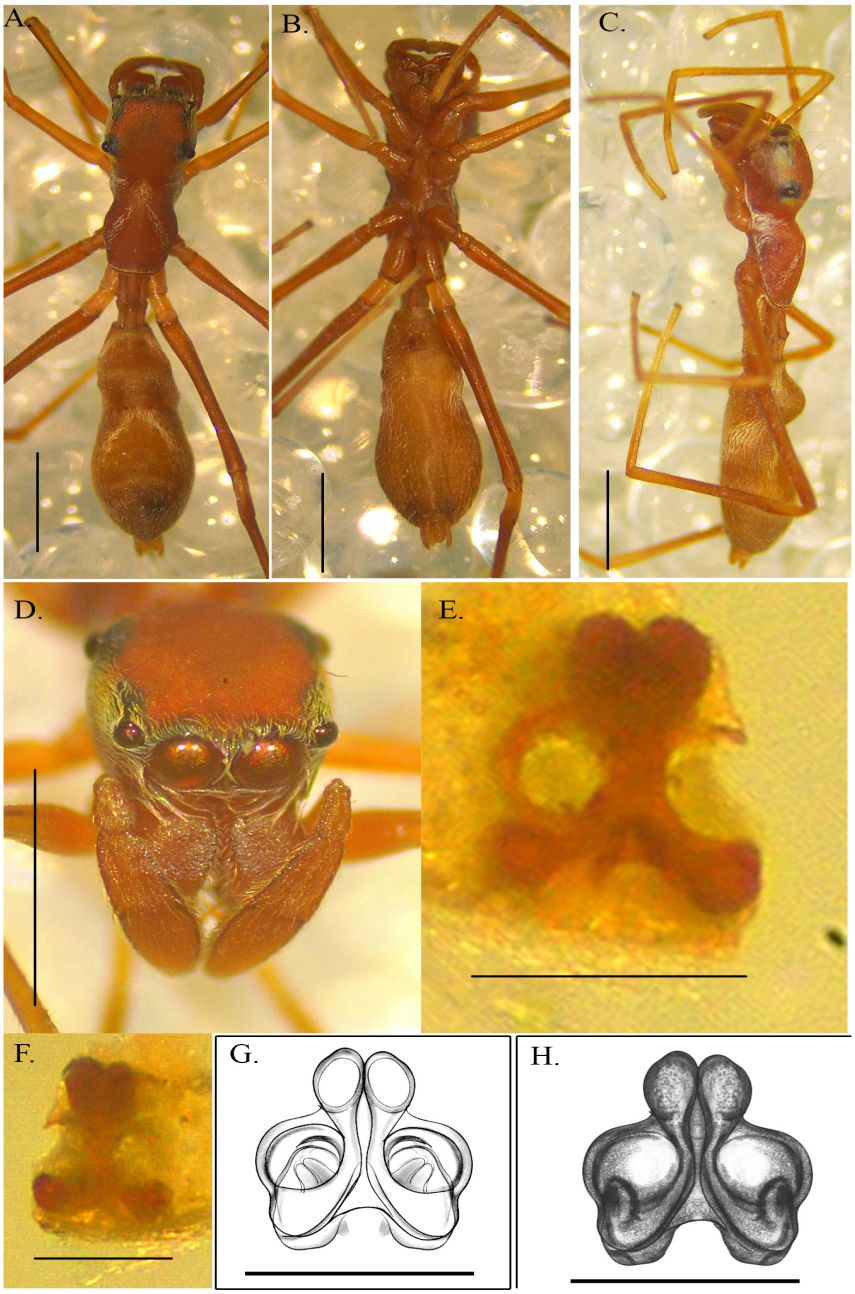
Dexippus kleini Thorell, 1891: **A.** Habitus, dorsal view; **B.** Palp, dorsal view; **C.** Palp, ventral view; **D.** Palp, prolateral view, **E.** Palp, retrolateral view. Scale bars = 2 mm (A), 0.2 mm (B, C, D, E).

PLATE 44



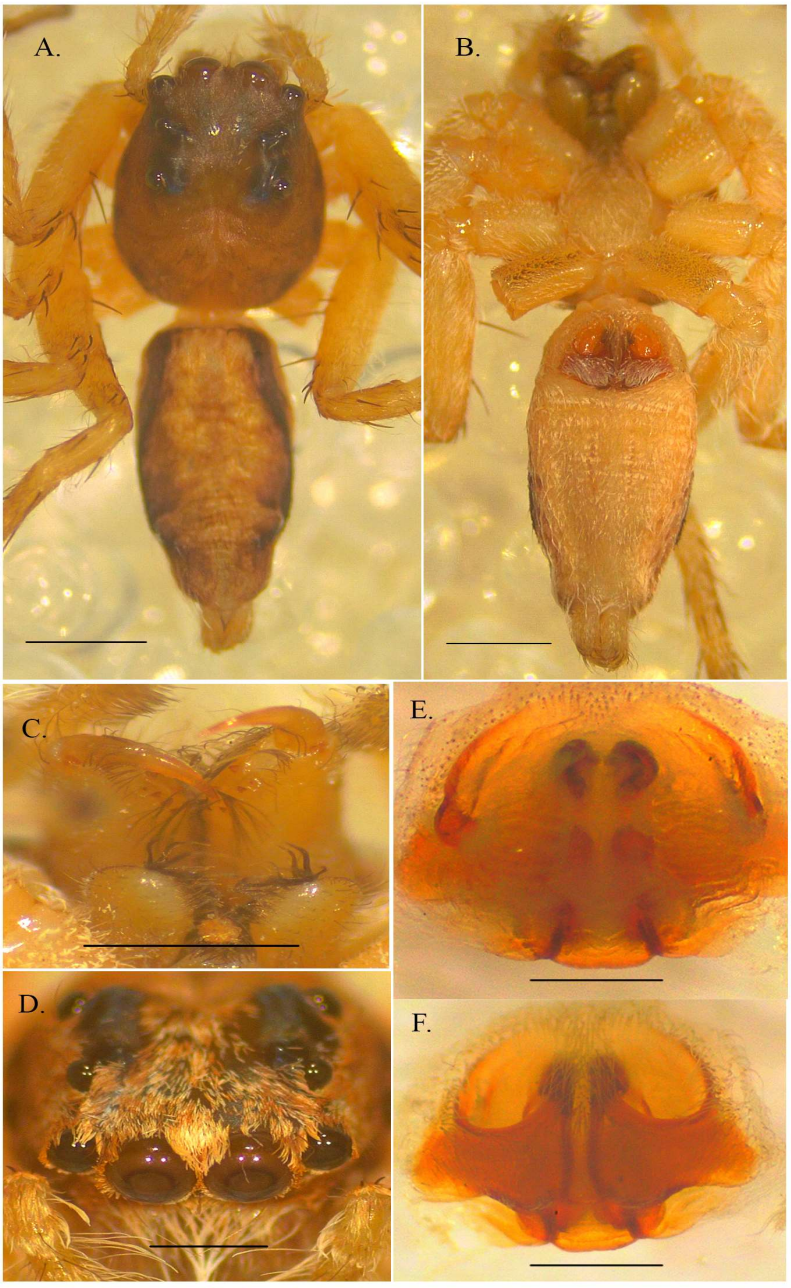
Hyllus diardi (Walckenaer, 1837): **A.** Carapace, dorsal view; **B.** Carapace, ventral view; **C.** Abdomen, dorsal view; **D.** Abdomen, ventral view; **E.** Epigyne, dorsal view; **F.** Epigyne, ventral view. Scale bars = 2 mm (A, B, C, D), 0.5 mm (E, F).

PLATE 45



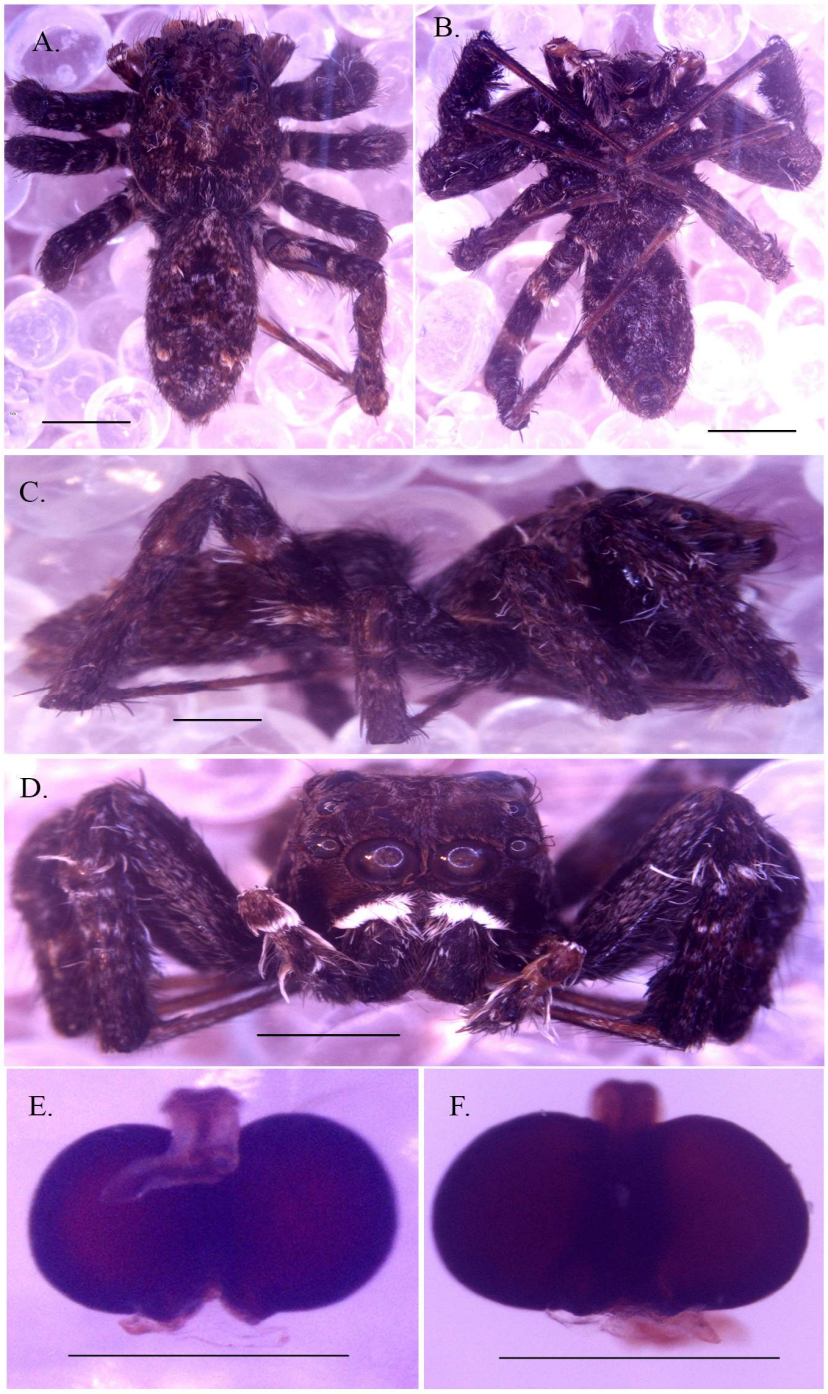
Myrmaplata plataleoides (O. Pickard-Cambridge, 1869): **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Habitus, lateral view; **D.** Eyes, frontal view; **E.** Epigyne, dorsal view; **F.** Epigyne, ventral view; **G.** Diagrammatic representation of epigyne, dorsal view; **H.** Diagrammatic representation of epigyne, ventral view. Scale bars = 1 mm (A, B, C), 0.5 mm (D), 0.2 mm (E, F, G, H).

PLATE 46



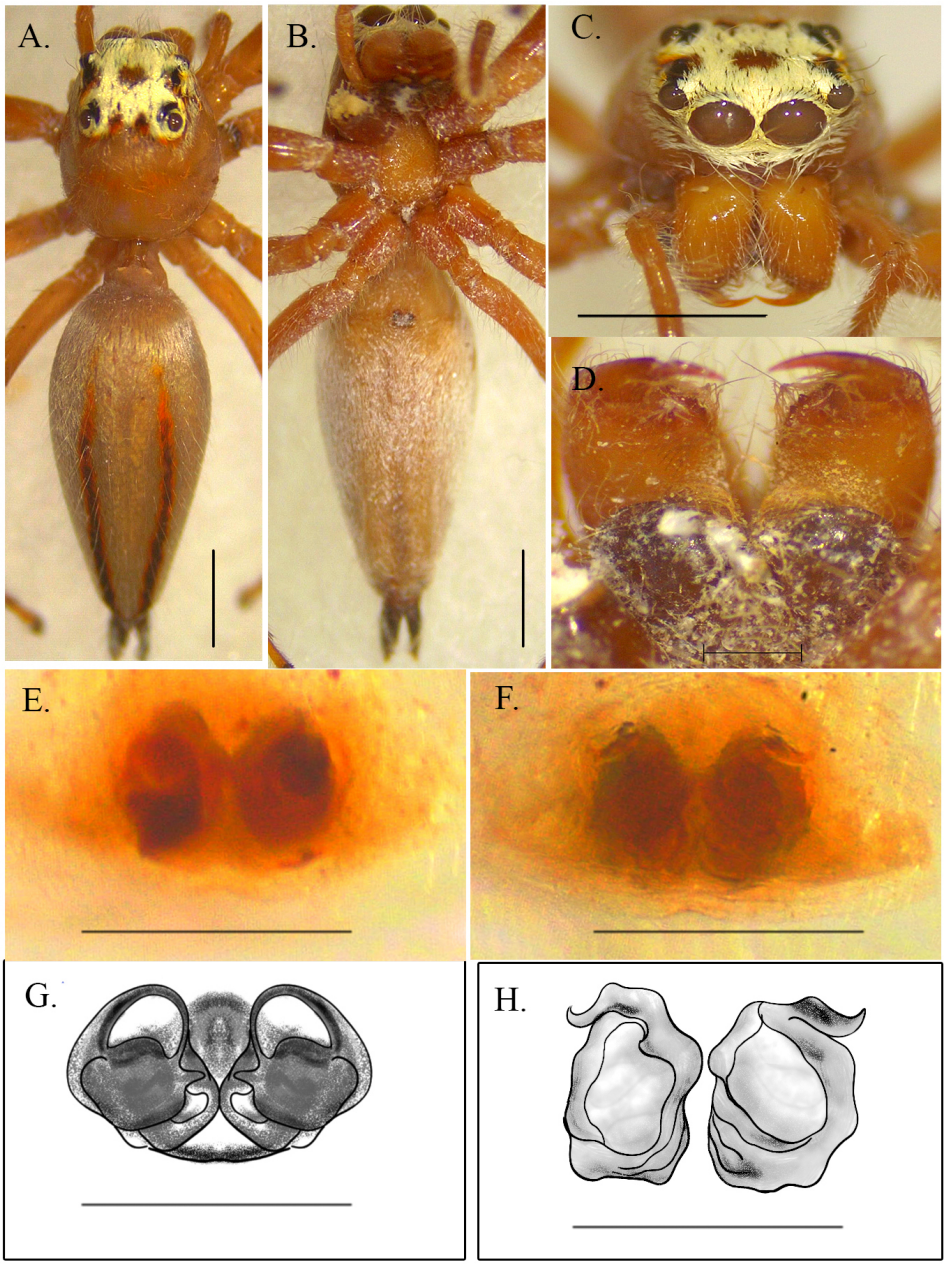
Phaeacius fimbriatus Simon, 1900: **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Chelicerae, ventral view; **D.** Eyes, frontal view; **E.** Epigyne, ventral view; **F.** Epigyne, dorsal view. Scale bars = 2 mm (A, B), 1 mm (C, D), 0.5 mm (E, F).

PLATE 47



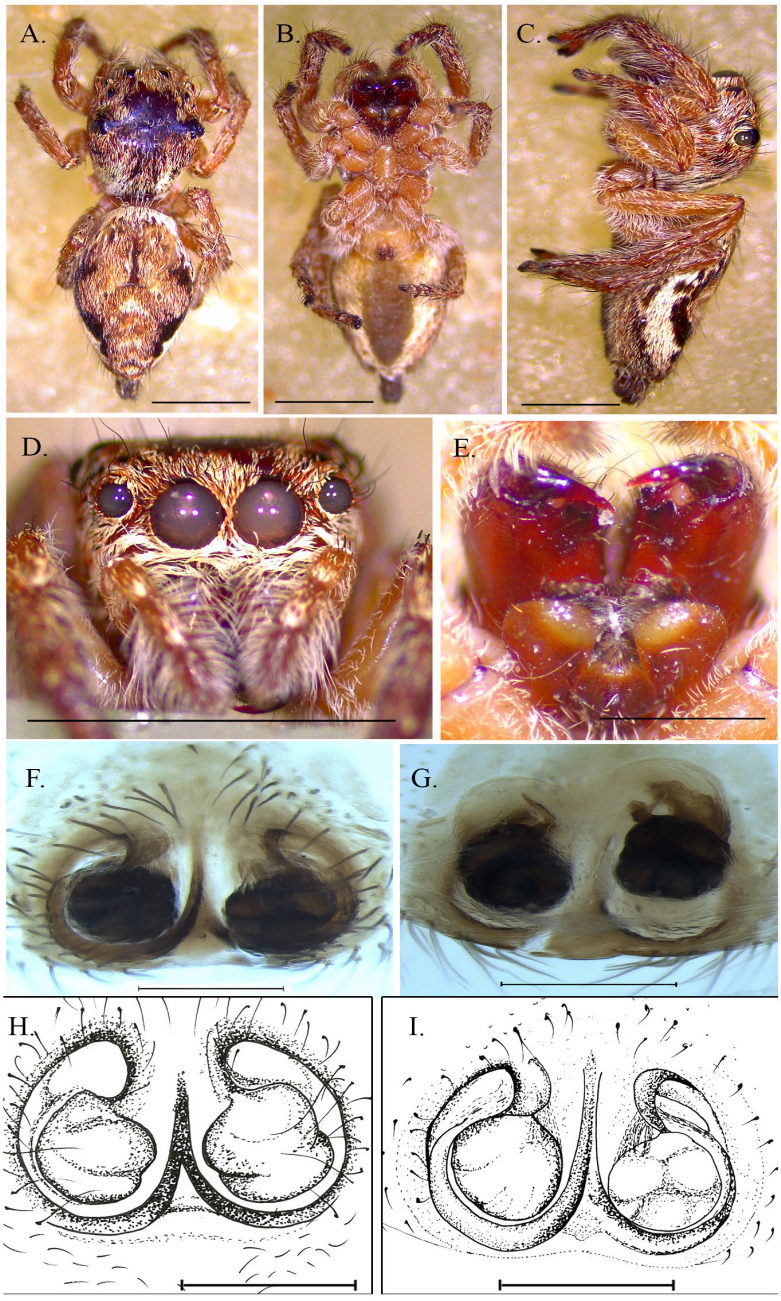
Portia fimbriata (Doleschall, 1859): **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Habitus, lateral view; **D.** Habitus, anterior view; **E.** Epigyne, dorsal view; **F.** Epigyne, ventral view. Scale bars = 2 mm (A, B, C, D), 0.5 mm (E, F).

PLATE 48



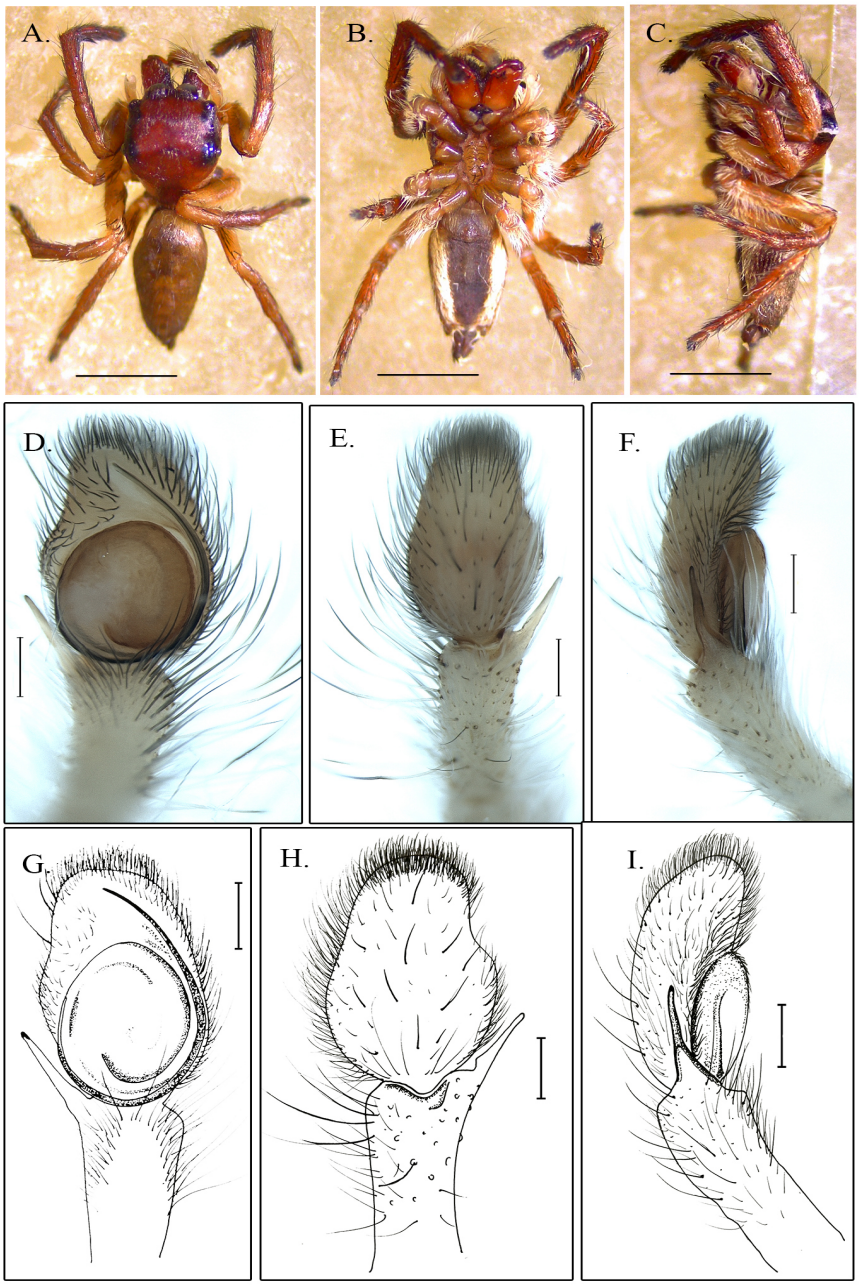
Telamonia dimidiata (Simon, 1899): **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Eyes, frontal view; **D.** Chelicerae, ventral view; **E.** Epigyne, dorsal view; **F.** Epigyne, ventral view; **G.** Diagrammatic representation of epigyne, dorsal view; **H.** Diagrammatic representation of epigyne, ventral view. Scale bars = 2 mm (A, B), 1 mm (C, D), 0.5 mm (E, F, G, H).

PLATE 49



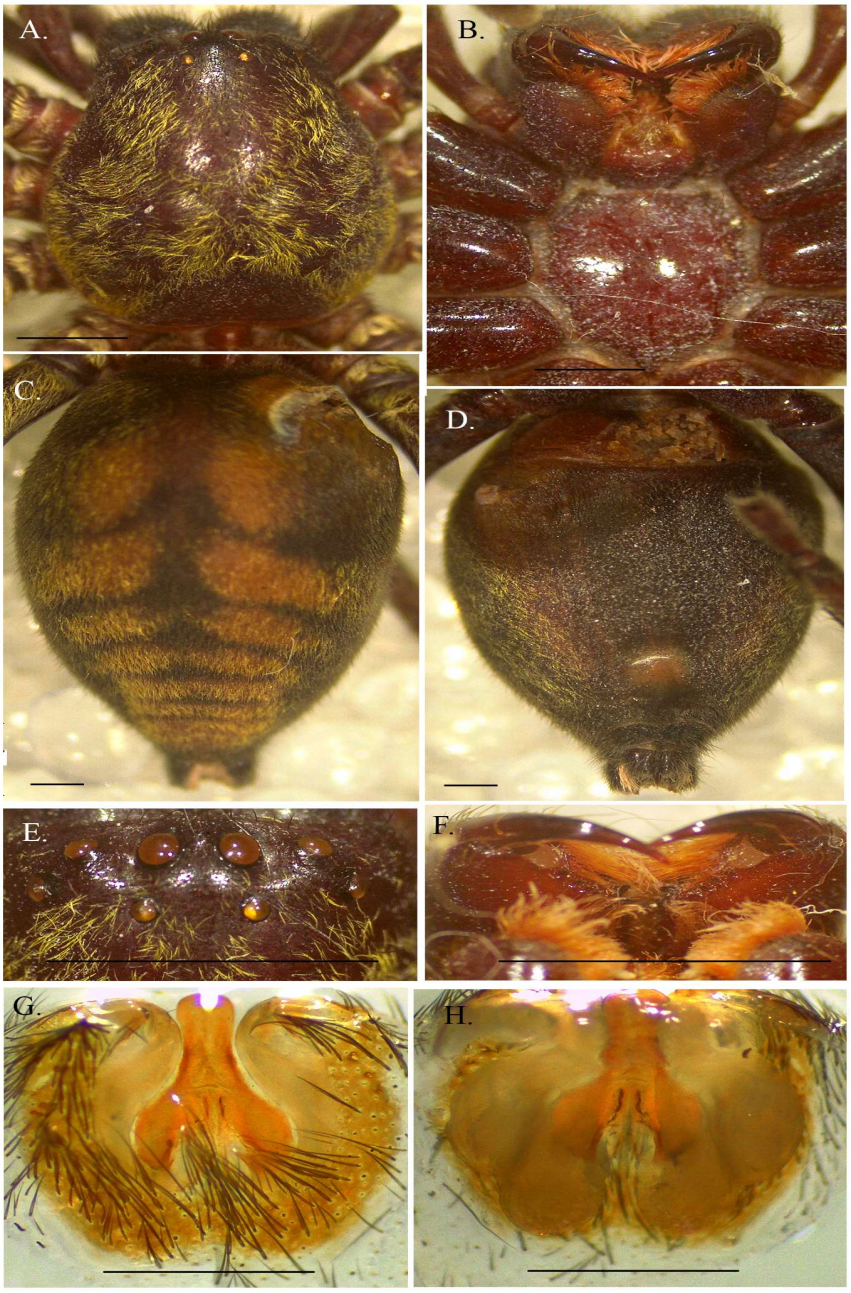
Vailimia jharbari Basumatary, Caleb and Das, 2020: **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Habitus, lateral view; **D.** Eyes, frontal view; **E.** Chelicerae, ventral view; **F.** Epigyne, dorsal view; **G.** Epigyne, ventral view; **H.** Diagrammatic representation of epigyne, dorsal view; **I.** Diagrammatic representation of epigyne, ventral view. Scale bars = 2 mm (A, B, C), 0.5 mm (D, E), 0.2 mm (F, G, H, I).

PLATE 50



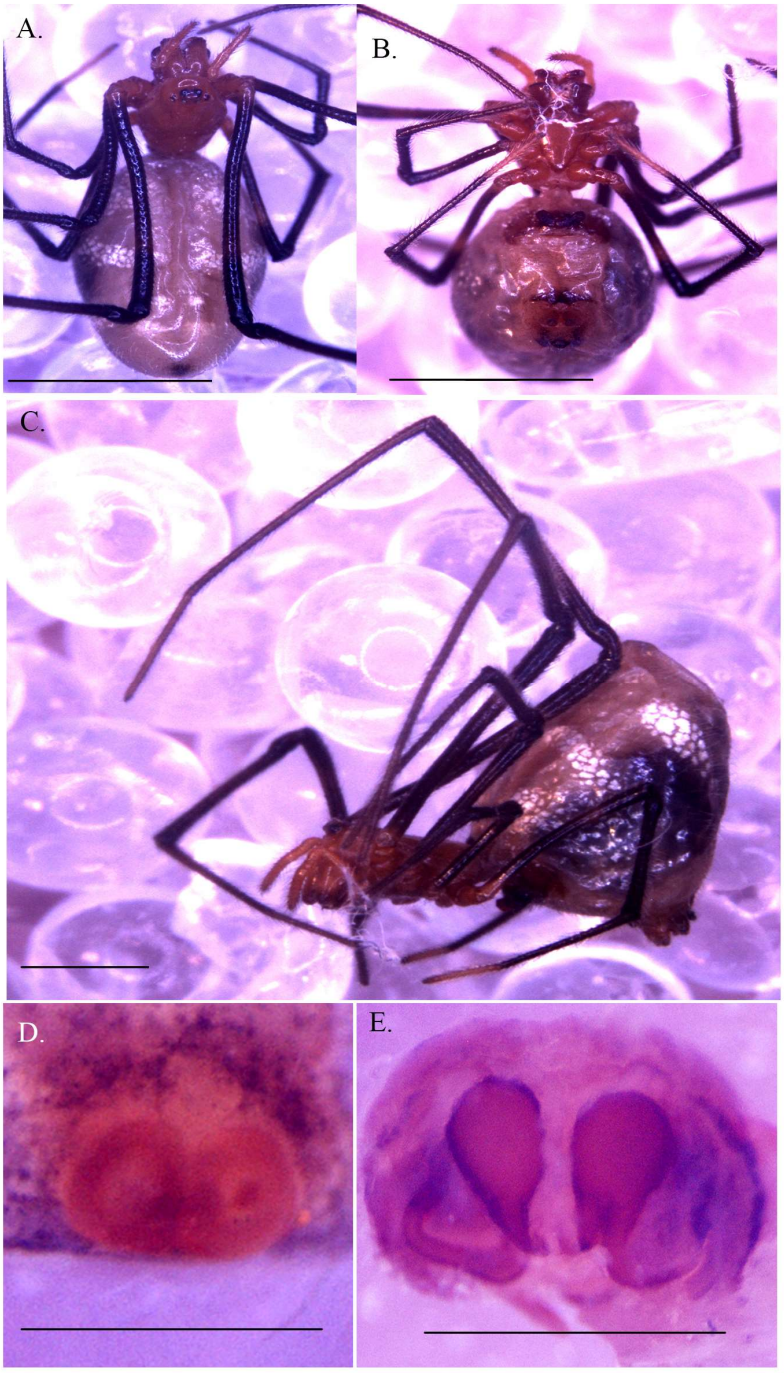
Vailimia jharbari Basumatary, Caleb and Das, 2020: **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Habitus, lateral view; **D.** Palp, ventral view; **E.** Palp, dorsal view; **F.** Palp, retrolateral view; **G.** Diagrammatic representation of palp, ventral view; **H.** Diagrammatic representation of palp, dorsal view; **I.** Diagrammatic representation of palp, retrolateral view. Scale bars = 2 mm (A, B, C), 0.5 mm (D, E, F, G, H, I).

PLATE 51



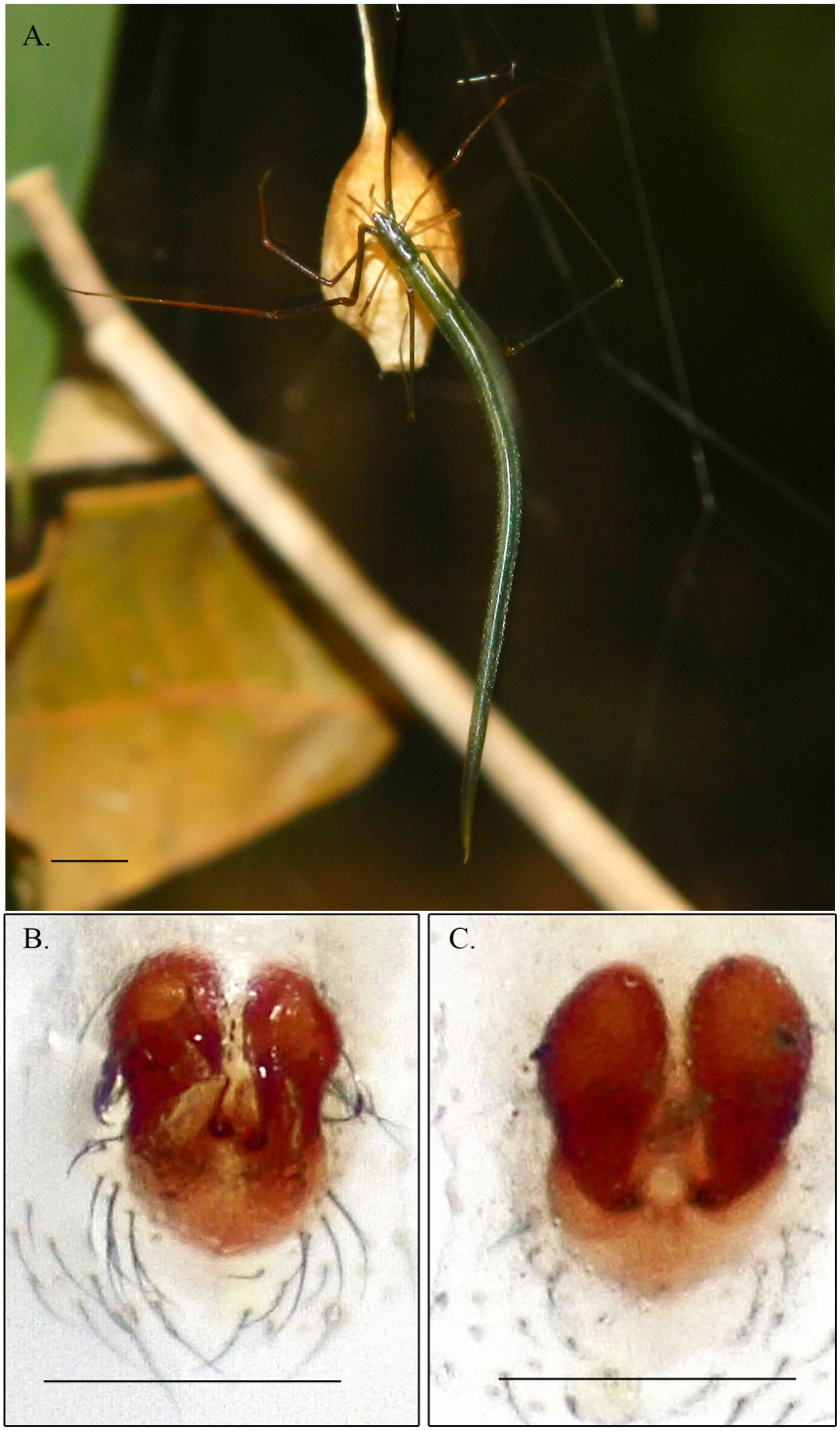
Thelcticopis severa (L. Koch, 1875): **A.** Carapace, dorsal view; **B.** Carapace, ventral view; **C.** Abodmen, dorsal view; **D.** Abdomen, ventral view; **E.** Eye, front view; **F.** Chelicerae, ventral view; **G.** Epigyne, dorsal view; **H.** Epigyne, ventral view. Scale bars = 5 mm (A, B, C, D), 2 mm (E, F), 1 mm (G, H).

PLATE 52



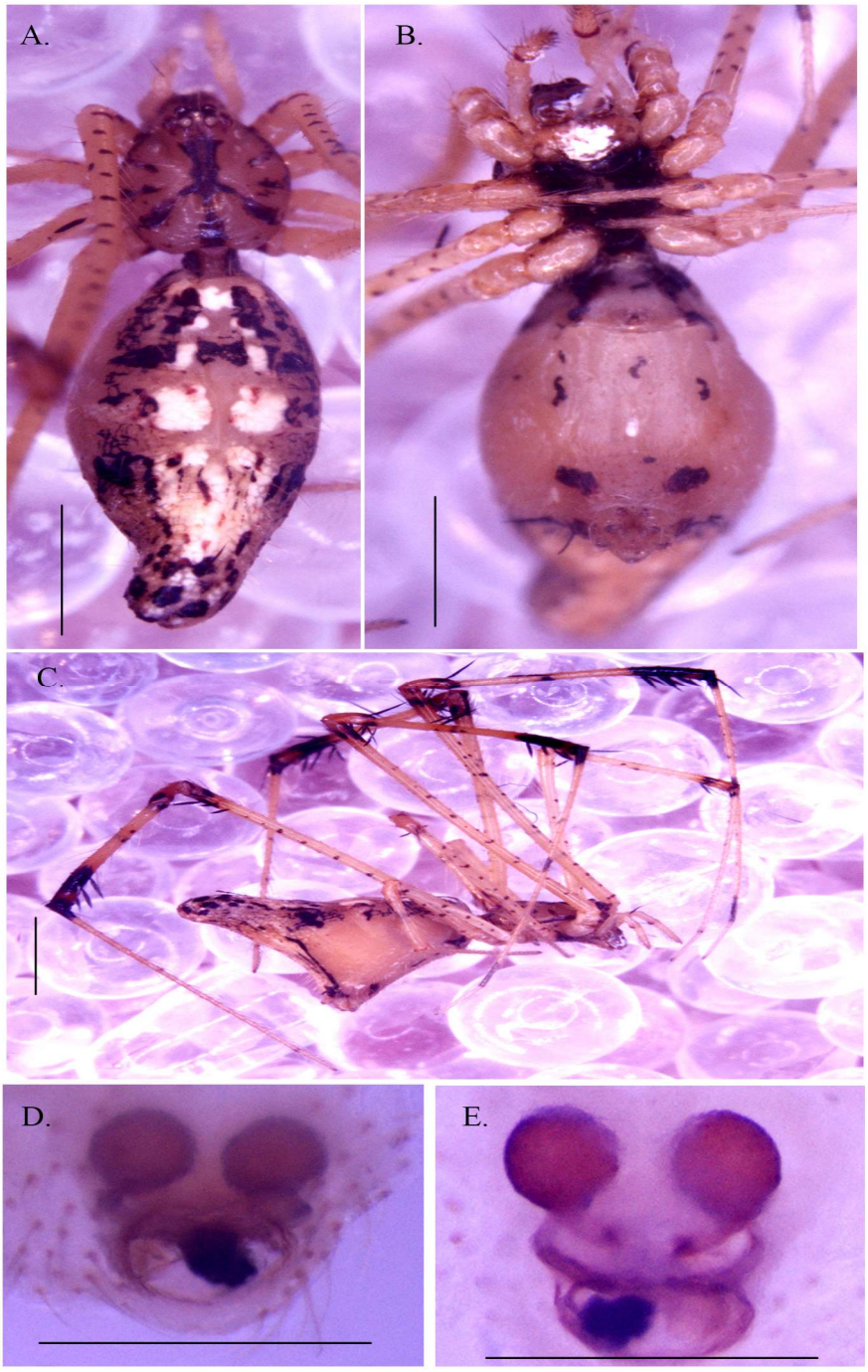
Argyrodes miniaceus (Doleschall, 1857): **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Habitus, lateral view; **D.** Epigyne, dorsal view; **E.** Epigyne, ventral view. Scale bars = 2 mm (A, B, C), 0.2 mm (D, E, F).

PLATE 53



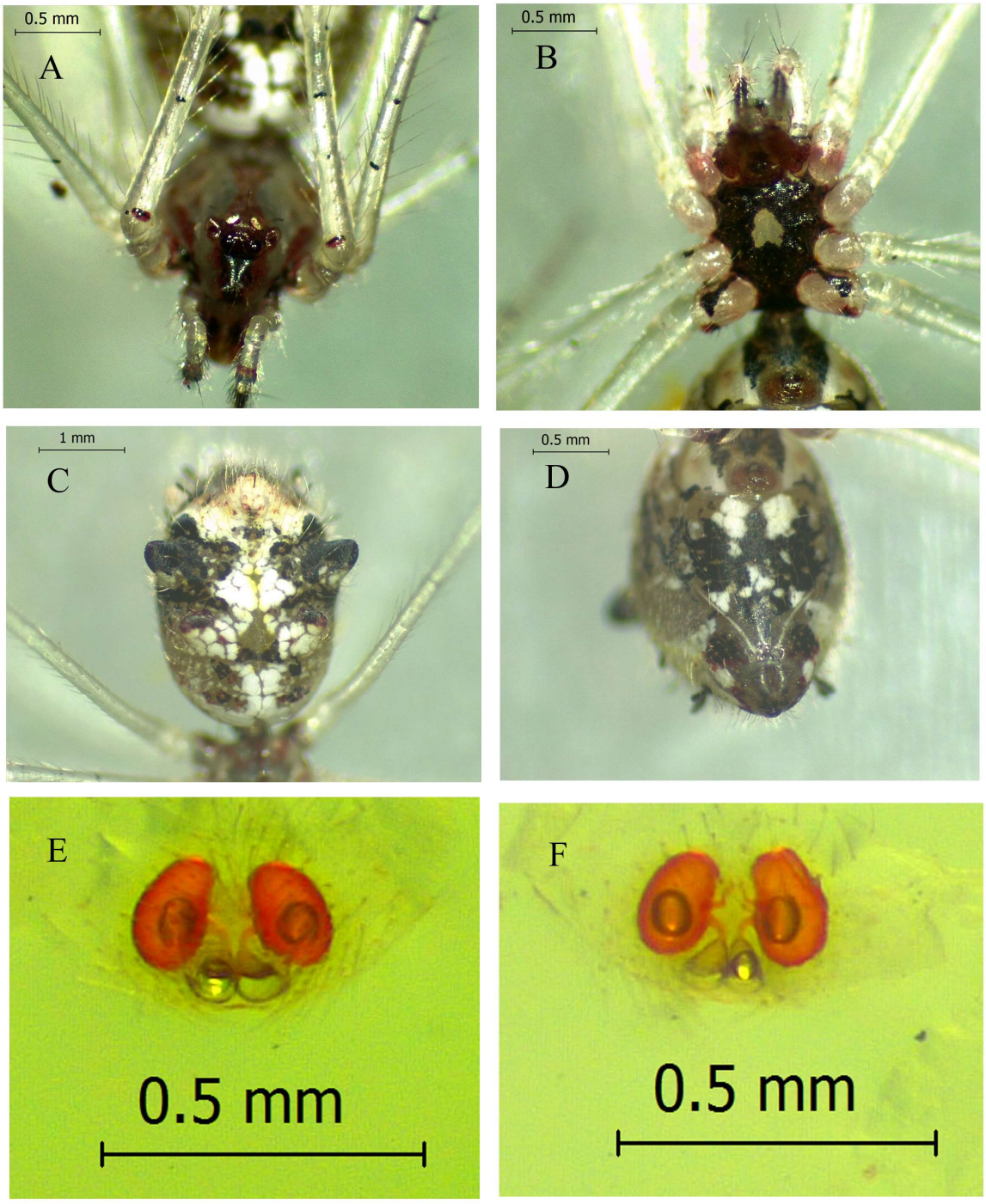
Ariamnes cylindrogaster Simon, 1889: **A.** Habitus, dorsal view; **B.** Epigyne, dorsal view; **C.** Epigyne, ventral view. Scale bars = 2 mm (A), 0.2 mm (B, C).

PLATE 54



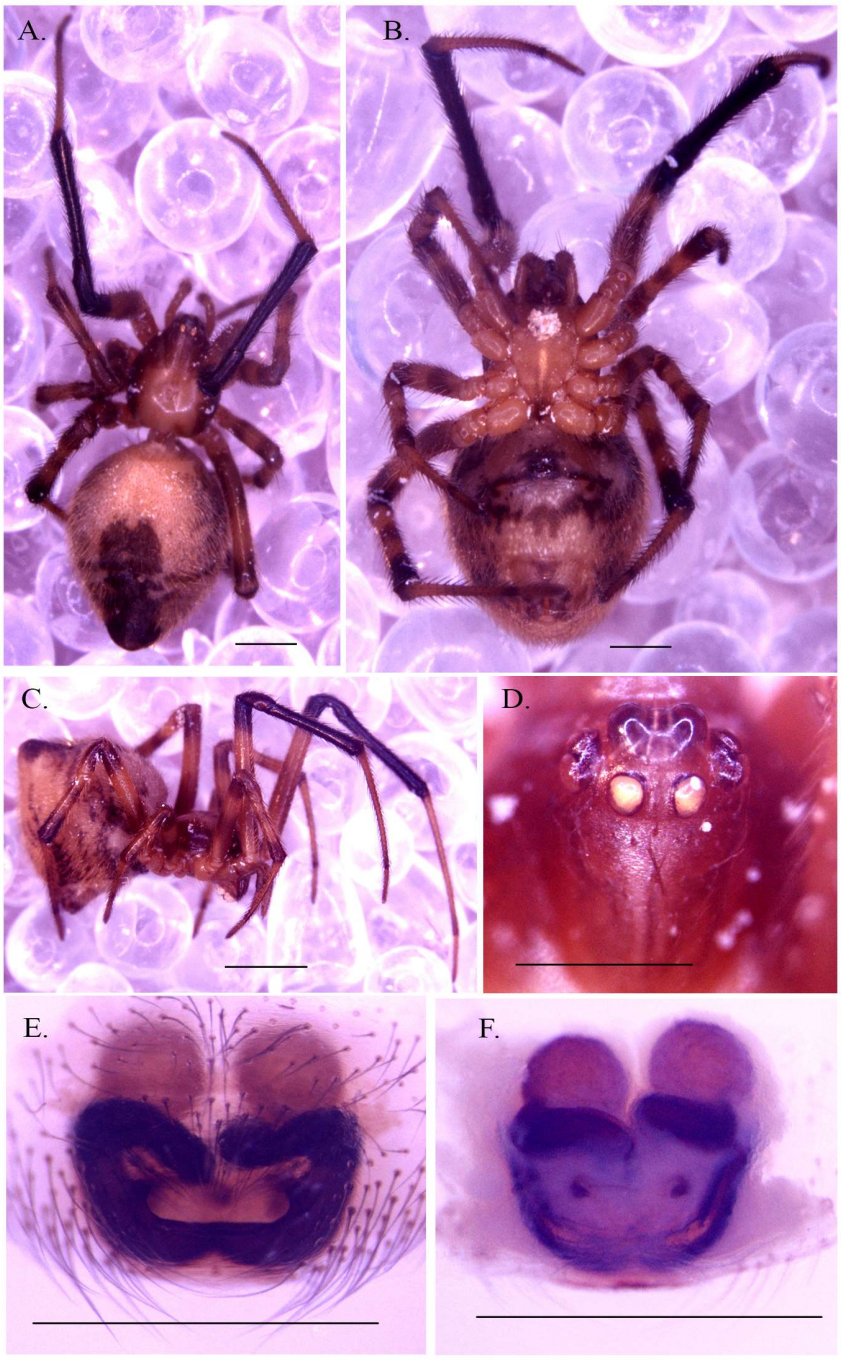
Meotipa picturata Simon, 1895: **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Habitus, lateral view; **D.** Epigyne, dorsal view; **E.** Epigyne, ventral view. Scale bars = 2 mm (A, B, C), 0.2 mm (D, E).

PLATE 55



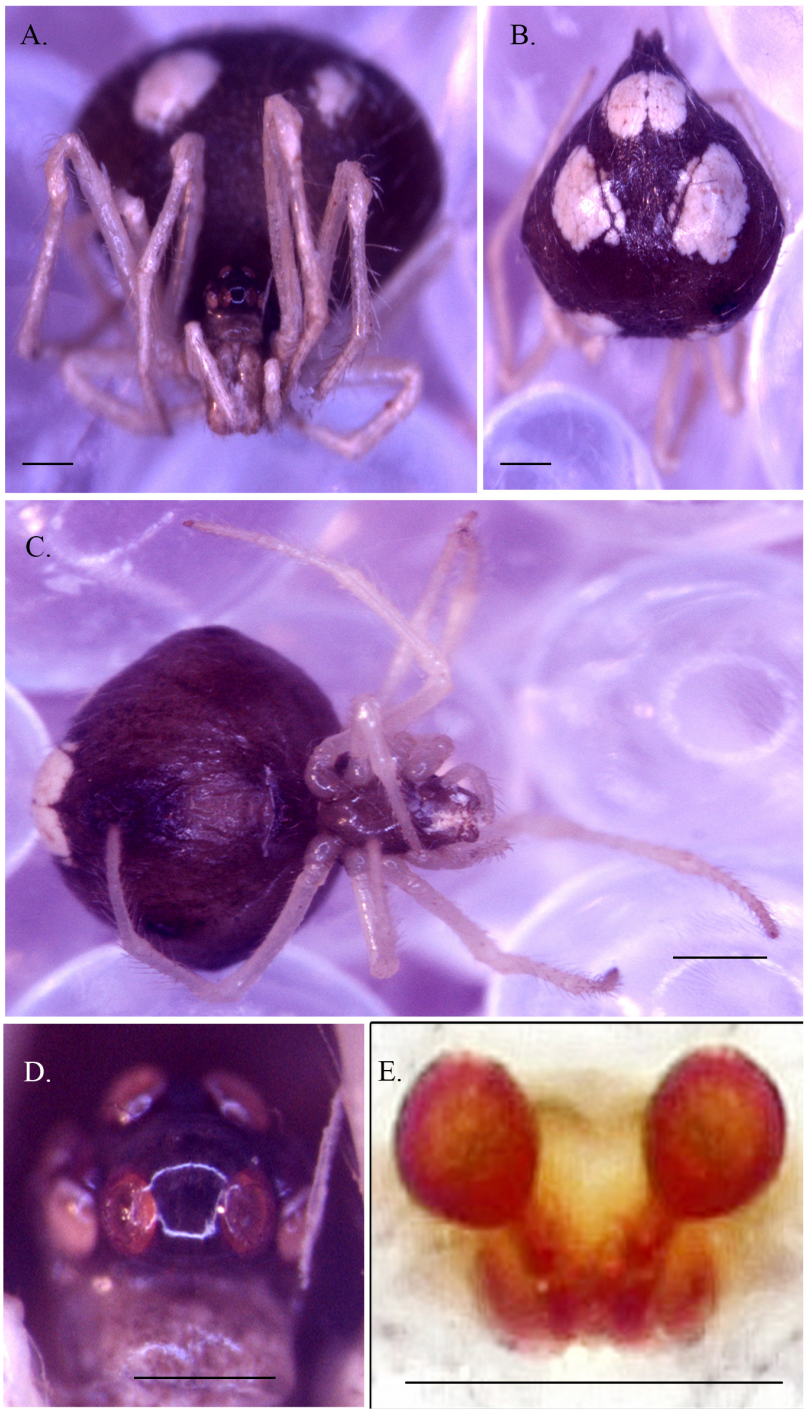
Meotipa ultapani Basumatary and Brahma, 2019: **A.** Carapace, dorsal view; **B.** Carapace, ventral view; **C.** Abdomen, drosal view; **D.** Abodmen, ventral view; **E.** Epigyne, drosal view; **F.** Epigyne, ventral view. Scale bars = 1 mm (C), 0.5 mm (A, B, D, E, F).

PLATE 56



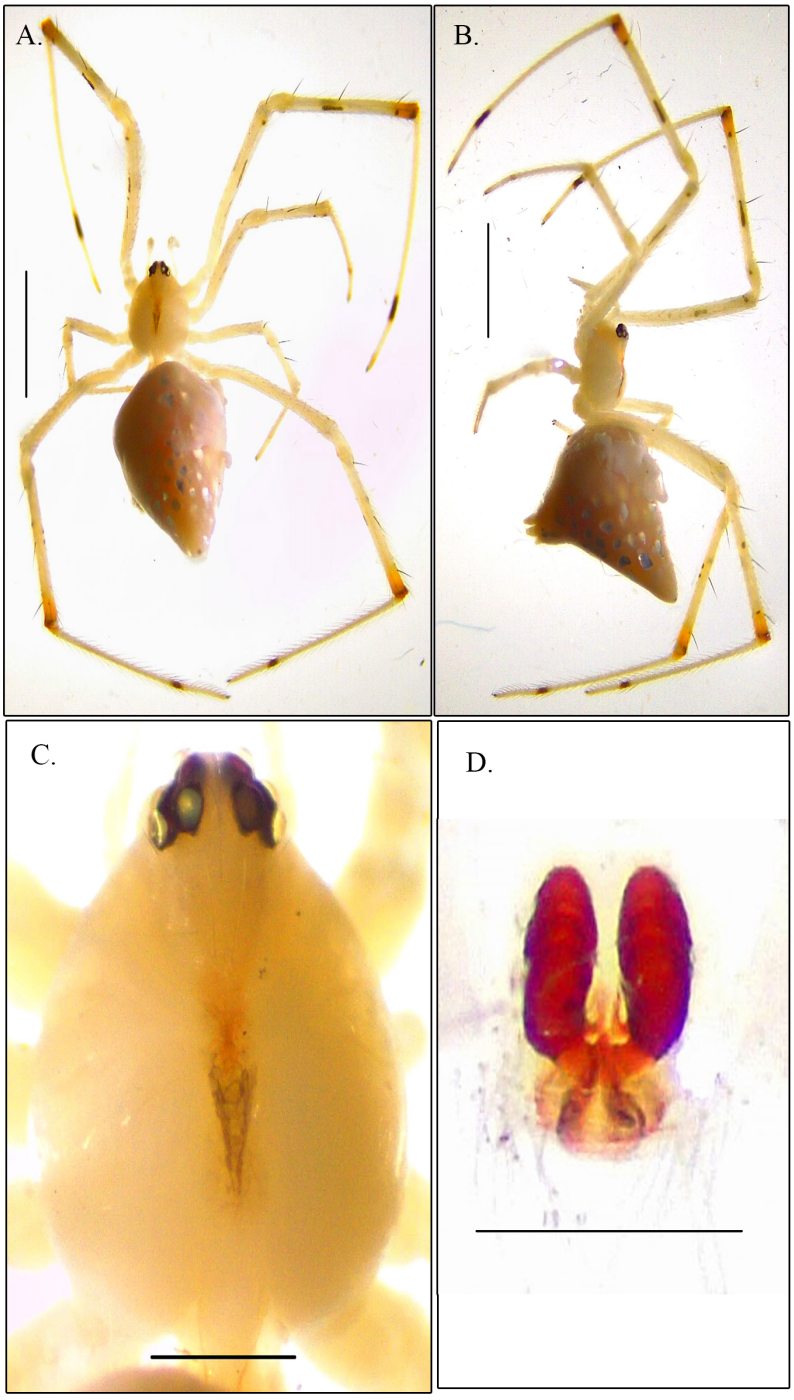
Parasteatoda celsabdomina (Zhu, 1998): **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Habitus, lateral view; **D.** Eyes, frontal view; **E.** Epigyne, dorsal view; **F.** Eyes, ventral view. Scale bars = 2 mm (A, B, C), 1 mm (D), 0.2 mm (E, F).

PLATE 57



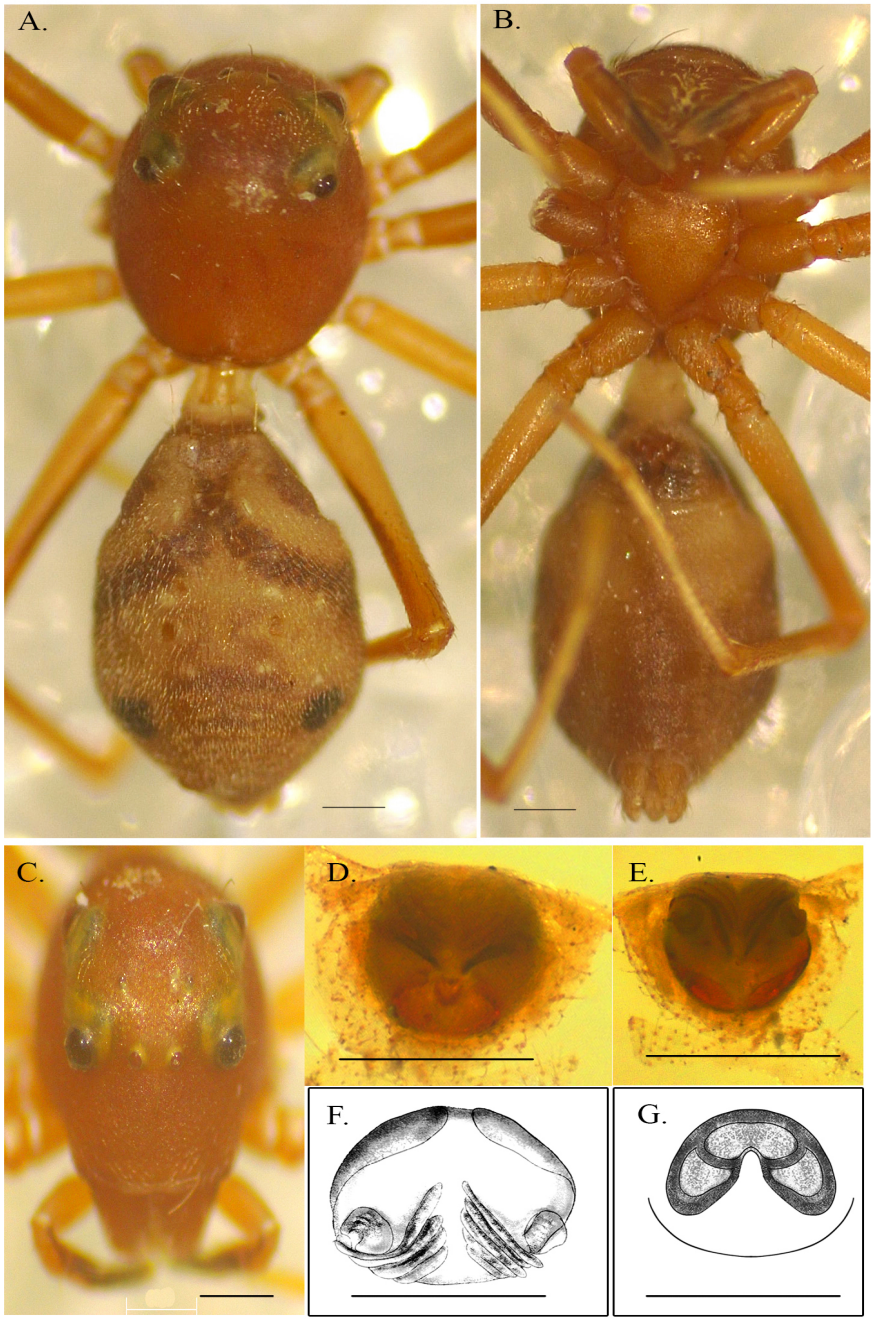
Theridula gonygaster (Simon, 1873): **A.** Habitus, frontal view; **B.** Habitus, dorsal view; **C.** Habitus, ventral view; **D.** Eyes, frontal view; **E.** Epigyne, ventral view. Scale bars = 1 mm (A, B, C), 0.5 mm (D), 0.2 mm (E).

PLATE 58



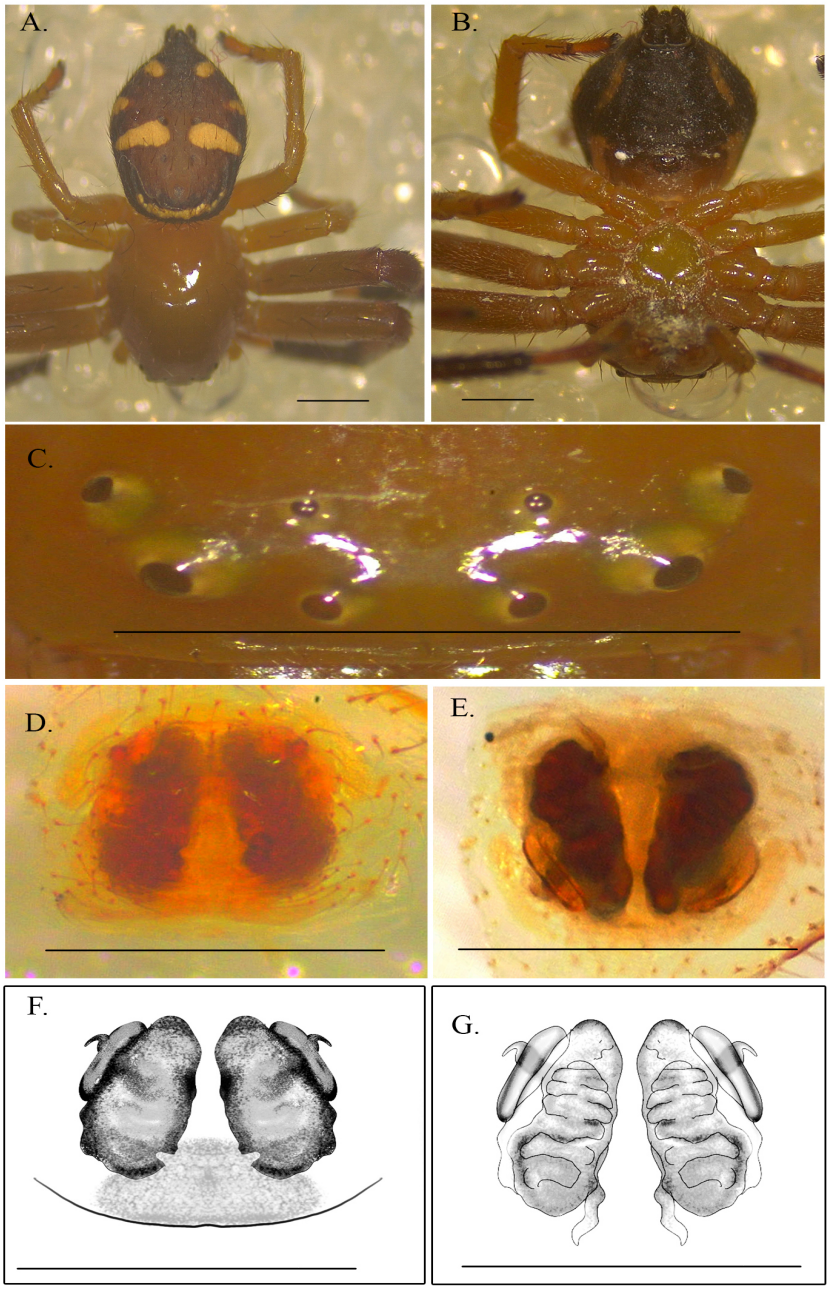
Thwaitesia margaritifera O. Pickard-Cambridge, 1881: **A.** Habitus, dorsal view; **B.** Habitus, lateral view; **C.** Carapace, dorsal view; **D.** Epigyne, ventral view. Scale bars = 2 mm (A, B), 1 mm (C), 0.2 mm (D).

PLATE 59



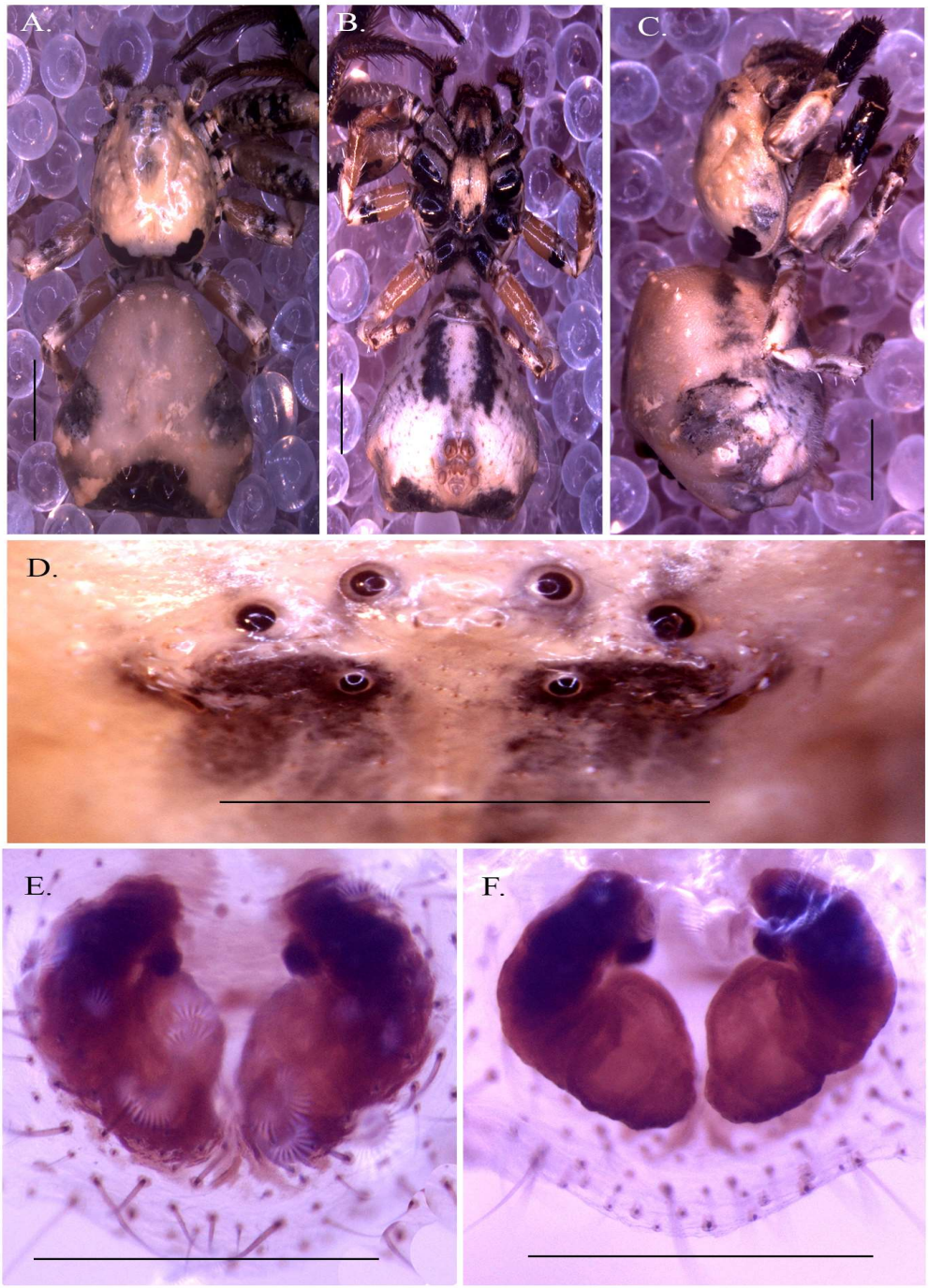
Amyciaea forticeps (O. Pickard-Cambridge, 1873): **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Carapace, frontal view; **D.** Epigyne, dorsal view; **E.** Epigyne, ventral view; **F.** Diagrammatic representation of epigyne, dorsal view; **G.** Diagrammatic representation of epigyne, ventral view. Scale bars = 1 mm (A, B), 0.5 mm (C), 0.2 mm (D, E, F, G).

PLATE 60



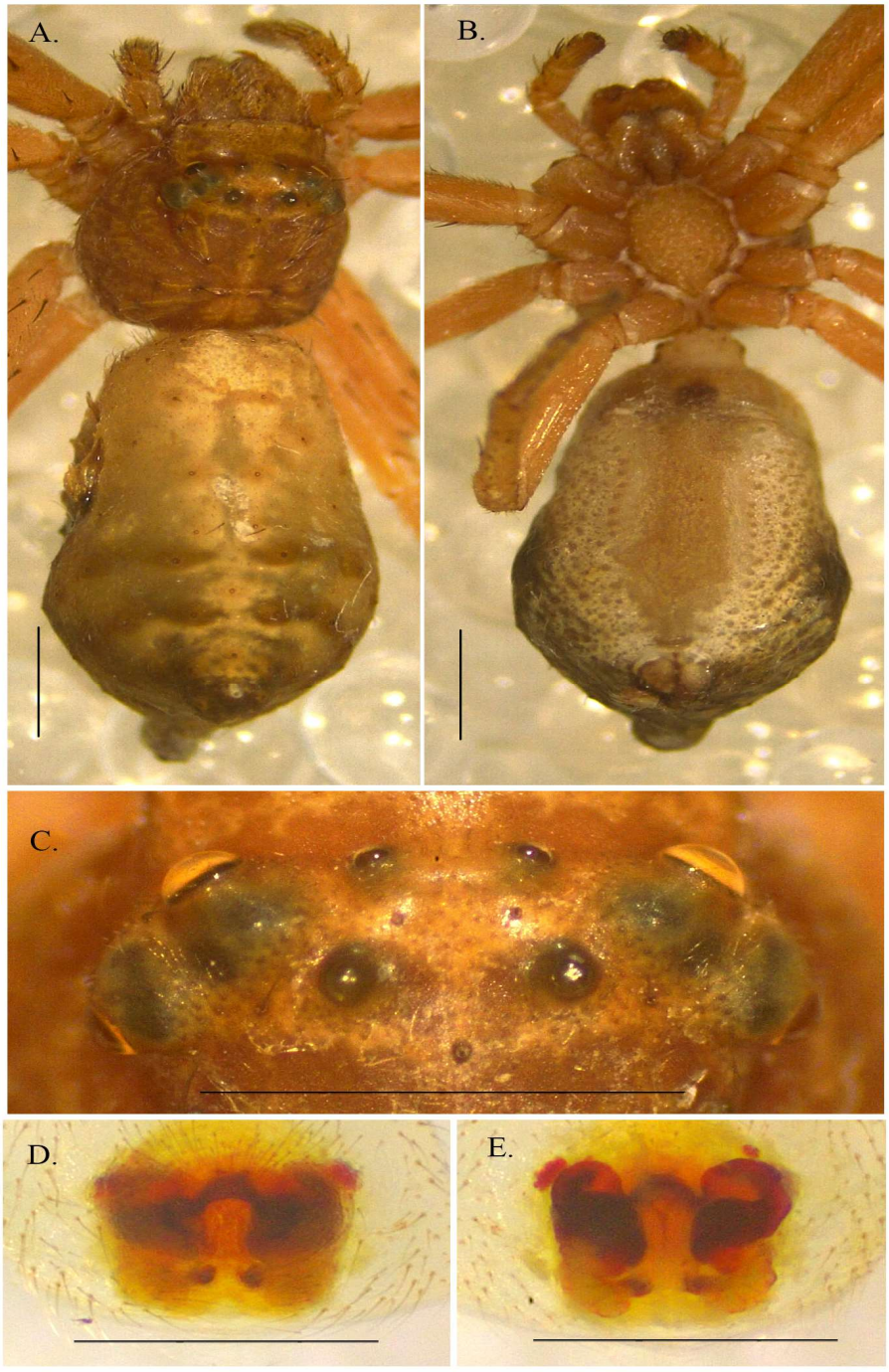
Camaricus khandalaensis Tikader, 1980: **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Eyes, frontal view; **D.** Epigyne, dorsal view; **E.** Epigyne, ventral view; **F.** Diagrammatic representation of epigyne, dorsal view; **G.** Diagrammatic representation of epigyne, ventral view. Scale bars = 2 mm (A, B), 1 mm (C), 0.5 mm (D, E, F, G).

PLATE 61



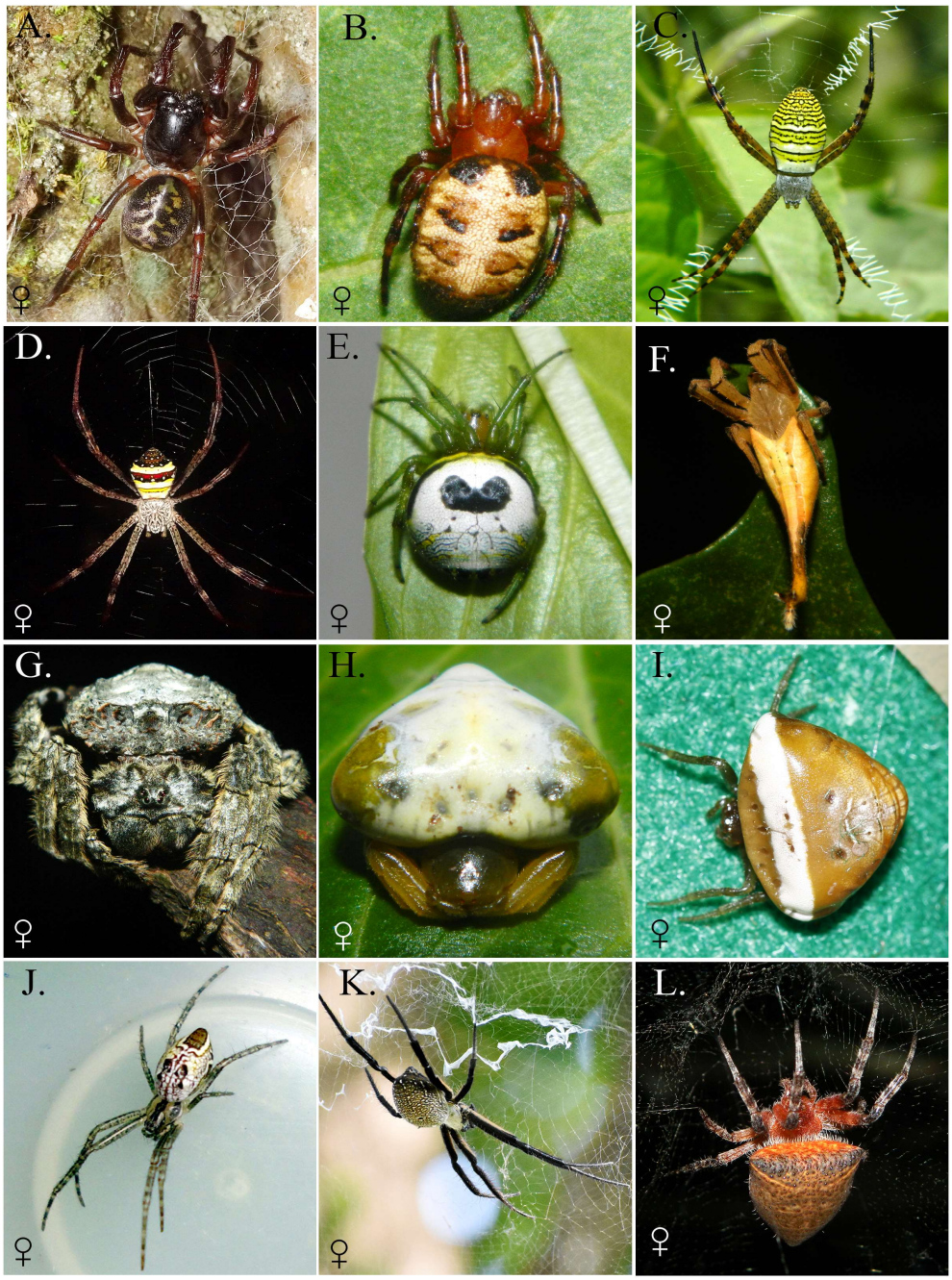
Phrynarachne decipiens (Forbes, 1884): **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Habitus, lateral view; **D.** Eyes, frontal view; **E.** Epigyne, dorsal view; **F.** Epigyne, ventral view. Scale bars = 5 mm (A, B, C), 2 mm (D), 1 mm (E, F).

PLATE 62



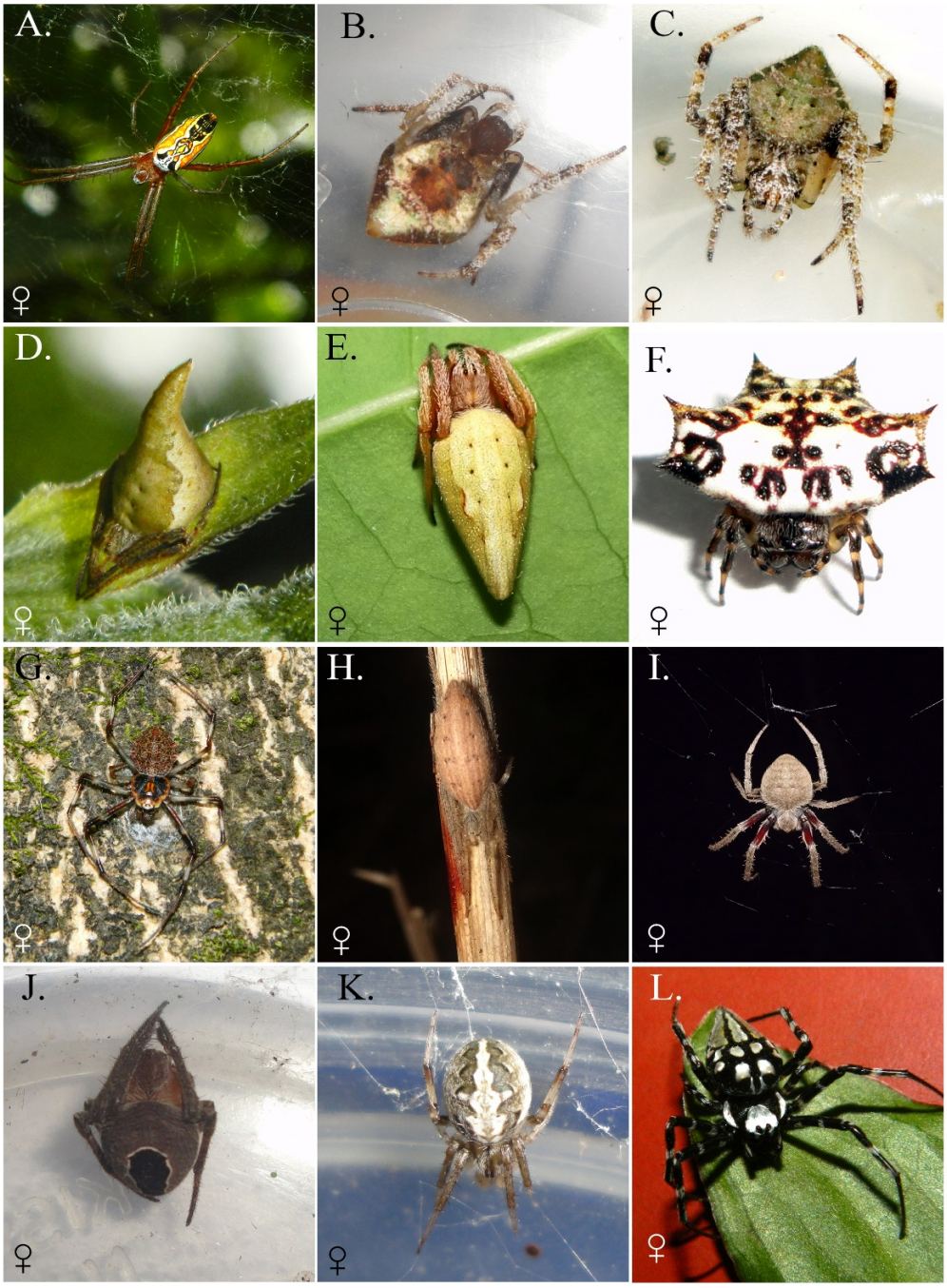
Tmarus jabalpurensis Gajbe and Gajbe, 1999: **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Eyes, frontal region, **D.** Epigyne, dorsal view; **E.** Epigyne, ventral view. Scale bars = 5 mm (A, B), 2 mm (C), 0.5 mm (D, E).

PLATE 63



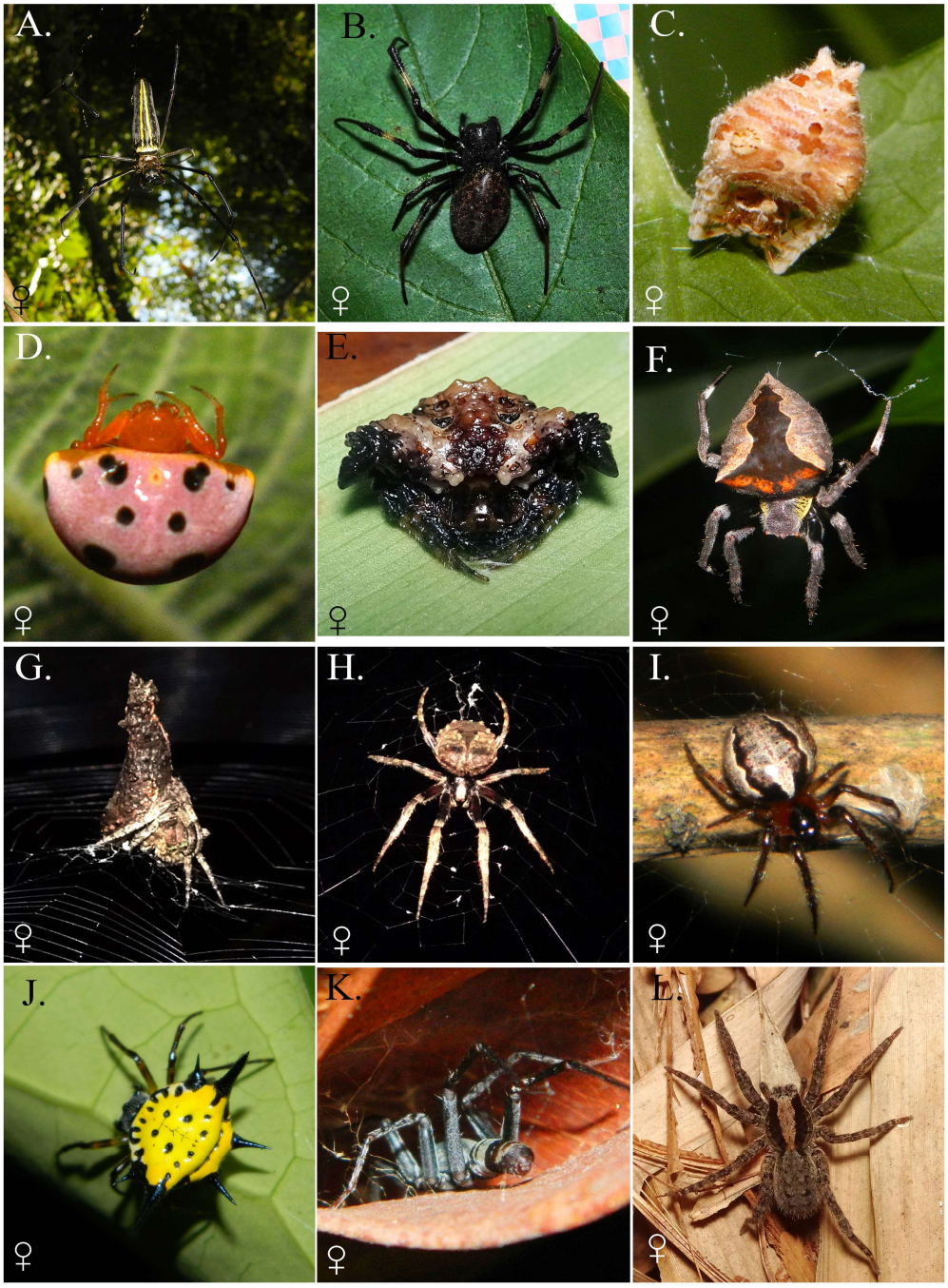
A. *Himalmartensus ausobskyi;* **B.** *Acusilas coccineus;* **C.** *Argiope aemula;* **D.** *Argiope pulchella;* **E.** *Bijoaraneus mitificus;* **F.** *Arachnura angura*; **G.** *Caerostris sumatrana;* **H.** *Cyrtarachne inaequalis;* **I.** *Cyrtarachne nagasakiensis;* **J**. *Cyrtophora citricola;* **K.** *Cyrtophora moluccensis;* **L.** *Cyrtophora unicolor.*

PLATE 64



A. *Cyrtophora feae;* **B.** *Eriovixia excelsa;* **C.** *Eriovixia laglaizei*; **D.** *Eriovixia pseudocentrodes*; **E.** *Eriovixia kachugaonensis;* **F.** *Gasteracantha kuhli;* **G.** *Herennia multipuncta;* **H.** *Larinia phthisica;* **I.** *Neoscona bengalensis;* **J.** *Neoscona mukerjei;* **K.** *Neoscona theisi;* **L.** *Neogea nocticolor*.

PLATE 65

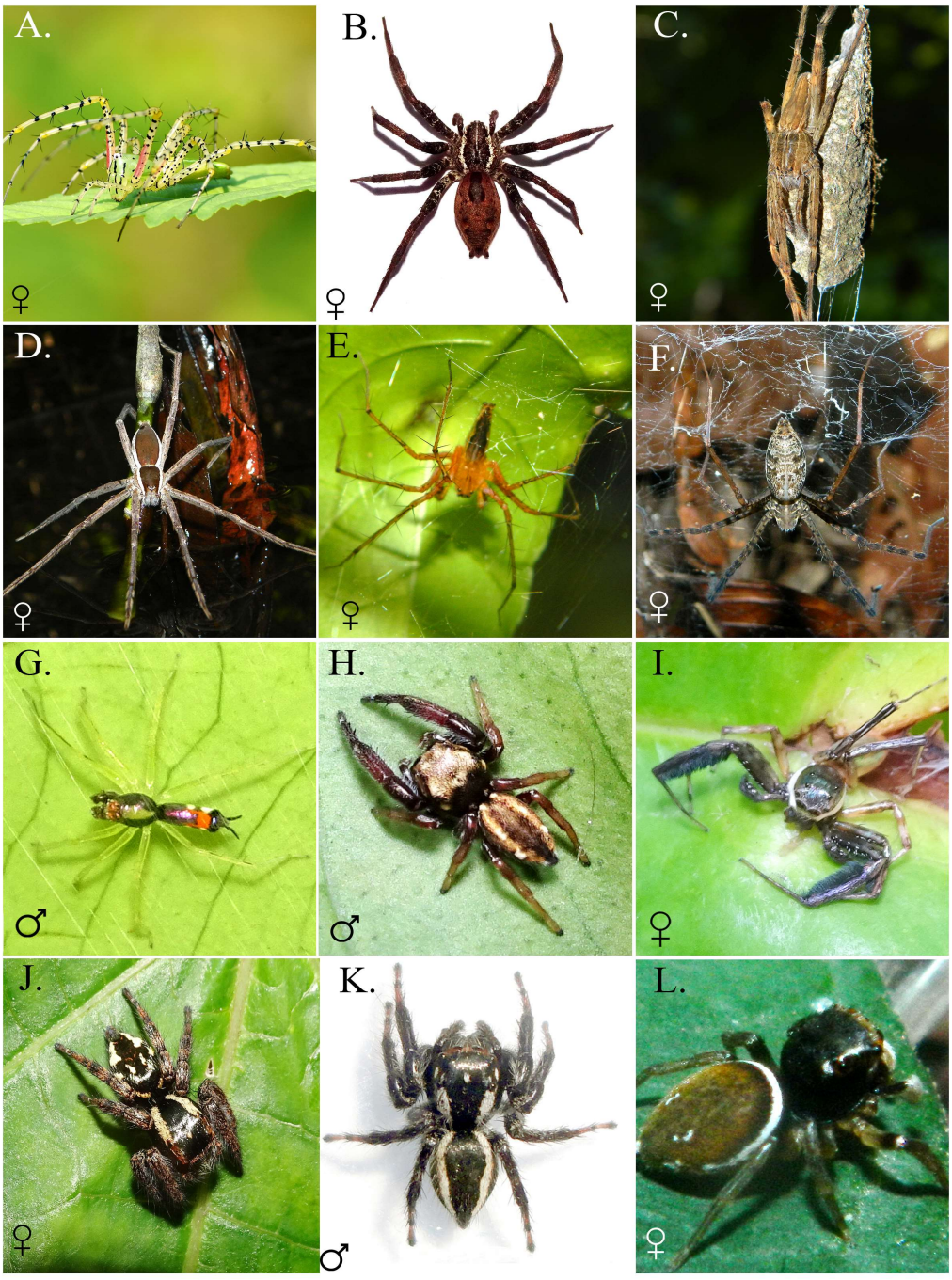


A. *Nephila pilipes;* **B.** *Nephilengys malabarensis*; **C.** *Ordgarius sexspinosus*; **D.** *Paraplectana mamoniae;* **E.** *Pasilobus kotigeharus*; **F.** *Parawixia dehaani;* **G.** *Poltys columnaris;* **H.** *Poltys illepidus*; **I.** *Guizygiella indica*; **J.** *Macracantha hasselti;* **K.** *Corinnomma severum;* **L.** *Bowie sikkimensis.*

PLATE 66

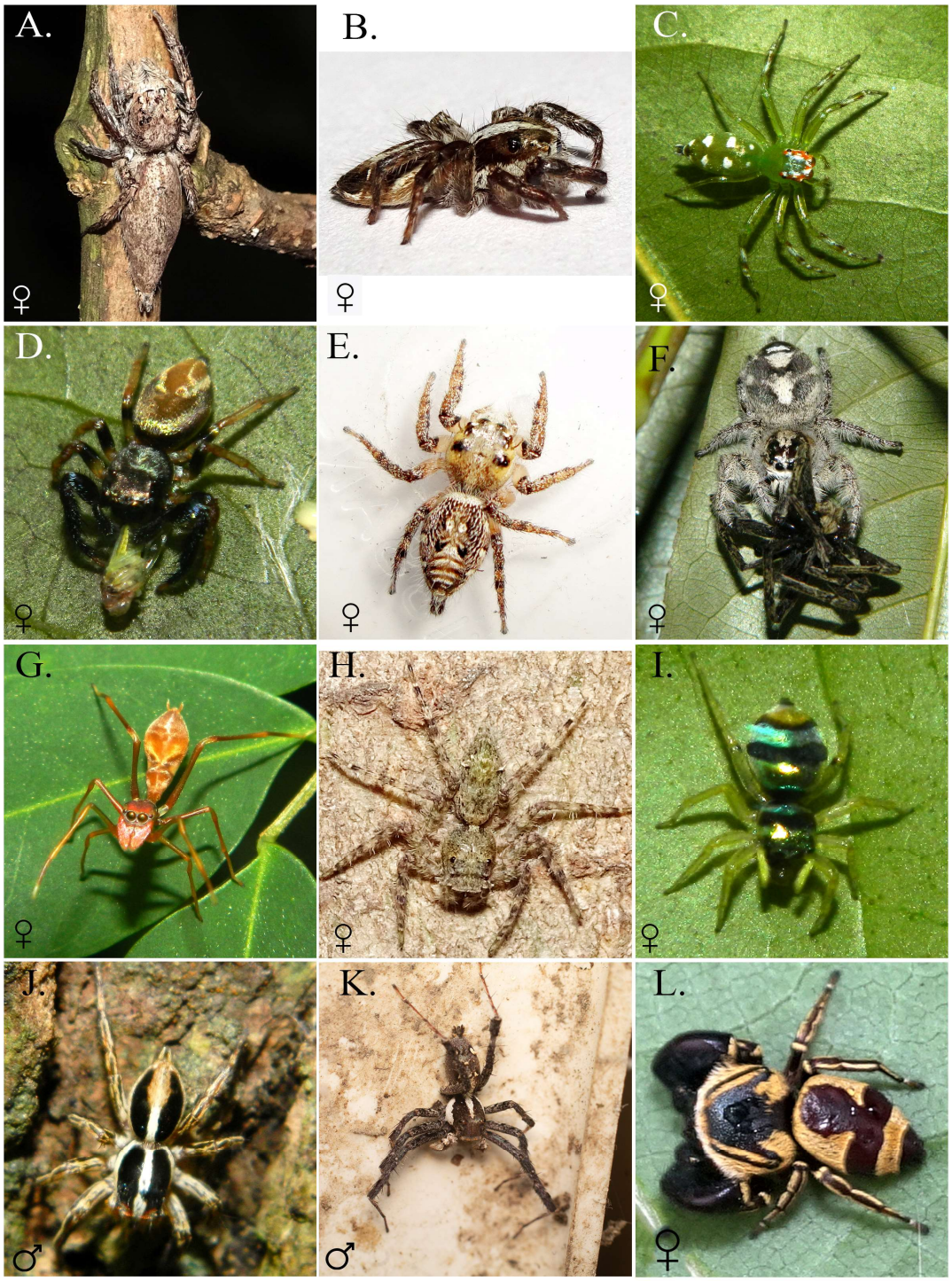
A. *Clubiona filicata;* **B.** *Cheiracanthium danieli;* **C.** *Asianopis goalparaensis;* **D.** *Hersilia savignyi;* **E.** *Lycosa mackenziei;* **F.** *Pardosa pseudoannulata;* **G** *Gravelyia boro;* **H.** *Gravelyia boro;* **I.** *Hamadruas sikkimensis;* **J.** *Hamataliwa pentagona;* **K.** *Oxyopes Shweta;* **L.** *Oxyopes sitae.*

PLATE 67



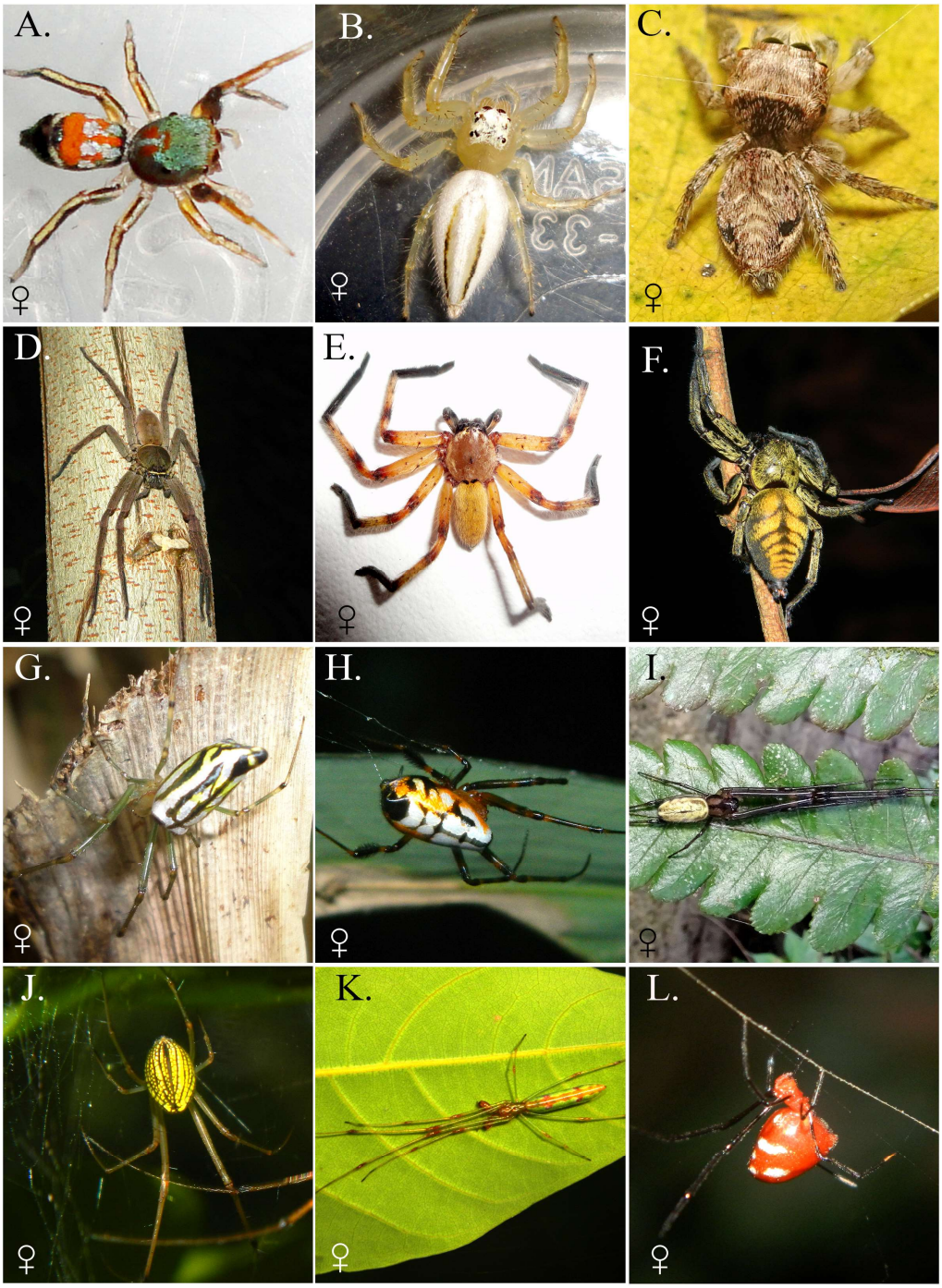
A. *Peucetia latikae;* **B.** *Dendrolycosa songi;* **C.** *Hygropoda higenaga;* **D.** *Nilus albocinctus;* **E.** *Polyboea vulpina;* **F.** *Psechrus himalayanus;* **G.** *Asemonea tenuipes;* **H.** *Bianor angulosus*; **I.** *Brettus cingulatus*; **J.** *Carrhotus viduus;* **K.** *Carrhotus viduus;* **L.** *Chinattus prabodhi.*

PLATE 68



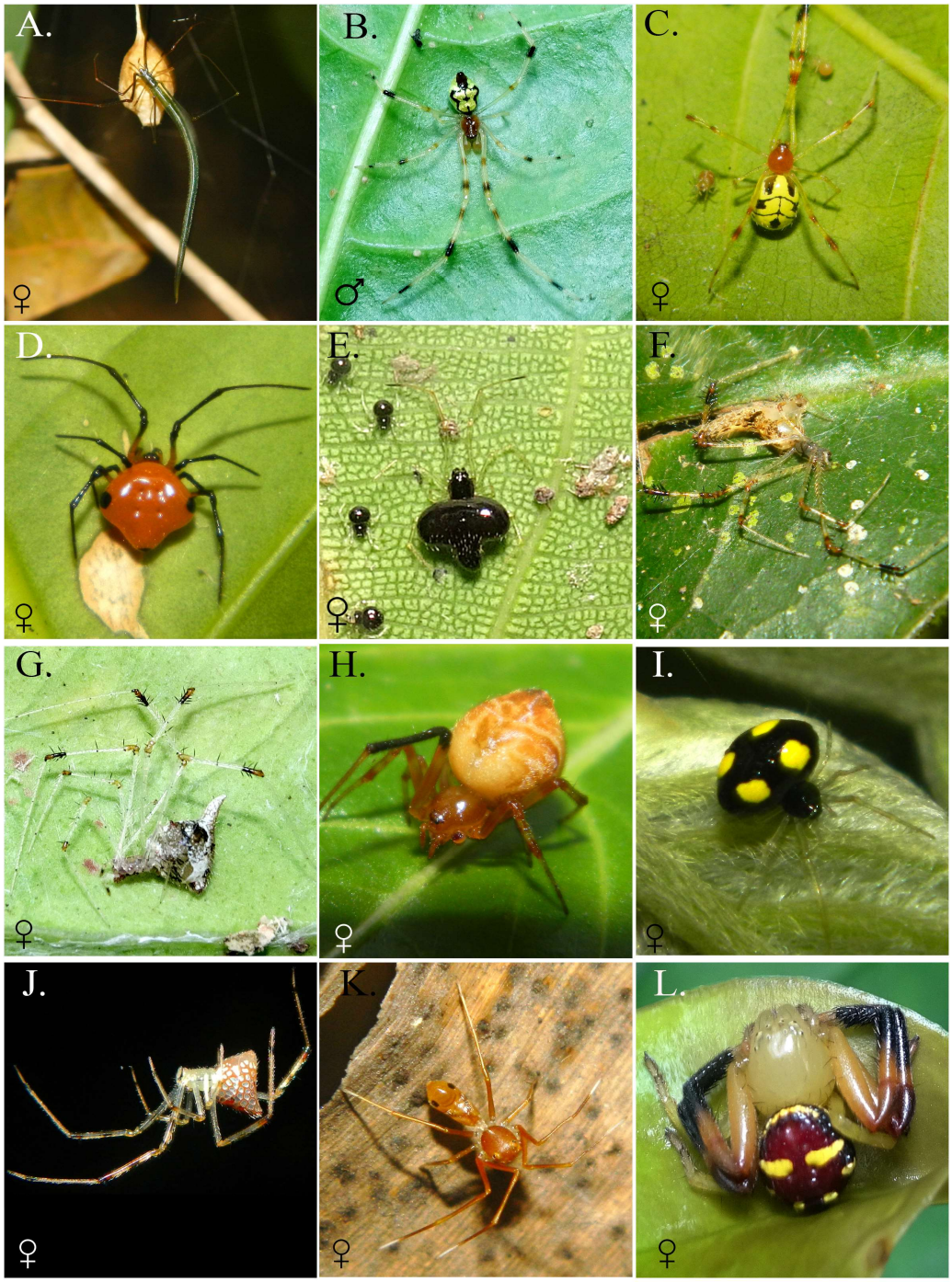
A. *Cocalus murinus;* **B.** *Dexippus kleini;* **C.** *Epeus indicus;* **D.** *Thiania bhamoensis;* **E.** *Hyllus semicupreus;* **F.** *Myrmaplata plataleoides*; **G.** *Phaeacius fimbriatus;* **H.** *Phintella vittata;* **I.** *Plexippus paykulli;* **J.** *Portia fimbriata*; **K.** *Rhene flaviocomans.*

PLATE 69



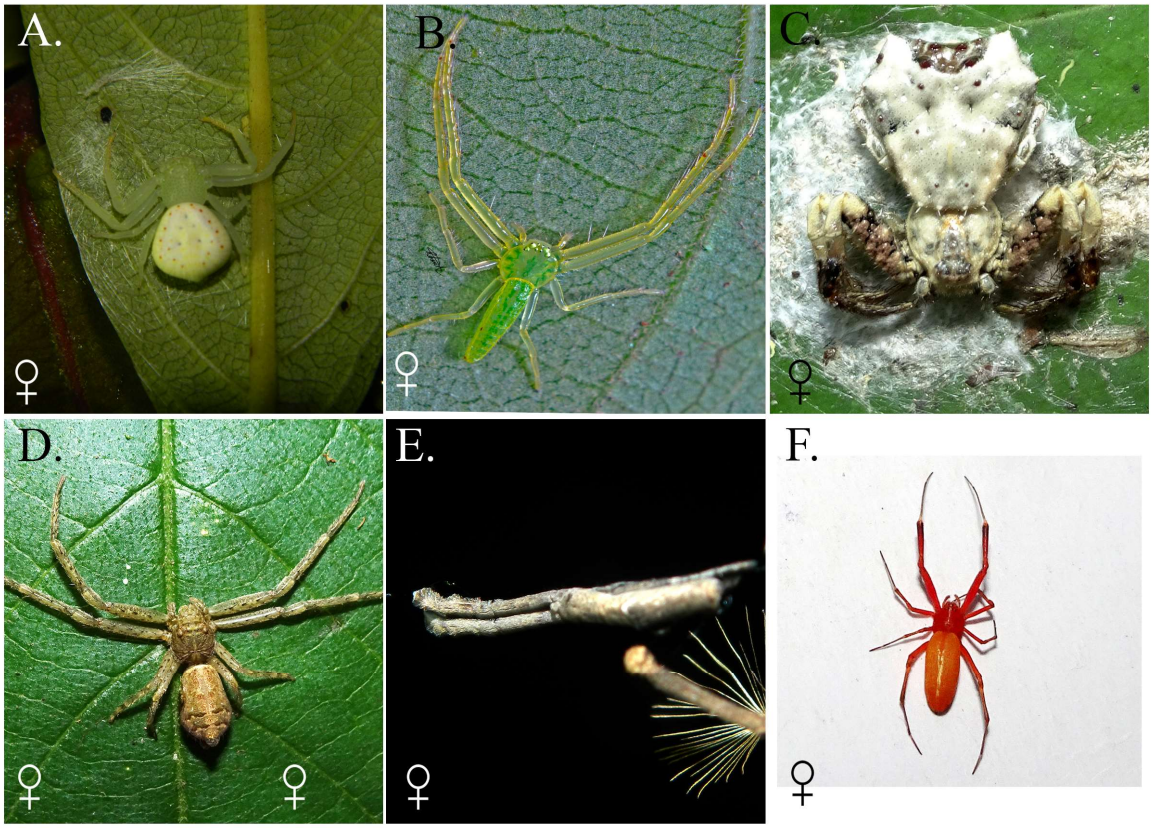
A. *Siler semiglaucus*; **B.** *Telamonia dimidiata*; **C.** *Vailimia jharbari*; **D.** *Heteropoda venatoria*; **E.** *Olios lamarcki*; **F.** *Thelcticopis severa*; **G.** *Leucauge decorata*; **H.** *Leucauge fastigata*; **I.** *Tylorida ventralis*; **J.** *Tylorida striata*; **K.** *Tetragnatha javana*; **L.** *Argyrodes miniaceus*.

PLATE 70



A. *Ariamnes cylindrogaster*; **B.** *Chrysso scintillans*; **C.** *Chrysso urbasae*; **D.** *Chrysso angula*; **E.** *Chikunia nigra*; **E.** *Meotipa picturara*; **F.** *Meotipa ultapani*; **G.** *Parasteatoda celsabdomina*; **H.** *Theridula gonygaster*; **I.** *Thwaitesia margaritifera*; **J.** *Amyciaea forticeps*; **K.** *Camaricus khandalaensis*.

PLATE 71



A. *Thomisus lobosus*; **B.** *Oxytate greenae*; **C.** *Phrynarachne decipiens*; **D.** *Tmarus jabalpurensis*; **E.** *Miagrammopes apostrophus*; **F.** *Philoponella alata*.

ANNEXURE I
LIST OF ABBREVIATIONS

Sl. No.	ABBREVIATIONS USED	FULL FORM
1	AER	Anterior eye row
2	ALE	Anterior lateral eye
3	AME	Anterior median eye
4	asl	above sea level
5	BTC	Bodoland Territorial Council
6	CD	Copulatory duct
7	CHD	Central head department
9	EFL	Eye field length
10	FD	Fertilization duct
11	PER	Posterior eye region
12	PLE	Posterior lateral eye
13	PME	Posterior median eye
14	PLS	Posterior lateral spinneret
15	PMS	Posterior median spinneret
16	LAS	Leica application suite
17	mt	meta tarsus
18	NZC	National Zoological Collections
19	p	prolateral
20	PCCF	Principal Chief Conservator Forest
21	r	retrolateral
22	RTA	Retrolateral tibial apophysis
23	ti	tibia
24	v	ventral
26	RF	Reserve Forest
27	ZSI	Zoological Survey of India
28	Ha	Hectare

ANNEXURE II

DEPARTMENT OF ZOOLOGY, BODOLAND UNIVERSITY

PEOPLE'S PERCEPTION ON "SPIDER" QUESTIONNAIRE

General information

Date: Datasheet no.:

Surveyor's name:

Name of surveyed area:

Respondent information

Name of respondent:

Age Gender:

Educational qualification

Below 10 HSLC HSSLC Graduate Others

GPS location

Occupation:

Knowledge on spiders

1. Types of spiders seen: (open-ended)

2. Availability of spiders: (multiple choice)

   (i) House Indoors (ii) Home-garden (iii) Paddy field (iv) Forest

3. Season of maximum occurrence: (single choice)
   (i) Winter (ii) Pre-monsoon (iii) Monsoon
   (iv) Post-monsoon (v) Unaware

Additional information

NAME	AGE	GENDER	FEAR SPIDER (Yes/No)	NO FEAR	KILL SPIDER (Yes/No)	INDIFFERENT

Spider bite incident

NAME	DATE	TIME OF BITE	AGE	GENDER	INFORMED PHC (Y/N)	PREVENTIVE MEASURES TAKEN

People's perception on spiders (open-ended)

APPENDIX 1
PUBLICATIONS

1. Basumatary, P. and Brahma, D. (2021). One new burrow spider of the genus *Gravelyia* Mirza and Mondal 2018 (Araneae: Nemesiidae) from north-east India. *Acta Arachnologica* 70(1): 39-46.
2. Basumatary, P., Caleb, J. T. D. and Brahma, D. (2021). Rediscovery of *Dexippus kleini* Thorell 1891 (Araneae: Salticidae: Plexippini) after 129 years and its first record from India. *Acta Arachnologica* 70(1): 35-38.
3. Basumatary, P., Das, S., Caleb, J. T. D. and Brahma, D. (2020c). First record of the genus *Chinattus* Logunov 1999 with the description of a new species from India (Araneae: Salticidae: Hasariini). *Acta Arachnologica* 69(2): 127-129.
4. Basumatary, P., Caleb, J. T. D., Das, S. and Brahma, D. (2020b). Redescription of the net-casting spider *Asianopis goalparaensis* (Tikader et Malhotra, 1978) comb.n. (Araneae: Deinopidae) from India. *Arthropoda Selecta* 29(3): 325-329.
5. Basumatary, P., Caleb, J. T. D., Das, S., Jangid, A. K., Kalita, J. and Brahma, D. (2020a). First record of the genus *Vailimia* Kammerer, 2006 from India, with the description of two new species (Araneae: Salticidae: Plexippina). *Zootaxa* 4790(1): 178-186.
6. Basumatary, P. and Brahma, D. (2019b). A new species of *Paraplectana* Brito Capello, 1867 (Araneae: Araneidae) from north-east India. *Arachnology* 18(3): 276-279.
7. Basumatary, P. and Brahma, D. (2019a). A new species of the genus *Meotipa* Simon 1895 (Araneae: Theridiidae) from India. *Acta Arachnologica* 68(1): 21-24.
8. Basumatary, P., Chanda, D., Das, S., Kalita, J., Brahma, D., Basumatary, T., Basumatary, B. K. & Daimary, S. (2019). On a new species of the orb-weaving spider genus *Eriovixia* (Araneae: Araneidae) from India. *Arachnology* 18(1): 24-27.

9. Basumatary, P., Das, S., Kalita, J. and Brahma, D. (2018b). New record of *Cyrtarachne nagasakiensis* Strand, 1918 (Araneae: Araneidae) from India. *Arachnology* 17(9): 463-465.
10. Basumatary, P., Das, S., Kalita, J. and Brahma, D. (2018a). New record of *Hyllus diardi* (Walckenaer 1837) (Araneae: Salticidae) from India. *Acta Arachnologica* 67(1): 35-37.
11. Das, S., Kalita, J., Mahanta, N., Brahma, D., & Basumatary, P. (2024). New record of Phrynarachne decipiens (Forbes 1884) (Araneae: Thomisidae) from India. *Acta Arachnologica*, *73*(1), 63-66.

Acta Arachnologica, 70 (1): 39–46, June 28, 2021

One new burrow spider of the genus *Gravelyia* Mirza & Mondal 2018 (Araneae: Nemesiidae) from north-east India

Paris Basumatary & Dulur Brahma*

Department of Zoology, Bodoland University, Assam, 783370, India
E-mail: brahmadulur@gmail.com
**Corresponding author*

Abstract — *Gravelyia boro* sp. nov. is described based on both sexes from Assam, India in a genus previously known from two species. The palp of the species belonging to the genus is illustrated for the first time, and a distribution map of *G. boro* sp. nov. is also provided.

Key words — Araneae, Asia, Kokrajhar, mygalomorph, male palp

Introduction

The non-monophyletic mygalomorph family Nemesiidae Simon 1889 (Opatova et al. 2020) comprises 184 species belonging to 22 genera worldwide (World Spider Catalog 2020), of which two genera, *Damarchilus* Siliwal et al. 2015 and *Gravelyia* Mirza & Mondal 2018 occur in India (Caleb & Sankaran 2021). The recently described genus *Gravelyia* currently contains two species viz., the type species *G. excavatus* (Gravely 1921) and *G. striatus* Mirza & Mondal 2018, both species are known only from India. Although *G. excavatus* is known by both sexes the details of male palp is neither illustrated nor described in detail and *G. striatus* is only known from the female.

The genus *Gravelyia* Mirza & Mondal 2018 was erected with *G. excavatus* (Gravely 1921) as its type. *G. excavatus* (Gravely 1921) was originally described from Barkuda Island of Odisha in India, and there are no museum records of male of this species apart from some illustrations by Gravely (1921). The male of this genus bears a distinct single tibial spur on tibiae I alongwith metatarsus I bearing a cluster of cuspules ventro-proximally. The present paper describes *Gravelyia boro* sp. nov. from Assam, India.

Materials and Methods

Live individuals were photographed with Sony DSC – HX90V. Specimens were hand collected and preserved in 80% ethanol. Images were made using a Leica M205A stereo microscope equipped with a Leica DFC500 HD camera using a Leica Application Suite (LAS) version 3.8. The spermathecae were dissected and immersed in lactic acid for 24 hours to clear soft tissue. All measurements are in millimeters (mm). Legs measurements are given as total length (femur, patella, tibia, metatarsus and tarsus). Leg spination pattern follows Mirza & Mondal (2018). The studied specimens are deposited at museum in North Eastern Regional Centre, Zoological Survey of India (NERC – ZSI), Shillong. Abbreviations used: ALE = anterior lateral eye, AME = anterior median eye, PLE = posterior lateral eye, PME = posterior median eye, PLS = posterior lateral spinnerets, PMS = posterior median spinnerets, mt = metatarsus, p = prolateral, r = retrolateral, ti = tibia, v = ventral.

Taxonomy

Family: Nemesiidae Simon 1892
Gravelyia Mirza & Mondal 2018
Type species: *Damarchus excavatus* Gravely 1921 (♀ lectotype in Zoological Survey of India, Kolkata)
Diagnosis: For detailed diagnosis see Mirza & Mondal 2018.

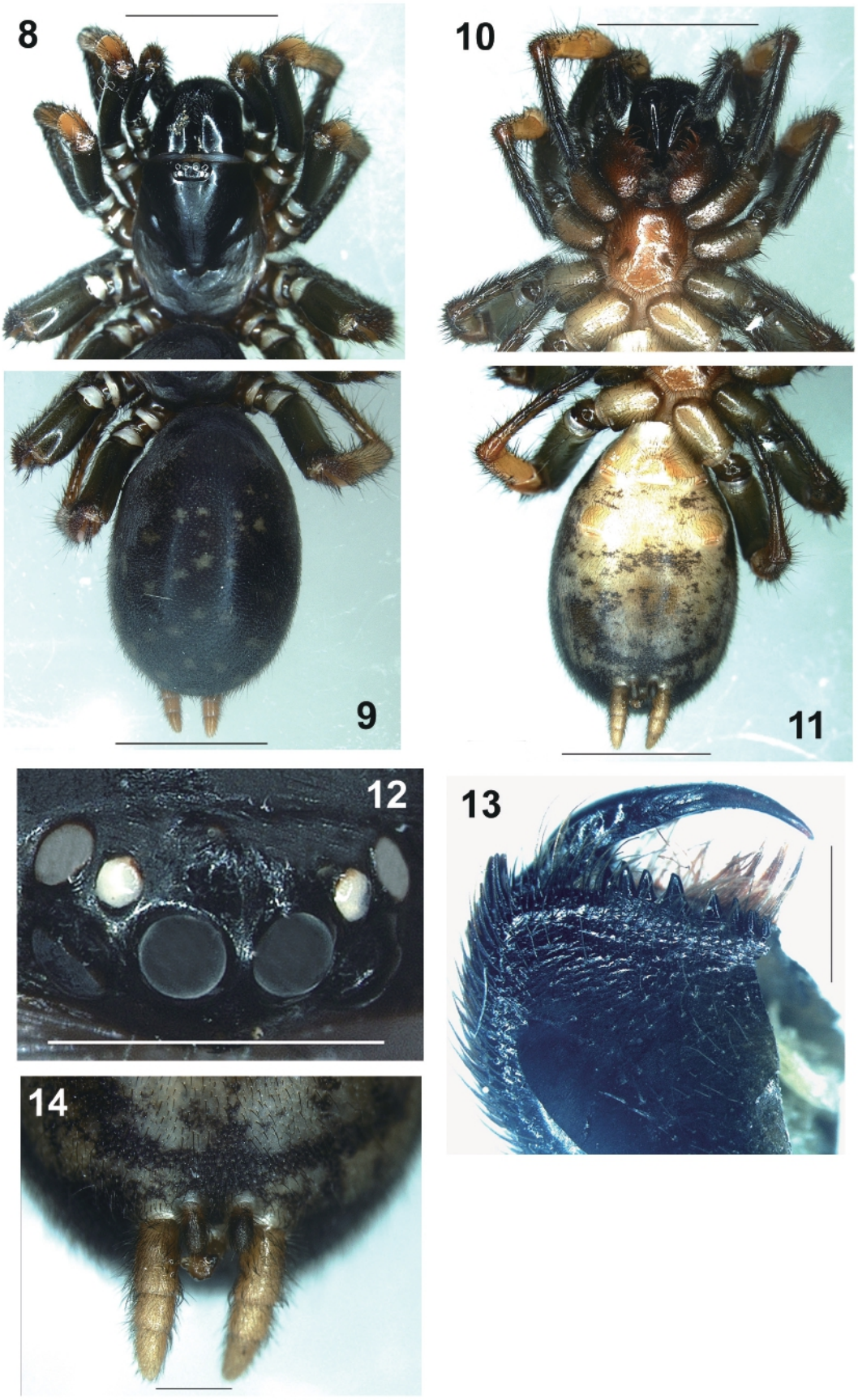
Gravelyia boro sp. nov.
(Figs. 1–37)

Type series. Holotype: ♀ (IV/ARA/ERS-21): India, Assam, Jharbari Forest Range, Chirang Reserve Forest (N 26°37'23.11", E90°14'48.67"), 81 m, 28.III. 2019 (P. Basumatary). Paratypes: 2♂ (IV/ARA/ERS-28–29) and 1♀ (IV/ARA/ERS-30) same data as in the holotype.

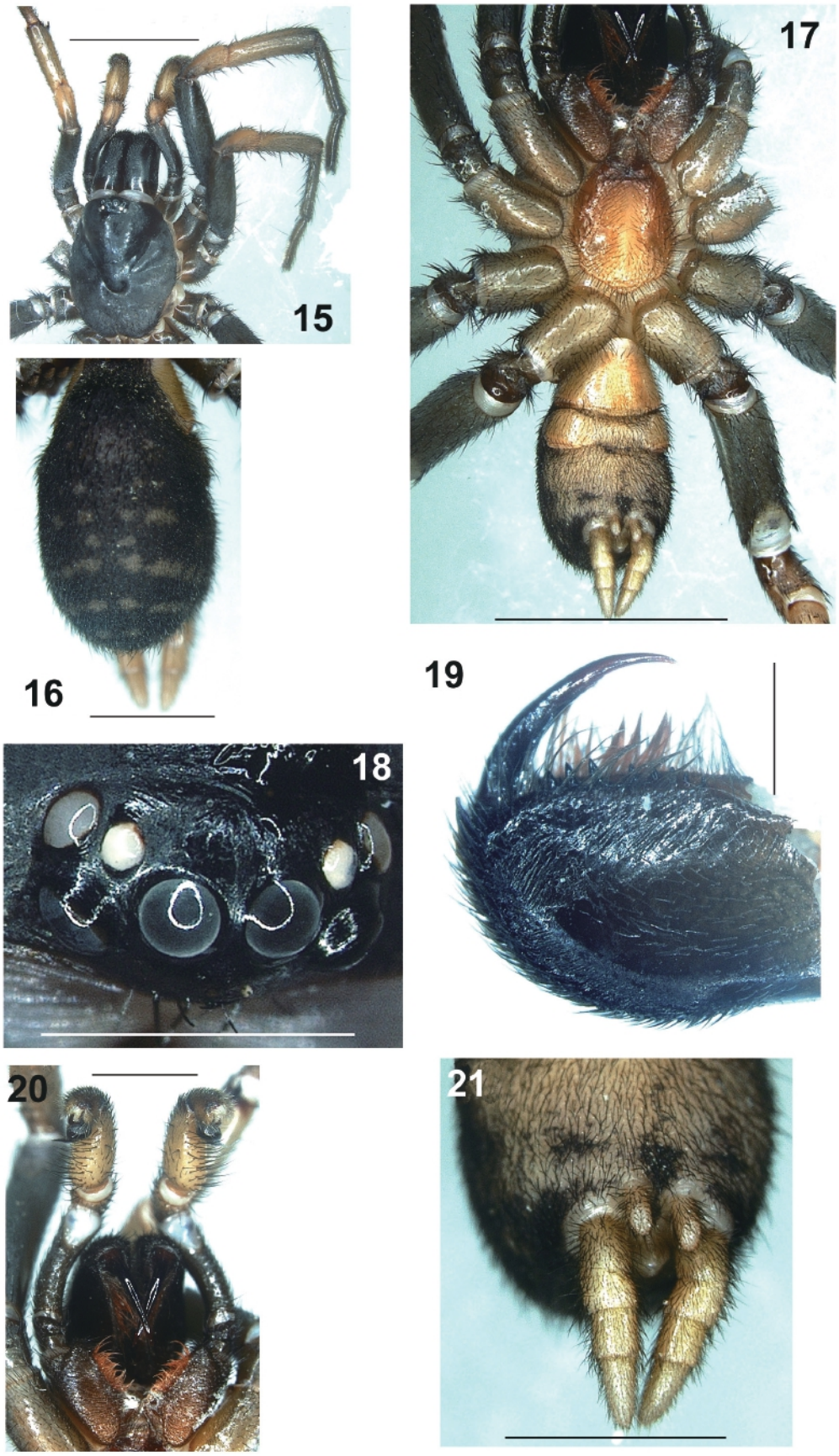
Etymology. The specific name is derived from the Boro tribe, one of the largest ethnolinguistic group in the Assam state of India, and predominantly inhabits the type locality of the new species. The name is used as a noun in apposition.

Diagnosis. *Gravelyia boro* sp. nov. is distinguishable from *G. excavatus* and *G. striatus* by the abdominal pattern, *G. boro* sp. nov. has sparse pale brownish dorsal spots (Figs. 2, 9), while *G. excavatus* and *G. striatus* have wide, short chevron stripes, almost covering the abdomen (*cf.* in figs. 1A & 2A, Mirza & Mondal 2018). Female of *G. boro* sp.

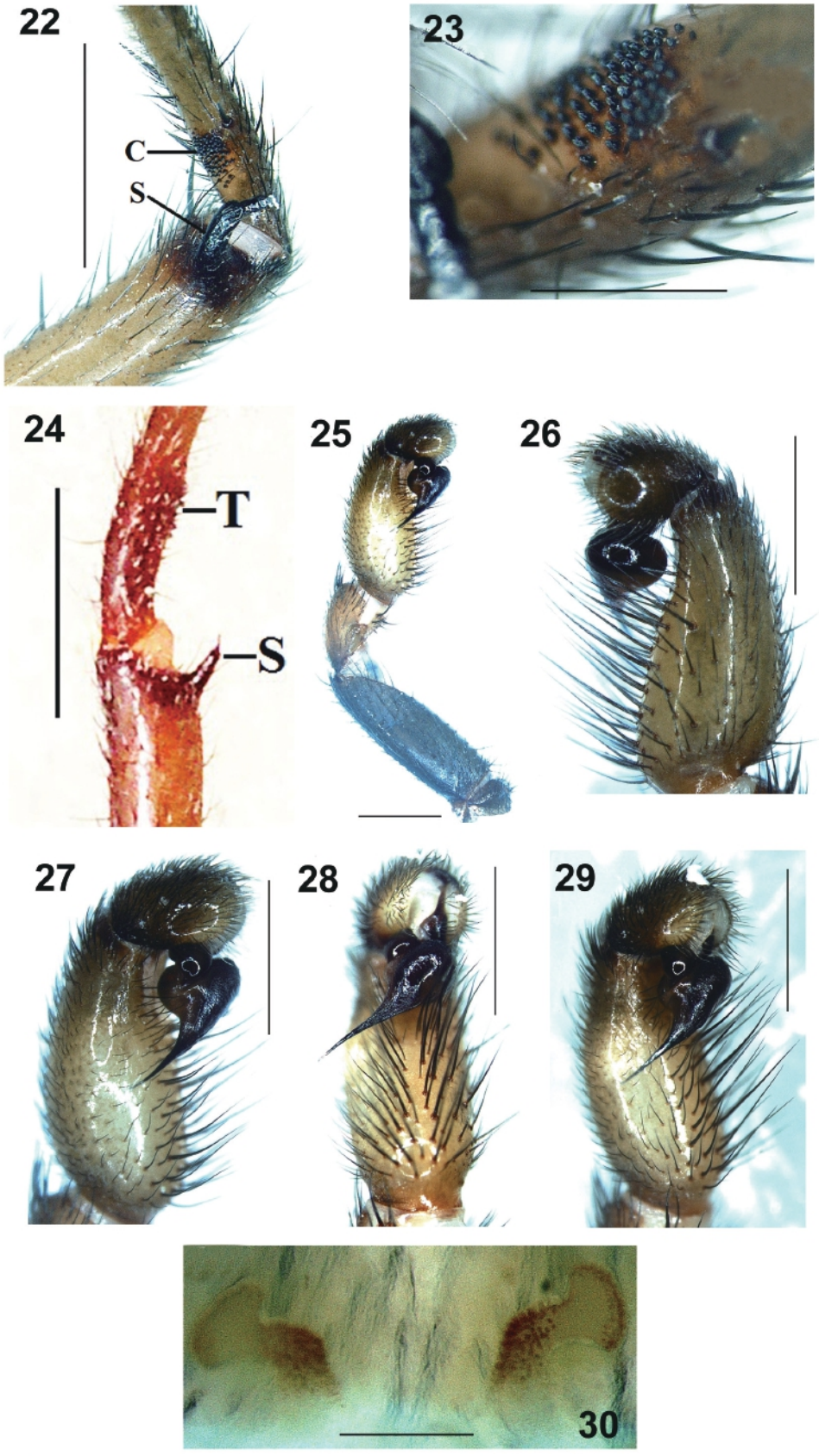
Figs. 1–7. *Gravelyia boro* sp. nov.: 1 – live habitus in burrow; 2, 4, 6 – female, live habitus, dorsal, lateral and anterior views; 3, 5, 7 – male, live habitus, dorsal, lateral and anterior views.



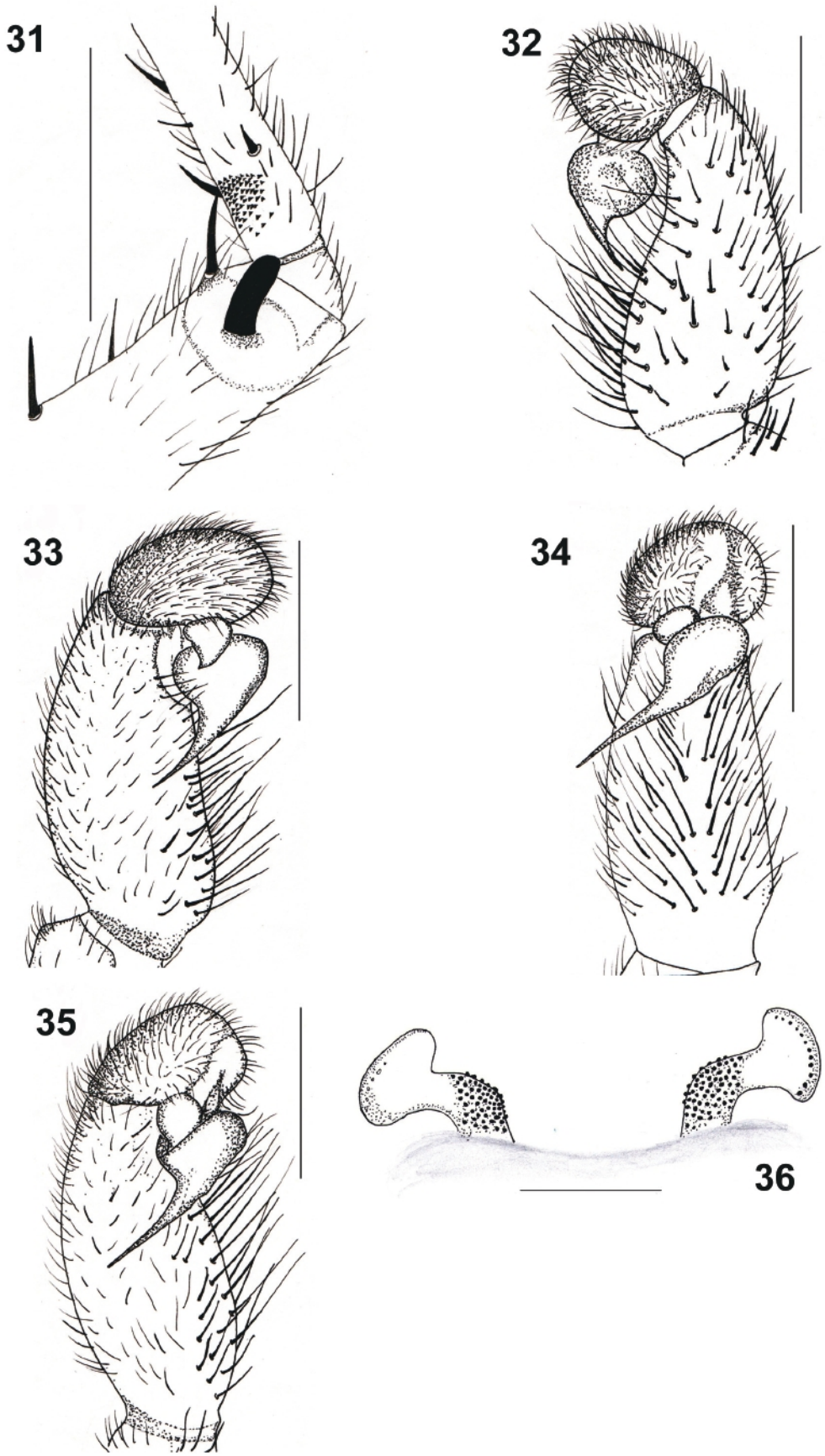
Figs. 8–14. Female of *Gravelyia boro* sp. nov.: 8 – carapace, dorsal dorsal view; 9 – abdomen, dorsal view; 10 – carapace, ventral view; 11 – abdomen, ventral view; 12 – eyes, anterior view; 13 – chelicerae, prolateral view; 14 – spinnerets. Scale bars: 5 mm (8–11); 2 mm (12); 1 mm (13–14).



Figs. 15–21. Male of *Gravelyia boro* sp. nov.: 15 – carapace, dorsal view; 16 – abdomen, dorsal view; 17 – habitus, ventral view; 18 – eyes, anterior view; 19 – chelicerae, prolateral view; 20 – male maxillae, labium and palp, ventral view; 21 – spinnerets. Scale bars: 5 mm (15–17); 2 mm (18, 20); 1 mm (19, 21).



Figs. 22–30. *Gravelyia boro* sp. nov.: 22 – male tibia and metatarsus I, prolateral view (S – spur, C – cuspules); 23 – ditto, cluster of cuspules, prolateral view; 24 – male tibia and metatarsus I, prolateral view, (S – spur, T – tubercle); 25 – whole male palp, retrolateral view; 26 – right male palp, dorsal view; 27 – ditto, ventral view; 28 – ditto, prolateral view; 29 – ditto, retrolateral view; 30 – vulva, dorsal view. Scale bars: 2 mm (22, 24, 25); 1 mm (26–29); 0.5 mm (23); 0.2 mm (30).



Figs. 31–36. *Gravelyia boro* sp. nov.: 31 – male tarsus and metatarsus I, prolateral view; 32 – right male palp, dorsal view; 33 – ditto, ventral view; 34 – ditto, prolateral view; 35 – ditto, retrolateral view, 36 – vulva, dorsal view. Scale bars: 2 mm (31); 1 mm (32–35); 0.2 mm (36).

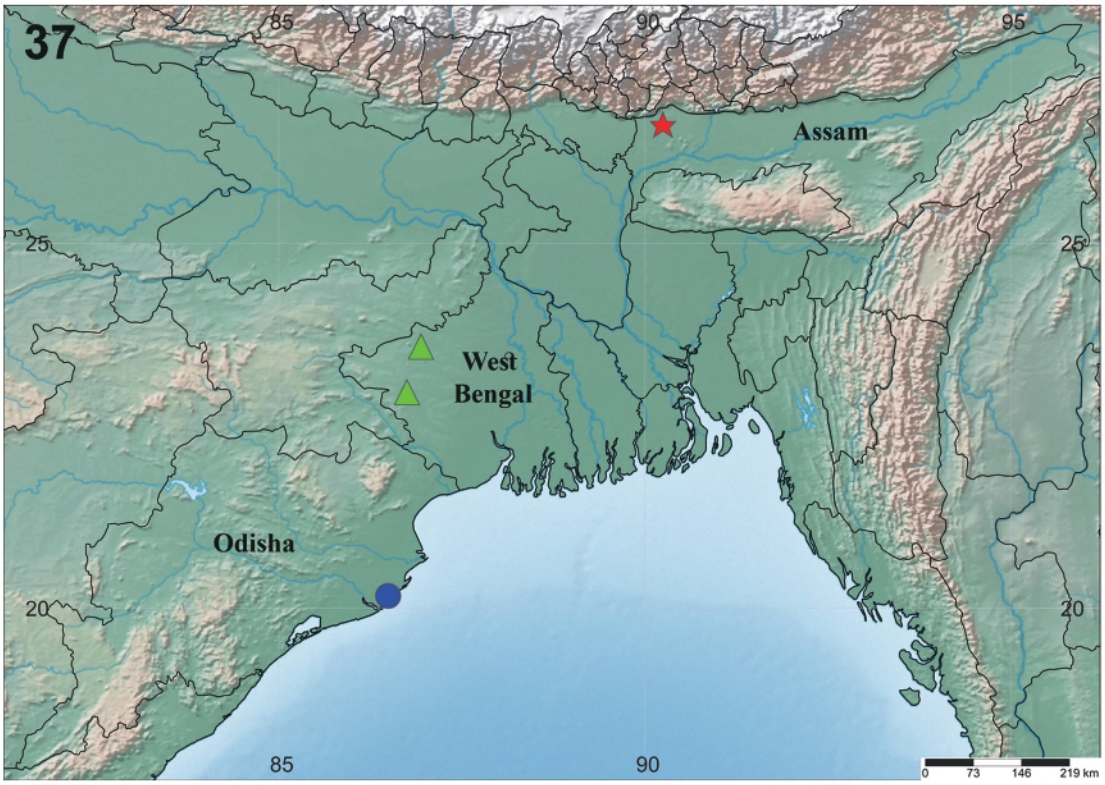


Fig. 37. Distribution records of *Gravelyia boro* sp. nov. (star), *G. striatus* (triangle) and *G. excavatus* (circle).

nov. can be distinguished from those of *G. excavatus* and *G. striatus* by having fungiform receptacles, swollen heads, curved outwards and directed distal (Figs. 30, 36), whereas in *G. excavatus* the receptacles are fully mounds and swollen inwards distally and *G. striatus* having small mounds with bud shaped swellings directed distal upwards in opposite direction (*cf.* in figs. 1D & 2D, Mirza & Mondal 2018). Male of *G. boro* sp. nov. can be differentiated from those of *G. excavatus* by the spur directed outwards distal and flattened anteriorly without any curves, distal end of tibiae I with gentle inward curvature, and metatarsus I with slightly raised tubercle (Fig. 24), whereas in *G. excavatus* the spur is slightly curved and distally bent inwards being stout and bulky anteriorly, tibiae I without inward slope distally and metatarsus I with highly raised tubercle (*cf.* in fig. 1f, Gravely 1921).

Description. Female (holotype). Total length, without chelicera: 15.08. Carapace (Figs. 2, 6, 8): 5.41 long, 4.41 wide. Matte black, raised caput, covered sparsely with blackish setae. Eye sizes and interdistances (Fig. 12): 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, ALE-PLE 0.12. Maxillae (Fig. 10): 1.64 long, 0.95 wide, with 15 cuspules. Reddish brown with tuft of coarse brownish setae on prolateral sides. Labium (Fig. 10): 0.68 long, 0.56 wide. Dark reddish brown, labiosternal junction distinct and well developed. Chelicera (Fig. 13): glossy blackish with 8 promarginal teeth and 16 mesobasal denticles. Rastellum formed by thick setae. Sternum (Fig. 10): 2.65 long, 2.48 wide. Yellowish brown, sub-rectangular, covered sparsely with blackish setae. Sigilla (Fig. 10): anterior and median slight oval, marginal, posterior large, oval-elongated, 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. Legs covered with numerous blackish setae alongwith blackish spines sparsely; femora, metatarsi and tarsi blackish; patellae and tibiae yellowish brown. Scopulae present on patellae laterally and entire on tarsi and metatarsi I–IV, including patellae and tibiae of palp. Paired claws on all legs with a row of 4-6 teeth. Abdomen (Figs. 2, 4, 9, 11): 9.67 long, 6.3 wide; blackish, pilose; dorsum covered with pale brownish spots distally; venter pale whitish brown at proximal end and pale blackish with sparse blackish patches distad. Spinnerets (Fig. 14): PLS 2.09 long, 0.59 wide, PLS-PLS 0.78; PMS 0.69 long, 0.32 wide, PMS-PMS 0.42. PLS yellowish brown and pilose, with apical segment triangular distally; PMS pilose and blackish brown.

Vulva (Figs. 30, 36): receptacles fungiform with swollen heads, curved outwards laterally, 0.25 long; swollen heads spaced by 3 width, stalks spaced by more than 3.7 diameters, and heads 2 times wider than stalk; pores on receptacle dense on the mesal side of the stalk, and evenly spaced on heads.

Male (paratype IV/ARA/ERS – 28). Total length, without chelicera: 13.26. Carapace (Figs. 3, 7, 16): 5.39 long, 4.19 wide. Matte blackish with raised caput and covered with sparse blackish setae. Eye sizes and interdistances (Fig. 18): 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 (Figs. 15, 20): 1.68 long, 0.98 wide, with 15 cuspules. Coloration as in female, covered with numerous short blackish setae ventrally and tuft of coarse reddish brown hairs laterally, anterior maxillary lobe protruded. Labium (Fig. 20): 0.71 long, 0.61 wide. Coloration as in female with well-developed labiosternal junction. Chelicerae (Fig. 19): Glossy blackish with 8 promarginal teeth and 16 mesobasal denticles. Rastellum formed by thick setae. Intercheliceral tumescence absent. Sternum (Fig. 15): 3.5 long, 2.25 wide. Sigilla (Fig. 17): as in female. Leg (Figs. 5, 7, 16, 22–24, 31): 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. Legs covered with numerous blackish setae and sparsely by spines; tibiae I with an outwardly bent blackish stout spur located distally, and inwardly slope at distal end; metatarsus I with cluster of 60–65 blackish cuspules near proximal end; femora blackish; patellae, tibiae, metatarsi and tarsi of all legs yellowish brown. Scopulae as in female. Paired claws on all legs with a row of 5-6 teeth. Abdomen (Figs. 3, 18): 4.83 long, 2.92 wide. Abdomen as in female except for dorsum covered with broad longitudinal pale brownish spots distally; venter pale whitish brown at proximal end and pale blackish with sparse blackish patches distad. 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: apical segment triangular. Palp (Figs. 20, 25–29, 32–35) femora 2.16 long, blackish with short whitish patch disto-ventrally; patella 1.08 long and 0.7 wide, sparse blackish spines apically; tibia 2.0 long and 0.84 wide, relatively 1/3 femora length; cymbium 0.84 long and 0.48 wide, oval shaped, slightly curved inwards and covered with blackish setae; bulb 1.01 long, oval with several low ridges (Figs. 27–29); embolus slender, twice as long as tegulum, pointed at the tip and gently curved inwards distally.

Distribution. India (Assam) (Fig. 37).

Natural history. *Gravelyia boro* sp. nov. were found underground sandy loam in the burrow ca. 10–15 cm deep. The burrows were seen with open entrance of 0.8–1 cm wide, but entrances of burrows were not found during winter, which might probably be concealed with soil particles for hibernation (Fig. 1). The burrowing site had some vegetation cover with herbs and shrubs.

Acknowledgements

We owe our heartful thanks to Yuri M. Marusik (Magadan, Russia) for providing constructive comments and taxonomic inputs. We are grateful to Dr. Vishwanath D. Hegde Officer-in-Charge, Zoological Survey of India, Shillong for providing stereo zoom microscope facility and Assam State Biodiversity Board for granting collection permit. Many thanks to Dr. Ilona J Kharkongor Dr. Uttam Saikia, Bhaskar Saikia, Amit Rana and Merilly Dkhar for their support. Our gratitude to Aninidya Swargowari (Additional Principal Chief Conservator of Forest & Central Head of Department) for granting permit to conduct study at Chirang Reserve Forest. We are indebted to Pabidash Narzary (Conservation guard, Sikhnajhar Nounwgwr Adventure Tourism Society, Jharbari) for his valuable assistance in field work. We are thankful to Jharbari Forest Range staffs for their support. We extend our heartfelt thanks to Rafael P. Indicatti (São Paulo, Brazil) and an anonymous reviewer for their constructive comments on improving the manuscript.

References

Caleb, J.T.D. & Sankaran, P.M. 2021. Araneae of India. Version 2021, online at http://www.indianspiders.in [accessed on 21 January, 2021].

Gravely, F.H. 1921. The spiders and scorpions of Barkuda Island. Rec. Ind. Mus., Cal., 22: 399–421.

Mirza, Z.A. & Mondal, A. 2018. A new genus *Gravelyia* with two species of the family Nemesiidae (Araneae: Mygalomorphae) from India. Acta Arachnol., 67: 43–48.

Opatova, V., Hamilton, C. A., Hedin, M., Montes de Oca, L., Král, J. & Bond, J. E. 2020. Phylogenetic systematics and evolution of the spider infraorder Mygalomorphae using genomic scale data. Syst. Biol., 69: 671–707.

Raven, R.J. 1985. The spider infraorder Mygalomorphae (Araneae): cladistics and systematics. Bull. Am. Mus. Nat. Hist., 182: 1–180.

Simon, E. 1889. Arachnides. In: Voyage de M. E. Simon au Venezuela (décembre 1887-avril 1888). 4e Mémoire. Ann. Soc. Entomol. Fr., 9: 16–220.

World Spider Catalog 2020. World Spider Catalog 21.5 Natural History Museum Bern. Available from http://wsc.nmbe.ch. (accessed on 24 November, 2020).

Received November 30, 2020 / Accepted May 6, 2021

Acta Arachnologica, 70 (1): 35–38, June 28, 2021

Rediscovery of *Dexippus kleini* Thorell 1891 (Araneae: Salticidae: Plexippini) after 129 years and its first record from India

Paris Basumatary[1], John T.D. Caleb[2*] & Dulur Brahma[1]

[1]*Department of Zoology, Bodoland University, Assam – 783370, India*
[2]*Zoological Survey of India, Prani Vigyan Bhavan, M-Block, New Alipore, Kolkata – 700053, West Bengal, India*
E-mail: caleb87woodgate@gmail.com
**Corresponding author*

Abstract — *Dexippus kleini* Thorell 1891 is recorded for the first time from India based on a sample collected from Assam, northeastern India which is about 2600 km away from its type locality. The species is diagnosed and illustrated in detail along with notes on its natural history, and a distributional map is also provided. The present species is recorded for the first time since its original description 129 years ago.

Key words — Assam, distribution, Indonesia, Jharbari, jumping spider, taxonomy.

Introduction

Dexippus Thorell 1891 is a small Oriental jumping spider genus monotypically erected with *Dexippus kleini* Thorell 1891 as its type species. It comprises only four species: *D. kleini* Thorell 1891 (Indonesia), *D. pengi* Wang & Li 2020 (Yunnan, China), *D. taiwanensis* Peng & Li 2002 (Taiwan) and *D. topali* Prószyński 1992 (India) World Spider Catalog 2021 and all are known from their corresponding type localities only. Maddison (2015) placed *Dexippus* within the subtribe Plexippina under the tribe Plexippini of the subfamily Salticinae.

D. kleini was originally described on the basis of the male sex from Aceh province (formerly known as Atjeh) located on the northern region of Sumatra Island in Indonesia. There are no records of the species since its original description apart from the illustrations of the holotype by Prószyński (1984). The male of this species is larger (7 mm) in comparison to its congeners which measure about 5–6 mm in body length, and possesses a narrower elongated abdomen with distinct whitish silver markings on dorsum bordered by two blackish longitudinal markings that distinguish it from its congeners. This paper aims to report the rediscovery of *D. kleini* after 129 years and its first record from Assam, India, about 2600 km away from its type locality.

Material and Methods

Collected specimens were preserved in 70% ethanol and were later examined under a Leica EZ4 HD stereomicroscope. Detailed photographs were obtained using a Leica M205A stereomicroscope equipped with a Leica DFC500 HD camera, enabled with a Leica Application Suite (LAS) version 3.8. The species was identified based on illustrations of the type provided by Prószyński (1984) and digital images of the type available from the website of Natural History Museum of Denmark (http://www.daim.snm.ku.dk/The-digitized-type-collection). All measurements are in millimeters (mm). The studied specimen is deposited in National Zoological Collections, Zoological Survey of India (NZC-ZSI), Chennai.

Abbreviations used are as follows: AER = anterior eye row, ALE = anterior lateral eye, AME = anterior median eye, EFL = eye field length, PER = posterior eye row, PLE = posterior lateral eye, PME = posterior median eye, RTA = retrolateral tibial apophysis.

Taxonomy

Dexippus Thorell 1891
Type species: *Dexippus kleini* Thorell 1891

Dexippus kleini Thorell 1891
(Figs. 1–6)

D. kleini Thorell 1891: 112 (description of male) (♂ holotype in Zoological Museum, Copenhagen, digital images of the type, examined).
D. kleini Prószyński 1984: 33 (illustrations of the holotype).

Specimen examined. 1♂ from India, Assam, Kokrajhar, Jharbari Forest Range (26.6052°N, 90.2419°E), 72 m a.s.l., 10 July 2018, leg. P. Basumatary.

Diagnosis. The species resembles *D. taiwanensis* in palpal structure but differs by the short embolus which is slightly curved apically (*vs.* long, widely curved and S-shaped

Figs. 1–5. 1. *Dexippus kleini* from a silken retreat on *Imperata cylindrica*. 2. habitus, dorsal view; 3–5. male left palp, prolateral, ventral and retrolateral views. Scale bars: 2, 2 mm; 3–5, 0.2 mm.

embolus) and short RTA with wide incision at the tip, directed posteriorly with uneven surface (*vs*. RTA with shallow incision at the tip and with even surface directed posteriorly) (cf. Figs. 3–5, with figs. 6 in Peng & Li 2002).

Description. Male. Habitus as in Fig. 2. Total length: 7.6 long; carapace: 3.62 long, 2.59 wide; abdomen: 3.98 long, 1.89 wide. Carapace whitish with metallic sheen, lateral sides reddish brown, ocular area reddish brown, fringe areas of AMEs with tuft of hairs (Fig. 2). Eye measurements: AME 0.45, ALE 0.30, PME 0.26, PLE 0.18. AER 1.71, PER 1.52, EFL 1.10. Chelicerae brownish, sternum brownish and covered sparsely with whitish setae; labium and maxillae pale brown. Legs brownish covered with blackish and whitish hairs sparsely (Fig. 2). Abdomen oval with metallic sheen, covered with blackish hairs, lateral sides reddish brown; venter pale brown with broad mid venter blackish band and a pair of narrow blackish band, merged with each other (Fig. 2). Spinnerets dark.

Palp as in Figs. 3–5; tibiae and tarsus brownish, covered with long blackish setae; RTA short with wide incision at the tip, directed posteriorly; bulb oval shaped, with a conical outward projection posteriorly; embolus long with sturdy base and curved distally forming an S-shaped (Figs. 3–5).

Female. Unknown

Natural history. The species was found on *Imperata cylindrica* (Cogon grass). The studied male was found inside a long and cylindrical cocoon shaped silken retreat on cogon grass flower (Fig. 1).

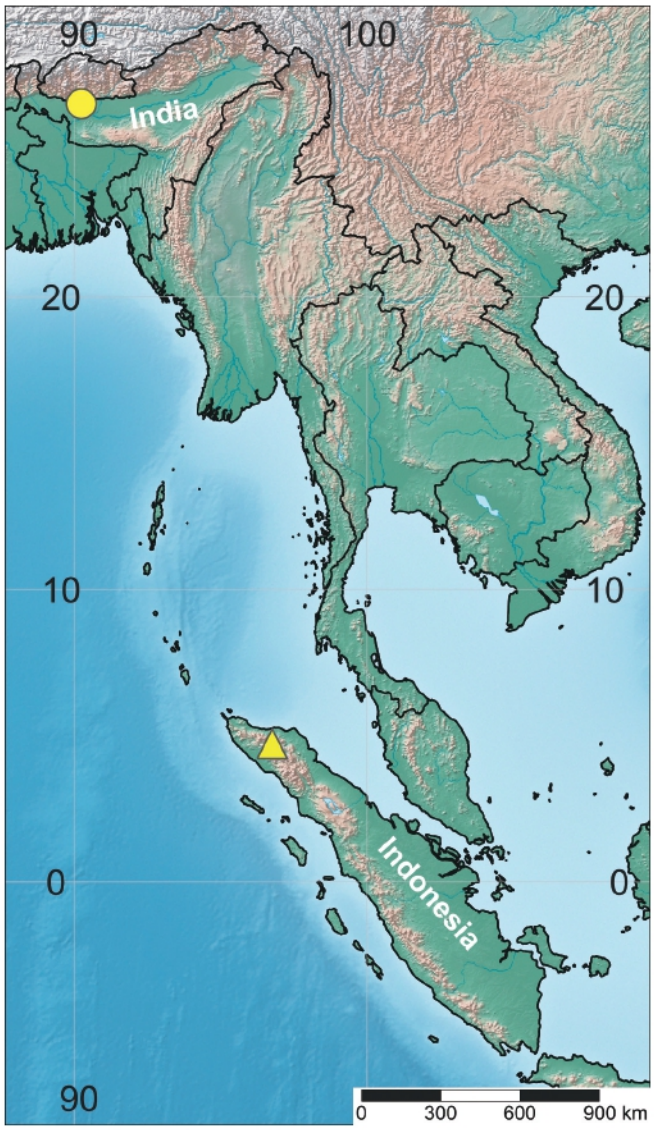


Fig. 6. Distributional records of *Dexippus kleini*. Triangle: Aceh (type locality); Circle: Jharbari, Assam (new locality).

Distribution. *Dexippus kleini* was previously known only from the Sumatran Island (Indonesia), and with the present record its distribution range extends till northeast part of India (Assam) (Fig. 6), which is the northwestern limit of its distribution. The occurrence of this species in Malaysia, Thailand and Myanmar which lie between the two locations is possible.

Discussion. The salticid fauna of India is currently represented by 275 species (Caleb & Sankaran 2021) and the tribe Plexippini from India is represented by 53 species in 20 genera viz., *Brancus* Simon 1902 (1), *Burmattus* Prószyński 1992 (1), *Dexippus* Thorell 1891 (1), *Epeus* Peckham & Peckham 1886 (4), *Evarcha* Simon 1902 (2), *Hyllus* C. L. Koch 1846 (5), *Orientattus* Caleb 2020 (1), *Pancorius* Simon 1902 (6), *Plexippus* C. L. Koch 1846 (6), *Pseudamycus* Simon 1885 (1), *Ptocasius* Simon 1885 (1), *Telamonia* Thorell 1887 (3), *Thyene* Simon 1885 (1), *Vailimia* Kammerer 2006 (2), *Yaginumaella* Prószyński 1979 (1), *Bianor* Peckham & Peckham 1886 (8), *Harmochirus* Simon 1885 (4), *Modunda* Simon 1901 (1), *Neaetha* Simon 1884 (1) and *Pellenes* Simon 1876 (3) (Maddison 2015; World Spider Catalog 2021).

Studies on salticids lay far behind in comparison with other countries like Australia, Brazil and China with a representative diversity of over 450 species each (Patoleta & Żabka 2020; Richardson 2020; Galvis 2015; Cao et al. 2015). Studies in the past decade, on the Indian fauna have nevertheless advanced our knowledge substantially (Basumatary et al. 2020a,b; Benjamin 2010; Caleb 2016a,b, 2017; Caleb & Mathai 2014; Caleb et al. 2015, 2017, 2018, 2019, 2020; Kulkarni & Joseph 2015; Logunov 2020; Maddison et al. 2020; Malamel et al. 2015, Malamel et al. 2019; Paul et al. 2020; Prajapati 2019; Prajapati *et al.* 2016, 2018, 2020; Roy et al. 2016; Sanap et al. 2017, 2019; Sankaran et al. 2019, Sudhin et al. 2019a,b).

A few salticids were recently rediscovered in India after more than a century since their first description: *Proszynskia diatreta* (Simon 1902) (after 112 years) (Caleb & Mathai 2014), *Curubis erratica* Simon, 1902 (after 114 years) (Caleb 2016a) and *Piranthus decorus* Thorell 1895 (after 122 years) (Caleb & Sanap 2017). All these findings reflect the underlying inadequately studied diversity of the Indian salticid fauna. The present finding adds one more species to the list of species rediscovered a century later since its original description with no other sightings or reports in between.

Acknowledgements

Our sincere thanks go to Additional PCCF and CHD, Forest, BTC, Kokrajhar, for granting permission to conduct study at Ripu-Chirang Reserve Forest. We greatly acknowledge the Assam State Biodiversity Board for granting collection permit. We owe our sincere thanks to the Director, Zoological Survey of India, Kolkata, for giving access to the facilities. We acknowledge the National History Museum of Copenhagen, Denmark for making available digital images of the type specimen which helped us in confirming the identity of our specimen. Our heartfelt thanks also go to Pabidash Narzary and Sinaiti Daimari for aiding in field work and Sanswrang Basumatary for helping with the plant identification. We are grateful to the reviewers for their constructive comments which greatly helped improve the manuscript.

References

Basumatary, P., Caleb, J.T.D., Das, S., Jangid, A. K., Kalita, J. & Brahma, D. 2020a. First record of the genus *Vailimia* Kammerer, 2006 from India, with the description of two new species (Araneae: Salticidae: Plexippina). Zootaxa, 4790: 178–186.

Basumatary, P., Das, S., Caleb, J.T.D. & Brahma, D. 2020b. First record of the genus *Chinattus* Logunov, 1999 with the description Arachnol., 69: 127–129.

Benjamin, S. P. 2010. Revision and cladistic analysis of the jumping spider genus *Onomastus* (Araneae: Salticidae). Zoological J. Linn. Soc., 159: 711–745.

Cao, Q., Li, S.Q. & Żabka, M. 2016. The jumping spiders from Xishuangbanna, Yunnan, China (Araneae, Salticidae). ZooKeys, 630: 43–104.

Caleb, J.T.D. & Mathai, M.T. 2014. Description of some interesting jumping spiders (Araneae: Salticidae) from South India. J. Entomol. Zool. Stud., 2: 63–71.

Caleb, J.T.D., Mungkung, S. & Mathai, M.T. 2015. Four new species of jumping spider (Araneae: Salticidae: Aelurillinae) with the description of a new genus from South India. Peckhamia, 124: 1–18.

Caleb, J.T.D. 2016a. A discovery and redescription of *Curubis erratica* Simon, 1902 (Araneae: Salticidae) from India. Arthropoda Sel., 25: 207–211.

Caleb, J.T.D. 2016b. New data on the jumping spiders (Araneae: Salticidae) from India. Arthropoda Sel., 25: 271–277.

Caleb, J.T.D. 2017. Jumping spiders of the genus *Icius* Simon, 1876 (Araneae: Salticidae) from India, with a description of a new species. Arthropoda Sel., 26: 323–327.

Caleb, J.T.D. & Sanap, R.V. 2017. Rediscovery of *Piranthus decorus* Thorell 1895 (Araneae: Salticidae) after 122 years since the original description. Acta Arachnol., 66: 25–29.

Caleb, J.T.D., Chatterjee, S., Tyagi, K., Kundu, S. & Kumar, V. 2017. Two new jumping spiders of the genera *Epocilla* Thorell, 1887 and *Mogrus* Simon, 1882 from India (Araneae: Salticidae). Arthropoda Sel., 26: 329–334.

Caleb, J.T.D., Chatterjee, S., Tyagi, K., Kundu, S. & Kumar, V. 2018. A new generic record and two new species of jumping spiders (Araneae: Salticidae) from India. Acta Arachnol., 67: 7–12.

Caleb, J.T.D., Sankaran, P. M., Nafin, K. S. & Acharya, S. 2019. *Indopadilla*, a new jumping spider genus from India (Araneae: Salticidae). Arthropoda Sel., 28: 567–574.

Caleb, J.T.D., Bera, C. & Acharya, S. 2020. New species and synonymies in the genus *Carrhotus* Thorell, 1891 from India (Aranei: Salticidae: Salticini). Arthropoda Sel., 29: 51–66.

Caleb, J. T. D. 2020. A new jumping spider genus from South and Southeast Asia (Araneae: Salticidae: Plexippini: *Orientattus*). Peckhamia, 200: 1–5.

Caleb, J.T.D. & Sankaran, P.M. 2021. Araneae of India. Version 2021, online at http://www.indianspiders.in [accessed on 08 January 2021]

Galvis, W. 2015. First record of the jumping spider *Eustiromastix falcatus* (Araneae: Salticidae) in Brazil. Peckhamia, 120: 1–3.

Koch, C. L. 1846. *Die Arachniden*. J. L. Lotzbeck, Nürnberg, Dreizehnter Band, pp. 1–234, pl. 433–468 (f. 1078–1271).

Kulkarni, S. & Joseph, S. 2015. First record of genus *Siler* Simon, 1889 (Araneae: Salticidae) from India. J. Threat. Tax., 7: 7701–7703.

Logunov, D.V. 2020. Further notes on the genus *Stenaelurillus* Simon, 1885 from India (Araneae: Salticidae). Zootaxa, 4899: 201–214.

Maddison, W. P. 2015. A phylogenetic classification of jumping spiders (Araneae: Salticidae). J. Arachnol., 43: 231–292.

Maddison, W.P., Beattie, I., Marathe, K., Ng, P.Y.C., Kanesharatnam, N., Benjamin, S.P. & Kunte, K. 2020. A phylogenetic and taxonomic review of baviine jumping spiders (Araneae, Salticidae, Baviini). ZooKeys, 1004: 27–97.

Malamel, J.J., Sankaran, P.M. & Sebastian, P.A. 2015. First record of the jumping spider genus *Bavia* Simon, 1877 from India, with the description of a new species. Zootaxa, 4007: 596–599.

Malamel, J.J., Nafin, K.S., Sudhikumar, A.V. & Sebastian, P.A. 2019. Two new species of the jumping spiders (Araneae: Salticidae) from the genera *Epeus* Peckham et Peckham, 1886 and *Piranthus* Thorell, 1895 from India. Arthropoda Sel., 28: 267–276.

Patoleta, B.M. & Żabka, M. 2020. New record of *Gelotia* Thorell, 1890 and a new species of *Parahelpis* Gardzińska & Żabka, 2010 (Araneae: Salticidae) from Australia. Zootaxa, 4899: 280–286.

Paul, J., Prajapati, D.A., Joseph, M.M. & Sebastian, P.A. 2020. Description of a new species of *Colaxes* Simon, 1900 (Araneae: Salticidae: Ballinae) from the tropical montane cloud forests of Western Ghats, India. Arthropoda Sel., 29: 244–250.

Prajapati, D.A. 2019. A new species of the jumping spider genus *Phlegra* Simon, 1876 from India (Aranei: Salticidae: Aelurillina). Arthropoda Sel., 28: 575–578.

Prajapati, D.A., Murthappa, P.S., Sankaran, P.M. & Sebastian, P.A. 2016. Two new species of *Stenaelurillus* Simon, 1886 from India (Araneae: Salticidae: Aelurillina). Zootaxa, 4171: 321–334.

Prajapati, D.A., Malamel, J.J., Sudhikumar, A.V. & Sebastian, P.A. 2018. A new species of the jumping spider genus *Icius* Simon, 1876 from India (Aranei: Salticidae: Chrysillini). Arthropoda Sel., 27: 330–334.

Prajapati, D.A., Malamel, J. J. & Sebastian, P. A. 2020. First record of *Uroballus* Simon, 1902 from India, with description of a new species (Araneae: Salticidae: Simaethina). Arachnology, 18: 629–631.

Peckham, G. W. & Peckham, E. G. 1886. Genera of the family Attidae: with a partial synonymy. Trans. Wis. Acad. Sci. Arts Lett., 6: 255–342.

Peng, X.J. & Li, S.Q. 2002. Four new and two newly recorded species of Taiwanese jumping spiders (Araneae: Salticidae) deposited in the United States. Zool. Stud., 41: 337–345.

Prószyński, J. 1984. Atlas rysunków diagnostycznych mniej znanych Salticidae (Araneae). Zes. Nau. Wy. Szkoły Rolniczo-Pedagogicznej w Sie, 2: 1–177.

Prószyński, J. 1992. Salticidae (Araneae) of India in the collection of the Hungarian National Natural History Museum in Budapest. Ann. Zool., Warszawa, 44: 165–277.

Prószyński, J. 1992. Salticidae (Araneae) of the Old World and Pacific Islands in several US collections. Ann. Zool., Warszawa, 44: 87–163.

Richardson, B.J. 2020. Evolutionary biogeography of Australian jumping spider genera (Araneae: Salticidae). Australian J. Zool., 67: 162–172.

Roy, T.K., Saha, S. & Raychaudhuri, D. 2016. A treatise on the jumping spiders (Araneae: Salticidae) of tea ecosystem of Dooars, West Bengal, India. World Sci. News, 53: 1–66.

Sanap, R.V., Joglekar, A., Prajapati, D.A. & Caleb, J.T.D. 2017. Two new species of *Langelurillus* Próchniewicz, 1994 from India (Araneae: Salticidae: Aelurillina). Zootaxa, 4318: 135–146.

Sanap, R.V., Caleb, J.T.D. & Joglekar, A. 2019. A new species of the hisponine jumping spiders from India (Araneae: Salticidae), with some observations on its life history. Arthropoda Sel., 28: 113–124.

Sankaran, P.M., Malamel, J.J., Joseph, M.M. & Sebastian, P.A. 2019. New species of *Habrocestum* Simon, 1876 and a redescription of *Curubis tetrica* Simon, 1902 (Araneae: Salticidae: Salticinae: Hasariini) from India. J. Nat. Hist., 53: 1–15.

Simon, E. 1876. Les arachnides de France. Tome troisième. Roret, Paris, 364 pp., pl. IX-XIII.

Simon, E. 1884. Etudes arachnologiques. 16e Mémoire. XXIII. Matériaux pour servir à la faune des arachnides de la Grèce. Ann. Soc. Entomol. Fr., 4: 305–356.

Simon, E. 1885. Arachnides recueillis par M. Weyers à Sumatra. Premier envoi. Ann. de la Soc. Entomol. de Belge., (C.R.): 30–39.

Simon, E. 1885. Matériaux pour servir à la faune arachnologiques de l'Asie méridionale. I. Arachnides recueillis à Wagra-Karoor près Gundacul, district de Bellary par M. M. Chaper. II. Arachnides recueillis à Ramnad, district de Madura par M. l'abbé Fabre. Bull. soc. zool. Fr., 10: 1–39.

Simon, E. 1901. Descriptions d'arachnides nouveaux de la famille des Attidae (suite). Ann. de la Soc. Entomol. de Belge. 45: 141–161.

Simon, E. 1902. Etudes arachnologiques. 32e Mémoire. LI. Descriptions d'espèces nouvelles de la famille des Salticidae (suite). Ann. de la Soc. Entomol. de Fr., 71: 389–421.

Sudhin, P.P., Nafin, K.S., Sumesh, N.V. & Sudhikumar, A.V. 2019a. A new spider species of the genus *Cocalus* C.L. Koch, 1846 (Araneae: Salticidae: Spartaeinae) from Western Ghats of India. Arthropoda Sel., 28: 125–130.

Sudhin, P.P., Nafin, K.S., Benjamin, S.P. & Sudhikumar, A.V. 2019b. Two new species of the genus *Marengo* Peckham et Peckham, 1892 (Araneae: Salticidae) from Western Ghats of India. Arthropoda Sel., 28: 435–444.

Thorell, T. 1887. Viaggio di L. Fea in Birmania e regioni vicine. II. Primo saggio sui ragni birmani. Ann. Mus. Civ. Stor. Nat. Genova, 25: 5–417.

Thorell, T. 1891. Spindlar från Nikobarerna och andra delar af södra Asien. K. Sven. vetensk.akad. handl., 24: 1–149.

World Spider Catalog 2021. World Spider Catalog. Version 22.0. Natural History Museum Bern, online at http://wsc.nmbe.ch, accessed on 21 January, 2020. doi: 10.24436/2

Received January 23, 2021 / Accepted May 6, 2021

Acta Arachnologica, 69 (2): 127–129, December 20, 2020

First record of the genus *Chinattus* Logunov 1999 with the description of a new species from India (Araneae: Salticidae: Hasariini)

Paris Basumatary[1], Sangeeta Das[2], John T. D. Caleb[3] & Dulur Brahma[1*]

[1]*Department of Zoology, Bodoland University, Assam, 783370, India*
[2]*Department of Zoology, Assam Don Bosco University, Assam, 781014, India*
[3] *Zoological Survey of India, Prani Vigyan Bhavan, M-Block, New Alipore, Kolkata 700053, West Bengal, India*
*E-mail: brahmadulur@gmail.com, *Corresponding author*

Abstract — A new jumping spider species, *Chinattus prabodhi* sp. nov. is described based on female specimens collected from Assam State of India. Females of the new species can be distinguished from other known congeners by the epigyne lacking a distinctive circular median pocket, the long, narrow and arching copulatory ducts, aligned posteriorly at the copulatory openings, and the oblong spermathecae. With the discovery of the new species, the genus *Chinattus* Logunov 1999 is reported for the first time from India.

Key words — Assam, Bhumka, Jharbari, taxonomy.

Introduction

The jumping spider genus *Chinattus* was erected by Logunov (1999) with the type species *Habrocestoides szechwanensis* Prószyński 1992. It comprises of 17 accepted species (World Spider Catalog 2020), and is currently placed within the tribe Hasariini of the subfamily Salticinae (Maddison 2015). The present paper reports the genus for the first time from India with discovery of a new species, *C. prabodhi* sp. nov. from Jharbari Forest Range of Chirang Reserve Forest, Assam.

Materials and Methods

Field photographs were taken with a Sony DSC HX90V camera. The specimens were preserved in 80% ethanol and microphotographs were made under a Leica M205A stereomicroscope equipped with a Leica DFC500 HD camera enabled with a Leica Application Suite (LAS) version 3.8. Measurements are given in millimeters (mm). The types are deposited in the National Zoological Collections, North Eastern Regional Centre, Shillong, Zoological Survey of India (NERC – ZSI). Abbreviations used in the text: ALE = anterior lateral eye; AME = anterior median eye; CD = copulatory duct; FD = fertilization duct; PLE = posterior lateral eye; PME = posterior median eye.

Taxonomic account:
Chinattus Logunov 1999
Type species: *Habrocestoides szechwanensis* Prószyński 1992
Diagnosis: For detailed diagnosis see Logunov (1999).

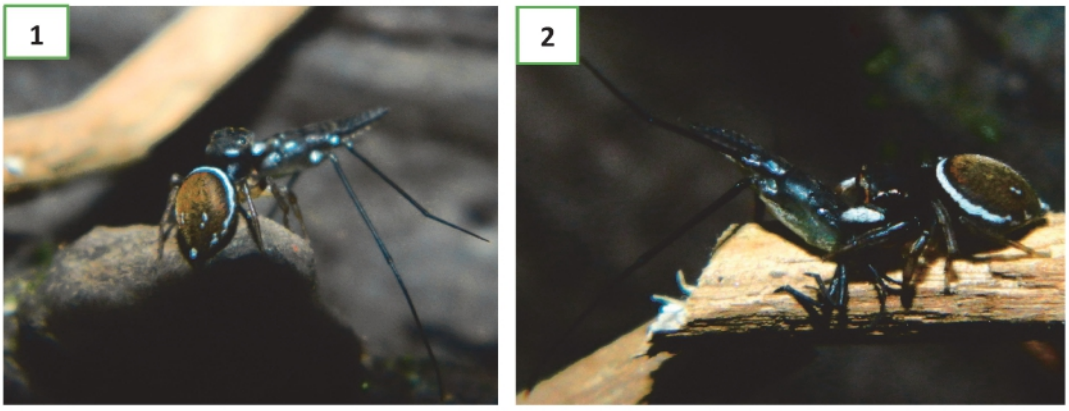
Chinattus prabodhi sp. nov.
(Figs. 1–11)

Type series. Holotype: ♀ (IV/ARA/ERS–39): Jharbari Forest Range, Bhumkah, Kokrajhar (26.1873 N, 90.1758 E), 74 m a.s.l., 8 August 2019, leg. P. Basumatary. Paratype: 1♀ (IV/ARA/ERS–40), collected along with the holotype.

Etymology. The species is named for Prabodh Kumar Brahma, a forest officer and keen nature lover, in recognition of his support in hosting and encouraging our field research work on spiders.

Diagnosis. The female of *C. prabodhi* sp. nov. resembles *C. szechwanensis* (Prószyński 1992) and *C. undulatus* (Song & Chai 1992**)** in genital morphology, but is distinguishable by having oblong spermathecae, long and arching CDs pointing posteriorly along the copulatory openings (Figs. 8–11), whereas spermathecae is elongated, CDs short without arching and directed laterally in *C. szechwanensis* (see figs. 27–28 in Peng & Xie 1995) and *C. undulatus* with globular spermathecae, narrow CDs folded medially (see figs. 5B–C in Song & Chai 1992).

Description. Female holotype (IV/ARA/ERS–39). Total length: 5.77 long; carapace: 2.46 long, 1.94 wide; abdomen: 3.31 long, 2.31 wide. Carapace dark brown, covered with greyish hairs (Fig. 3). Anterior and posterior eyes surrounded by reddish-brown orbital setae. Clypeal region dark brown with a row of white hairs below the anterior eyes and margin of the carapace (Fig. 5). 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. Sternum oval, reddish brown. Chelicerae red-



Figs. 1–2. General morphology of *Chinattus prabodhi* sp. nov.: 1, female feeding on a water strider, live habitus, dorsal; 2, ditto, lateral view.

dish brown with two promarignal and one retromarginal teeth; labium and maxillae reddish brown (Figs. 6–7). Legs yellowish-brown covered with greyish hairs (Fig. 4). 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). Abdomen yellowish-brown, covered with pale brownish hairs; dorsum with three white patches (two along the median region and one at the posterior end of abdomen); anterior region and lateral sides lined with a fringe white hair; venter brownish with pale brownish hairs; spinnerets brownish (Figs. 1–3). Epigyne sclerotized with a pair of copulatory openings placed laterally; spermathecae oblong; CDs long, slightly arching and with a pair of glandular ducts aligned posteriorly; FDs arise anteriorly from the spermathecae (Figs. 8–11).

Male. Unknown.

Natural history. The species was found along moist and damp bank of the perennial Bhumka stream. The bank is mostly covered with leaf litter, under thick canopy cover and the forest type is moist deciduous. They were observed feeding on water striders (Figs. 1–2)

Distribution. India (Assam).

Remarks. Though the species lacks the epigynal rounded pocket present in most congeners, it however, shares other diagnostic characters of the genus having unidentate chelicerae, leg formula 4312, widely separated copulatory openings, transversely arranged copulatory ducts and the presence of glandular ducts. The species, therefore has been placed in *Chinattus*.

Acknowledgements

Our sincere thanks go to Aninidya Swargawari (Additional Principal Chief Conservator of Forest & Central Head of Department, Forest, Kokrajhar, Assam) for granting permission to conduct study at Chirang Reserve Forest. We are grateful to Dr. Vishwanath D. Hegde, Officer-in-Charge, ZSI, Shillong for allowing the use of the stereozoom microscope facility and Assam State Biodiversity Board for granting collection permit. Many thanks to Dr. Ilona J Kharkongor, Dr. Uttam Saikia, Bhaskar Saikia and Jharbari Forest Range staff for their support. We are indebted to Pabidash Narzary for aiding in field work. We are grateful to the reviewers for their valuable comments in improving the manuscript.

References

Logunov, D. V. 1999. Redefinition of the genus *Habrocestoides* Prószyński, 1992, with establishment of a new genus, *Chinattus* gen n. (Araneae: Salticidae). Bull. Br. Arachnol. Soc., 11: 39–149.

Maddison, W.P. 2015. A phylogenetic classification of jumping spiders (Araneae: Salticidae). J. Arachnol., 43: 231–292.

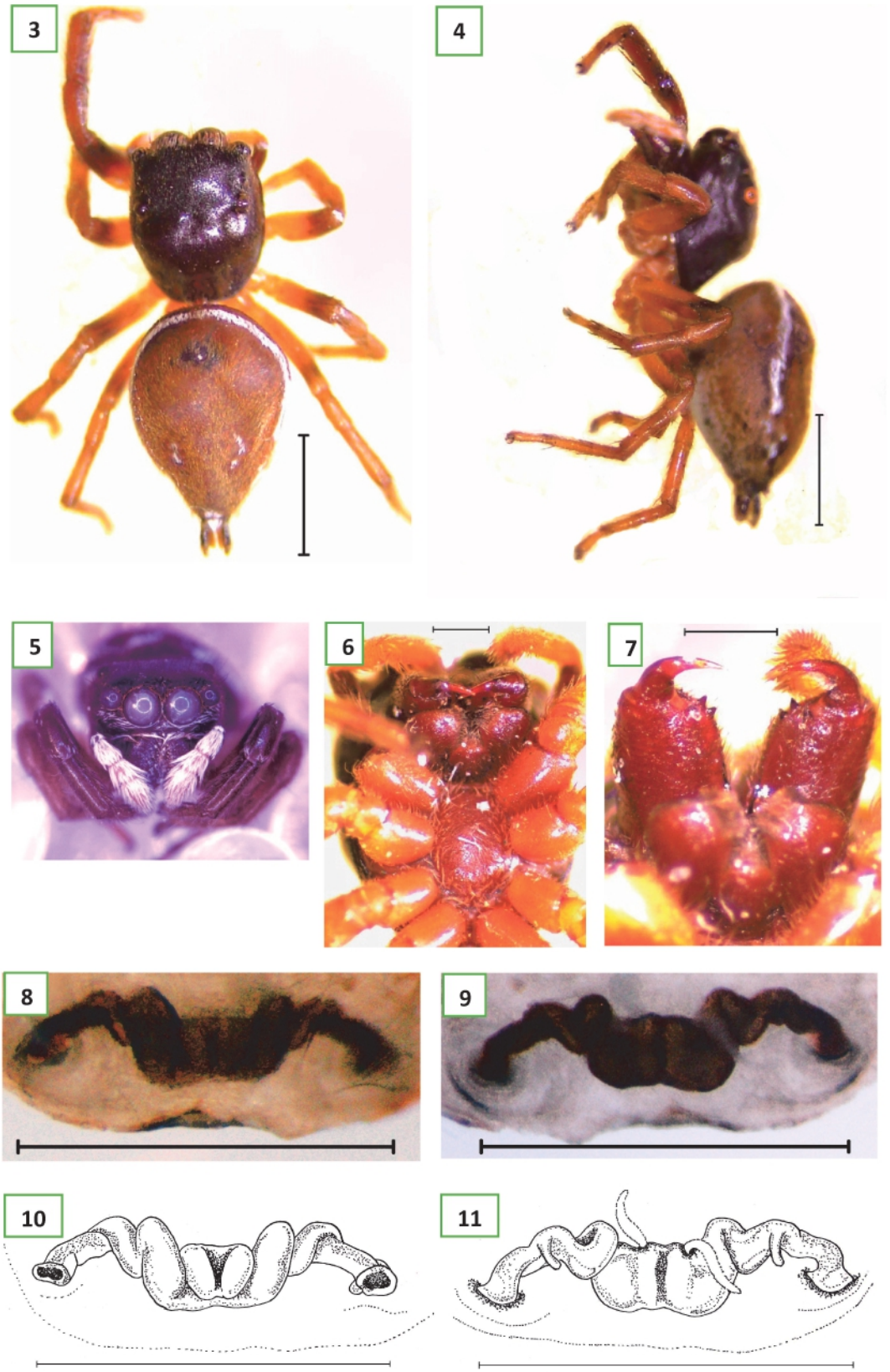
Prószyński, J. 1992. Salticidae (Araneae) of the Old World and Pacific Islands in several US collections. Ann. Zool., Warszawa, 44: 87–163.

Peng, X. J. & Xie, L. P. 1995. Spiders of the genus *Habrocestoides* from China (Araneae: Salticidae). Bull. Br. Arachnol. Soc., 10: 57–64.

Song, D. X. & Chai, J. Y. 1992. On new species of jumping spiders (Araneae: Salticidae) from Wuling Mountains area, southwestern China. J. Xinjiang Univ., 9: 76–86.

World Spider Catalog 2020. World Spider Catalog. Version 21.5. Natural History Museum Bern. Available from http://wsc.nmbe.ch (accessed 27 August, 2020)

Received July 21, 2020/ Accepted September 17, 2020



Figs. 3–11. General morphology and genitalia of *Chinattus prabodhi* sp. nov.: 3, habitus, dorsal; 4, ditto, lateral; 5, head, frontal; 6, sternum, ventral; 7, chelicerae, ventral; 8, epigyne, ventral view; 9, vulva, dorsal; 10, epigyne, ventral; 11, vulva, dorsal. Scale bars: 3–4, 2 mm; 5–11, 0.5 mm.

Arthropoda Selecta 29(3): 325–329

Redescription of the net-casting spider *Asianopis goalparaensis* (Tikader et Malhotra, 1978) comb.n. (Araneae: Deinopidae) from India

Переописание паука-деинопиды *Asianopis goalparaensis* (Tikader et Malhotra, 1978) comb.n. (Araneae: Deinopidae) из Индии

Paris Basumatary[1], John T.D. Caleb[2,*], Sangeeta Das[3], Dulur Brahma[1]
Парис Басуматари[1], Джон Т.Д. Калеб[2,*], Сангита Дас[3], Дулур Брахма[1]

[1] Department of Zoology, Bodoland University, Assam – 783370, India.
[2] Zoological Survey of India, Prani Vigyan Bhavan, M-Block, New Alipore, Kolkata – 700053, West Bengal, India; email: caleb87woodgate@gmail.com
[3] Department of Zoology, Assam Don Bosco University, Assam – 782402, India.
[*]Corresponding author

KEY WORDS: Aranei, Assam, diagnosis, Kokrajhar, morphology, taxonomy.
КЛЮЧЕВЫЕ СЛОВА: Aranei, Ассам, диагноз, Кокражхар, морфология, таксономия.

ABSTRACT: *Asianopis goalparaensis* (Tikader et Malhotra, 1978) comb.n. belonging to the *liukuensis* species group is redescribed on the basis of fresh specimens collected from Assam, India. Detailed illustrations, a distributional map and notes on its natural history are provided.

How to cite this article: Basumatary P., Caleb J.T.D., Das S., Brahma D. 2020. Redescription of the net-casting spider *Asianopis goalparaensis* (Tikader et Malhotra, 1978) comb.n. (Araneae: Deinopidae) from India // Arthropoda Selecta. Vol.29. No.3. P.325–329. doi: 10.15298/arthsel. 29.3.04

РЕЗЮМЕ: Вид *Asianopis goalparaensis* (Tikader et Malhotra, 1978) comb.n., относящийся к группе видов *liukuensis*, переописан по свежим экземплярам, собранным в Ассаме, Индия. Даны детальные иллюстрации, карта распространения и наблюдения по биологии вида.

Introduction

The Asian deinopid genus *Asianopis* Lin et Li, 2020 was recently erected, with *A. zhuanghaoyuni* Lin et Li, 2020 as its generotype [Lin *et al*., 2020]. The genus consists of seven valid species, of which only *Asianopis liukuensis* (Yin, Grisworld et Yan, 2002) is known from India [WSC, 2020]. Two species were earlier described from India: viz., *Deinopis goalparaensis* Tikader et Malhotra, 1978, which is currently considered *nomen dubium* [Caleb, 2019], and *D. scrubjunglei* Caleb et Mathai, 2014, a junior synonym of *A. liukuensis* [Lin *et al*., 2020]. The specimens of *D. goalparaensis* collected by Tikader [Tikader, Malhotra, 1978] were from Jamduar, a former part of Goalpara District, Assam. In July 1983, Goalpara was partitioned into Dhubri and Kokrajhar Districts and Jamduar fell under Kokrajhar District. The place is located in the eastern Raimona forest range, being part of the Ripu Reserve Forest under the Manas Biosphere Reserve [Forest Department, 2009]. This place is known for its magnificent scenic landscapes surrounded by Bhutan Hills harbouring diverse flora and fauna.

The genus *Asianopis* consists of two species groups [Lin *et al*., 2020]: viz., the *liukuensis*-group and the *zhuanghaoyuni*-group, of which the former includes two nominal species — *A. dumogae* (Merian, 1911) and *A. liukuensis* (Yin, Griswold et Yan, 2002). *D. goalparaensis* belongs to this group, as it shares the following diagnostic characters thereof: proximally enlarged femora I; pear-shaped carapace; female chelicerae having four pro- and seven retromarignal teeth, with numerous denticles between them; epigyne with an anchor-shaped median plate; distinct copulatory openings; insemination ducts with three turns; and oval spermathecae [Lin *et al*., 2020].

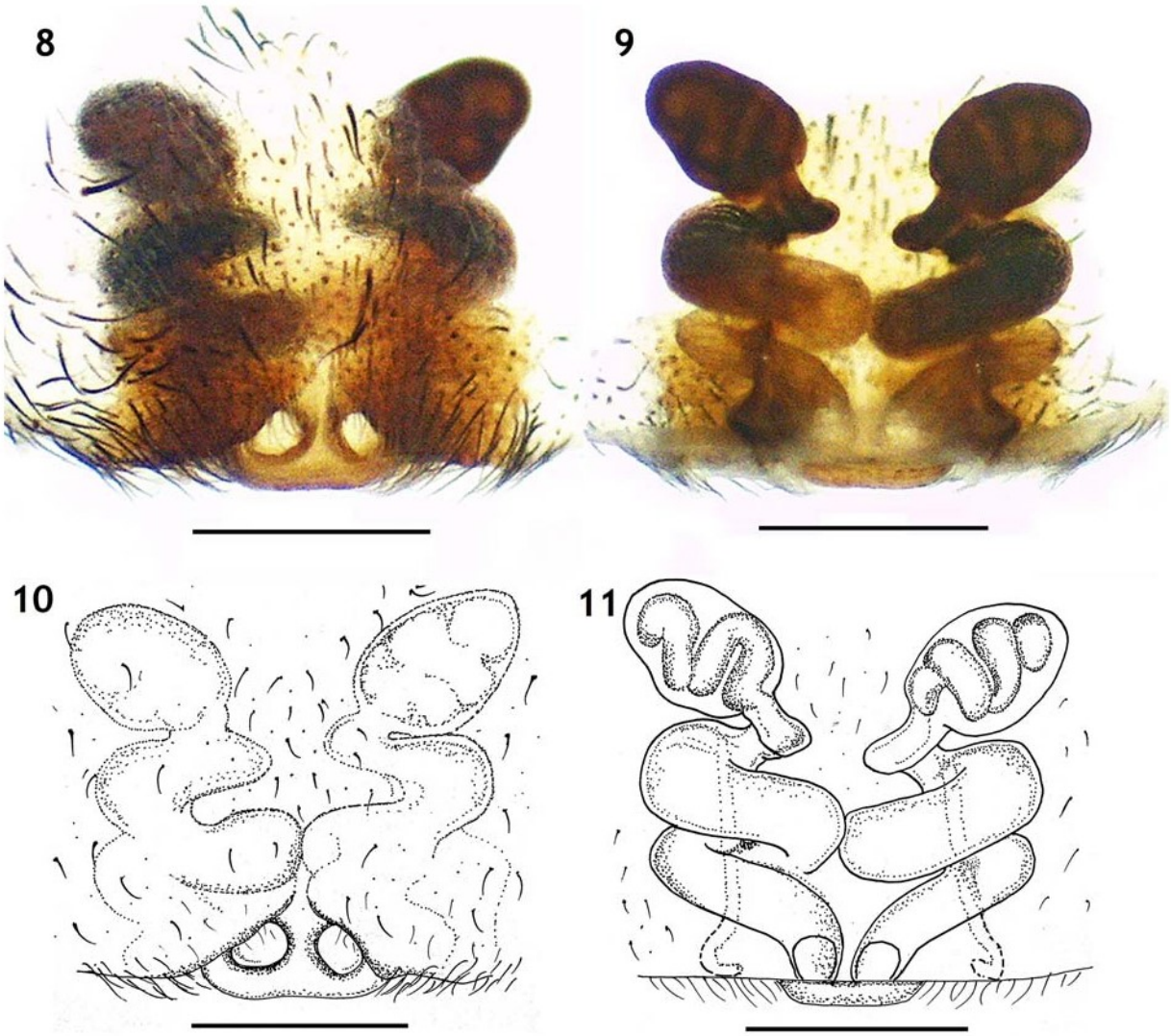
The present paper is aimed at the redescription of *D. goalparaensis* on the basis of newly collected material from the same district where the type locality lies. Detailed illustrations, a distributional map and notes on its natural history are provided.

Materials and methods

Specimens were hand collected during a night survey and photographed using a Sony Cyber-shot DSC-HX90V camera. The specimens were observed and photographed under a Leica EZ4 HD stereomicroscope enabled with a

Figs 1–7. Somatic morphology of *Asianopis goalparaensis* (Tikader et Malhotra, 1978) comb.n., female: 1 — general appearance, dorsal view; 2 — ditto, lateral view; 3 — prosoma, dorsal view; 4 — ditto, ventral view; 5 — abdomen, dorsal view; 6 — ditto, ventral view; 7 — chelicerae, ventral view. Scale bars: (3–6) 2 mm, (7) 0.5 mm.

Рис. 1–7. Соматическая морфология *Asianopis goalparaensis* (Tikader et Malhotra, 1978) comb.n., самка: 1 — общий вид сверху; 2 — то же, сбоку; 3 — просома, сверху; 4 — то же, снизу; 5 — брюшко, сверху; 6 — то же, снизу; 7 — хелицеры, снизу. Масштаб: (3–6) 2 мм, (7) 0,5 мм.



Figs 8–11. Female copulatory organs of *Asianopis goalparaensis* (Tikader et Malhotra, 1978) comb.n.: 8, 10 — epigyne, ventral view; 9, 11 — vulva, dorsal view. Scale bar: (8–11) 0.5 mm.

Рис. 8–11. Копулятивные органя самки *Asianopis goalparaensis* (Tikader et Malhotra, 1978) comb.n.: 8, 10 — эпигина, снизу; 9, 11 — вульва, сверху. Масштаб: (8–11) 0,5 мм.

Leica Application Suite (LAS EZ), version 3.0. Epigyne was dissected and macerated in 10% KOH to clear soft tissue. The type locality coordinates were approximated by using Google Earth Pro. All measurements are in millimeters (mm). Specimens are deposited in the National Zoological Collections, Zoological Survey of India (NZC-ZSI), Kolkata.

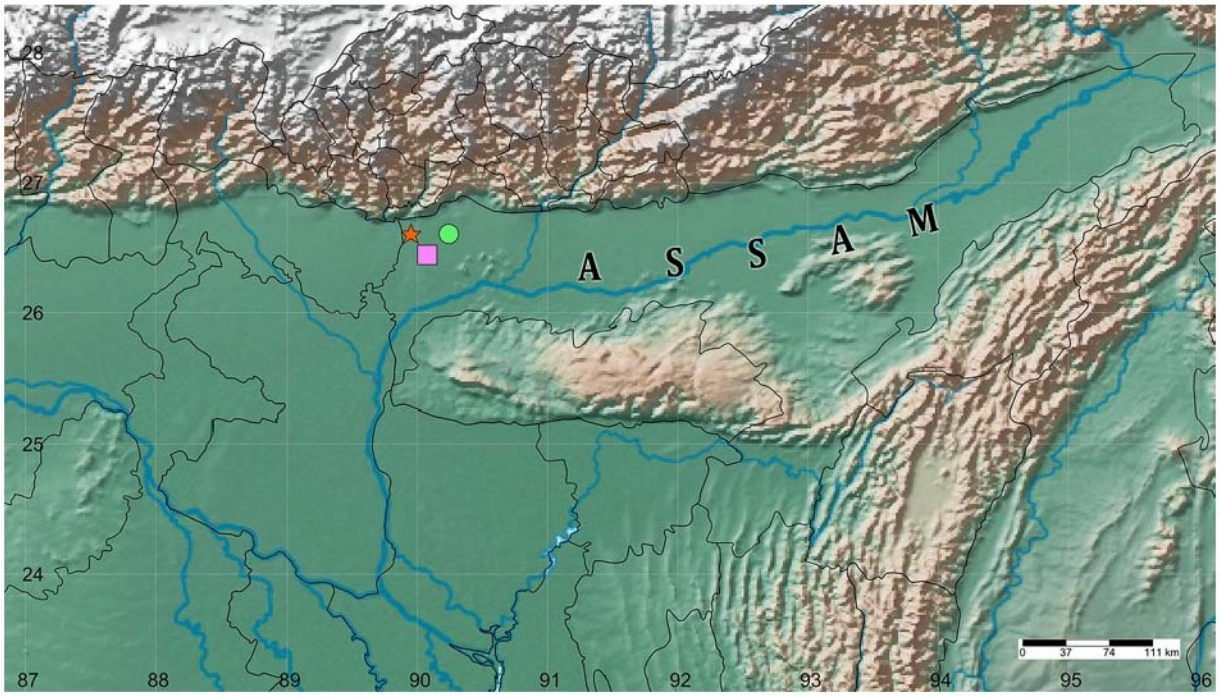
Taxonomy

Genus *Asianopis* Lin et Li, 2020.

Type species: *Asianops zhuanghaoyuni* Lin et Li, 2020, by the original designation.

DIAGNOSIS. For detailed diagnosis and description see Lin *et al.* [2020].

COMMENTS. Lin *et al*. [2020] described three new *Asianopis* species and transferred four species from *Deinopis* MacLeay, 1839 to *Asianopis*. Yet, they did not consider six other *Deinopis* species known from SE Asia: viz., *Deinopis aruensis* Roewer, 1938 (Indonesia), *D. fasciculigera* Simon, 1909 (Vietnam), *D. gubatmakiling* Barrion-Dupo et Barrion, 2018 (The Philippines), *D. kollari* Doleschall, 1859 (Myanmar and Malaysia), *D. labangan* Barrion-Dupo et Barrion, 2018 (The Philippines) and *D. luzonensis* Barrion-Dupo et Barrion, 2018 (The Philippines), which could also belong to *Asianopis*. Each of these species has at least one of the diagnostic characters supporting its placement in *Asianopis*. The female chelicerae with numerous denticles between pro- and retromarginal teeth (in *D. gubatmakiling, D. labangan* and *D. luzonensis*; see figs 1B, 5C, 6B in Barrion-Dupo & Barrion [2018]); the prominent setal fringe over PMEs (in *D. kollari*, *D. gubatmakiling, D. labangan*; cf. fig. 7b in Doleschall [1859] and figs 1A, 4A–B in Barrion-Dupo & Barrion [2018] with fig. 2D in Lin *et al*. [2020], and in *D. fasciculigera*: "*Oculi antici maximi, pilis erectis et obtusis, superne albidis extus fuscis*", see Simon [1909: 74]). *D. aruensis* has insemination ducts making over eight turns [Roewer, 1938: 19b].



Map. Collecting localities of *Asianopis goalparaensis* (Tikader et Malhotra, 1978) comb.n. in India. Star represents the type locality (Jamduar), square (Phipsu) and circle (Jharbari).

Карта. Точки сбора *Asianopis goalparaensis* (Tikader et Malhotra, 1978) comb.n. в Индии. Звезда показывает типовое местообитание (Джамдуар), квадрат (Фипсу) и кружок (Дхарбари).

A. liukuensis is the only Oriental species having a wide distribution from South India to Hainan Island in China. *D. fasciculigera* known from northern Vietnam is likely to be a senior synonym of *A. liukuensis*, as its type locality lies within the distributional range of the latter species. Such probability was earlier suggested by Logunov [2018]. Nevertheless, *D. fasciculigera* could be represented by a subadult, as it only measures 10–13 mm in total length [Simon, 1909]. Thus, the assumption that *D. fasciculigera* could be a senior synonym of *A. liukuensis* requires a further justification by reference to the type series of the former species or newly collected topotypes.

Asianopis goalparaensis (Tikader et Malhotra, 1978) **comb.n.**

Figs 1–11, Map.

Deinopis goalparaensis Tikader et Malhotra, 1978: 157, figs 1–5 (description of a juvenile, not female)

Deinopis goalparaensis: Caleb, 2019: 148, figs 1–11 (*nomen dubium*).

MATERIAL: INDIA: 1 ♀ (NZC-ZSI), Jharbari Forest Range, Assam (26.6052°N, 90.2419°E), 74 m a.s.l., 10.09.2018, P. Basumatary; 1 ♀ (NZC-ZSI), Phipsu, Assam (26.44384° N, 90.07591° E), 72 m a.s.l., 23.09.2018, P. Basumatary.

DIAGNOSIS. In general morphology, *A. goalparaensis* is similar to *A. liukuensis* from which it can be distinguished by the insemination ducts forming two and a half spirals; the spermathecae directed laterally, opposing each other with a wide V-shaped gap in between (insemination ducts with three spirals and closely placed spermathecae in *A. liukuensis*: cf. Figs 9, 11 with figs 6, 8 in Lin *et al.* [2020]).

COMMENTS. The studied specimens were observed and collected from near the type locality of *D. goalparaensis* in Assam, India (see Map). The morphological characters match those of the type specimens (cf. Figs 3–6 with figs 1–4 in Caleb [2019]), thus leaving no doubt that the studied specimens indeed belong to *D. goalparaensis*.

DESCRIPTION. MALE unknown.

FEMALE. Total length 16.18. Carapace 5.18 long, 3.53 wide; abdomen 11 long, 2.72 wide. Carapace yellowish brown, covered with dense short greyish hairs, with a pale black longitudinal patch medially from the base of posterior median eyes till fovea pointed posteriorly. Short blackish spines on both the lateral sides of thoracic regions; coarse blackish hairs forming a horn-shaped projection, along with small blackish setae over posterior median eyes (Figs 1, 3). Chelicerae yellowish brown, with four pro- and 7–8 retromarginal teeth and many denticles between the pro- and retromarginal teeth. Sternum blackish, with a pale yellow triangular patch medially. Labium and maxillae blackish, with pale yellow margins and tufts of brownish hairs (Figs 4, 7). Legs covered with blackish hairs; femora I–IV with spines retrolaterally, femur I with basal enlargement and tuft of hairs prolaterally, femora I–II blackish distally, patellae I–IV blackish, metatarsi I–IV blackish just above the proximal ends, tip of tarsi I–IV blackish (Figs 2, 4). Abdomen elongated, yellowish brown, with a medial brownish longitudinal patch pointed posteriorly and chevron markings merge with the patch, a pair of slight lateral bumps present in anterior half; ventrally blackish, with two pairs of short pale yellow patches: one at mid-venter and another at posterior end; a broad yellowish brown longitudinal margin runs from epigastric furrow to the cribellum. Spinnerets dark brown (Figs 5, 6). Epigyne with anchor-shaped median plate; a pair of rounded copulatory openings surrounded by plumose hairs; spiral insemination ducts make two and a half spirals, their

anterior portions narrow; spermathecae oval, diverging laterally (Figs 8–11).

NATURAL HISTORY. The species occurs in the mixed shrub vegetation and bamboo patches (Figs 1, 2). Specimens were frequently found at a height of about three feet above the ground level, but at some instances a few individuals were found at about eight feet high. It was also observed that the length and width of the net casting web increased as the individuals grew older: i.e., from a small web measuring one centimeter approximately in juveniles to three centimeters in subadults and finally five to six centimeters in gravid females. The web colour is also changed abruptly from pale white in juveniles to milky white in adults.

DISTRIBUTION. India, Assam (Map).

Acknowledgements. Our sincere thanks go to the Additional PCCF & CHD, Forest, BTC, Kokrajhar, for granting a permission to conduct the study at the Ripu-Chirang Reserve Forest. We greatly acknowledge the Assam State Biodiversity Board for granting the collection permit. We owe our sincere thanks to Dr Kailash Chandra, the Director, Zoological Survey of India, Kolkata, for giving access to the facilities and his support. Our heartfelt thanks also go to Tunu Basumatary, Niren Borgoyary, Pabidash Narzary, Jarang Basumatary and Karma Gayary for aiding with fieldwork. We are indebted to Dr. D.V. Logunov (Manchester, UK) whose suggestions, linguistic and editorial inputs greatly improved the manuscript.

Compliance with ethical standards

Conflict of Interest: The authors declare that they have no conflict of interest.

Ethical approval: No ethical issues were raised during our research.

References

Barrion-Dupo A.L.A., Barrion A.T. 2018. Discovery of the family Deinopidae from the Philippines, with descriptions of three new species of *Deinopis* Macleay, 1839 // Philippine Entomologist. Vol.31. No.1. P.1–23.

Caleb J.T.D. 2019. The Indian net-casting spider name *Deinopis goalparaensis* Tikader & Malhotra is a *nomen dubium* (Araneae: Deinopidae) // Zootaxa. Vol.4668. No.1. P.148–150.

Doleschall L. 1859. Tweede Bijdrage tot de kennis der Arachniden van den Indischen Archipel // Acta Societatis Scientiarum Indica-Neerlandica. Vol.5. S.1–60.

Forest Department, BTC. 2009. Profile on forest and Wildlife, BTC. P.12, 16.

Lin Y.J., Shao L., Hänggi A., Caleb J.T.D., Koh J.K.H., Jäger P. & Li S.Q. 2020. *Asianopis* gen. nov., a new genus of the spider family Deinopidae from Asia // ZooKeys. Vol.911. P.67–99.

Logunov D.V. 2018. A new ogre-faced spider species of the genus *Deinopis* MacLeay, 1839 from Vietnam (Aranei: Deinopidae) // Arthropoda Selecta. Vol.27. No.2. P.139–142.

Roewer C.F. 1938. Résultats scientifiques du Voyage aux indes orientales néerlandaises de la SS. AA. RR. le Prince et la Princesse Leopold de Belgique. Araneae // Mémoires du Musée Royal d'Histoire Naturelle de Belgique. Vol.3. No.19. P.1–94.

Simon E. 1909. Etude sur les arachnides du Tonkin (1re partie) // Bulletin Scientifique de la France et de la Belgique. Vol.42. P.69–147.

Tikader B.K., Malhotra M.S. 1978. A new record of rare spider of the family Dinopidae from India with description of a new species // Proceedings of the Indian Academy of Science. Vol.87. No.6. P.157–159.

WSC 2020. World Spider Catalog. Version 21.0. Natural History Museum Bern, Bern. Available from: http://wsc.nmbe.ch (accessed 6 May 2020).

Yin C.M., Griswold C.E., Yan H.M. 2002. A new ogre-faced spider (*Deinopis*) from the Gaoligong Mountains, Yunnan, China (Araneae, Deinopidae) // Journal of Arachnology. Vol.30. No.3. P.610–612.

Responsible editor D.V. Logunov

Zootaxa 4790 (1): 178–186
https://www.mapress.com/j/zt/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

https://doi.org/10.11646/zootaxa.4790.1.11
http://zoobank.org/urn:lsid:zoobank.org:pub:B56FEEEF-BB82-4FE4-AA84-1A0F2EA1F869

First record of the genus *Vailimia* Kammerer, 2006 from India, with the description of two new species (Araneae: Salticidae: Plexippina)

PARIS BASUMATARY [1], JOHN T.D. CALEB [2,6], SANGEETA DAS [3], ASHISH KUMAR JANGID [4], JATIN KALITA [5] & DULUR BRAHMA [1]

[1] *Department of Zoology, Bodoland University, Assam, 783370, India*
parishbasumatary@gmail.com; https://orcid.org/0000-0002-0636-162X
brahmadulur@gmail.com; https://orcid.org/0000-0002-2620-8665
[2] *Zoological Survey of India, Prani Vigyan Bhavan, M-Block, New Alipore, Kolkata, 700053, West Bengal, India*
caleb87woodgate@gmail.com; https://orcid.org/0000-0002-9471-9467
[3] *Department of Zoology, Assam Don Bosco University, Assam, 782402, India*
sangeetadasccss@gmail.com; https://orcid.org/0000-0002-0585-4609
[4] *Wildlife Institute of India, Chandrabani, Dehradun, 248001, Uttarakhand, India*
ashishjangid22@gmail.com; https://orcid.org/0000-0002-6225-1900
5 Department of Zoology, Gauhati University, Assam, 781014, India
kalitaj@live.com; https://orcid.org/0000-0002-5927-8934
[6] *Corresponding author*

Abstract

The genus *Vailimia* Kammerer, 2006 is recorded for the first time from India. Two new species, *Vailimia ajmerensis* Caleb & Jangid **sp. nov.** (♂), and *V. jharbari* Basumatary, Caleb & Das **sp. nov.** (♂♀), are described and illustrated in detail. Presently, the genus is known only by the males, which means that the female of *V. jharbari* described herein is the first female known in the genus.

Key words: taxonomy, jumping spider, Assam, Rajasthan

Introduction

The oriental jumping spider genus *Vailimia* was originally erected as *Vailima* by Peckham & Peckham (1907), with *Vailima masinei* Peckham & Peckham, 1907 as its type. Since the generic name was preoccupied, a replacement name was proposed (Kammerer 2006). *Vailimia* was placed within subtribe Plexippina (tribe Plexippini of the Salticinae) by Maddison (2015). It presently comprises four described species, of which three, namely *V. masinei* (Peckham & Peckham, 1907), *V. bakoensis* Prószyński & Deeleman-Reinhold, 2013 and *V. jianyuae* Prószyński & Deeleman-Reinhold, 2013, are known from Borneo, and one species (*V. longitibia* Guo, Zhang & Zhu, 2011) is known from China (World Spider Catalog 2020). In the present paper we record the genus for the first time in India with the description of two new species, *Vailimia ajmerensis* **sp. nov.**, and *V. jharbari* **sp. nov.**, from Rajasthan and Assam states, respectively.

Materials and methods

Specimens were hand collected and live specimens were photographed in the field with a Nikon COOLPIX L310. Specimens were preserved in 80% ethanol and were later examined under a Leica EZ4 HD stereomicroscope. Detailed microphotographs were obtained using a Leica M205A stereomicroscope attached with Leica DFC500 HD camera enabled with a Leica Application Suite (LAS) version 3.8. Epigyne was dissected and macerated in 10% KOH to clear soft tissue. All measurements are in millimeters. Leg measurements are given as total length (femur,

 Accepted by G. Ruiz: 5 May 2020; published: 10 Jun. 2020

patella, tibia, metatarsus and tarsus). Type specimens are deposited in National Zoological Collections, Zoological Survey of India (NZC-ZSI), Kolkata.

Abbreviations used are as follows: AER = anterior eye row, ALE = anterior lateral eye, AME = anterior median eye, EFL = eye field length, PER = posterior eye row, PLE = posterior lateral eye, PME = posterior median eye, RTA = retrolateral tibial apophysis.

Taxonomy

Vailimia Kammerer, 2006

Type species: *Vailimia masinei* (Peckham & Peckham, 1907).

Diagnosis. For detailed diagnosis of males, see Prószyński & Deeleman-Reinhold (2013). Epigyne with a pair of oval translucent windows, separated by a narrow septum; anteriorly placed copulatory openings; copulatory ducts less sclerotized, broad, sinuous; spermathecae globular (Figs 24–27).

FIGURES 1–4. *Vailimia ajmerensis* **sp. nov.**, male. 1 dorsal view; 2 ventral view; 3 frontal view; 4 lateral view. Scale bars: 2 mm (1–2, 4); 1 mm (3).

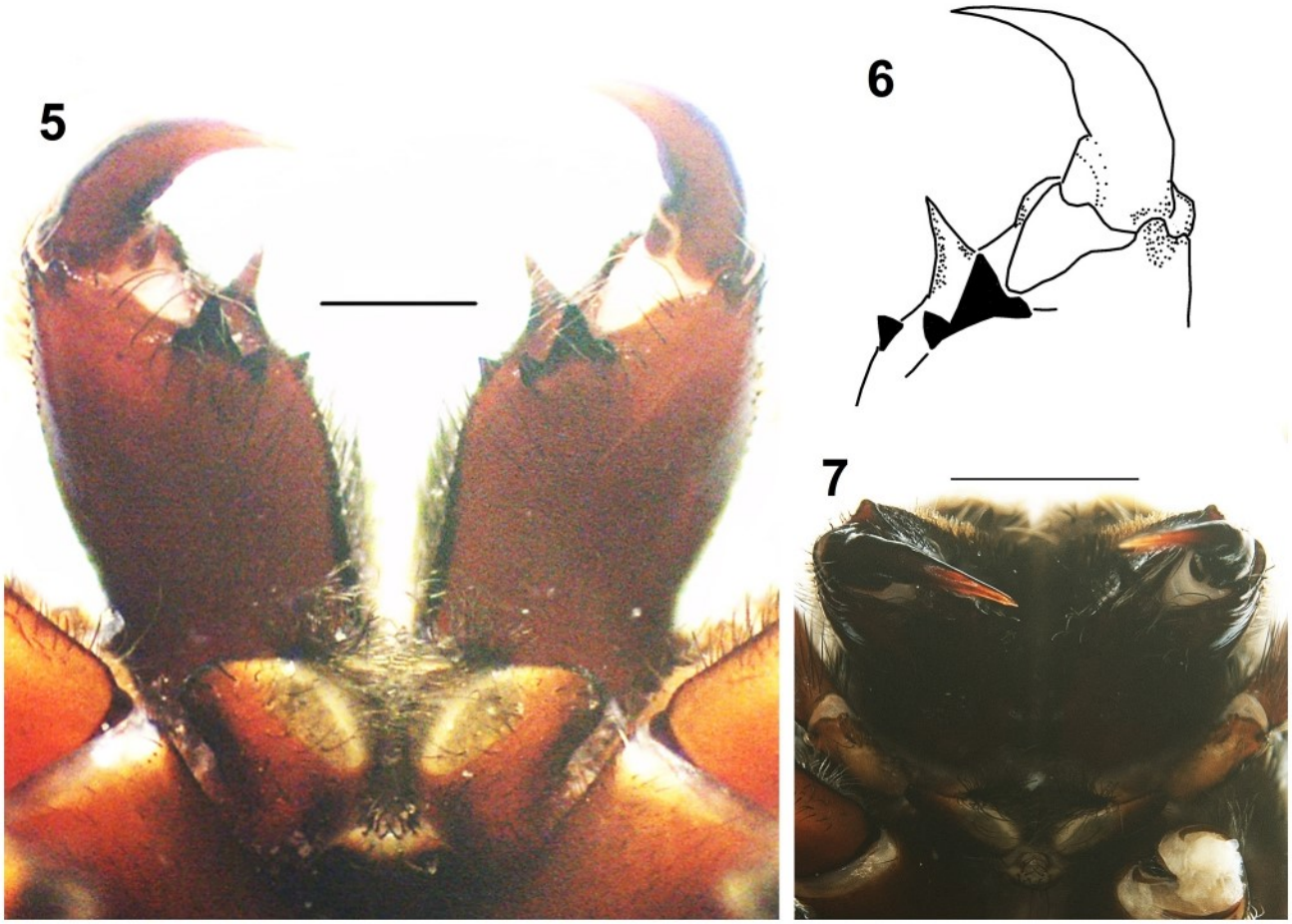
Vailimia ajmerensis **Caleb & Jangid sp. nov.**
Figs 1–11

Note: This species was misidentified as *Ptocasius strupifer* Simon, 1901 in Kaur et al. (2014: 503, figs 2A–G): ♂ from India, Rajasthan, Keoladeo National Park, Bharatpur, Indraprastha University collection, not examined.

Type material. Holotype: ♂ (NZC-ZSI 6590/18): Ajmer (26.50747°N, 74.68112°E), 490 m a.s.l., Rajasthan, India, 06 June 2017, leg. Ashish K. Jangid.

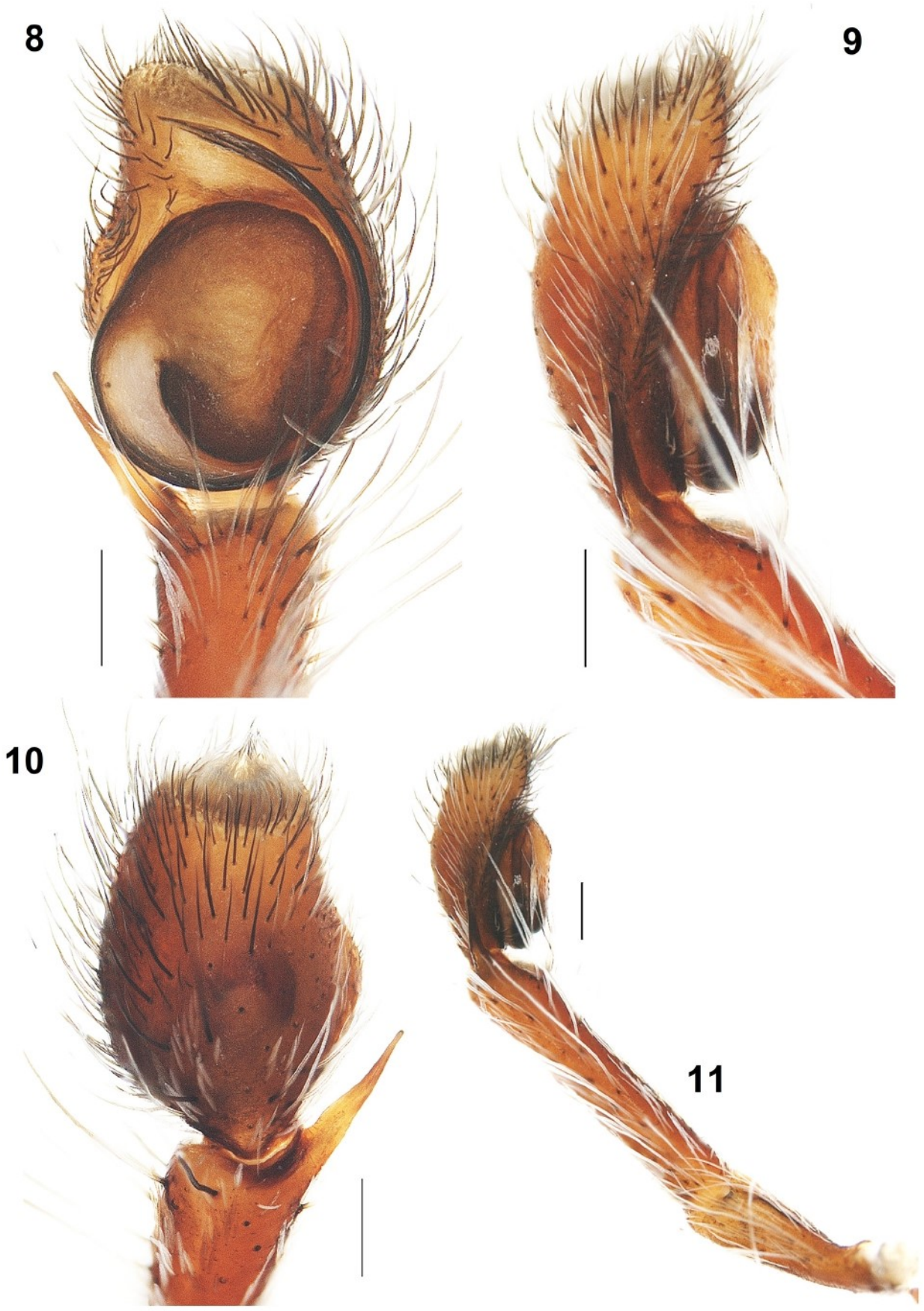
Etymology. The specific name is derived from the type locality (Ajmer, Rajasthan) from where the holotype was collected.

Diagnosis. The species is similar to *Vailimia jianyuae* Prószyński & Deeleman-Reinhold, 2013 in having a long palpal tibia, but can be distinguished by the thicker distal embolic region pointing retrolaterally (tapering uniformly and directed apically in *V. jianyuae*); shorter and wider apical portion of cymbium and the proportionately larger bulb, occupying 3/4 of the cymbium (narrower and longer cymbium; bulb occupying 1/2 the cymbium in *V. jianyuae*) (cf. Fig. 8 herein with Prószyński & Deeleman-Reinhold 2013: fig. 139); RTA with a ridge at the base and gently curving distally (RTA with a small notch at the base, sharply bending and slightly curved at the apex in *V. jianyuae*) (cf. Figs 9–10 herein with Prószyński & Deeleman-Reinhold 2013: fig. 141).



FIGURES 5–7. *Vailimia ajmerensis* **sp. nov.** 5–6 male chelicerae, retrolateral view; 7 chelicerae and fangs, apical view. Scale bars: 0.5 mm (5); 1 mm (7).

Description. Male (holotype). Total length: 7.06; carapace: 3.56 long, 2.99 wide; abdomen: 3.50 long, 2.18 wide. Carapace dark brown, covered with pale greyish hairs (Fig. 1); two pairs of tubercles present along the margin of the ocular area, a smaller one between the ALEs and PMEs and a larger one near the PLEs (Fig. 4). Anterior eyes surrounded by white setae. Clypeal region brown, covered with long dark brownish setae (Fig. 3). Eye measurements: AME 0.69, ALE 0.37, PME 0.11, PLE 0.36, AER 2.42, PER 3.04, EFL 1.36. Clypeus height 0.16. Sternum oval, brownish. Chelicerae reddish-brown, two teeth (one small and one big) on the promargin and one uneven bifid tooth on the retromargin, with a small ridge at the base (Figs 5–6); labium and maxillae brown with pale margins.



FIGURES 8–11. *Vailimia ajmerensis* **sp. nov.**, right male palp. 8 ventral view; 9 retrolateral view; 10 dorsal view; 11 retrolateral view, with tibia and patella. Scale bars: 0.2 mm.

Legs reddish-brown; leg I & II with fringe of hairs ventrally on patella, tibia and metatarsus. Leg measurements: I 9.61 (2.71, 2.14, 2.31, 1.59, 0.86); II 6.78 (2.07, 1.57, 1.37, 1.10, 0.67); III 7.48 (2.64, 1.45, 1.39, 1.27, 0.73); IV 6.53 (2.10, 1.22, 1.23, 1.39, 0.59). Leg formula: 1324. Abdomen reddish-brown; covered with pale hairs; mid dorsal region lighter with chevron-shaped markings; venter dark brown with lateral yellow-brown longitudinal stripes; spinnerets brown (Figs 1–2). Palps yellow-brown; palpal tibia and patella covered with long white hairs laterally; cymbium with a dorsal scopula and white hairs present at the base; embolus long arising from the retrolateral margin encircling the bulb; RTA strong and long, tapering toward the tip, directed anteriorly (Figs 8–11).

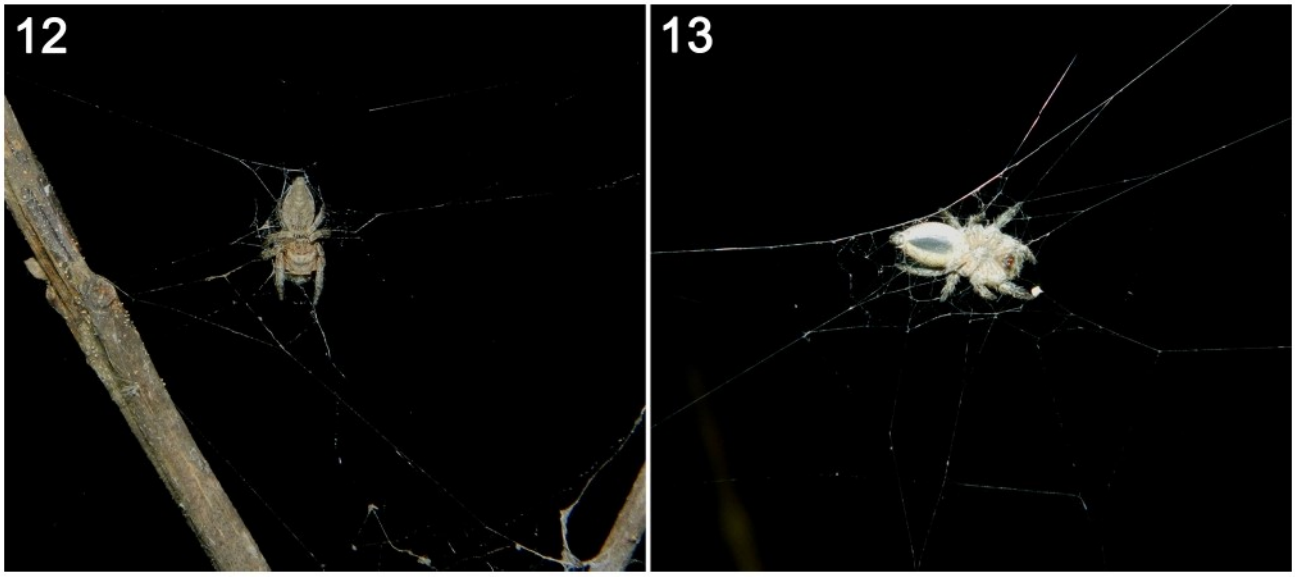
Female. Unknown.

Distribution. Known only from Rajasthan (India).

***Vailimia jharbari* Basumatary, Caleb & Das sp. nov.**
Figs 12–27

Type material. Holotype: ♂ (NZC-ZSI 6591/18) from India, Assam, Kokrajhar, Jharbari Forest Range (26.6052°N, 90.2419°E), 74 m a.s.l., 1 February 2017, leg. P. Basumatary. **Paratypes:** 1 ♂ (NZC-ZSI 6592/18) from Jharbari Forest Range under Chirang Reserve Forest (26.5970°N, 90.2376°E), 72 m a.s.l., 21 December 2017; 2 ♀ (NZC-ZSI 6593/18) and (NZC-ZSI 6594/18) from Jharbari Forest Range under Chirang Reserve Forest (26.6045°N, 90.2378°E), 81 m a.s.l., 11 March 2018, all leg. P. Basumatary.

Etymology. The specific name is derived from Jharbari Forest range, from where the species was collected. The name is used as a noun in apposition.



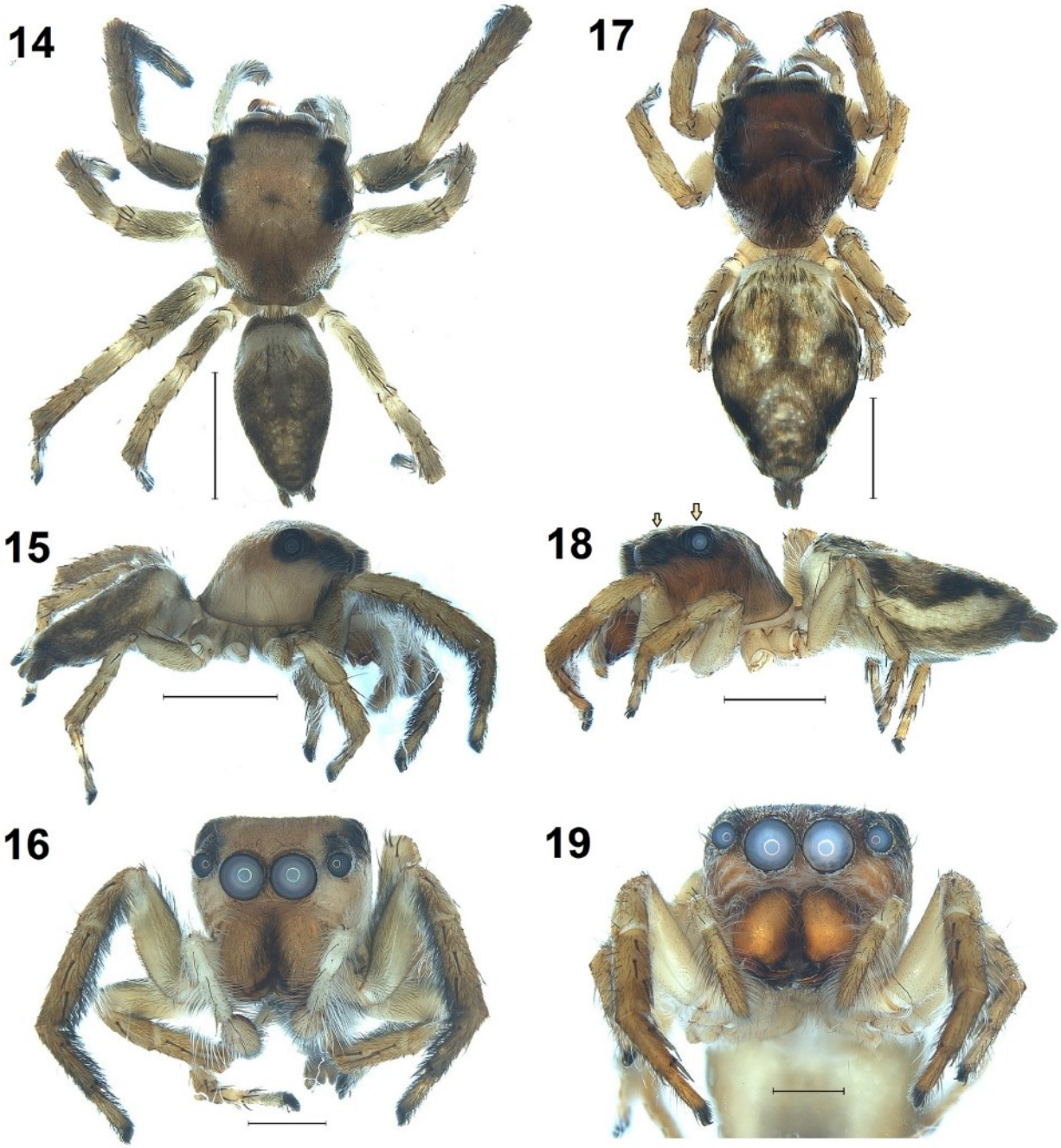
FIGURES 12–13. *Vailimia jharbari* **sp. nov.** 12 female on web; 13 resting position on web.

Diagnosis. The species closely resembles *Vailimia longitibia* Guo, Zhang & Zhu, 2011 in the habitus and palp (Figs 14–16, 20–22), but differs in having a relatively shorter palpal tibia and broader apical cymbial region; RTA with a broad base without a ridge, narrow, directed distally (with a ridge at the base; curved and directed dorsally in *V. longitibia*) (cf. Figs 20–22 herein with Guo, Zhang & Zhu 2011: figs 4–5).

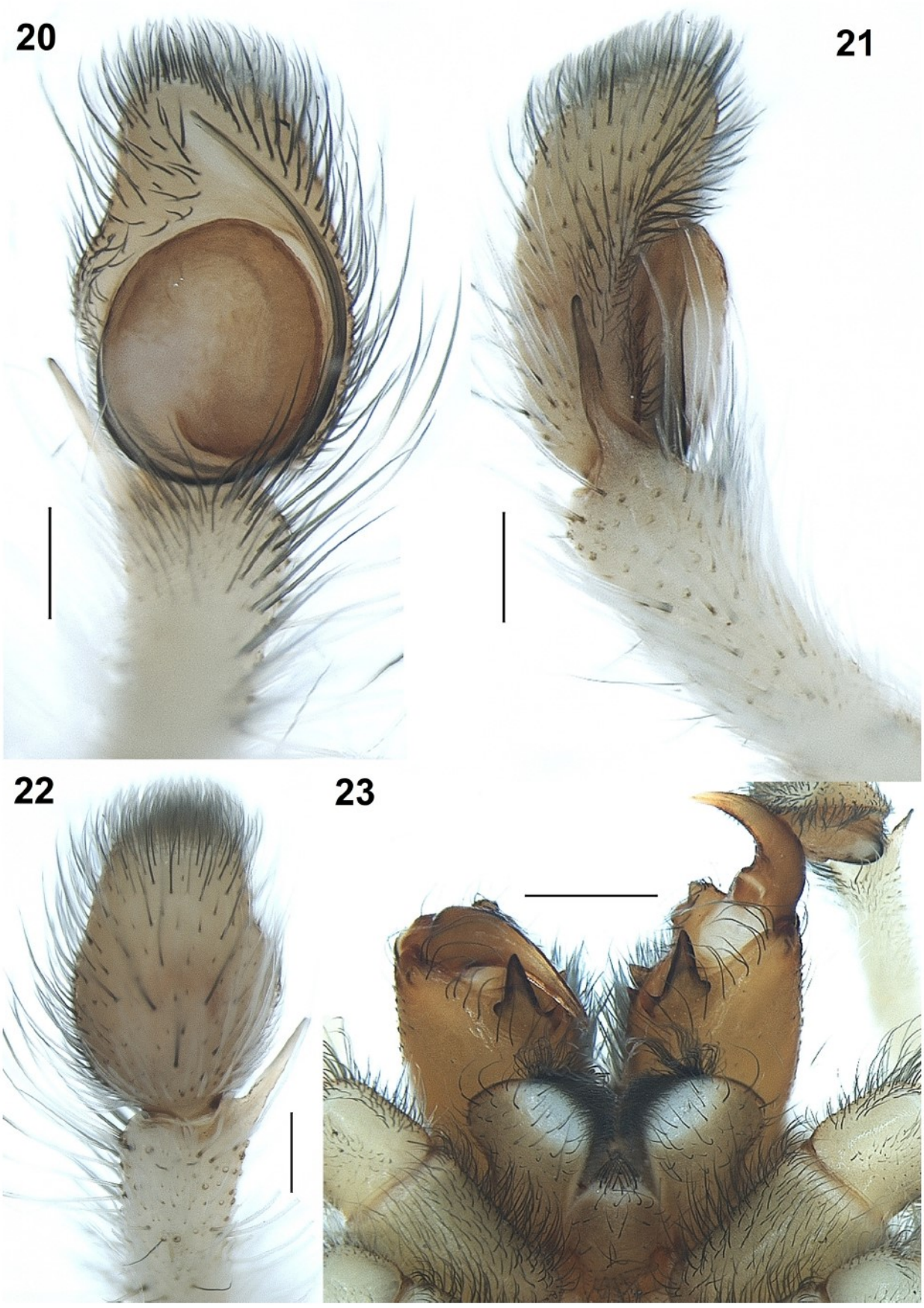
Description. Male (holotype). Total length: 6.63; carapace: 3.12 long, 2.77 wide; abdomen: 3.51 long, 2.23 wide. Carapace brown, covered with greyish and whitish hairs; eyes surrounded by blackish region; broad white band present on lateral margin; two pairs of tubercles present along the margin of the ocular area, one between the ALEs and PMEs another near the PLEs (Fig. 14). Anterior eyes surrounded by white setae, clypeal region light brown covered with long hairs; 'cheek region' covered with four thin transverse white stripes (Fig. 16). Eye measurements: AME 0.73, ALE 0.37, PME 0.14, PLE 0.34, AER 2.28, PER 2.54, EFL 1.42. Clypeus height 0.10. Chelicerae light brown with two promarginal teeth and a bifid retromarginal tooth (Fig. 23). Sternum pale brown and oval; labium and maxillae pale brown. Legs yellowish brown; leg I & II covered with dense black hairs on ventral region of patellae, tibiae and metatarsi. 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). Abdomen oval, brownish, covered sparsely with blackish setae, having chevron markings mid-dorsally (Fig. 14); venter brown with yellow longitudinal lateral margins. Spinnerets brownish. Palps light yellow; palpal tibia with blackish long hairs; cymbium with a patch of dorsal scopulae and white hairs present at the base; RTA long and narrow, with a broad base; embolus long and slender (Figs 20–23).

Female (NZC-ZSI 6593/18). Total length: 9.12; carapace: 4.02 long, 3.16 wide; abdomen: 5.10 long, 3.40 wide. Eye measurements: AME 0.71, ALE, 0.38, PME 0.13, PLE 0.36, AER 2.48, PER 2.93, EFL 1.50. Clypeus height 0.21. 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, 0.67). Coloration pattern as in male, but differs by following: abdomen with black patches on lateral sides and a short dark brown mid-dorsal stripe above the chevron pattern (Fig. 17). Epigyne with a pair of oval translucent windows, separated by a narrow septum; copulatory openings present at the anterior region; copulatory ducts broad, arching anteriorly (Figs 24, 26); spermathecae globular (Figs 25, 27).



FIGURES 14–19. *Vailimia jharbari* **sp. nov.** 14–16 male (14 dorsal view; 15 lateral view; 16 frontal view). 17–19 female (17 dorsal view; 18 lateral view; 19 frontal view). Scale bars: 2 mm (14–15, 17–18); 1 mm (16, 19).



FIGURES 20–23. *Vailimia jharbari* **sp. nov.** 20–22 right male palp (20 ventral view; 21 retrolateral view; 22 dorsal view); 23 chelicerae, retrolateral view. Scale bars: 0.2 mm (20–22); 0.5 mm (23).

Chandan Brahma and the forest officials of Jharbari Forest Range office. John Caleb gratefully acknowledges the American Arachnological Society for the Herb Levi Memorial Fund for Arachnological Research (HLMFAR). We are grateful to the reviewers for their constructive comments and Dr Gustavo Ruiz for his editorial efforts which greatly improved the manuscript.

References

Guo, J.Y., Zhang, F. & Zhu, M.S. (2011) One new recorded genus and one new species of the family Salticidae (Arachnida: Araneae) from China. *Acta Arachnologica Sinica*, 20 (1), 1–3.

Hill, D.E., Abhijith, A.P.C., Krishna, P. & Ramesh, S. (2019) Construction of orb webs as nocturnal retreats by jumping spiders (Araneae: Salticidae: cf. *Anarrhotus*) in southwestern India. *Peckhamia*, 182.1, 1–10.

Kammerer, C.F. (2006) Notes on some preoccupied names in Arthropoda. *Acta Zootaxonomica Sinica*, 31 (2), 269–271.

Kaur, M., Das, S.K., Anoop, K.R. & Siliwal, M. (2014) Preliminary checklist of spiders of Keoladeo National Park, Bharatpur, Rajasthan with first record of *Ptocasius strupifer* Simon, 1901 (Araneae: Salticidae) from India. *Munis Entomology and Zoology*, 9 (1), 501–509.

Maddison, W.P. (2015) A phylogenetic classification of jumping spiders (Araneae: Salticidae). *Journal of Arachnology*, 43 (3), 231–292.
https://doi.org/10.1636/arac-43-03-231-292

Peckham, G. & Peckham, E.G. (1907) The Attidae of Borneo. *Transactions of the Wisconsin Academy of Sciences, Arts and Letters*, 15, 603–653.

Prószyński, J. & Deeleman-Reinhold, C.L. (2013) Description of some Salticidae (Araneae) from the Malay Archipelago. III. Salticidae of Borneo, with comments on adjacent territories. *Arthropoda Selecta*, 22 (2), 113–144.
https://doi.org/10.15298/arthsel.22.2.02

World Spider Catalog (2020) *World Spider Catalog. Version 21.0*. Natural History Museum Bern, online at http://wsc.nmbe.ch (accessed 2 May 2020)

Arachnology (2019) **18** (3), 276–279

A new species of *Paraplectana* Brito Capello, 1867 (Araneae: Araneidae) from north-east India

Paris Basumatary
Dulur Brahma
Department of Zoology,
Bodoland University,
Assam 783370, India
email: brahmadulur@gmail.com

Abstract

A new araneid species *Paraplectana mamoniae* **sp. nov.**, with a characteristic glossy pink abdomen in females, is described and illustrated based on morphology of individuals collected from Assam, together with notes on its natural history.

Keywords: diagnosis • Jharbari• Kokrajhar• morphology• taxonomy

Introduction

The genus *Paraplectana*, type species *Paraplectana thorntoni* (Blackwall, 1865), was erected by Brito Capello in 1867 with *P. cabindae* as its type, previously described as *Eurysoma thorntoni* by Blackwall in 1865, which later *E. thorntoni* was given new combination as *P. thorntoni* (Blackwall, 1865) by O. Pickard-Cambridge (1879). It is generally recognizable by its abdomen with glossy, elliptical and blackish markings on the dorsum of females. The Afrotropical and Oriental spider genus *Paraplectana* Brito Capello, 1867 consists of 13 nominal species, of which only two species, *P. gravelyi* (Tikader, 1961) and *P. rajashree* Ahmed *et al.* 2015, are known from India (World Spider Catalog 2019). Recent phylogenetic work on Araneidae by Scharff *et al*. (2019) placed *Paraplectana* in the informal group of cyrtarachnines within the ARA clade. The rarity of male individuals in this genus is well known, as noted by Tanikawa (2011). All described individuals of this genus are females, except for *P. sakaguchii* Uyemura, 1938 and *P. tsushimensis* Yamaguchi, 1960, known by both sexes (World Spider Catalog 2019). The spiders of this genus are known to mimic ladybird beetles. These beetles possess noxious chemicals which wreck havoc on taste buds, leading birds to recognize these unsavoury lunch targets from afar and this is a perfect example of Batesian mimicry, in which a species imitates the warning signals to get the protection with its perceived foul taste (Bay 2017). In this paper, we describe a new species *Paraplectana mamoniae* sp. nov. from India.

Materials and methods

Field photographs were taken with Sony DSC-HX90V. Specimens were hand collected, preserved in 80% ethanol and deposited in North Eastern Regional Centre, Zoological Survey of India (NERC- ZSI), Shillong. The microphotographs were taken using a Leica DFC500 HD camera on a Leica M205A stereo microscope using Leica Application Suite (LAS) version 3.8. Soft epigynal tissues were treated in 10% KOH. All measurements are in mm. Leg measurements are given as: total length (femur, patella, tibia, metatarsus, tarsus).

Abbreviations: ALE = anterior lateral eye, AME = anterior median eye, ARA = Araneidae, CD = copulatory duct, CHD = Central Head of Department, DFO = Divisional Forest Officer, FD = fertilisation duct, P = promarginal, PCCF = Principal Chief Conservator of Forest, PLE = posterior lateral eye, PME = posterior median eye, R = retromarginal, S = spermathecae, ZSI = Zoological Survey of India.

Paraplectana Brito Capello, 1867

Type species: *Paraplectana thorntoni* (Blackwall, 1865).

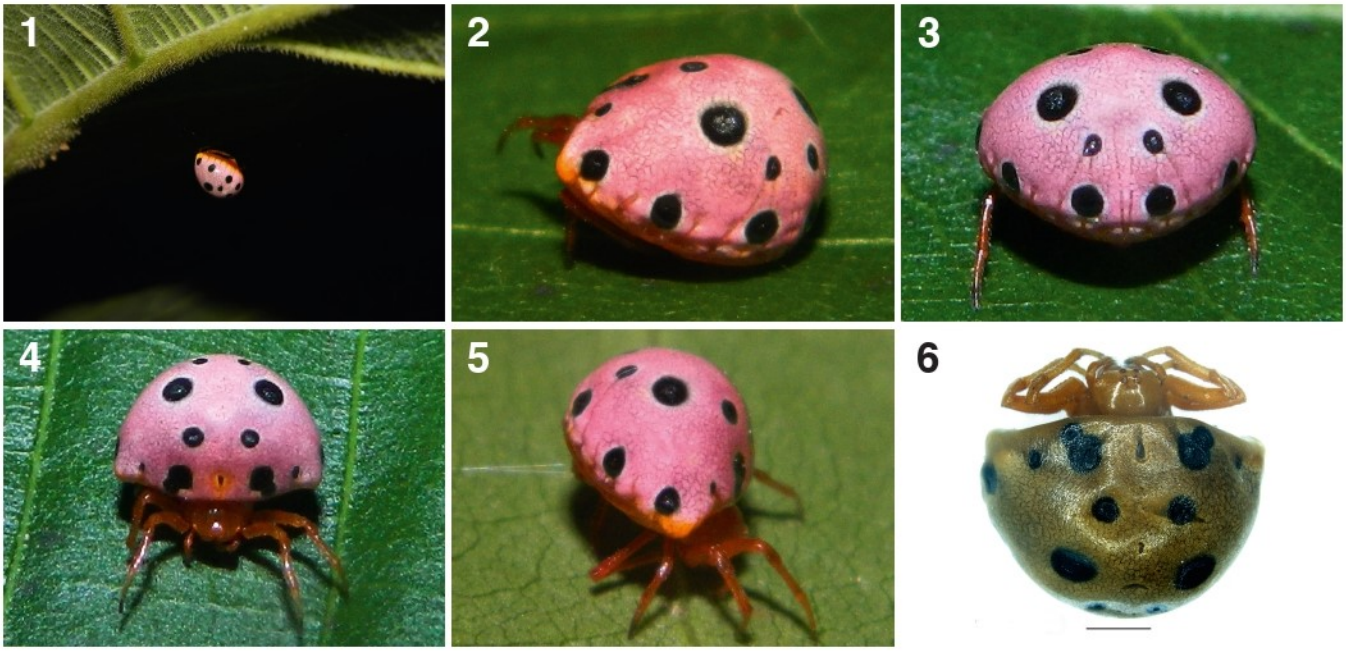
Diagnosis: For detailed diagnosis of males see Tanikawa & Harigae (2010) and Tanikawa (2011), and for females see Ahmed *et al*. (2015).

Paraplectana mamoniae sp. nov. (Figs. 1–16)

Types: Holotype ♀ (IV/ARA/ERS–22), India, Assam, Kokrajhar, Jharbari Forest Range (26°36′22.8″N 90°14′45.3″E), 70 m, 2 October 2018, leg. P. Basumatary. Paratype ♀ (IV/ARA/ERS–31) Jharbari Forest Range (26°36′22.8″N 90°14′45.3″E), 70 m, 2 October 2018, leg. P. Basumatary.

Etymology: The specific name is dedicated in memory of Lt. Mamoni Rava (1990–2019). She was an inspiring woman researcher from the Department of Biotechnology, Bodoland University, and a core research worker for Research and Development in Technology Incubation Centre of the department. The name is used as a noun in apposition.

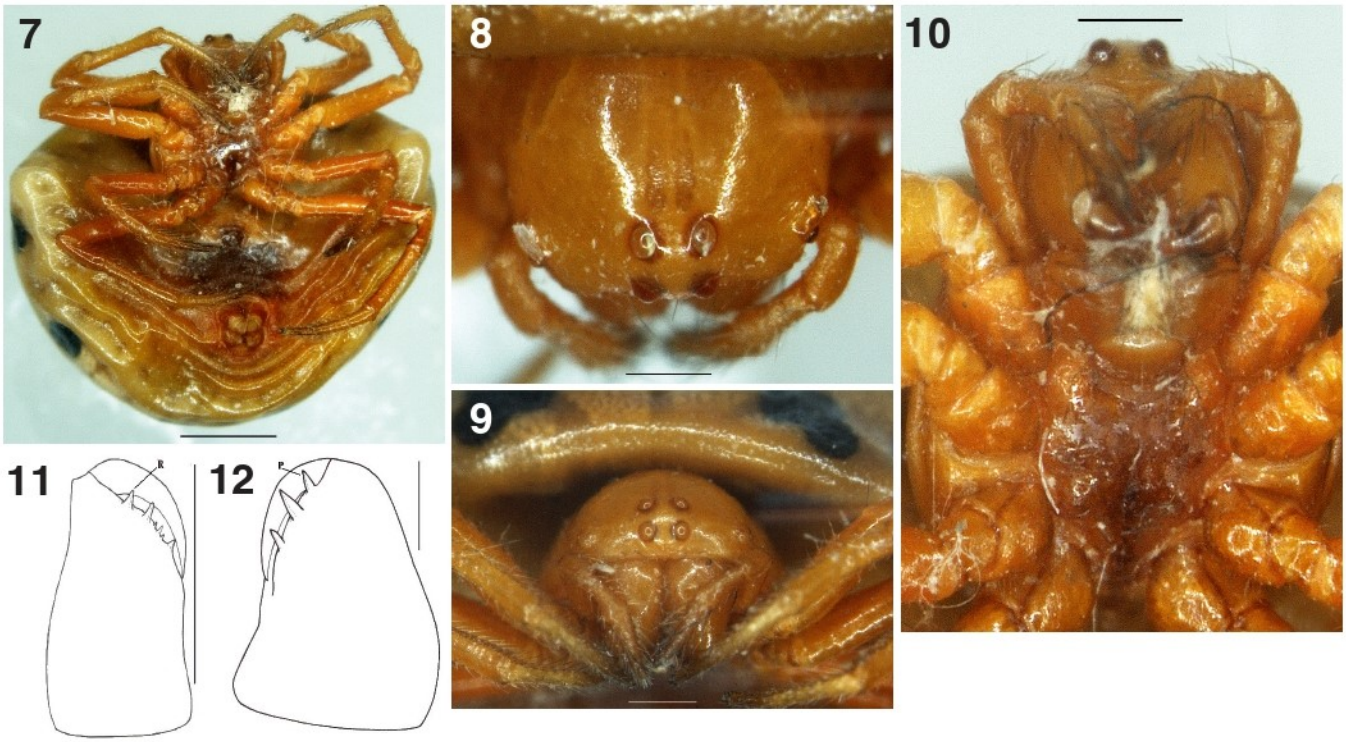
Diagnosis: The female of *Paraplectana mamoniae* sp. nov. is distinguishable from its known congeners by having a characteristic pinkish white abdomen with 18 blackish spots (Figs. 1–5). In contrast, the abdomen is yellowish with 14 blackish spots and venter reddish in *P. coccinella* (Thorell, 1890), abdomen glossy red with 12 black spots in *P. duodecimmaculata* Simon, 1897, abdomen reddish brown with 17 yellowish markings in *P. sakaguchi*, abdomen reddish brown with 12 blackish spots in *P. tushimensis*, abdomen greyish yellow with 14 blackish white patches in *P. gravelyi*, abdomen orange red with 14 blackish spots, venter having blackish patch posteriorly in *P. rajashree*. *P. mamoniae* has a distinct genital morphology: spermathecae large, suboval, narrowly spaced (0.1 mm) (Figs. 15–16); atrium scletorized; short copulatory ducts, uncurved and widely spaced (Figs. 13–14). In contrast, the atrium is slightly scletrorized, spermathecae small and ovoid in *P. sakaguchi* (Lee, Yoo & Kim 2015, fig. 1A–B), spermathecae spherical and large, copulatory ducts thin, narrow and long, arising medially from the posterior end of spermathecae and directed distad in *P. gravelyi* (Tikader 1982, figs. 274–276), spermathecae small and widely



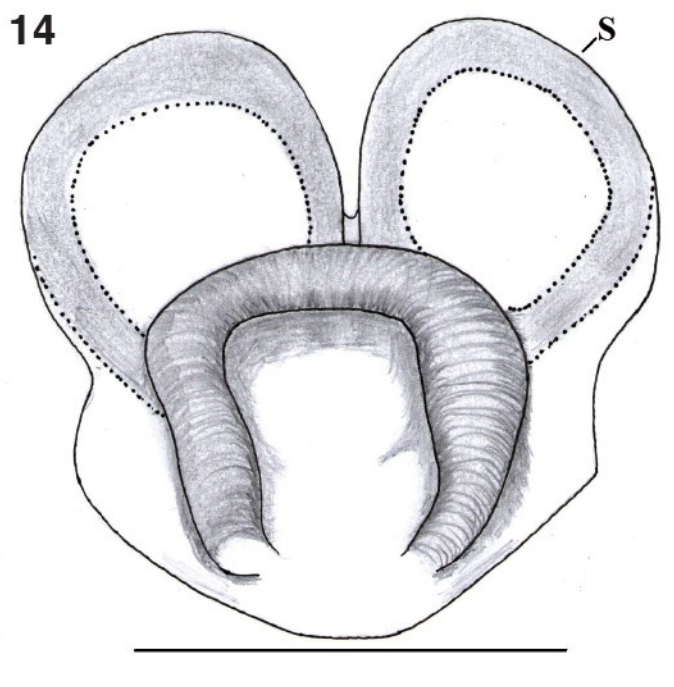
Figs. 1–6: *Paraplectana mamoniae* sp. nov. **1** live habitus, lateral view (on dragline); **2** live habitus, lateral view; **3** same, posterior view; **4** same, frontal view; **5** same, lateral view; **6** preserved habitus, dorsal view. Scale bar = 1 mm.

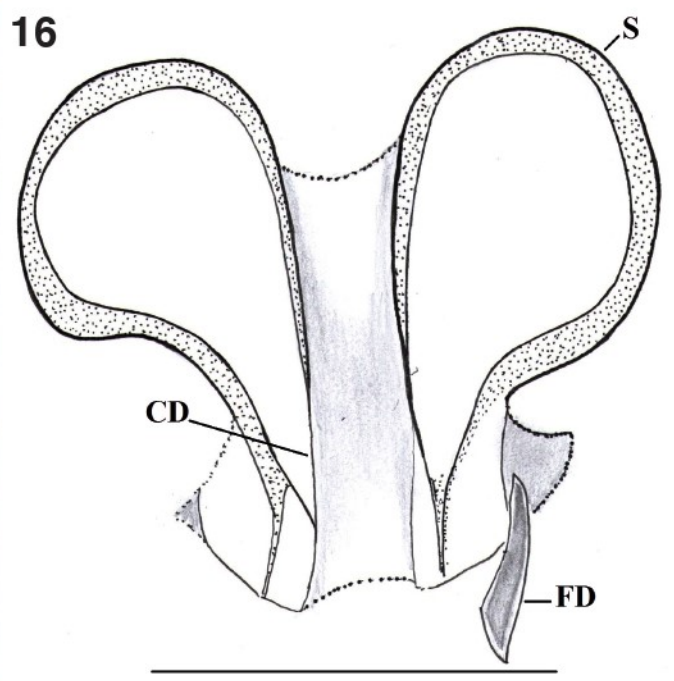
spaced (0.2 mm), copulatory ducts long, narrowing anteriorly and less spaced posteriorly in *P. rajashree* (Ahmed *et al.* 2015, figs. 1, 6–7).

Description of female holotype (IV/ARA/ERS–22): Total length 5.49; carapace 2.35 long, 3.77 wide; abdomen 3.14 long, 4.31 wide. Carapace reddish orange, raised ocular area (Figs. 6, 8–9). AMEs and PMEs surrounded by narrow blackish ring (Figs. 8–9); 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. Chelicera, labium and maxilla reddish orange (Figs. 9–10). Chelicera with 3 promarginal and 6 retromarginal teeth (Figs. 11–12). Sternum dark reddish orange and sub-triangular (Fig. 10). Legs reddish orange, covered with numerous pale brownish setae, tarsus leg I–IV blackish brown (Fig. 7). Leg measurements: I 3.15 (1.14 + 0.44 + 0.71 + 0.56 + 0.3), II 3.14 (1.19 + 0.5 + 0.68



Figs. 7–12: *Paraplectana mamoniae* sp. nov. **7** habitus, ventral view; **8** cephalothorax, dorsal view; **9** same, anterior view; **10** same, ventral view; **11** diagrammatic representation of chelicera, ventral view; **12** same, ventral view. Scale bars = 0.2 mm (12); 0.5 mm (11); 1 mm (7–10).





Figs. 13–16: *Paraplectana mamoniae* sp. nov. **13** vulva, dorsal view; **14** diagrammatic representation of vulva, dorsal view; **15** vulva, ventral view; **16** diagrammatic representation of vulva, ventral view. Scale bars = 0.2 mm.

+ 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). Abdomen elliptical, wider than long and blunt anteriorly (Figs. 2–6); dorsum pinkish white with 18 blackish spots (8 medially, 2 anteriorly and 8 laterally) (Figs. 2–5); venter brownish orange with short yellowish longitudinal patch along epigastric furrow and pale blackish patch beneath epigastric furrow (Fig. 7). Body colorations faded from glossy pinkish white to dull brown in preserved individuals (Fig. 6). Epigyne scletorized, slightly elongated posteriorly; spermathecae large, suboval; copulatory ducts short, continuous with spermathecae, arising laterally and directed distad, widely spaced posteriorly; fertilisation duct short and narrow, connected with copulatory duct distally (Figs. 13–16).

Male unknown.

Natural history: The new species was found on the abaxial surface of a fig, *Ficus hispida*, constructing a single dragline at a height of 2 m above the ground (Fig. 1). Adult females were observed to be active at night.

Distribution: Assam, India (Fig. 17).

Acknowledgements

We are grateful to Ilona J Kharkongor Scientist-D & Officer-in-Charge, ZSI, Shillong for providing stereo zoom microscope facility to PB and Assam State Biodiversity Board for granting collection permit. Many thanks to Dr.

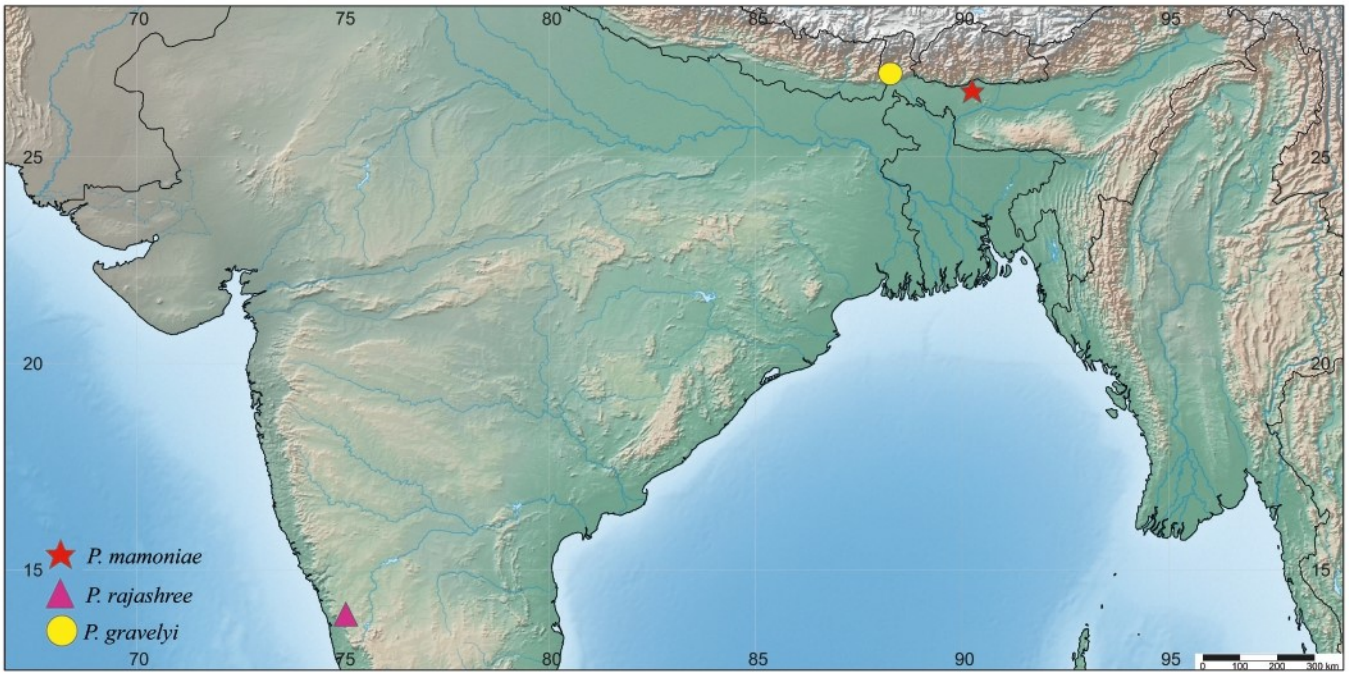


Fig. 17: Type localities of *Paraplectana* species described from India. The type locality of *P. mamoniae* sp. nov. is marked as a red star.

Uttam Saikia, Bhaskar Saikia, Amit Rana and Merilly Dkhar for their support. Our gratitude to Aninidya Swargawari, Additional PCCF & CHD and Prabodh Kumar Brahma, DFO. We are indebted to Pabidash Narzary for his valuable assistance in field work. We express our heartfelt gratitude to the family members (Fulisha Rabha & Babita Rabha), teaching and non-teaching staff, colleagues, friends and Dr Sandeep Das, Associate Professor & Ph.D. Supervisor of Lt. Mamoni Rava from the Department of Biotechnology, Bodoland University for their support and guidance during her tenure of doctoral research work. We are thankful to Debomay Chanda for aiding in photo stacking and Sanswrang Basumatary for helping with identification of plant species. We are grateful to Prof. Paul A. Selden, Paleontological Institute, University of Kansas, for his editorial help, and to anonymous reviewers for their help in improving the ms.

References

AHMED, J., SUMUKHA, J. N., KHALAP, R., MOHAN, K. & JADHAV, B. 2015: First record of the spider genus *Paraplectana* Brito Capello, 1867 from India, with a description of a new species. (Araneae: Araneidae: Cyrtarachninae). *Indian Journal of Arachnology* **4**(2): 1–5.

BAY, N. 2017: How birds are fooled by ladybird mimicry and why spiders are amazing. Macro Photography in Singapore, online at: https://www.nickybay.com

BLACKWALL, J. 1865: Descriptions of recently discovered species and characters of a new genus, of Araneida from the East of Central Africa. Annals and Magazine of Natural History, decade 3 **16**: 336–352.

BRITO CAPELLO, F. DE 1867: Descripçao de algunas especies novas ou pouco conhecidas de Crustaceo e Arachnidios de Portugal e possesoes portuguezas do Ultramar. Memorias *da Academia Real das Sciencias de Lisboa* (*N.S.*) **4**: 1–17.

LEE, S. Y., YOO, J. S. & KIM, S. T. 2015: Ultra rare *Paraplectana sakaguchii* Uyemura, 1938 (Araneae: Araneidae) new to Korean spider fauna. *Journal of Species Research* **4**: 57–59.

PICKARD-CAMBRIDGE, O. 1879: On some new and little known species of Araneidea, with remarks on the genus *Gasteracantha*. *Proceedings of the Zoological Society of London* **47**: 279–293.

SCHARFF, N., CODDINGTON, J. A., BLACKLEDGE, T. A., AGNARSSON, I., FRAMENAU, V. W., SZŰTS, T., HAYASHI, C. Y. & DIMITROV, D. 2019: Phylogeny of the orb-weaving spider family Araneidae (Araneae: Araneoidea). Cladistics: 1–21.

SIMON, E. 1897: Études arachnologiques. 27e Mémoire. XLII. Descriptions d'espèces nouvelles de l'ordre des Araneae. Annales de la Société Entomologique de France **65**: 465–510.

TANIKAWA, A. & HARIGAE, T. 2010: The first description of a male of Paraplectana sakaguchii (Araneae: Araneidae). Acta Arachnologica **59**: 39–41.

TANIKAWA, A. 2011: The first description of a male of Paraplectana tsushimensis (Araneae: Araneidae). Acta Arachnologica **60**: 71–73.

THORELL, T. 1890: Aracnidi di Nias e di Sumatra raccolti nel 1886 dal Sig. E. Modigliani. Annali del Museo Civico di Storia Naturale di Genova **30**: 5–106.

TIKADER, B. K. 1961: Revision of Indian spiders of the genus Cyrtarachne (Argiopidae: Arachnida). Journal of the Bombay Natural History Society **57**: 547–556.

TIKADER, B. K. 1982: Family Araneidae (= Argiopidae), typical orb-weavers. Fauna India (Araneae) **2**: 1–293.

UYEMURA, T. 1938: Two new spiders from Wakayama Prefecture, Japan. Acta Arachnologica **3**: 90–95.

WORLD SPIDER CATALOG 2019: World spider catalog, version 20.5. Bern: Natural History Museum, online at: http://wsc.nmbe.ch

YAMAGUCHI, T. 1960: A new species of genus Paraplectana from Tsushima, Japan. Science Bulletin of the Faculty of Liberal Arts and Education, Nagasaki University **11**: 5–7, 1 pl.

Acta Arachnologica, 68(1): 21–24, June 30, 2019

A new species of the genus *Meotipa* Simon 1895 (Araneae: Theridiidae) from India

Paris Basumatary[1]& Dulur Brahma[2*]

[*]*Department of Zoology, Bodoland University, Assam, 783370, India*
[1]*E-mail: parishbasumatary@gmail.com*
[2]*E-mail: brahmadulur@gmail.com*
**Corresponding author*

Abstract — A new theridiid species *Meotipa ultapani* sp. nov. is described and illustrated in detail along with notes on its natural history on the basis of specimens collected from Assam, India.

Key words — Taxonomy, diagnosis, Ultapani, Assam

Introduction

The comb-footed spider genus *Meotipa* was first erected by Simon in 1895 with type species *Meotipa picturata* Simon 1895. It consists of 13 accepted species, of which five species, *Meotipa andamanensis* (Tikader 1977)*, M. argyrodiformis* (Yaginuma 1952)*, M. multuma* Murthappa, Malamel, Prajapati, Sebastian & Venkateshwarlu 2017*, M. picturata* Simon 1895 and *M. sahyadri* Kulkarni, Vartak, Deshpande & Halali 2017 are known from India (World Spider Catalog 2018). In the present paper we describe a new species *Meotipa ultapani* sp. nov. from Assam state of India. This finding is a part of doctoral research work on spiders' diversity at Ripu-Chirang Reserve Forest under Manas Biosphere Reserve.

Materials and Methods

All the specimens are preserved in 80 % ethanol. The specimens were examined, measured and photographed under a Leica EZ4 E stereo microscope. The vulva was treated in 90 % lactic acid for clearing soft tissues before illustration. All measurements are given in millimeters. Leg measurements are given as total length (femur, patella, tibia, metatarsus and tarsus). The type specimens were deposited in BMGU (Biodiversity Museum Gauhati University, Northeast Region).

Abbreviations used are as follows: ALE- anterior lateral eye, AME- anterior median eye, PLE- posterior lateral eye, PME- posterior median eye, a.s.l. - above sea level.

Taxonomic account

Genus *Meotipa* Simon 1895

Meotipa ultapani sp. nov.

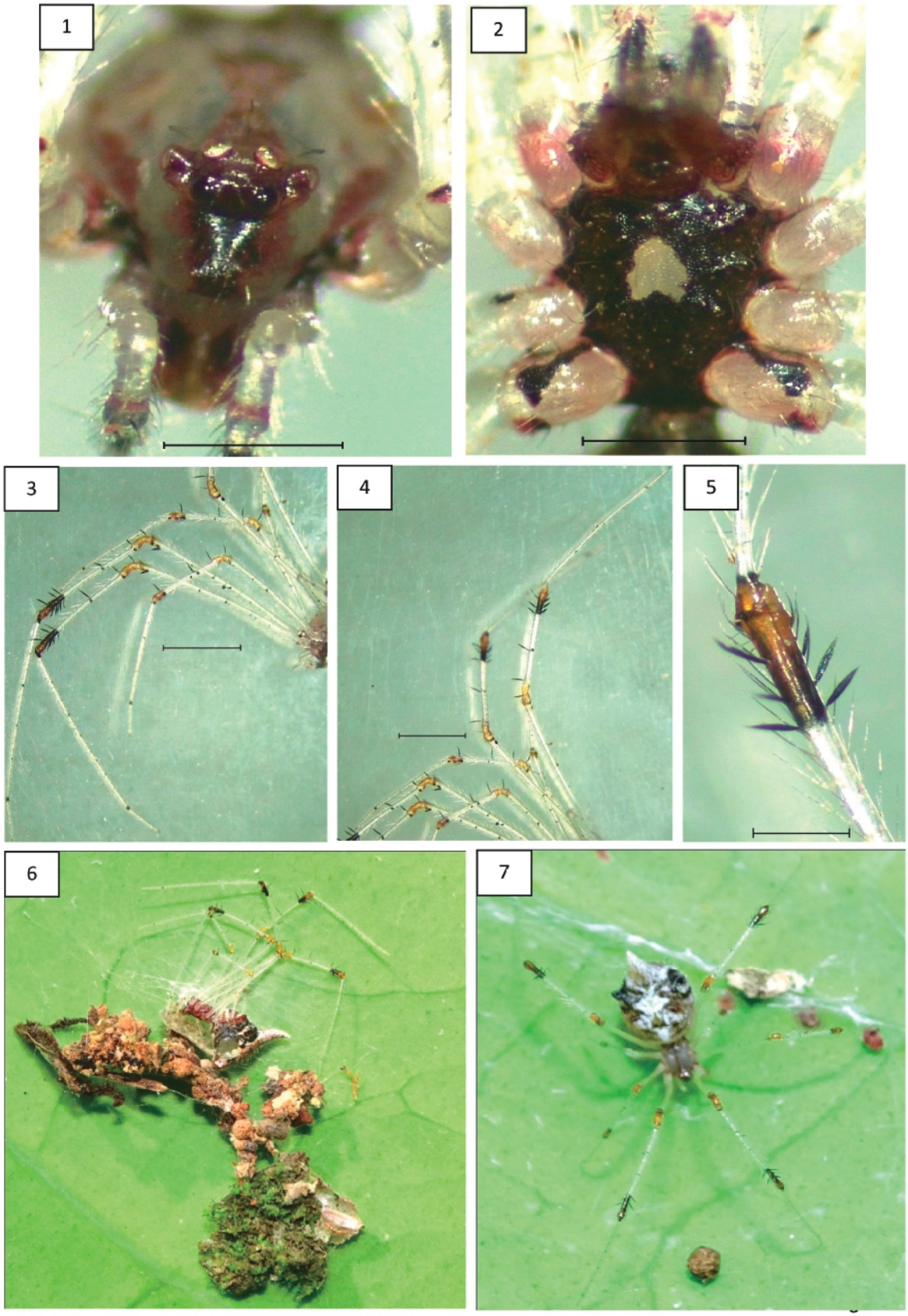
(Figs. 1–15)

Types. Holotype: ♀ (BMGU/A-10/ARA-34), India, Assam, Kokrajhar, Ultapani Forest Range under Chirang Reserve Forest (26˚ 36' 21.7" N, 90˚ 14' 44.3" E), a.s.l. 78 m, 21 January 2018, leg. P. Basumatary. Paratypes: 1♀ (BMGU/A-10/ARA-35), same locality as the holotype, 4 March 2018, 1♀ (BMGU/A-10/ARA-36) Jharbari Forest Range (26˚ 36' 22.8" N, 90˚ 14' 45.3" E), a.s.l. 70 m, 4 March 2018, 1♀ (BMGU/A-10/ARA-37) Jharbari Forest Range (26˚ 34' 20.8" N, 90˚ 12' 40.3" E), a.s.l. 70 m, 12 March 2018, all leg. P. Basumatary.

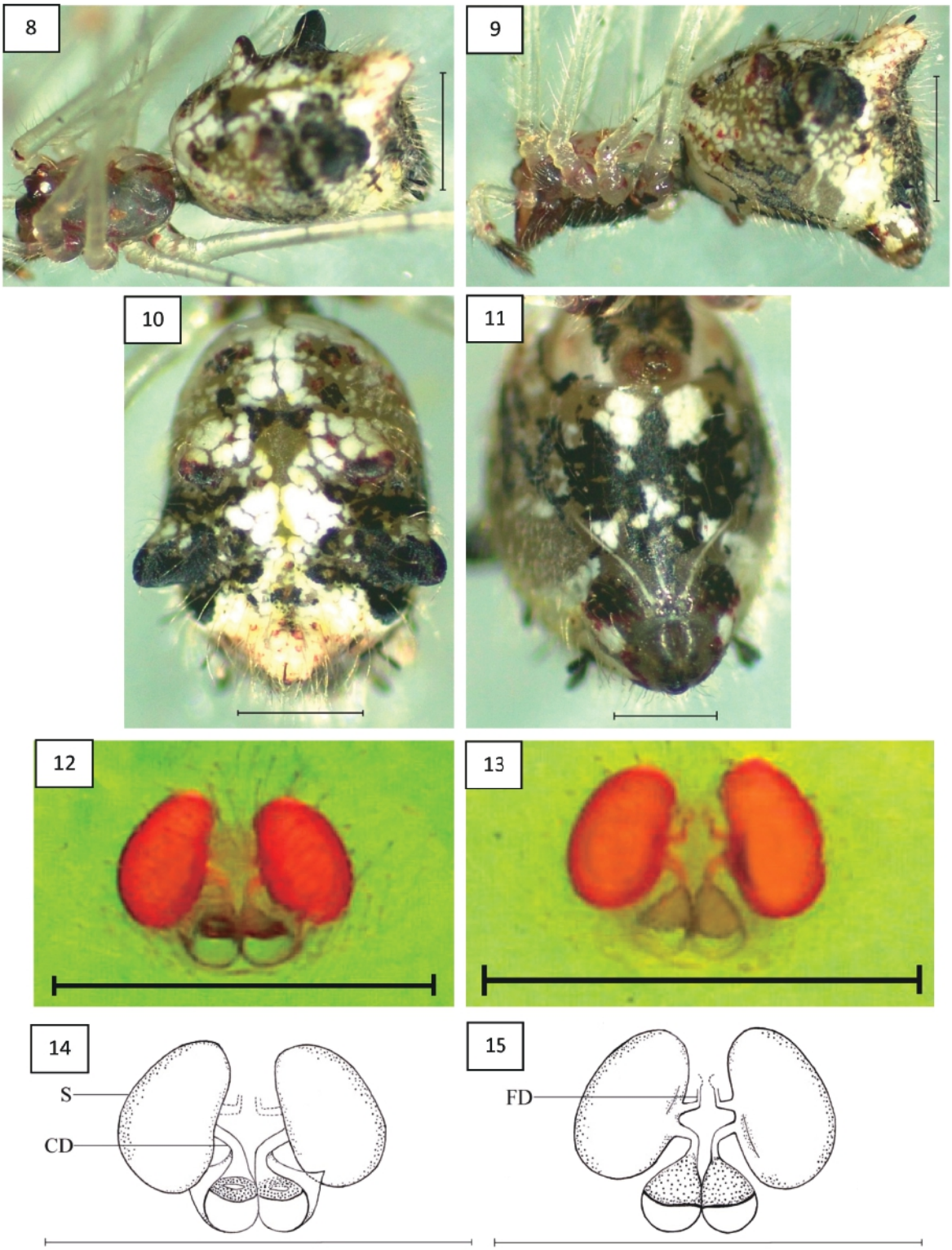
Etymology. The specific name is derived from its type locality. The name is used as a noun in apposition.

Diagnosis. The new species is similar to *Meotipa vesiculosa* Simon 1895 in habitus, but can be distinguished from the latter by the following characters: (1) spermathecae are kidney- shaped and untouched to each other (Figs. 12–15), but roundish and touching to each other in *M. vesiculosa* (Deeleman-Reinhold 2009: figs. 14–16*)*; (2) copulatory ducts are short and connected to lateral sides of spermathecae (Figs. 12–15), but long, forming semicircular shape and connected to spermathecae posteriorly in *M. vesiculosa* (Deeleman-Reinhold 2009, figs. 15–16); (3) fertilization ducts are situated medially (Figs. 13–15), but situated posteriorly in *M. vesiculosa* (Deeleman-Reinhold 2009, figs. 15–16); (4) femora I have one lanceolate spine ventro-distally (Figs.3–4), but a pair of ventro-distal spines in *M. vesiculosa* (Deeleman-Reinhold 2009, fig. 13).

Description. Female: holotype (BMGU/A-10/ARA-34). Total length 3.1; carapace length 1.25, width 0.94; abdomen length 1.85. Carapace pale grayish white with short median stripes on lateral sides, a pale reddish broad medial stripe from ocular region to fovea and dark broad patch from AMEs to distal end of clypeus (Fig. 1). Eyes raised from slanting clypeus, AMEs reddish black and the other eyes pearly white, surrounded by brown ring (Fig. 1). Eye sizes: AME 0.09, ALE 0.03, PME 0.07, PLE 0.08; interdistances



Figs. 1–7. *Meotipa ultapani* sp. nov. 1, cephalothorax, anterior view; 2, same, ventral view; 3, legs I–II, lateral view; 4, legs IV, lateral view; 5, distal part of tibia IV, dorso-lateral view; 6, live habitus, lateral view (resting position); 7, same, dorsal view. Scales: 2 mm (Figs. 4–5); 0.5 mm (Figs. 1–3).



Figs. 8–15. *Meotipa ultapani* sp. nov. 8, body, dorso-lateral view; 9, same, lateral view; 10, abdomen, dorsal view; 11, same, ventral view; 12, epigyne, ventral view; 13, vulva, dorsal view; 14, diagrammatic representation of vulva, ventral view; 15, same, dorsal view. Abbreviations: CD = copulatory duct; FD = fertilization duct; S = spermatheca. Scales: 1 mm (Figs. 8–11); 0.5 mm (Figs. 12–15).

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. Chelicerae, labium and maxillae reddish brown. Sternum reddish black and sub-triangular with a white triangular spot at centre (Fig. 2). Legs slender, basically whitish yellow and transparent, covered with numerous whitish setae; femora I–IV with distal part yellowish brown, sparse blackish semi-circular annulations and blackish spots ventrally, femora I with one lanceolate spine ventro-distally; patellae I, II & IV yellowish brown each with two lanceolate spines dorsally, patellae III yellowish brown and spines absent; tibiae I & IV with one dorso-medial lanceolate spine, and distal part blackish brown, having a whirl of 6-8 blackish lanceolate spines; tibiae II & III with two dorsal lanceolate spines medially and distally, and distal part yellowish brown; metatarsi and tarsi without any lanceolate spines; tip of metatarsi blackened (Figs. 3 & 5). 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). Abdomen with two pair of humps on dorso-lateral sides, posterior part protruding dorsally; wholly mottled with white, black and red spots, and dorso-lateral parts and posterior side darkened; sparsely covered with long whitish hairs; with one and two pairs of leaf-shaped flattened spines on postero-dorsal projection and on posterior side near spinnerets, respectively. In live individuals ventro-lateral sides somewhat translucent; and posterior projection long and slender but shrunk in preserved specimens (Figs. 6–11). Epigyne with a pair of central deep pits; spermathecae kidney-shaped; copulatory ducts short and uncoiled, connected to lateral side of spermathecae and curved posteriorly; fertilization ducts situated anteriorly to copulatory ducts, short and curved anteriorly (Figs. 12–15).

Natural history. The species was found on underside of broad leaves of fig plants, viz. *Ficus* sp., alongside the forest stream. The spiders were concealed by building a small retreat with debris of the plants (Fig. 6). Adult females with egg sac were observed during the months of October & November.

Male. Unknown.

Distribution. India (Assam).

Acknowledgements

Our sincere thanks go to Additional PCCF & CHD, Forest, BTC, Kokrajhar, for granting permission to conduct study at Ripu-Chirang Reserve Forest and Department of Zoology, Gauhati University for aiding us with laboratory and equipments. We greatly acknowledge Assam State Biodiversity Board for granting collection permit of spider specimens. PB is thankful to Durga Brahma and Sinaiti Daimary for aiding in field work and collections. PB is grateful to Dipti Thakuria for aiding in lab work. Our heartfelt thanks also go to Dhiren Brahma, Girendra Brahma, Bana Kr. Brahma Chaudhury and the forest officials of Ultapani Forest Range. PB gratefully acknowledges Siddharth Kulkarni, John Caleb, Sangeeta Das and Debomay Chanda for taxonomic discussions. We are grateful to the reviewers for their valuable comments in improving the manuscript.

References

Deeleman-Reinhold, C. L. 2009. Spiny theridiids in the Asian tropics. Systematics, notes on behaviour and species richness (Araneae: Theridiidae: *Chrysso*, *Meotipa*). Contrib. Nat. Hist., 12: 403–436.

Kulkarni, S., Vartak, A., Deshpande, V. & Halali, D. 2017. The spiny theridiid genus *Meotipa* Simon, 1895 in India, with description of a strange new species with translucent abdomen and a phylogenetic analysis about the genus placement (Araneae, Theridiidae). Zootaxa, 4291: 504–520.

Murthappa, P. S., Malamel, J. J., Prajapati, D. A., Sebastian, P. A. & Venkateshwarlu, M. 2017. First description of the male of the type species *Meotipa picturata* Simon, 1895 and description of a new *Meotipa* species (Araneae, Theridiidae) from India. Zootaxa, 4344: 589–596.

Simon, E. 1895. Etudes arachnologiques. 26e. XLI. Descriptions d'espèces et de genres nouveaux de l'ordre des Araneae. Ann. Soc. Entomol. France, 64: 131–160.

Tikader, B. K. 1977. Studies on spider fauna of Andaman and Nicobar islands, Indian Ocean. Rec. Zoo. Surv. India, 72: 153–212.

World Spider Catalog. 2018. World Spider Catalog. Natural History Museum Bern, online at http://wsc.nmbe.ch, version 19.5, accessed on 13/12/2018. doi: 10.24436/2.

Yaginuma, T. 1952. Two new species (*Phrurolithus* and *Ariamnes*) found in Japan. Arachnol. News, 21: 13–16.

Received December 17, 2018 / Accepted April 25, 2019

On a new species of the orb-weaving spider genus *Eriovixia* (Araneae: Araneidae) from India

Paris Basumatary
Department of Zoology,
Bodoland University,
Assam 783370,
India
email: parishbasumatary@gmail.com

Debomay Chanda
235, Debnagar, Jalpaiguri,
West Bengal 735101,
India

Sangeeta Das
Department of Zoology,
Assam Don Bosco University,
Assam 782402,
India

Jatin Kalita
Department of Zoology,
Gauhati University,
Assam 781014,
India

Dulur Brahma
Department of Zoology,
Bodoland University,
Assam 783370,
India

Tunu Basumatary
49, New Nobinogor,
Thakampur, Kachugaon,
Kokrajhar, Assam 783350,
India

Brojo Kumar Basumatary
50, Karigaon,
Kokrajhar,
Assam 783373,
India

Sinaiti Daimary
106, Mahanpur,
Bishmuri, Kokrajhar,
Assam 783370,
India

Abstract

A new species *Eriovixia kachugaonensis* sp. nov. with characteristic lanceolate abdomen in females is diagnosed and illustrated in detail based on specimens collected from Assam. We herein describe the female in detail along with digital images and illustrations.

Keywords: Assam • Kachugaon • taxonomy

Introduction

The genus *Eriovixia* was erected by Archer in 1951 with type species *Eriovixia rhinura* (Pocock, 1900). It is recognizable by its pilose carapace which is longer than wide, anterior eye row straighter than the posterior eye row, female abdomen longer than wide or wider than long, subtriangular, with or without caudal appendages, male abdomen longer than wide, epigynum with stout scape and recurved tip (Archer 1951; Tanikawa 1999). The members of the genus *Eriovixia* are medium sized orb-weaving spiders which range from Africa to Asia (Mi, Peng & Yin 2010) and currently consists of 22 accepted species, of which five, *Eriovixia excelsa* (Simon, 1889), *E. gryffindori* Ahmed, Khalap & Sumukha, 2016, *E. laglaizei* (Simon, 1877), *E. palawanensis* (Barrion & Litsinger, 1995), and *E. poonaensis* (Tikader & Bal, 1981), are known from India (World Spider Catalog 2018). In the present paper, we describe the new species *Eriovixia kachugaonensis* sp. nov. and its natural history from India.

Material and methods

Specimens were collected by handpicking and preserved in 80% ethanol. Photographs were taken by using Leica EZ4 E stereo microscope. Measurements are given in millimetres (mm). Leg measurements are given as femur, patella, tibia, metatarsus and tarsus. The epigynum was treated in lactic acid for clearing soft tissues. Descriptions are given based on fresh specimens. The type specimens are deposited in BMGU (Biodiversity Museum Gauhati University, Northeast Region). Abbreviations: ALE = anterior lateral eye, AME = anterior median eye, PLE = posterior lateral eye, PME = posterior median eye.

Araneidae Clerck, 1757

Eriovixia Archer, 1951

Type species: *Eriovixia rhinura* (Pocock, 1900)

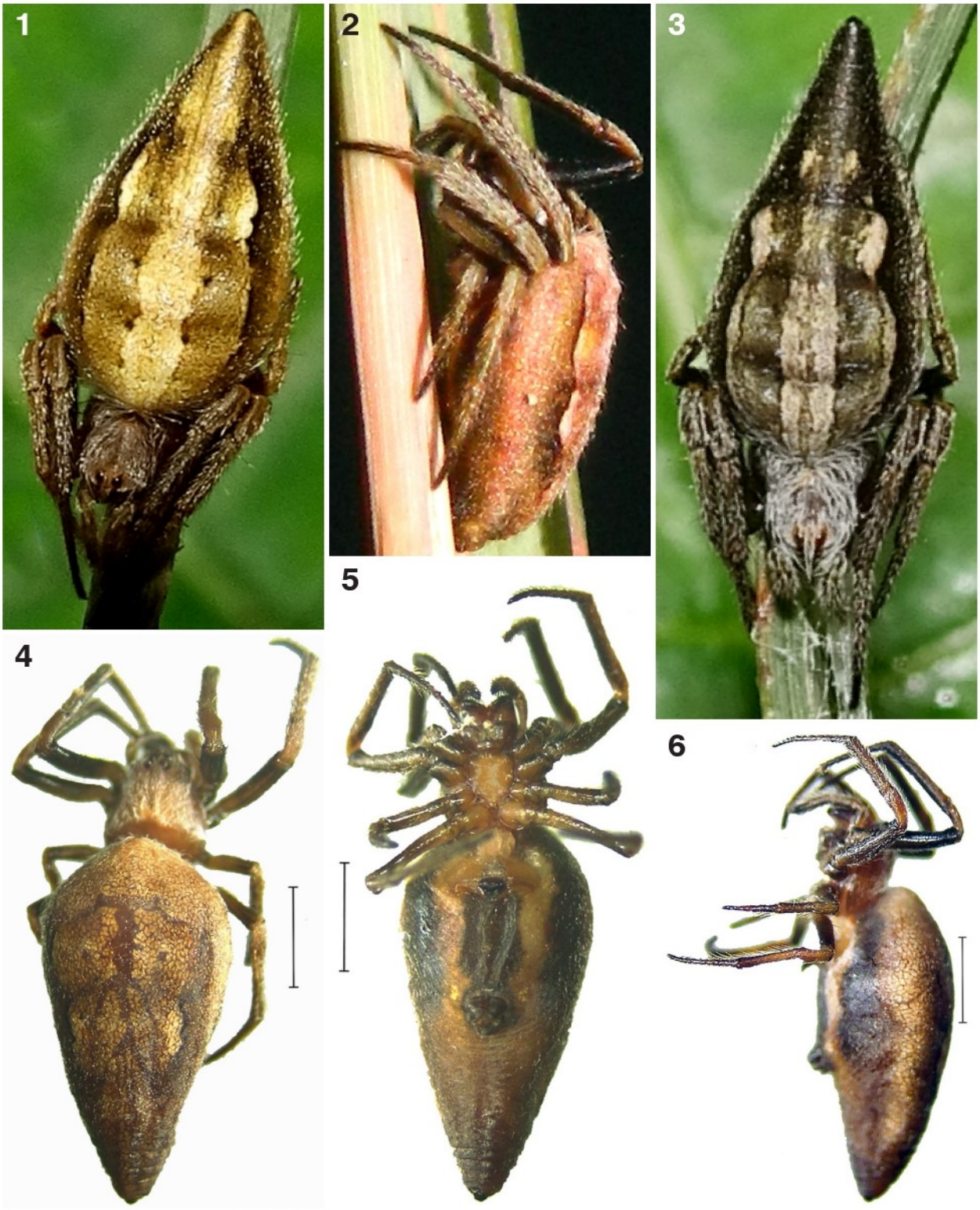
Diagnosis: Male with transverse fovea, abdomen longer than wide with a tubercle at posterior end, palp with large median apophysis, macroseta absent on patella, palp bearing one or two spurs on median apophysis. Female abdomen long, subtriangular, tapering posteriorly, epigyne bearing a scape with recurved tip.

Eriovixia kachugaonensis sp. nov. (Figs. 1–13)

Types: Holotype ♀, BMGU/A-10/ARA-30 from Kachugaon, 26°44′44.1″N 90°08′14.6″E, 81 m a.s.l., 11 July 2018, leg. T. Basumatary. Paratypes: INDIA: 1♀, BMGU/A-10/ARA-31, Kachugaon, 26°44′38.4″N 90°07′59.1″E, 72 m a.s.l., 12 June 2018 and 1♀, BMGU/A-10/ARA-32, Jharbari Forest Range, 26°35′49.3″N 90°14′15.7″E, 72 m a.s.l., 24 July 2018, all leg. P. Basumatary.

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

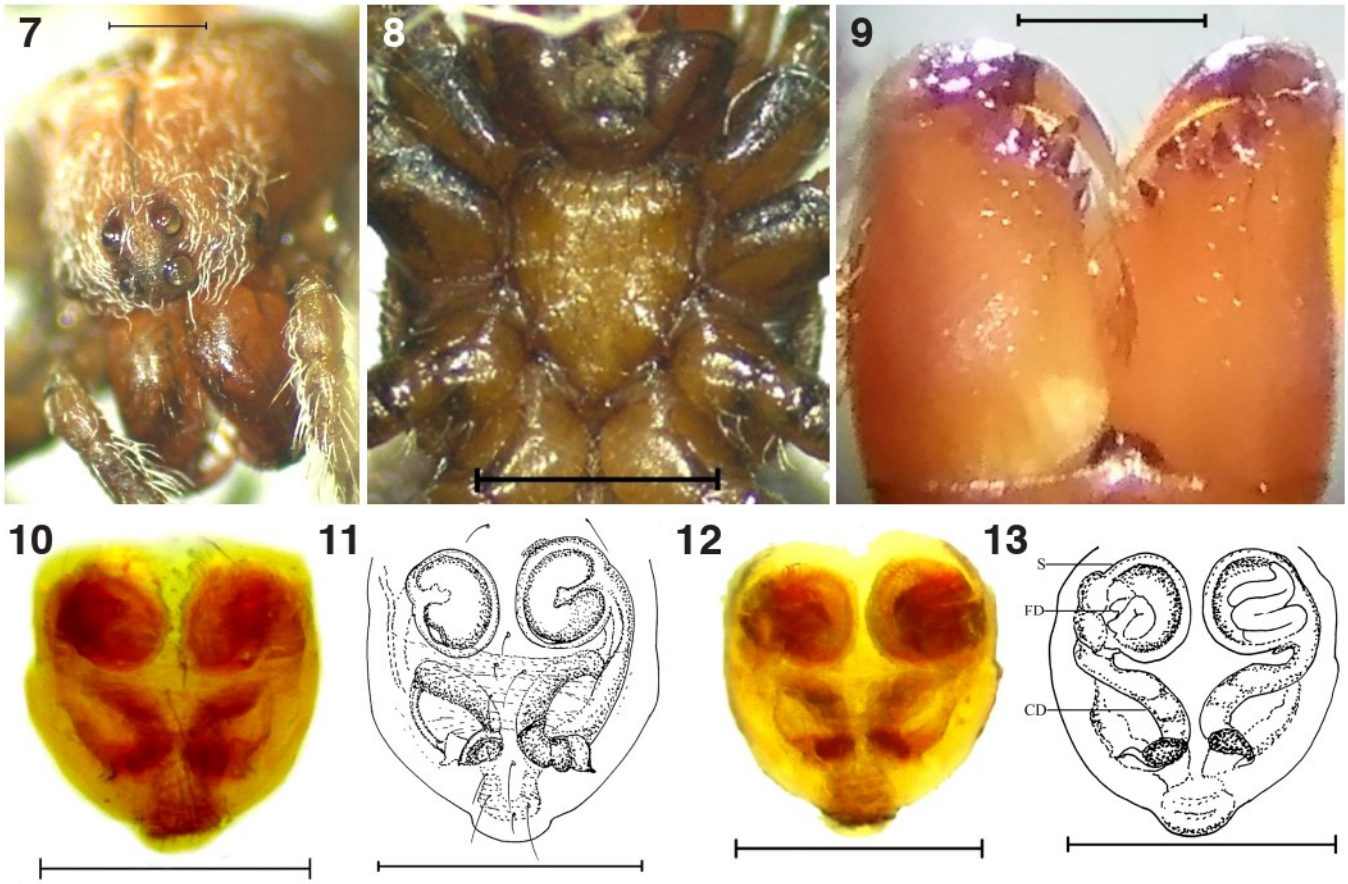
Diagnosis: The new species resembles *Eriovixia pseudocentrodes* (Bösenberg & Strand, 1906) in habitus, but can be distinguished from the latter by having a flat, elongate abdomen; the abdomen does not tapering posteriorly (Figs. 1–2, 4) (in *E. pseudocentrodes*, the abdomen is in an upright position and tapers posteriorly). The epigyne is oval shaped;



Figs. 1–6: *Eriovixia kachugaonensis* sp. nov., female. **1** live, anterior view; **2** live, lateral view; **3** live (black morph), anterior view; **4** habitus, dorsal view; **5** habitus, ventral view; **6** habitus, lateral view. Scale bars = 2 mm.

globular spermethecae; copulatory ducts long and with a single fold posteriorly, almost touching each other (Figs. 10–13) (in *E. pseudocentrodes*, the epigyne is triangular shaped; oval spermathecae; copulatory ducts unfolded, posterior ends facing each other). It is distinguishable from *E. gryffindori* Ahmed, Khalap & Sumukha, 2016 by the absence of a long, pointed, abdomen tapering posteriorly, short epigynal scape, coiled copulatory ducts and oval-shaped spermathecae.

Description of holotype female: Total length 8.83; carapace 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,



Figs. 7–13: *Eriovixia kachugaonensis* sp. nov., female. **7** cephalothorax, anterior view; **8** sternum; **9** chelicerae, retrolateral view; **10** internal genitalia, ventral view; **11** explanatory drawing of internal genitalia, ventral view; **12** internal genitalia, dorsal view; **13** explanatory drawing of internal genitalia, dorsal view. Scale bars = 1 mm (8), 0.5 mm (7, 9, 10–13).

PME–PME 0.16, PME–PLE 0.38. Leg measurements: I 5.25 (1.39, 0.66, 1.51, 1.08, 0.61); II 4.48 (1.36, 0.51, 1.12, 1, 0.49); III 2.93 (0.98, 0.42, 0.51, 0.63, 0.39); IV 4.65 (1.24, 0.72, 1.21, 0.96, 0.52). Carapace pear shaped and brownish with a short blackish mid-dorsal stripe to foveal groove; covered with whitish setae; longer than wide; deep cervical groove; ocular region dark brown; anterior eyes recurved and straight posterior eyes (Figs. 4, 7). Chelicera brownish with sparse grayish hairs; three retromarginal and three promarginal teeths (Fig. 9). Sternum yellowish brown and triangular; labium and maxillae dark brown (Fig. 8). Legs blackish brown, covered with short bristle-like hairs (Figs. 5–6). Abdomen elongated, pointed posteriorly, with round muscle markings at posterior end; pale yellowish brown covered sparsely with whitish hairs; dark brown margins on dorsum with three pairs of sigillae; broad blackish markings on lateral sides (Figs. 1–2, 4); venter dark brown; short blackish broad margin from distal end of epigynum to proximal end of spinnerets; blackish brown spinnerets (Fig. 5). Epigyne oval with long scape; globular spermethecae; copulatory ducts long with a single loop (Figs. 10–13)

Natural history: Females were observed resting motionless during the daytime on a specific narrow–lanceolate leaved plant *Saccharum spontaneum* (wild sugarcane) at a height of ~1.2 m above the ground. The females were found ~5 m apart with only one individual per plant. A black colour morph of *Eriovixia kachugaonensis* sp. nov. was also collected; only a single such individual was observed at the locality (Fig. 3).

Distribution: India (Assam).

Acknowledgements

We greatly acknowledge Additional PCCF & CHD, Forest, BTC, Kokrajhar and Department of Zoology, Gauhati University for aiding us with laboratory and equipments. We would like to acknowledge Assam State Biodiversity Board for granting collection permit. PB and TB are thankful to P. K. Brahma, ACF, Kachugaon Division for his support and encouragement. DC is thankful to Xiao-Qi Mi and Ayan Mondol for taxonomic discussion. PB is thankful to Sanswrang Basumatary, Dwihung Brahma and Miniswrang Borgoyary. Our heartfelt thanks go to Dipti Thakuria, Rajual Islary, K. R. Brahma, Range Officer, and Gaurav Yadav, SSB, CO 31 for their support. We are grateful to the reviewers for their constructive comments to improve the manuscript.

References

AHMED, J., KHALAP, R. & SUMUKHA, J. N. 2016: A new species of dry foliage mimicking *Eriovixia* Archer, 1951 from central Western Ghats, India (Araneae: Araneidae). *Indian Journal of Arachnology* **5**: 24–27.

ARCHER, A. F. 1951: Studies in the orbweaving spiders (Argiopidae). 1. *American Museum Novitates* **1487**: 1–52.

BARRION, A. T. & LITSINGER, J. A. 1995: *Riceland spiders of South and Southeast Asia*. Wallingford: CAB International.

BÖSENBERG, W. & STRAND, E. 1906: Japanische Spinnen. *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft* **30**: 93–422.

CLERCK, C. 1757: *Svenska spindlar, uti sina hufvud-slågter indelte samt under några och sextio särskildte arter beskrefne och med illuminerade gurer uplyste*. Stockholm: L. Salvii.

MI, X-Q., PENG, X-J. & YIN, C-M. 2010: The orb-weaving spider genus *Eriovixia* (Araneae: Araneidae) in the Gaoligong mountains, China. *Zootaxa* **2488**: 39–51.

POCOCK, R. I. 1900: On the scorpions, pedipalps and spiders from tropical West-Africa, represented in the collection of the British Museum. *Proceedings of the Zoological Society of London* **67**: 833–885, pl. LV–LVIII.

SIMON, E. 1877: Etudes arachnologiques. 5e Mémoire. IX. Arachnides recueillis aux îles Phillipines par MM. G. A. Baer et Laglaise. *Annales de la Société Entomologique de France* **7**: 53–96.

SIMON, E. 1889: Arachnides de l'Himalaya, recueillis par MM. Oldham et Wood-Mason, et faisant partie des collections de l'Indian Museum. Première partie. *Journal of the Asiatic Society of Bengal* **58**: 334–344.

TANIKAWA, A. 1999: Japanese spiders of the genus *Eriovixia* (Araneae: Araneidae). *Acta Arachnologica* **48**: 41–48.

TIKADER, B. K. & BAL, A. 1981: Studies on some orb-weaving spiders of the genera *Neoscona* Simon and *Araneus* Clerck of the family Araneidae (=Argiopidae) from India. *Records of the Zoological Survey of India, Occasional Paper* **24**: 1–60.

WORLD SPIDER CATALOG 2018: *World spider catalog, version 19.5*. Bern: Natural History Museum, online at: http://wsc.nmbe.ch

New record of *Cyrtarachne nagasakiensis* Strand, 1918 (Araneae: Araneidae) from India

Paris Basumatary
Department of Zoology,
Bodoland University,
Assam, 783370, India
email: parishbasumatary@gmail.com

Sangeeta Das
Department of Zoology,
Assam Don Bosco University,
Assam, 782402, India

Jatin Kalita
Department of Zoology,
Gauhati University,
Assam, 781014, India

Dulur Brahma
Department of Zoology,
Bodoland University,
Assam, 783370, India

Abstract

Cyrtarachne nagasakiensis Strand, 1918 (Araneidae) is newly recorded from India on the basis of a specimen collected from Assam. A species description is provided, with figures of the habitus and internal genitalia.

Keywords: Assam • taxonomy

Introduction

Genus *Cyrtarachne* Thorell, 1868 has 55 accepted species worldwide (World Spider Catalog 2018). *Cyrtarachne nagasakiensis* Strand, 1918 was described for the first time from Nagasaki, Japan. Later, it was reported from Korea by Jo (1981) and from China by Hu & Li (1987). This paper describes the tenth *Cyrtarachne* species known from India. *Cyrtarachne nagasakiensis* Strand, 1918 is recorded in India for the first time, from the Jharbari Forest Range of Chirang Reserve Forest, Assam. This is an integral part of the Manas Biosphere Reserve, and is located in western Assam; it harbours a wide variety of flora and fauna. The habitat types in the reserve can be divided into Sal forest, evergreen and semi-evergreen forest, deciduous forest, grassland, and riverine forest. This reserve forest remains largely unexplored in terms of arthropod diversity. The present study is a part of doctoral research work on diversity of spiders in the Chirang Reserve Forest over a period of 4 years, from 7 June 2017 to 9 February 2021.

Materials and methods

The specimen was hand collected and photographed during a nocturnal survey at 10 pm in the Jharbari Forest Range within the Manas Biosphere Reserve, Kokrajhar, Assam, India. The specimen was examined and measured under a Leica EZ4 E stereo microscope. The epigyne was dissected under a Magnus MSZ-Bi, cleared in 10% KOH overnight, and transferred to 80% ethanol after observation. The dissected specimen and epigyne were stored in glass vials and permanently preserved in Audman's preservative. All measurements were taken in millimetres. Leg measurements are given as total length followed by femur, patella, tibia, metatarsus and tarsus. The specimen is deposited in the Biodiversity Museum of Gauhati University, Northeast Region (BMGU) of India with Museum Accession No. (BMGU/A-10/ARA-23). Abbreviations: ALE = anterior lateral eye, AME = anterior median eye, PLE = posterior lateral eye, PME = posterior median eye. Interdistances of eyes are given by a hyphen (e.g. AME-PME).

Family Araneidae Clerck, 1757

Cyrtarachne Thorell, 1868

Cyrtarachne nagasakiensis Strand, 1918 (Figs. 1–10)

Diagnosis: *Cyrtarachne nagasakiensis* Strand, 1918 can be separated from other congeners by its oval-shaped spermatheca and highly coiled copulatory duct (Figs. 9–10). It is distinguishable from *C. bengalensis* Tikader, 1961 by the absence of small tubercles and complicated spiral ducts.

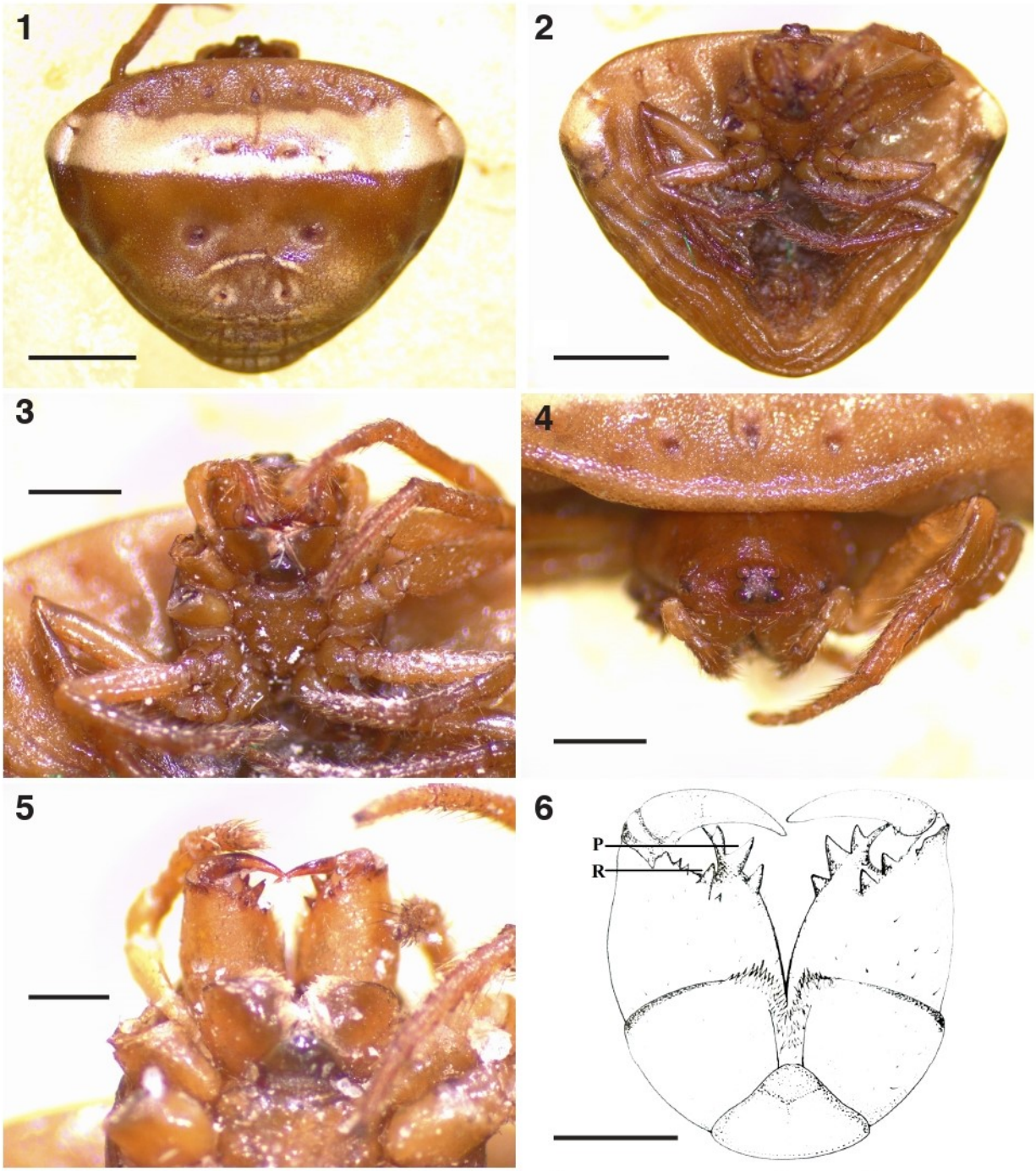
Specimen examined: 1♀, 26°36′22.6″N 90°14′33.1″E, 78 m a.s.l., Assam, India, collected by P. Basumatary on 19 July 2017.

Description of 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 (Figs. 1–4). Eye measurements: ALE 0.10, AME 0.16, PLE 0.09, PME 0.15, ALE-ALE 1.44, AME-AME 0.21, AME-PME: 0.11, AME-ALE 0.48, PME-PME 0.18, PLE-PLE 1.49, PME-PLE 0.55. 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) and IV 5.83 (2.05, 0.84, 1.34, 0.93, 0.67). Carapace, chelicera, labium and sternum reddish brown. Chelicera with 3 promarginal and 2–4 retromarginal teeth (Figs. 5–6). Legs yellow brown, without spines. Abdomen elliptical, with broad white transverse band, without tubercles. Dorsum dark grey anteriorly with three pairs of sigilla, middle pair large and distinct (Fig. 1). Internal genitalia: epigyne with scletorized rim (Figs. 7–8), copulatory ducts spherically coiled, spermathecae oval (Figs. 9–10).

Distribution: China, Korea, Japan and India (New record).

Acknowledgements

Our sincere thanks go to A. Swargowari, Addl. PCCF & CHD, Forest, BTC, Kokrajhar for granting permission to conduct studies at the Chirang Reserve Forest, and Department of Zoology, Gauhati University for aiding us with laboratory and equipment. Sangeeta Das acknowledges the UGC for a BSR fellowship. We greatly acknowledge Assam State Biodiversity Board for granting permission for collection of spider specimens. We would like to thank the District Magistrate of Kokrajhar for granting a security permit to conduct study at Jharbari Forest Range. We owe our sincere thanks to



Figs. 1–6: *Cyrtarachne nagasakiensis* Strand, 1918. **1** female habitus, dorsal view; **2** female habitus, ventral view; **3** sternum; **4** prosoma, dorsal view; **5** chelicerae; **6** explanatory drawing of chelicerae, P = promarginal teeth, R = retromarginal teeth. Scale bars = 2 mm (1–2), 1 mm (3–4), 0.5 mm (5–6).

Director of Education, B.T.C. and Ananta Swargiary, Head of Department of Zoology, Bodoland University. We are grateful to the two anonymous reviewers for their constructive comments to improve the manuscript. We also thank K. Brahma, DFO of Haltugaon Division, BTC, Kokrajhar. Our heartfelt thanks also go to Bhuban Mushahary, Nirma Basumatary, Pabidash Narzary, Jarang Basumatary, Chandan Brahma, Miniswrang Borgoyary, Sinaiti Daimary and the forest officials of Jharbari Range office.

References

CLERCK, C. 1757: *Svenska spindlar, uti sina hufvud-slågter indelte samt under några och sextio särskildte arter beskrefne och med illuminerade gurer uplyste*. Stockholm: L. Salvii.

HU, J. L. & LI, A. H. 1987: The spiders collected from the fields and the forests of Xizang Autonomous Region, China. (II). *Agricultural Insects, Spiders, Plant Diseases and Weeds of Xizang* **2**: 247–353.

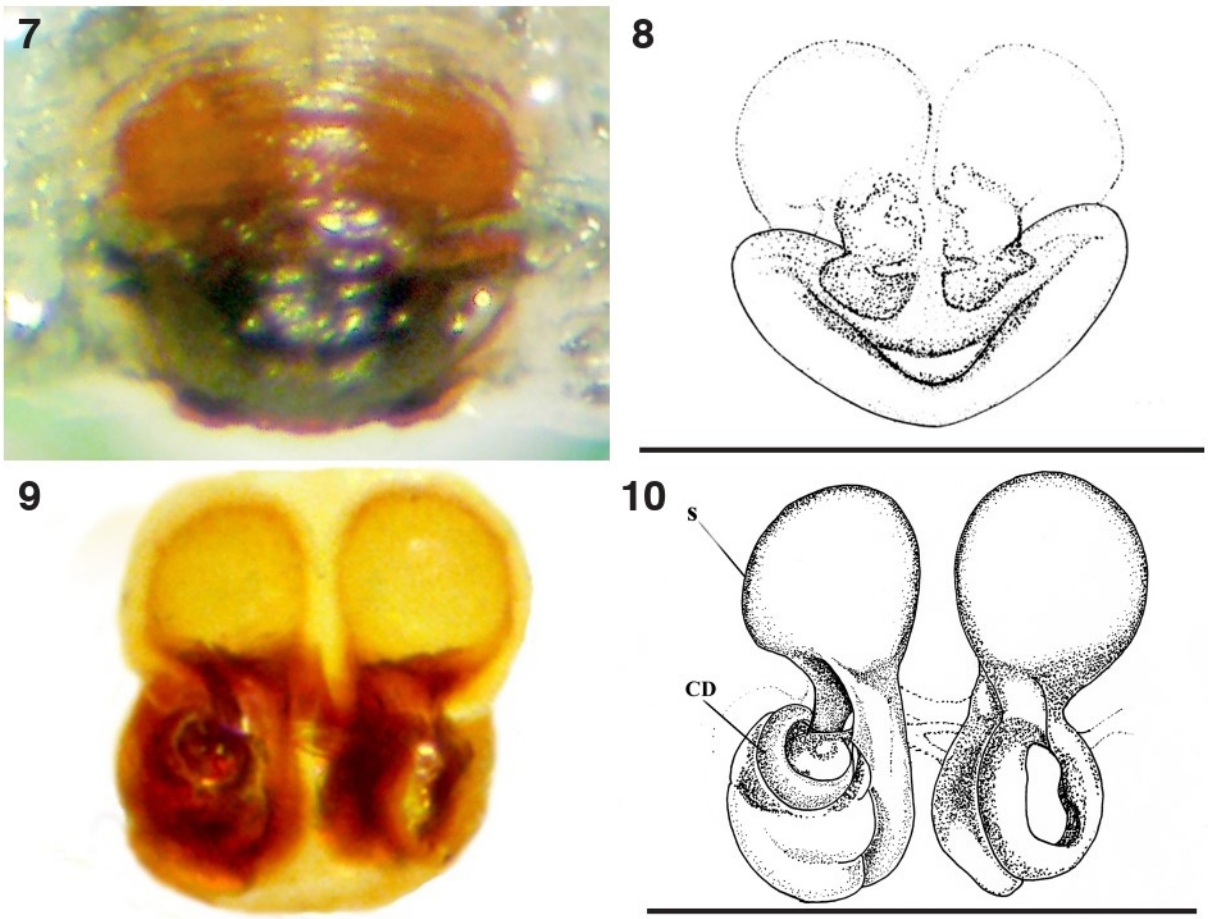
JO, T. H. 1981: On the spiders from Geomun Island, Korea. *Korean Journal of Zoology* **24**: 77–85.

STRAND, E. 1918: Zur Kenntnis japanischer Spinnen, I und II. *Archiv für Naturgeschichte* **82**: 73–113.

THORELL, T. 1868: Araneae. Species novae minusve cognitae. *In* C. A. Virgin (ed.), *Kongliga Svenska Fregatten Eugenies Resa omkring Jorden. Uppsala, Zoologi, Arachnida*: 1–34.

TIKADER, B. K. 1961: Revision of Indian spiders of the genus *Cyrtarachne* (Argiopidae: Arachnida). *Journal of the Bombay Natural History Society* **57**: 547–556.

WORLD SPIDER CATALOG 2018: *World spider catalog, version 19.5*. Bern: Natural History Museum, online at http://wsc.nmbe.ch



Figs. 7–10: *Cyrtarachne nagasakiensis* Strand, 1918. **7** epigyne, ventral view; **8** explanatory drawing of epigyne, ventral view; **9** female internal genitalia, dorsal view; **10** explanatory drawing of female internal genitalia, dorsal view, S = spermatheca, CD = copulatory duct. Scale bars = 0.5 mm.

Acta Arachnologica, 67(1): 35–37, August 31, 2018

New record of *Hyllus diardi* (Walckenaer 1837) (Araneae: Salticidae) from India

Paris Basumatary[1]*, Sangeeta Das[2], Jatin Kalita[3] & Dulur Brahma[1]

[1] *Department of Zoology, Bodoland University, Assam, 783370, India*
[2] *Biodiversity and Conservation Laboratory, Department of Zoology, Gauhati University, Assam, 781014, India*
[3] *Department of Zoology, Gauhati University*
* *Corresponding author. E-mail: parishbasumatary@gmail.com*

Abstract — *Hyllus diardi* (Walckenaer 1837) is recorded for the first time from India on the basis of female specimens collected from Assam. Description of the specimen is given with figures of its body and genitalia. This species is distinguished from its congeners by the distinctive large hairy body, unique abdominal patterns and structure of epigyne.

Key words — jumping spider, taxonomy, Assam

Introduction

The genus *Hyllus* C. L. Koch 1846 belonging to the family Salticidae has 71 accepted species according to the World Spider Catalog (2017). From India, four species of this genus are known, i.e. *Hyllus bos* (Sundevall 1833), *H. semicupreus* (Simon 1885), *H. pudicus* Thorell 1895 and *H. manu* Caleb, Christudhas, Laltanpuii & Chitra 2014. After examining the specimens collected from Jharbari forest range of Assam, we found the occurrence of *Hyllus diardi* (Walckenaer 1837) as the fifth addition to Indian fauna. This species has been reported from Myanmar by Thorell (1895); China by Peng and Kim (1998); Vietnam by Żabka (1985), and Java by Doleschall (1857).

Four species described by Koch (1846), i.e. *Plexippus mutillarius*, *P. lacertosus*, *P. janthinus* and *P. succinctus*, are regarded as junior synonyms of *H. diardi*. In this paper, we record this species from India for the first time.

Methods

The specimens were collected during nocturnal survey at 10:00 p.m. in Jharbari forest range of Chirang Reserve Forest under Manas Biosphere Reserve, Kokrajhar, Assam and were preserved in 80% ethanol. The specimens were deposited to Biodiversity Museum Gauhati University, Northeast Region (BMGU) with Museum Accession No. BMGU/A-10/ARA-21. The specimens were dissected under Olympus Magnus stereozoom microscope (MSZ- Bi) and were measured under Leica EZ4 E stereo microscope. Epigyne was dissected, cleared in 96% lactic acid for 24 hours and then again treated with KOH for four to five hours followed by transferring of the epigyne to 80% ethanol. Measurements were taken in millimeters. Abbreviations are used as follows: anterior lateral eye (ALE), anterior median eye (AME), posterior lateral eye (PLE), posterior median eye (PME). Interdistances of eyes are given by hyphen (e.g. AME-AME). Legs measurements are given as total length followed by femur, patella, tibia, metatarsus and tarsus.

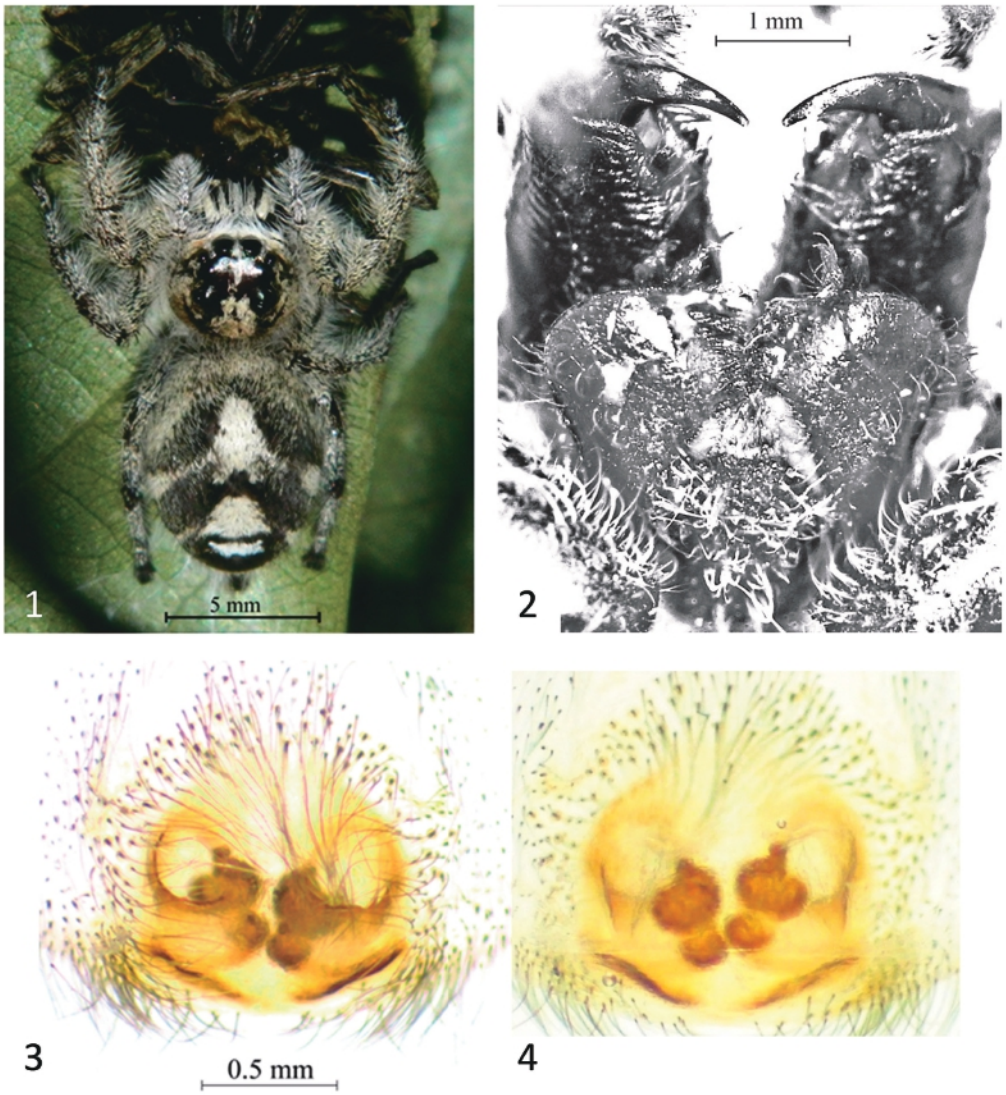
Taxonomic accounts

Hyllus diardi (Walckenaer 1837)
(Figs. 1–5)

Attus diardi Walckenaer 1837, p. 460.
Plexippus mutillarius C. L. Koch 1846, p. 93, figs. 1155–1156. Synonymized by Simon 1886, p. 139.
Plexippus lacertosus C. L. Koch 1846, p. 94, figs. 1157–1158. Synonymized by Xiong et al. 2017, p. 24.
Plexippus janthinus C. L. Koch 1846, p. 97, fig. 1160. Synonymized by Xiong et al. 2017, p. 24.
Plexippus succinctus C. L. Koch 1846, p. 98, fig. 1161. Synonymized with *Plexippus janthinus* by Thorell 1895, p. 376.
Attus succinctus: Doleschall 1857, p. 431.
Phidippa diardi: Simon 1864, p. 327.
Hyllus diardi: Simon 1886, p. 139; Prószyński 1984, 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 et al. 1999, p. 514, figs. 301E, 326L; Xiong et al. 2017, p. 23, fig. 1A–G.
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 & Kim 1998, p. 411, fig. 1D–F.

Diagnosis. *H. diardi* is characterized by large body size and distinctive abdominal pattern in females (Fig. 1). It can be distinguished from other Indian congeners by the presence of distinctive two chambered spermatheca in female internal genitalia.

Specimens examined. Two adult ♀, 1 juvenile ♀ (26˚37'10.9"N, 90˚16'53.8"E, elevation 79 m) from Jharbari



Figs. 1–4. *Hyllus diardi* (Walckenaer 1837). 1, habitus; 2, mouth parts, ventral view; 3, epigyne, ventral view; 4, female internal genitalia, dorsal view.

forest range, Chirang Reserve Forest, Assam, India; collected by P. Basumatary on 26 June 2017.

Description. Based on 1♀ (BMGU/A-10/ARA- 21) from Assam, India.

Measurements. 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. 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. 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). Leg formula: I > IV > II > III.

Body shape and coloration. Carapace brown with a black rim, covered with dense white hairs, narrow anteriorly, cephalic region with very sparsely distributed hairs; distinct long hair tuft horns present near PMEs. Sternum longer than broad. Chelicerae dark brown and covered with long white hairs; promargin of fang furrow with two teeth and retromargin with one tooth (Fig. 2). Pedipalp brown and covered with dense white hairs. Legs brown with white and black hairs and bristles. Opisthosoma oval, tapering posteriorly and broad at mid region, brown with dense patches of white hairs and black hairs; venter brown with a longitudinal black patch arising near epigastric furrow up to the base of spinnerets. Spinnerets dark brown and are covered with hairs.

Epigyne and internal genitalia. A pair of large oval shaped copulatory orifices separated by a median ridge (Fig. 3). Spermatheca divided into two chambers, 0.30 mm long and 0.26 mm wide (Figs. 4–5).

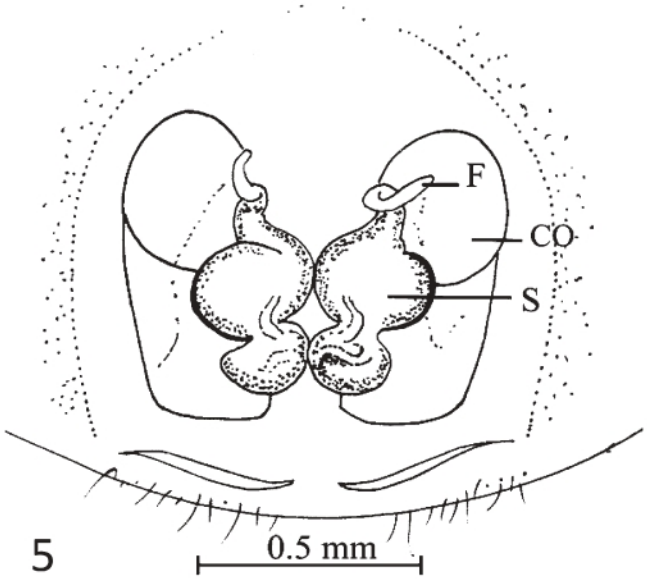


Fig. 5. Female internal genitalia of *Hyllus diardi* (Walckenaer 1837), dorsal view. CO: copulatory opening (opposite side), F: fertilization duct, S: spermatheca.

Distribution. Myanmar, Thailand, Laos, China, Java, and India (new record).

Acknowledgements

Our sincere thanks goes to A. Swargowari, Addl. PCCF & CHD, Forest, BTC, Kokrajhar for granting permission to conduct study at Chirang Reserve Forest, Department of Zoology Gauhati University for aiding us with laboratory and equipment and UGC- BSR for fellowship. We are thankful to A.K. Johari, PCCF (Biodiversity & CC) & Member Secretary- ASBB for granting permission for collection of spider specimens. We would like to thank the District Magistrate of Kokrajhar for granting security permit to conduct study at Jharbari Forest Range. We also thank K. Brahma, DFO of Haltugaon Division, BTC, Kokrajhar. Our heartfelt thanks also goes to Anubhav Agarwal, Nirma Basumatary, Guneswar Das, Bhuban Mushahary, Pabidash Narzary, Jarang Basumatary, Chandan Brahma, Miniswrang Borgoyary, Sunblawri Basumatary, Suraj Kr. Nath and the forest officials of Jharbari Range office. Special thanks to John T. D. Caleb and Siddharth Kulkarni for their constant help and support during the manuscript preparation. We are also thankful to the anonymous reviewers for helping us in ways by reviewing the manuscript

References

Caleb, J. T. D., Christudhas, A., Laltanpuii, K. & Chitra, M. 2014. New species of *Hyllus* C. L. Koch (Araneae: Salticidae) from India. Munis Entomol. Zool., 9: 634–637

Doleschall, L. 1857. Bijdrage tot de Kenntis der Arachniden van den Indischen Archipel. Nat. Tijdschr. Neder.-Ind. 13: 339–434.

Koch, C. L. 1846. Die Arachniden. Nürnberg, Dreizehnter Band, pp. 1–234, Vierzehnter Band, 1–88.

Peng, X. J. & Kim, J. P. 1998. Four species of jumping spiders (Araneae: Salticidae) from China. Korean J. Bio. Sci., 2: 411–414.

Peng, X. J., Xie, L. P., Xiao, X. Q. & Yin, C. M. 1993. Salticids in China (Arachniuda: Araneae). Hunan Normal Univ. Press, 270 pp.

Prószyński, J. 1984. Atlas rysunków diagnostycznych mniej znanych Salticidae (Araneae). Wyższa Szkola Rolniczo-Pedagogiczna, Siedlcach, 2: 1–177.

Simon, E. 1864. Histoire naturelle des araignées (aranéides). Paris, 1–540.

Simon, E. 1885. Matériaux pour servir à la faune arachnologiques de l'Asie méridionale. I. Arachnides recueillis à Wagra-Karoor près Gundacul, district de Bellary par M. M. Chaper. II. Arachnides recueillis à Ramnad, district de Madura par M. l'abbé Fabre. Bull. Soc. Zool. Fr., 10: 1–39.

Simon, E. 1886. Arachnides recueillis par M. A. Pavie (sous chef du service des postes au Cambodge) dans le royaume de Siam, au Cambodge et en Cochinchine. Act. Soc. Linn. Bord., 40: 137–166.

Simon, E. 1899. Contribution à la faune de Sumatra. Arachnides recueillis par M. J. L. Weyers, à Sumatra. (Deuxiéme mémoire). Ann. Soc. Entomol. Belg., 43: 78–125.

Song, D. X., Zhu, M. S. & Chen, J. 1999. The Spiders of China. Hebei Univ. Sci. Techol. Publ. House, Shijiazhuang, 640 pp.

Sundevall, C. J. 1833. Conspectus Arachnidum. Londini Gothorum, pp. 1–39.

Thorell, T. 1892. Studi sui ragni Malesi e Papuani. IV, 2. Ann. Mus. Civ. Stor. Nat. Genova, 31: 1–490.

Thorell, T. 1895. Descriptive catalogue of the spiders of Burma. London, pp. 1–406

Walckenaer, C. A. 1837. Histoire naturelle des insectes. Aptères. Paris, 1: 1–682

World Spider Catalog 2017. World Spider Catalog. Natural History Museum Bern, online at http://wsc.nmbe.ch, version 18.5, accessed on September 1, 2017. doi: 10.24436/2

Xiong, F., Liu, Z. P. & Zhang, Z. S. 2017. Review on the jumping spider genus *Hyllus* from China (Araneae Salticidae). Acta Arachnol. Sinica, 26: 22–26.

Żabka, M. 1985.Systematic and zoogeographic study on the family Salticidae (Araneae) from Viet-Nam. Ann. Zool., Warszawa, 39: 197–485.

Żabka, M. 1988. Salticidae (Araneae) of Oriental, Australian and Pacific regions, III. Ann. Zool., Warszawa, 41: 421–479.

Received September 23, 2017 / Accepted January 10, 2018

Acta Arachnologica, 73 (1): 63–66, August 24, 2024

New record of *Phrynarachne decipiens* (Forbes 1884) (Araneae: Thomisidae) from India

Sangeeta Das[1], Jatin Kalita[2], Nilutpal Mahanta[2], Dulur Brahma[3] & Paris Basumatary[3*]

[1]*Department of Zoology, Pragjyotish College, Assam, 781009, India*
[2]*Department of Zoology, Gauhati University, Assam, 781014, India*
[3]*Department of Zoology, Bodoland University, Assam, 783370, India*
E-mail: parishbasumatary@gmail.com
**Corresponding author*

Abstract — The bird dung crab spider *Phrynarachne decipiens* (Forbes 1884) is redescribed based on female specimens collected from Assam, India. Photographs and illustrations of the female genitalia are provided. This is the first record of *P. decipiens* from India.

Key words — bird-dropping, camouflage, taxonomy, Thomisidae

The genus *Phrynarachne* was erected by Thorell in 1869 with *P. rugosa* (Walckenaer 1805) as its type. It presently consists of 35 accepted species of which only three species have been reported from India: *P. ceylonica* (O. Pickard-Cambridge 1884), *P. peeliana* (Stoliczka 1869) and *P. tuberosa* (Blackwall 1864) (World Spider Catalog 2024).

Phrynarachne decipiens (Forbes 1884) was described based on female sex from Indonesia. The last description of this species was made by Jacobson in 1921 with only sketch of the habitus apart from which there are no detailed illustrations of the species since its original description. Only 10 species have been studied after their original description (Lin et al., 2022). The present paper aims to re-describe *P. decipiens* along with its first report from Assam, India.

Specimens were hand collected from Sonapur locality, Kamrup (Metropolitan) district of Assam (2 females) and Chirang Reserve Forest, Kokrajhar district of Assam (1 female). All the collected specimens were preserved in 80% ethanol, and were studied for their morphological descriptions under Leica EZ4 E stereo microscope. A single studied specimen collected from Chirang Reserve Forest was deposited to the museum of Zoological Survey of India (ZSI), Shillong. Dissected epigynum was kept in 96% lactic acid for 24 hours and then treated with 10% KOH for three to four hours followed by preservation in 80% ethanol. Abbreviations used are as follows: ALE: anterior lateral eye, AME: anterior median eye, ARA: Arachnida, ERS: Eastern Regional Centre, PLE: posterior lateral eye, PME: posterior median eye. Legs measurements are given as total length (femur, patella, tibia, metatarsus and tarsus). All measurements were in millimeters (mm).

Genus *Phrynarachne* Thorell 1869

Type species: *Phrynarachne rugosa* (Walckenaer 1805)

Phrynarachne decipiens (Forbes 1884)
(Figs. 1–10)

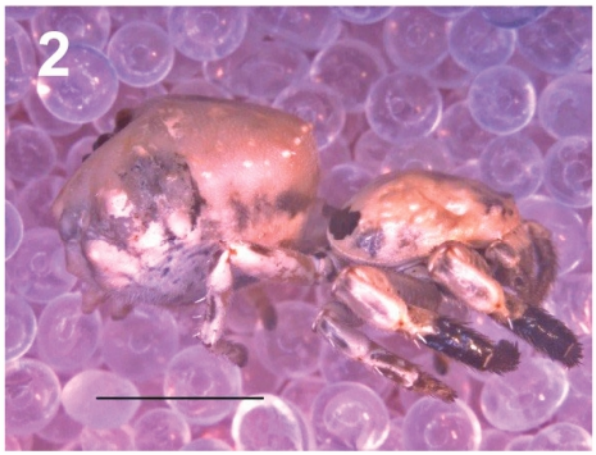
Thomisus decipiens Forbes 1884: 586; Jacobson 1921: 186.
Ornithoscatoides decipiens O. Pickard-Cambridge 1884: 199.
Phrynarachne decipiens Thorell 1890: 63; Workman 1896: 92.

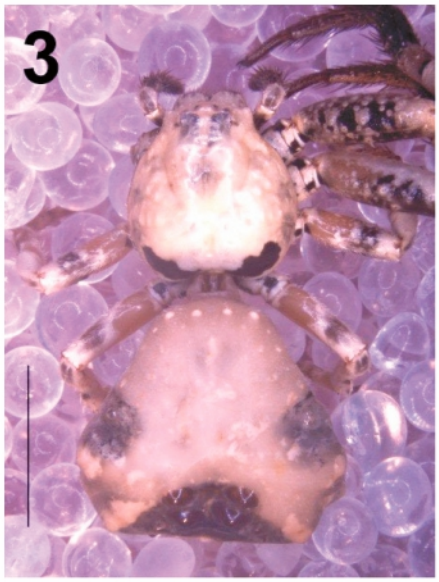
Type material. ***Holotype*** Collection of Forbes from West Java, specimen deposit location unknown, not examined.

Material examined: 1 adult ♀ (ZSI Accession number: IV/ARA/ERS/44) from India, Assam, Jharbari Reserve Forest, (26.6809 N, 90.2275 E) 90 m a.s.l., 28 July 2018, leg. P. Basumatary, 2 adult ♀ Sonapur locality, Kamrup (Metropolitan) district of Assam (26.13111 N, 91.89694 E) 22 August 2018, leg. S. Das and N. Mahanta.

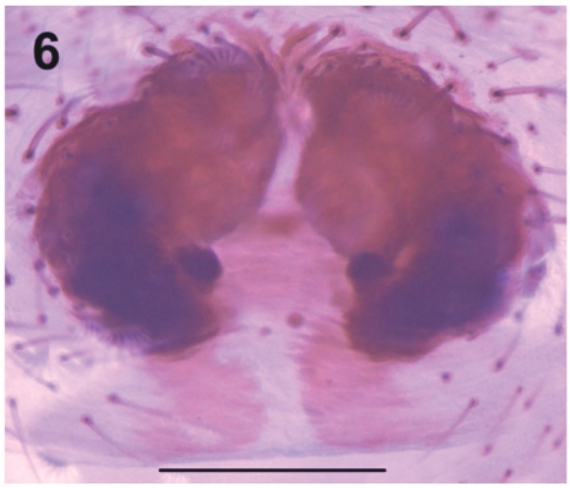
Diagnosis: The species resembles *P. peelina* in habitus but can be separated from the later by stout spermathecae with posterior heads almost touching each other (*vs.* oval shaped spermathecae and widely spaced) and short copulatory ducts with slightly curving outwards laterally (*vs.* copulatory ducts long and narrow, highly curved forming an arch) (cf. Figs. 6–9, with figs. 11–12 in Roy et al. 2010).

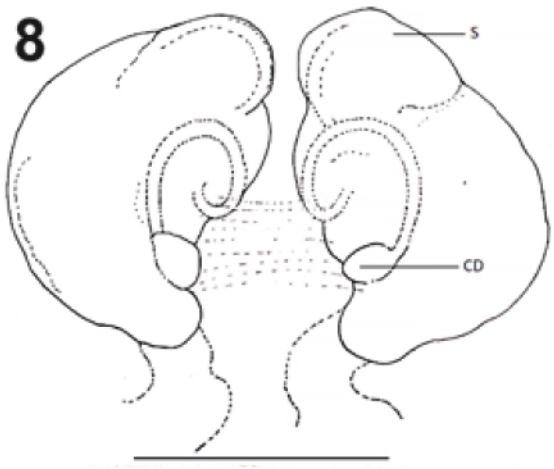
Description. Female. Total length 13.14 long; carapace: 5.24 long, 5.47 wide; abdomen: 7.9 long, 9.38 wide. Carapace chalk white with a pair of prominent lateral black markings at the posterior end, pale blackish markings at ocular region and at cephalothoracic junction anteriorly, cephalothorax with numerous tubercula dorsally, elevated cephalic area with eyes present on tubercles (Figs. 1, 3, 5). Eye measurements: AME 0.192, ALE 0.279, PME 0.168, PLE 0.19, AME–PME 0.30, AME–ALE 0.146, PLE–PME 0.382, ALE–PLE 0.278, AME–AME 0.358, PME–PME 0.40, PLE–PLE 1.39, ALE–ALE 0.92. Chelicerae pale blackish, sternum brownish white with blackish spots pos-

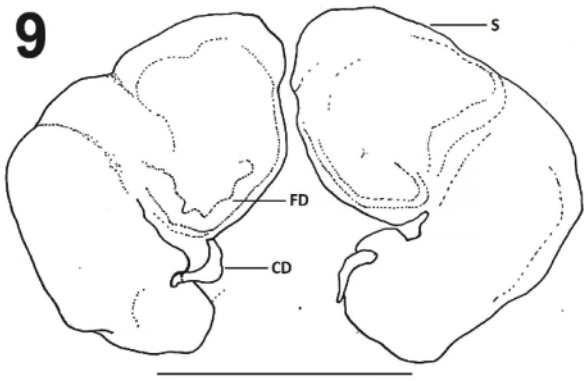




Figs. 1–5. *Phrynarachne decipiens* (Forbes 1884). 1, female habitus; 2, same, lateral view; 3, same, dorsal view; 4, same, ventral view; 5, eyes, anterior view; Scales = Figs. 2–4 (5 mm), 5 (2 mm)







Figs. 6–10. *Phrynarachne decipiens* (Forbes 1884). 6, cleared epigyne, dorsal view; 7, same, ventral view; 8, diagrammatic representation of epigyne, dorsal view; 9, diagrammatic representation of epigyne, ventral view; 10, Resting position with silk deposited on leaf mimicking bird droppings. Scales = Figs. 6–9 (0.5 mm).

teriorly, 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 (Figs. 2, 4). Leg measurements: I: 16.21 (5.11, 2.24, 3.37, 3.71, 1.78); II: 10.07(3.20, 1.09, 2.06, 2.31, 1.41); III: 8.25 (2.86, 1.45, 1.72, 1.25, 0.97); IV: 8.18 (3.04, 1.19, 1.70, 1.15, 1.10). Leg formula: 1243. 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 (Figs. 1, 3, 4). Spinnerets whitish brown (Fig. 4).

Epigynum (Figs. 6–9). 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.

Male. Unknown.

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. It generally lies 1–2 ft above the ground.

Remarks: The identification of the present species was done without examination of the type specimen, however the morphological characters and natural history of the studied specimen match those of the previously described specimens (cf. Figs. 1–3, 5 and 10 with figs a, g in Workman 1896 and figs 1–2 in Jacobson 1921), thus leaving no doubt that the studied specimen indeed belongs to *P. decipiens*.

Distribution. Malaysia, Indonesia (Java, Sumatra) and India (new record).

Acknowledgements

Our sincere thanks go to Additional PCCF and CHD, Forest, BTC, Kokrajhar, for granting study permit and Assam State Biodiversity Board is highly acknowledged for granting collection permit. We acknowledge the Zoological Survey of India, Shillong for allowing us to use the Leica microscope.

References

Blackwall, J. 1864. Descriptions of seven new species of East Indian spiders received from the Rev. O. P. Cambridge. Annals and Magazine of Natural History, 14 (3): 36–45.

Forbes, H. O. 1884. On the habits of *Thomisus decipiens*, a spider from Sumatra. Proceedings of the Zoological Society of London, 51(4, for 1883): 586–588, pl. 51.

Jacobson, E. 1921. *Thomisus decipiens* Forbes, a spider supposed to imitate the excrement of birds. Tijdschrift voor Entomologie, 64: 186–190.

Lin, Y., Yu, L., Koomen, P., Yan, X., & Li, S. 2022. Taxonomic notes on the genus *Phrynarachne* from China (Araneae, Thomisidae). ZooKeys, 1085: 69–99.

Roy, T. K., Dhali, D. C., Saha, S. & Raychaudhuri, D. 2010. Resurrection of the endemic bird dung crab spiders, *Phrynarachne* Thorell (Araneae: Thomisidae) of 19th century India. Munis Entomology and Zoology, 5: 543–550.

Stoliczka, F. 1869. Contribution towards the knowledge of Indian Arachnoidea. Journal of the Asiatic Society of Bengal, 38(pt.2): 201–251.

Thorell, T. 1869. On European spiders. Part I. Review of the European genera of spiders, preceded by some observations on zoological nomenclature. Nova Acta Regiae Societatis Scientiarum Upsaliensis, 7(3): 1–108.

Thorell, T. 1890. Aracnidi di Nias e di Sumatra raccoltinel 1886 dal Sig. E. Modigliani. Annali del Museo Civico di Storia Naturale di Genova, 30: 5–106.

Workman, T. 1896. *Malaysian spiders.* Belfast, 25–104.

World Spider Catalog 2024. World Spider Catalog. Version 24. Natural History Museum Bern, online at http://wsc.nmbe.ch, accessed on 24 April 2024. doi: 10.24436/2.

Received September 23, 2023 / Accepted December 19, 2023

APPENDIX 2
PERMISSION

Permission from Additional Principal Chief Conservator of Forest Cum CHD, BTR for condunting surveys at Chirang Reserve Forest, Assam, India.

GOVERNMENT OF ASSAM
OFFICE OF THE ADDITIONAL PRINCIPAL CHIEF CONSERVATOR OF FORESTS CUM CHD
BODOLAND TERRITORIAL COUNCIL, KOKRJHAR.

No.FGW/WL/35/Chakrasila/1180, Dated,Kokrajhar,the 16/10/2017.

To,

Sri Paris Basumatary,
Bodoland University, Zoology Department,
Kokrajhar.

Sub :- Permission for access to bio-resources (Spider fauna).

Ref :- Your petition dtd.15.9.2017.

The prayer petition submitted by your vide under reference is accepted and you are hereby allowed to access for bio-resources (Spider fauna) in Chirang Reserve Forest in Assam for the period of 4 (four) years i.e. from 07/06/2017 to 09/02/2020 on fulfillment of conditions laid down to the Assam State Biodiversity Board's letter No. ABB/Permission/2012/505, dtd. 7/6/2017.

This is for your information and necessary action.

(A. Swargowari, IFS)
Addl. PCCF & CHD, Forests, BTC, Kokrajhar.

Copy to :-

(1) The Superintendent of Police,Kokrajhar for favour of information.

(2) The Divisional Forest Officer,Haltugaon Division,Kokrajhar for information and Take necessary action.

(3) The Range Officer,Ultapani Range for information.

sd

(A. Swargowari,IFS)
Addl.PCCF & CHD,Forests,BTC,Kokrajhar.

APPENDIX 3
PERMISSION

Permission from Assam State Biodiversity Board for collection of specimens from Chirang Reserve Forest, Assam, India.

ASSAM STATE BIODIVERSITY BOARD
ARANYA BHAWAN, 2nd FLOOR
PANJABARI, GUWAHATI-781037
www.asbb.gov.in

ABB/Permission/ 2012/505

Tel- 0361- 2333917; Fax: 2333788
Email: assambioboard@gmail.com
Date: 07/06/2017

From: **A. K. Johari**, IFS
PCCF (Biodiversity & CC) &
Member Secretary-ASBB
Rehabari, Guwahati

To: Mr. Paris Basumatary
PhD. Research Scholar
Department of Zoology
Bodoland University, Kokrajhar-783370

Sub: Permission for access to bio-resources (Spider fauna) in Chirang RF, Assam.

Ref: Your application dated 17th May, 2017

Dear Mr. Basumatary,

In inviting a reference to the above, this is to convey approval of the Assam State Biodiversity Board on the PhD research study '*Ecology of Spiders at Chirang RF*" Assam. This permission is subject to fulfillment of following conditions:

i. The permission is for a period of from 07/06/2017 up to 09/02/2020.
ii. The permission granted is purely for survey purposes and is subject to other clearances from concerned Authorities of Forest Department, Assam.
iii. Collection of samples, excluding the Scheduled I species, if required, shall be done with due permission & with utmost care so as to cause no/ least harm to the fauna.
iv. In case of any intended IPR/Commercial use of the research finding, a fresh application shall be made in terms of the provision of the Biological Diversity Act-2002 and Assam Biodiversity Rules-2010.
v. The outcome of the research study shall be shared with the Board.

In the event of violation of any of the conditions stipulated above, the permission shall be liable to be withdrawn.

Yours faithfully,

07/06/2017

(A. K. Johari, IFS)
Member Secretary, ASBB

Copy for information to the Principal Chief Conservator of Forests, Wildlife, Assam, Basistha Forest Complex, Guwahati-29.

APPENDIX 4

SPECIMENS DEPOSTIED IN ZOOLOGICAL SURVEY OF INDIA (ZSI) SHILLONG, NORTH EASTERN REGIONAL CENTRE

A total of 100 individuals of spider specimens are deposited in ZSI, Shillong

भारत सरकार
GOVERNMENT OF INDIA
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE

भारतीय प्राणी सर्वेक्षण
उत्तर पूर्वीय प्रादेशिक केन्द्र
रिसा कालोनी, शिलांग
दुरभाष: -0364 2223638
फेक्स-0364 : 2226495

ZOOLOGICAL SURVEY OF INDIA
NORTH EASTERN REGIONAL CENTRE
RISA COLONY, SHILLONG - 793003
Phone:0364-2223638, Fax:0364-222649
E-mail: nerc@zsi.gov.in & zsishillong@rediffmail.com

File No. 2-7/2019-Tech./ 644 **Dated: 30th Sep., 2019**

To,

Paris Basumatary

Research Scholar

Department of Zoology

Bodoland University

Assam, 783370

Subject: Deposition of Arachnida specimen & issue of registration number

Sir,

With reference to the subject cited above, this is to acknowledge the receipt of following Arachnida specimens deposited by you in the National Repository housed in this Regional Centre. As desired the registration number of the said specimen are given below:-

Sl. No	Registration No.	Specimens	Family	Examples
1	IV/ARA/ERS-33	*Argyrodes miltosus*	Theridiidae	1, Female
2	IV/ARA/ERS-34	*Bianor sp.*	Solticidae	1, Male
3	IV/ARA/ERS-35	*Bianor sp.*	Solticidae	1, Male
4	IV/ARA/ERS-36	*Castianeira sp.*	Corinnidae	1, Male
5	IV/ARA/ERS-37	*Castianeira sp.*	Corinnidae	1, Female
6	IV/ARA/ERS-38	*Cocalus sp.*	Solticidae	1, Male
7	IV/ARA/ERS-39	*Heliophanus sp.*	Solticidae	1, Female
8	IV/ARA/ERS-40	*Heliophanus sp.*	Solticidae	1, Female
9	IV/ARA/ERS-41	*Meotipa assamensis*	Theridiidae	1, Female

10	IV/ARA/ERS-42	*Philoponella alata*	Uloboridae	1, Male
11	IV/ARA/ERS-43	*Philoponella alata*	Uloboridae	1, Male
12	IV/ARA/ERS-44	*Phrynarachne lancea*	Thomisidae	1, Female
13	IV/ARA/ERS-45		Pisauridae	1, Male
14	IV/ARA/ERS-46		Pisauridae	1, Female
15	IV/ARA/ERS-47	*Meotipa assamensis*	Theridiidae	1, Female
16	IV/ARA/ERS-48	*Meatipa sp.*	Theridiidae	1, Female
17	IV/ARA/ERS-49	*Orelgorius sexspinosus*	Araneidae	1, Female
18	IV/ARA/ERS-50	*Philoponella alata*	Uloboridae	1, Female
19	IV/ARA/ERS-51	*Philoponella alata*	Uloboridae	1, Female
20	IV/ARA/ERS-52	*Gnothopalystes sp.*	Sparassidae	1, Female
21	IV/ARA/ERS-53	*Parasteatoda sp.*	Theridiidae	1, Female
22	IV/ARA/ERS-54	*Parasteatoda sp.*	Theridiidae	1, Female
23	IV/ARA/ERS-55	*Theridula sp.*	Theridiidae	1, Female
24	IV/ARA/ERS-56	*Theridula sp.*	Theridiidae	1, Female
25	IV/ARA/ERS-57	*Theridula sp.*	Theridiidae	1, Female
26	IV/ARA/ERS-58		Zodariidae	1, Male
27	IV/ARA/ERS-59		Zodariidae	1, Female

Thanking You,

Yours faithfully,

(Dr. V. D. Hegde)

Scientist- E & Officer-in-Charge

Officer-in-Charge
Zoological Survey of India
North Eastern Regional Centre
Shillong

सत्यमेव जयते

GOVERNMENT OF INDIA

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय

MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE

भारतीय प्राणी सर्वेक्षण
उत्तर पूर्वीय प्रादेशिक केन्द्र
रिसा कालोनी ,शिलागं
दुरभाषा: 0364 -2223638
फेक्स: 0364 - 2226495

ZOOLOGICAL SURVEY OF INDIA
NORTH EASTERN REGIONAL CENTRE
RISA COLONY, SHILLONG-793003
Phone:0364-2223638, Fax:0364-2226495
E-mail: zsishillong@rediffmail.com
nerc@zsi.gov.in

File No.- 2-4/2024-Tech. 457 Dated 9th July, 2024

To,
Paris Basumatary
Ph. D. Research Scholar
Department of Zoology
Bodoland University

Sub: Allotment of registration numbers to the spider specimens deposited at NERC, ZSI, Shillong

Sir,

With reference to your application dated 24/06/2024 regarding deposition of spider specimens and acquiring registration numbers, this is to inform you that this office has registered a total of 140 specimens belonging to 84 species deposited by you with registration number from IV/ARA/ERS/166 to IV/ARA/ERS/249. Please find enclosed herewith the list of species along with the registration number.

Encl: As stated above.

Yours faithfully,

9/7/24

(J. Lyngdoh)
Sci-E & Officer-in-Charge
NERC, ZSI, Shillong

उत्तर पूर्वीय प्रादेशिक केन्द्र
North Eastern Regional Centre
भारतीय प्राणी सर्वेक्षण
Zoological Survey of India
शिलांग / Shillong - 03

Table: List of species submitted with registration number

Sl. No.	Species	Exs. Submitted	Family	Registration Number
1	*Acusilas coccineus* Simon, 1895	1	Araneidae	IV/ARA/ERS/166
2	*Argiope aemula* (Walckenaer, 1841)	1	Araneidae	IV/ARA/ERS/167
3	*Argiope pulchella* Thorell, 1881	1	Araneidae	IV/ARA/ERS/168
4	*Bijoaraneus mitificus* (Simon, 1886)	2	Araneidae	IV/ARA/ERS/169
5	*Arachnura angura* Tikader, 1970	2	Araneidae	IV/ARA/ERS/170
6	*Caerostris sumatrana* Strand, 1915	2	Araneidae	IV/ARA/ERS/171
7	*Cyrtarachne inaequalis* Thorell, 1895	2	Araneidae	IV/ARA/ERS/172
8	*Cyrtarachne nagasakiensis* Strand, 1898	1	Araneidae	IV/ARA/ERS/173
9	*Cyrtophora cicatrosa* (Stoliczka, 1869)	1	Araneidae	IV/ARA/ERS/174
10	*Cyrtophora moluccensis* (Doleschall, 1857)	1	Araneidae	IV/ARA/ERS/175
11	*Cyrtophora unicolor* (Doleschall, 1857)	1	Araneidae	IV/ARA/ERS/176
12	*Cyrtophora feae* (Thorell, 1887)	2	Araneidae	IV/ARA/ERS/177
13	*Eriovixia excelsa* (Simon, 1889)	3	Araneidae	IV/ARA/ERS/178
14	*Eriovixia laglaizei* (Simon, 1877)	2	Araneidae	IV/ARA/ERS/179
15	*Eriovixia pseudocentrodes* (Bösenberg & Strand, 1906)	1	Araneidae	IV/ARA/ERS/180
16	*Gasteracantha kuhli* C. L. Koch, 1837	2	Araneidae	IV/ARA/ERS/181
17	*Herennia multipuncta* (Doleschall, 1859)	2	Araneidae	IV/ARA/ERS/182
18	*Larinia phthisica* (L. Koch, 1871)	3	Araneidae	IV/ARA/ERS/183
19	*Macracantha hasselti* (C. L. Koch, 1837)	1	Araneidae	IV/ARA/ERS/184
20	*Neoscona bengalensis* Tikader & Bal, 1981	3	Araneidae	IV/ARA/ERS/185
21	*Neoscona mukerjei* Tikader, 1980	1	Araneidae	IV/ARA/ERS/186
22	*Neoscona theisi* (Walckenaer, 1841)	3	Araneidae	IV/ARA/ERS/187
23	*Nephila pilipes* (Fabricius, 1793)	1	Araneidae	IV/ARA/ERS/188
24	*Nephilengys malabarensis* (Walckenaer, 1841)	1	Araneidae	IV/ARA/ERS/189
25	*Pasilobus kotigeharus* Tikader, 1963	1	Araneidae	IV/ARA/ERS/190
26	*Parawixia dehaani* (Doleschall, 1859)	2	Araneidae	IV/ARA/ERS/191
27	*Poltys columnaris* Thorell, 1890	1	Araneidae	IV/ARA/ERS/192
28	*Poltys illepidus* C. L. Koch, 1843	1	Araneidae	IV/ARA/ERS/193
29	*Guizygiella indica* (Tikader & Bal, 1980)	3	Araneidae	IV/ARA/ERS/194
30	*Bowie sikkimensis* (Gravely, 1931)	1	Ctenidae	IV/ARA/ERS/195
31	*Clubiona bengalensis* Biswas, 1984	1	Clubionidae	IV/ARA/ERS/196
32	*Cheiracanthium danieli* Tikader, 1975	1	Cheiracanthiidae	IV/ARA/ERS/197
33	*Hersilia savignyi* Lucas, 1836	1	Hersiliidae	IV/ARA/ERS/198
34	*Lycosa mackenziei* Gravely, 1924	1	Lycosidae	IV/ARA/ERS/199
35	*Pardosa pseudoannulata* (Bösenberg & Strand, 1906)	1	Lycosidae	IV/ARA/ERS/200
36	*Hamadruas sikkimensis* (Tikader, 1970)	3	Oxyopidae	IV/ARA/ERS/201
37	*Hamataliwa pentagona* Tang & Li, 2012	3	Oxyopidae	IV/ARA/ERS/202
38	*Oxyopes shweta* Tikader, 1970	1	Oxyopidae	IV/ARA/ERS/203
39	*Oxyopes sitae* Tikader, 1970	4	Oxyopidae	IV/ARA/ERS/204
40	*Peucetia latikae* Tikader, 1970	2	Oxyopidae	IV/ARA/ERS/205
41	*Dendrolycosa songi* (Zhang, 2000)	1	Pisauridae	IV/ARA/ERS/206
42	*Hygropoda higenaga* (Kishida, 1936)	2	Pisauridae	IV/ARA/ERS/207
43	*Nilus albocinctus* (Doleschall, 1859)	2	Pisauridae	IV/ARA/ERS/208
44	*Psechrus himalayanus* Simon, 1906	1	Psechridae	IV/ARA/ERS/209
45	*Asemonea tenuipes* (O. Pickard-Cambridge, 1869)	2	Salticidae	IV/ARA/ERS/210
46	*Bianor angulosus* (Karsch, 1879)	2	Salticidae	IV/ARA/ERS/211
47	*Brettus cingulatus* Thorell, 1895	2	Salticidae	IV/ARA/ERS/212
48	*Carrhotus viduus* (C. L. Koch, 1846)	3	Salticidae	IV/ARA/ERS/213
49	*Epeus indicus* Prószyński, 1992	1	Salticidae	IV/ARA/ERS/214
50	*Thiania bhamoensis* Thorell, 1887	1	Salticidae	IV/ARA/ERS/215
51	*Hyllus semicupreus* (Simon, 1885)	1	Salticidae	IV/ARA/ERS/216
52	*Hyllus diardi* (Walckenaer, 1837)	1	Salticidae	IV/ARA/ERS/217
53	*Myrmaplata plataleoides* (O. Pickard-Cambridge, 1869)	4	Salticidae	IV/ARA/ERS/218
54	*Phaeacius fimbriatus* Simon, 1900	2	Salticidae	IV/ARA/ERS/219
55	*Phintella vittate* (C. L. Koch, 1846)	1	Salticidae	IV/ARA/ERS/220
56	*Plexippus paykulli* (Audouin, 1826)	1	Salticidae	IV/ARA/ERS/221
57	*Portia fimbriata* (Doleschall, 1859)	2	Salticidae	IV/ARA/ERS/222
58	*Rhene albigera* (C. L. Koch, 1846)	1	Salticidae	IV/ARA/ERS/223
59	*Siler semiglaucus* (Simon, 1901)	2	Salticidae	IV/ARA/ERS/224
60	*Telamonia dimidiate* (Simon, 1899)	2	Salticidae	IV/ARA/ERS/225

61	*Vailimia jharbari* Basumatary, Caleb & Das, 2020	1	Salticidae	IV/ARA/ERS/226
62	*Heteropoda venatoria* (Linnaeus, 1767)	1	Sparassidae	IV/ARA/ERS/227
63	*Olios lamarcki* (Latreille, 1806)	1	Sparassidae	IV/ARA/ERS/228
64	*Thelcticopis severa* (L. Koch, 1875)	2	Sparassidae	IV/ARA/ERS/229
65	*Leucauge decorata* (Blackwall, 1864)	1	Tetragnathidae	IV/ARA/ERS/230
66	*Leucauge fastigata* (Simon, 1877)	2	Tetragnathidae	IV/ARA/ERS/231
67	*Tylorida ventralis* (Thorell, 1877)	2	Tetragnathidae	IV/ARA/ERS/232
68	*Tylorida striata* (Thorell, 1877)	1	Tetragnathidae	IV/ARA/ERS/233
69	*Tetragnatha javana* (Thorell, 1890)	2	Tetragnathidae	IV/ARA/ERS/234
70	*Argyrodes miniaceus* (Doleschall, 1857)	2	Theridiidae	IV/ARA/ERS/235
71	*Chrysso angula* (Tikader, 1970)	1	Theridiidae	IV/ARA/ERS/236
72	*Chikunia nigra* (O. Pickard-Cambridge, 1880)	1	Theridiidae	IV/ARA/ERS/237
73	*Meotipa picturata* Simon, 1895	2	Theridiidae	IV/ARA/ERS/238
74	*Parasteatoda celsabdomina* (Zhu, 1998)	2	Theridiidae	IV/ARA/ERS/239
75	*Theridula gonygaster* (Simon, 1873)	1	Theridiidae	IV/ARA/ERS/240
76	*Thwaitesia margaritifera* O. Pickard-Cambridge, 1881	2	Theridiidae	IV/ARA/ERS/241
77	*Amyciaea forticeps* (O. Pickard-Cambridge, 1873)	2	Thomisidae	IV/ARA/ERS/242
78	*Camaricus khandalaensis* Tikader, 1980	2	Thomisidae	IV/ARA/ERS/243
79	*Thomisus lobosus* Tikader, 1965	4	Thomisidae	IV/ARA/ERS/244
80	*Oxytate greenae* (Tikader, 1980)	1	Thomisidae	IV/ARA/ERS/245
81	*Phrynarachne decipiens* (Forbes, 1884)	1	Thomisidae	IV/ARA/ERS/246
82	*Tmarus jabalpurensis* Gajbe & Gajbe, 1999	2	Thomisidae	IV/ARA/ERS/247
83	*Stiphropus soureni* Sen, 1964	1	Thomisidae	IV/ARA/ERS/248
84	*Miagrammopes apostrophus* Sen, Saha & Raychaudhuri, 2013	2	Uloboridae	IV/ARA/ERS/249

APPENDIX 5

SEMINARS ATTENDED

Redescription of Cocalus Murinus Simon 1899, A Lesser Known Salticidae

Paris Basumatar [1], Sangeeta Das [2], Jatin Kalita [2], Dulur Brahma [1]

[1] *Dept. of Zoology, Bodoland University, Assam, India*

[2] *Dept. of Zoology, Gauhati University, Assam, India*

Genus Cocalus C.L. Koch, 1846 a lesser known genus of spider has only five accepted species worldwide as per World Spider Catalog 2017. Out of five species, only one species of Cocalus murinus Simon, 1899 has been reported from West Bengal, India. This species is nocturnal and is found on tree twigs at a height of 8ft. It is distinguished from its congeners by the hairy body, distinctive bump at the front ocular region and structure of epigyne. This paper redescribes the spider on the basis of specimen collected from Jharbari Reserve Forest, Assam, India.

MAKE INDIA CLEAN
AS WELL AS CLEANING UP
TECHNOLOGIES

4th International Conference on Environment and Ecology

ICEE 2018

Hosted by:
Department of Zoology, Gauhati University, Guwahati, Assam
In Association with:
International Foundation for Environment and Ecology, Kolkata
In Collaboration with:
Confederation of Indian Universities, New Delhi

Certificate of Participation

This is to certify that Paris Basumatary
of Dept. of Zoology, Bodoland University, Assam.
has participated and presented a paper / ~~poster~~ on Redescription of Cocalus murinus Simon 1899, a lesser known Salticidae.
in the "4th International Conference on Environment and Ecology" held on 12-13-14 February 2018 at Gauhati University, Guwahati, Assam.

Prof. Jatin Kalita
Organising Secretary

Dr. P. R. Trivedi
President, CIU, New Delhi

Dr. Anjan Sinha
Organising President

14th February 2018 Guwahati, Assam, India