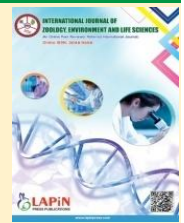




International Journal of Zoology, Environment and Life Sciences

Content Available at www.lapinjournals.com ISSN (O): 3048-9598
(An International online peer reviewed Referred Journal)



Research Article

Open Access

FIRST DESCRIPTION OF A CRABSPIDERS SPECIES STIPHROPUSSANGAYUS, BARRION & LITSINGER, 1995 (ARANAE: ARANEOMORPHAE: THOMISIDAE) IN ODISHA, INDIA

Jashavant Nayak^{*1}, Hitesh Kumar Warte², Leena Sahu³, Rajanikant⁴

¹Research Scholar, Department of Zoology, Govt. Dudhadhari Bajrang Girls Postgraduate College Raipur Chhattisgarh, India

^{2,3}Department of Zoology, Govt. Pt. Shyam Shankar Mishra College Deobhog, Gariyaband, Chhattisgarh, India

⁴Student, Department of Education, Institute of Technology and Sciences Gariyaband, Chhattisgarh, India

Article History: Received: 22 June 2025, Revised: 14 July May 2025, Accepted: 12 Aug 2025

***Corresponding author**

Jashavant Nayak

DOI: <https://doi.org/10.70604/ijzels.v2i3.73>

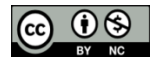
Abstract

The present paper describe a new Thomisidae (Crab spiders) species *Stiphropussangayus*, Barrion&Litsinger, 1995 was First time recorded in Odisha state. Genus *Stiphropus* Gersaeker, 1873 is the first genera and the first species that is observed in Kokasara region, Kalahandi district, Odisha, India. The study increases a little fundamental knowledge about crab spider, specially *Stiphropussangayus* in odisha state.

Keywords: Thomisidae, Crab spider, Genera, Species, *Stiphropussangayus*, Kalahandi, Odisha.

This article is licensed under a Creative Commons Attribution-Non-commercial 4.0 International License.

Copyright © 2025 Author(s) retains the copyright of this article.



Introduction

Spiders are predatory carnivores, mostly terrestrial creatures found everywhere in the world except Antarctica. They are strange creatures in nature due to their incredible abilities and characteristics. They have four pairs of jointed legs, a pair of palpal and chelicerae and eight simple eyes [11]. There are 51,928 spider species who belong to 4,376 genera and 135 families in the world. Thomisids belong to the family Thomisidae (Sundevall, 1833). They are commonly called crab spiders or a flower spider due to their crab-like appearance. Thomisid's spider abdomen is short and broad. Females have larger abdomen than male. Their first pair of legs is stronger than the other six pairs of legs [25]. They have eight eyes arranged in two rows [11, 25]. There are 2178 crab spider species under 171 genera present in the world (WSC 2024) In India, 214 Thomisids spider species under 43 genera were observed [25]. The first crab spider species, *Thomisuselongatus* and *Thomisuspugilis*, were observed by Stoliczka in 1869 in West Bengal [26]. Only 15 species under 10 genera of crab spider are observed in Odisha state. 5 species (*Oxytate*, *Bomis*, *Xysticus*, *Misumena*, *Thwaitesia*) are observed as generic level. Mahapatra et al.(2014) observed *Thomisuslobosus*, *Thomisusprojectus*, *Indoxysticusminutus*,

Camaricuskhandaensis in the Khordha region of Odisha [26]. De and Palita (2018) observed *Thwaitesia* species in Koraput [4]. Choudhuri et al. (2019) observed 9 crab spiders belonging to 7 genera in Odisha state. Arjun et al. (2021) observed *Oxytate* spider at genetic level in Mayurbhanj. In India [1]. Three species of *Stiphropus* genus are spiders and are found in different states. *Stiphropusduriusculus* Simon, 1885 was the first species records in Karnataka in 1885. *Stiphropus saureni* Sen, 1964 is the second species records in West Bengal by Sen in 1964 and Arunachal Pradesh by Caleb and Kumar in 2018. *Stiphropussangayus* is the third species in Madhya Pradesh (Sen, 2010).

Methodology

Study Area –Kokasara is a block of Kalahandi district in Odisha state. It is situated at Latitude 19.67602° and longitude 82.6831°. There is wide agricultural lands and high flora diversity in every season (mostly in the rainy season) (Fig. 1& 2).

Sampling Methods

The specimens were collected from Majhiguda village in the Kokasara region. *Stiphropussangayus* has been

observed multiple times under Arjun tree (*Terminellaarjuna*).

Preservation – 1 male and 1 female *Stiphropussangynus* specimens were captured and collected from the sampling area, Majhiguda village. All specimens are preserved in 70% alcohol and capture images by INFINIX SMART HD camera version 10 and GPS MAP camera version 1.4.22. The specimens are placed in Biology lab of Shraddha Public School, Gariyaband, Chhattisgarh, India. (Fig. 01)

Identification – Specimens are identified by morphological characteristics and by help of recent published literatures, world spider catalogue version 2024.

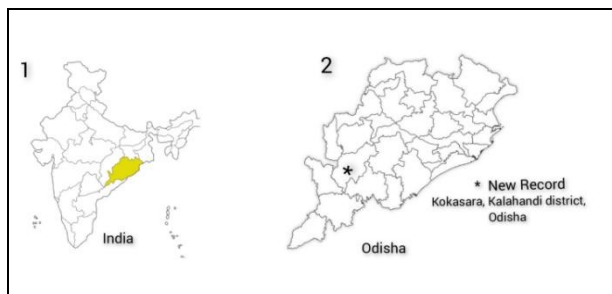


Figure 01: Map represent the study site where specimens recorded first time in state. (1. India & 2. Kalahandi district and Kokasara region)

Result and Discussion

During the study of spider biodiversity in Kokasara region a black crab spider was recorded from the area. The specimens were identified by standard methods and concluded that the species belongs to Family Thomisidae, a family of crab spiders and the species is *Stiphropussangayus* Barrion & Litsinger 1996. The description of specimens is given below. *Stiphropussangayus*, Barrion & Litsinger, 1995 (Fig. 02).

Taxonomy

Phylum – Arthropoda

Class – Arachnida

Order – Araneae

Family – Thomisidae, Sundevall, 1833

Genus – *Stiphropus*, Gerstaecker, 1873

Species – *Stiphropussangayus* Barrion & Litsinger 1995

Type Material: Holotype – 1 Female, 24.VII. 2023, Collected from Majhiguda village, kokasara, odisha, India. GPS Lat. 19.676026°, Long. 82.68315°, Sample is examined in Shraddha Public School Gariyaband, Chhattisgarh, India, sample was collected from grass and Arjuna tree. ©Jashavant Nayak.

Description: 1 Female

Cephalothorax: Smaller than the abdomen, contains orange-red colour eyes, the chelicere are black, thick and projected half dorsoventrally.

Abdomen: Female is larger than male, broad and thick, black in colour, Dorsal part contains four pairs of deep rounded furrows, the third furrow is larger, rounded and

deeper than the other, Completely covered with small and tiny hairs, the Spinnrets with hairs that locate ventral part of posterior abdomen.

Legs: It contains four pairs of legs, 1-3 pairs of legs projected on the anterior side, 4 pairs of legs projected on the posterior side, Legs are thick, black and terminally sharp.

Diagnosis: The species was diagnosed by Barrion & Litsinger, 1995.

Type Locality: In agricultural land and barks of trees of Majhiguda, kokasara, odisha India.

Distribution: *Stiphropussangayus*, Barrion & Litsinger, 1995 is completely distributed in kokasara region, Odisha, India. It is mostly found in the bark of trees, grass and agricultural land. (Fig. 02).



Figure 02: Habitus - *Stiphropussangayus* Barrion & Litsinger, 1995. 3. Lateral view, 4. Dorsal view, 5. Posterodorsal view. © Jashavant Nayak

Conclusion

Stiphropussangayus Barrion & Litsinger 1995 is a crab spider species belongs to family Thomisidae Sundevall, 1833. It is third largest family of Araneomorphae spiders that are distributed on the entire world.

Acknowledgement

The authors gratefully acknowledge Dr. Kiran Gajpal, Principal, Govt. D.B. Girl's P.G. College, Raipur, Chhattisgarh, for providing institutional support and encouragement throughout the study. Sincere thanks are also extended to the Dr. K.K. Harris HOD, Department of Zoology and Research Centre and Dr. Avinash R. Nichat HOD, Department of Zoology, M.V.V. Govt. P.G. College Bhakhara, Dhamtari, C.G., India for valuable guidance and access to laboratory facilities essential for the completion of this research.

Author Contribution

All authors are contributed equally.

Conflict of Interest

No Conflict of Interest

References

- Arjun MS, Alby JM, Arun PR. 2021. A preliminary checklist of spider fauna (Family: Araneidae) of Sulaipat Village in the Odisha state of India. *Species*, 22(70): 356-360.
- Barrion, A. T. & Litsinger, J. A. 1995. Riceland spiders of South and Southeast Asia. CAB International, Wallingford, UK, 700 pp., 16
- Choudhury SR, Siliwal M, Das SK. 2019. Spiders of Odisha: a preliminary checklist. *Journal of Threatened Taxa*, 11(9): 14144-14157.
- Choudhury SR, Siliwal M, Das SK, Giroti Amritsar. (2021). Description of a new genus and five new species of Tube-dwelling spider family Segestriidae (Araneae: Synspermiata) from Odisha, India. *Zootaxa*, 4963(1): 91-114
- Das CR, Palita SK, Das NP. 2012. Spiders of rice field wetlands of Kendrapara region, Odisha. National Conference on Conservation of Wetlands and its Biodiversity. India.
- De K, Palita SK. 2018. A checklist of spiders from six sacred groves in Southern Odisha, India. *Serket, The Arachnological Bulletin of the Middle East and North Africa*, 16(1): 30-40.
- Fengyuan Li, Yejie Li, Shuqiang Li. (2023). Notes on two Stiphropus species from China (Araneae, Thomisidae). *Biodiversity Data Journal* 11(10): 1 – 12 doi: 10.3897/BDJ.11.e105695
- Mallick JR, Dash S, Patnaik HP. 2017. Spider fauna of brinjal ecosystem in coastal Odisha. *Journal of Applied Zoological Research*, 28(2): 233-237.
- Nayak J., Sori P., Sahu L., Bharti D. (2025). A new observational record of jumping spider (Araneae: Salticidae: Aelurillini: Aelurillina) *Stenaelurillus metallicus* Caleb & Mathai, 2016 in Chhattisgarh, India. *International Journal of Biology Research* 10(1) 19-21. <https://www.biologyjournal.in/assets/archives/2025/vol10issue1/10007-1740555118544.pdf>
- Nayak J., Sori P., Bharti D. (2025). Description of a New Spider *Meotipasahyadri* Kulkarni, Vartak, Deshpande & Halali, 2017 (Araneae: Theridiidae) in Chhattisgarh, India. *International Journal of Research Publication and Reviews* 6(2) 4518-4521. <https://doi.org/10.55248/gengpi.6.0225.1026>
- Nayak J. & Sori P. (2025). *Hamadruashieroglyphica* Thorell, 1887 (Araneae: Oxyopidae): First Description of a lynx Spider In Chhattisgarh, India. *International Research Journal of Modernization in Engineering Technology and Science*: 7(3): 632-634. DOI: <https://www.doi.org/10.56726/IRJMETS68434>
- Nayak J., Warte H.K., Sori P. & Sahu L. (2025). Study on Jumping Spiders (Araneae: Araneomorphae: Salticidae) Diversity in Shraddha Public School Campus Gariaband, Chhattisgarh, India. *International Journal of Latest Technology In Engineering, Management & Applied Science* : 14 (3): 350- 353 DOI : <https://doi.org/10.51583/IJLTEMAS.2025.140300037>
- Nichat AR., Warte HK., Nayak J., (2024). Spider diversity (Arachnida: Araneae) in Deobhog region Gariyaband Chhattisgarh India : *International Journal of Innovation and Science and Engineering*. : 11 (8) : 39 – 45 https://ijiset.com/vol11/v11s8/IJISSET_V11_I08_03.pdf
- Nichat AR., Warte HK., Shaffi SA. & Nayak J., (2024). A study of biodiversity of spider species (arachnida : araneae : araneomorphae) in kokasara region, Kala-handi, Odisha, India : *African Journal of Biological Sciences* : 6 (15) : 9550- 9560. <https://doi.org/10.48047/AFJBS.6.15.2024.9550-9560>
- Nichat AR., Harris KK., Warte HK., Dubey M., Sori P. & Nayak J. (2025). Spiders Diversity in North East Gariaband Forest Regions of Chhattisgarh, India. *Uttar Pradesh Journal of Zoology*, 46(4): 119-127. DOI: <https://doi.org/10.56557/upjz/2025/v46i44808>
- Mohapatra AK, Biswas T, Parida SP. 2014. Spider Diversity in RIE campus. RIE, Bhubaneswar, pp. 76. Mohapatra TJ. 2021. <https://indiabiodiversity.org/observation/show/17069313>.
- Palita SK. 2016. Faunal diversity assessment of invertebrates and lower vertebrates of Deomali hills of Eastern Ghats, Koraput, Odisha, India. Final Technical Report. Odisha Biodiversity Board and Central University Of Orissa, pp. 44.
- Panda S, Mishra S, Priyadarshini D and Parida P. (2011). Spiders of Nandankanan. Forest Department, Government of Odisha, India.
- Pandit, R. & Pai, I. (2017). Spiders of Taleigao Plateau, Goa, India. *Journal of Environmental Science and Public Health*, 1(4), 240–252.
- Pandit, R. & Dharwadkar, M. (2020). Preliminary checklist of spider fauna (Araneae: Arachnida) of Chandranath Hill, Goa, India. *Journal of Threatened Taxa*, 12(11): 16597–16606. Doi: 10.11609/jott.6096.12.11.16597-16606
- Prasad P, Saha GK, Kumar V, Tyagi K. 2021b. Rediscovery and redescription of crab spider *Thomisus granulifrons* Simon 1906 (Araneae: Thomisidae) from India. *Acta Arachnologica*, 70(1): 21-23.
- 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, S., Saha, S. & Raychaudhuri, D. (2010c). Crab spiders (Araneae: Thomisidae) of Bandhavgarh National Park, with first record of *Stiphropus Sangayus* Barrion & Litsinger from India. *Current Biotica*, 4(3): 278-284.

24. Sethi VD, Tikader BK. 1988. Studies on some giant crab spiders of the family Heteropodidae from India. *Records of the Zoological Survey of India, Kolkata, Miscellaneous Publications*, 93: 1-94.
25. Siliwal M, Molur S (2008) An Inventory of the Spider Fauna of Odisha, India. Unpublished report, submitted To the Odhisa Forest Department, Bhubaneshwar. Zoo Outreach Organisation, India.
26. Simon, E. (1895c). Descriptions d'arachnides nouveaux de la famille des Thomisidae. *Annales de la SociétéEntomologique de Belgique*39: 432-443
27. Singh G, Singh R. (2021a). Diversity and distribution of crab spiders (Thomisidae: Araneomorphae: Araneae: Arachnida) in India. *International Journal of Zoology and Applied Biosciences*, 6(3): 132-161.
28. Singh, B.B. & Singh, R. (2014). Incidence and biodiversity of riceland spiders (Arthropoda : Arachnida) in northeastern Uttar Pradesh, India. *Indo-American Journal of Life Sciences & Biotechnology*, 2(1): 64-89.
29. Singh R, Singh G. 2021c. Updated checklist of spider diversity (Arachnida: Araneae) in Haryana, Himachal Pradesh, Punjab, Chandigarh and Delhi (India). *Serket, The Arachnological Bulletin of the Middle East And North Africa*, 18(2): 199-228.
30. Singh BB, Singh R. 2021. Checklist of spider diversity of Chhattisgarh (Araneomorphae: Araneae: Arachnida). *Journal of Applied Biosciences*, 47(1, 2): 52-6.
31. Singh R, Varma AK, Singh BB, Singh B. (2023). Spider fauna of India. Asian Biological Research Foundation (ABRF) Prayagraj, India & Nature light Publisher.
32. Stoliczka, F. (1869). Contribution towards the knowledge of Indian Arachnoidea. *Journal of the Asiatic Society of Bengal*, 38(2): 201-251.
33. Caleb, J.T.D. & Kumar, V. (2018a). Arachnida: Araneae. In: Faunal Diversity of Indian Himalaya (Eds. Chandra, K., Gupta, D., Gopi, K.C., Tripathy, B. and Kumar, V.), *Zoological Survey of India, Kolkata*, pp. 177-188.