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Date of Birth: 20.11.1970

EDUCATION

1989 AISSCE in First division, CBSE Board.

1992 B.Sc. in First Division from College of Basic Science, Bhubaneswar.

1994 M.Sc. (Botany) in First Division (rank in the University) from Utkal University, Bhubaneswar.

2011 Ph. D from Lucknow University (Title: "Study towards the knowledge of *Glossopteris* Flora of India").

FIELD OF SPECIALIZATION

Gondwana Flora of India

RESEARCH INTEREST

Permian Megafossils: I am working on Permian megafossil from Damodar and Rajmahal Gondwana Basins of India. My Ph.D. is from Rawanwara Area of Pench Valley Coalfield, Satpura Gondwana Basin. Most of the work I carried out are from Wardha and Godavari, South Rewa Gondwana Basin and Kashmir region. A database was developed (IPSD) for the Permian seeds of India. Now, I am focussing on marine incursion during Permian period in peninsular India.

Permian Cuticles: Cuticle studies were carried out to find earth's palaeoatmospheric ($p\text{CO}_2$) fluctuations during Permian age by stomatal numbers (stomatal density and index) of *Glossopteris* leaves.

Gondwana megaspores: Heterogenous megaspores study was carried out from the lower, Upper Permian and Early Triassic sediments of India. Developed a software on information system IGMIS for storage and retrieval of Indian Gondwana megaspore data.

Palynological studies: Palynostratigraphical studies were carried out for spores/pollen grains from South Rewa Gondwana Basin, Guryul Ravine of Permo – Triassic boundary section, Kashmir and Ib–river sediments, Rajmahal and Damodar basins.

Present Research: Presently, I am working on Palaeofloral and biomarker analyses to reconstruct the Lower Gondwana palaeoenvironment and palaeoclimate of Rajmahal and Damodar basins.

PUBLICATIONS (Total Impact Factor:55.404)

1. **Pillai S.S.K.**, Sebastian R.A., Mathews R.P., Murthy S., Saxena A., Sahoo M., Sahu S.K., Dhingra G.K., (2024). Palaeodepositional environment, implications of Glossopteris flora, and organic matter characteristics from Early Permian Period, Karo OCM, East Bokaro Coalfield, Damodar Basin, India. *Journal of Palaeogeography*, 13(3): 528-546. <https://doi.org/10.1016/j.jop.2024.04.004>. **IF: 2.9**
2. Murthy, S., Saxena, A., **Pillai, S.S.K.**, & Gupta, S., (2024). Reappraisal of Permian and Early Triassic Palynoflora and Palynostratigraphy of Son-Mahanadi Basin and Their Climatic Implications. In: Samant, B., Thakre, D. (eds) *Applications of Palynology in Stratigraphy and Climate Studies. Society of Earth Scientists Series. Springer, Cham.* pp. 39-81
3. Sahoo, M., Murthy, S., Saxena, A., **Pillai, S. S. K.**, & Sahu, S. K. (2024). Significance of palynology in understanding age, palaeoclimate and correlation of Indian Gondwana sediments. In: Samant, B., Thakre, D. (eds) *Applications of Palynology in Stratigraphy and Climate Studies. Society of Earth Scientists Series. Springer, Cham.* pp 13-38. DOI: https://doi.org/10.1007/978-3-031-51877-5_2
4. **Pillai, S.S.K.**, Manoj, M.C., Mathew, R.P., Murthy, S., Sharma, A., Sahoo, M., Saxena, A., Pradhan, S., and Kumar, S. (2023). Lower Permian Gondwana sequence of Rajhara (Daltonganj Coalfield), Damodar Basin, India: Floristic and geochemical records and their implications on marine incursions and depositional environment. *Environmental Geochemistry and Health*, <https://doi.org/10.1007/s10653-023-01517-8>. **IF: 4.898**
5. Govind, N., Sahoo, M., **Pillai, S.S.K.**, and Sahu, S.K. (2023). IPSD: e-repository of Permian seeds from Indian Lower Gondwana. *Acta Palaeobotanica*, 63(2), 151-161.

6. Choudhuri A, Mandal S, dam Bumby A and **Pillai SSK** (2023). Glacial sedimentation in Northern Gondwana: insights from the Talchir formation, Manendragarh, India. *Geological Magazine*. <https://doi.org/10.1017/S0016756823000353>. **IF** : 2.656
7. **Pillai SSK**, Sahoo M., Chatteraj A. (2022). Cordaitalean Leaf: A northern hemisphere taxon from Pench Valley Coalfield, Satpura Gondwana Basin, Madhya Pradesh, India. *Species*. **23**(72): 514-521.
8. Saxena A., Gupta S., **Pillai S.S.K.**, Murthy S., Agnihotri D., Khnagar R., Savita C. & Khan M. (2022). Late Permian macrofloral remains from the Bijori Formation, Satpura Gondwana Basin and their biostratigraphic implications. *Geophytology* **51**(1&2): 41–58.
9. Farooqui A, **Pillai SSK**, Agnihotri D, Khan S, Tewari R, Shukla SK, Ali S, Trivedi A, Pandita SK, Kumar K, Bhat GD, Agnihotri R, (2021). Impact of climate on the evolution of vegetation in tectonically active Karewa basin, Kashmir Himalayas *Journal of Earth System Science*. (<https://doi.org/10.1007/s12040-021-01586-2>). **IF**:1.912
10. Sahoo M., Goswami S, Aggarwal N and **Pillai SSK** (2020). Palaeofloristics of Lower Gondwana Exposure near Kumunda Village, Angul District, Talcher Basin, Odisha, India: A comprehensive study on megafloral and palynofloral assemblages. *Journal of the Geological Society of India*, Vol.95: 241-254.**IF**:1.44
11. Mathews RP, **Pillai SSK**, Manoj MC, Agrawal S (2020). Palaeoenvironmental reconstruction and evidence of marine influence in Permian coal-bearing sequence from Lalmatia Coalmine (Rajmahal Basin), Jharkhand, India: A multi-proxy approach. *International Journal of Coal Geology* 224, 10348. <https://doi.org/10.1016/j.coal.2020.103485>. **IF**: 6.3
12. Patel, R., Goswami S, Sahoo, M, **Pillai S.SK**, Aggarwal N, Mathews R, Swain R, Saxena A, Singh K. (2020). Biodiversity of a Permian Temperate Forest: A case study from Ustali area, Ib River Basin, Odisha, India. *Geological Journal* 56(2):903-933.**IF**:2.128
13. **Pillai SSK** and Goswami S (2020). Morphotypes of *Noeggerathiopsis*- leaves from Pench Valley Coalfield of Satpura Gondwana Basin, Madhya Pradesh, India. *Himalayan Geology*, Vol. 41 (2): 195-201. **IF**:1.311
14. **Pillai SSK**, Mathews RP, Murthy S, Goswami S, Agrawal S, Sahoo M and Singh R (2020). Palaeofloral investigation based on morphotaxonomy, palynomorphs,

- biomarkers and stable isotope from Lalmatia coal mine of Rajmahal Lower Gondwana Basin, Godda District, Jharkhand, India: An inclusive empirical study. *Journal of the Geological Society of India*, Vol.96: 43-57. **IF**:1.44
15. Chopparapu C., Annamraju R., **Pillai SSK**, Sabina Kavali P. (2019). Glossopteris Flora from Barren Measures, Pranhita–Godavari Basin, India. *Journal of the Geological Society of India*. Vol.94:405-410.**IF**:1.44
16. Agrawal N., Murthy S., **Pillai SSK**, Sarate OS. (2019). ArtiskianPalynoflora and Palaeoclimate of Nand-Besur Block, Bandar Coalfield, Wardha Basin, India. *Journal of the Palaeontological Society of India* Vol. 64(2): 241-255. **IF**:0.652
17. **Pillai SSK**, Agnihotri D, Gautam S & Tewari R. (2018) Glossopteris flora from the Pali Formation, Johilla Coalfield, South Rewa Gondwana Basin, Madhya Pradesh, India: palynological evidence for a late Permian age. *Journal of the Palaeontological Society of India*: **63**(1)53-72. **IF**:0.652
18. Agnihotri D, Pandita SK, Tewaria R, Ram-Awatar, Linnemann U, **Pillai SSK**, Joshi A, Gautama S, Kamlesh Kumar (2018) Palynology and detrital zircon geochronology of the Carboniferous Fenestella Shale Formation of the Tethyan realm in Kashmir Himalaya: Implications for global correlation and floristic evolution. *Journal of Asian Earth Science***157**: 348-359.**IF**:3.374
19. Agnihotri D, **Pillai SSK**, Aggarwal N, Tewari R, Jasper A & Uhl D (2018). Palynomorphs from the Barakar Formation of Dhanpuri Open Cast Mine, Sohagpur Coalfield, Madhya Pradesh. *The Palaeobotanist* 67(2): 171–184.
20. Murthy S, Sarate OS, **Pillai SSK** & Tewari R (2017). Early Permian micro and megaspores from the Nand–Besur Block, Bandar Coalfield, Wardha Basin, Maharashtra, India. *The Palaeobotanist* 66(2): 177–189.
21. **Pillai SSK**, Meena KL, Tewari R & Joshi A (2017). Early Triassic Palynomorphs from Kuraloi Block, Belphar Area, Ib-River Coalfield, Mahanadi Basin, Odisha. *Journal of the Geological Society of India*. **88**: 693-704.**IF**:1.466
22. Kumar K, Tewari R, Agnihotri D, Sharma A, Pandita SK, **Pillai SSK**. & Singh V (2017). Geochemistry of the Permian-Triassic sequences of the Guryul Ravine section, Jammu and Kashmir, India: Implications for oceanic redox conditions. *Geo Res J*, **13**: 114-125.

23. Iannuzzi R, Oliveira MECB, **Pillai SSK**, Tybusch GP & Hoelzel A. (2016). An emended diagnosis of *Gangamopteris buriadica* Feistmantel from the Permian of Gondwana. *Revista do Instituto de Geociências – USP, Geol. USP*, **16** (4): 23-31.
24. Jasper A, Uhl D, Agnihotri D, Tewari R, Pandita SK, Benicio JRW, Pires EF., Rosa AASD Bhat GD & **Pillai SSK** (2016). Evidence of wildfires in the Late Permian (Changsinghian) Zewan Formation of Kashmir, India. *Current Science* 110:419-423. **IF**:1.169
25. Agnihotri D, Tewari R, **Pillai SSK**, Jasper A & Uhl D (2016). Early Permian *Glossopteris* flora from the Sharda Open Cast Mine, Sohagpur Coalfield, Shahdol District, Madhya Pradesh. *The Palaeobotanist* **65**: 97–107.
26. Tewari R, Ram- Awatar, Pandita SK, McLoughlin S, Agnihotri D, **Pillai SSK**, Singh V, Kumar K & Bhat GD (2015). The Permian–Triassic palynological transition in the Guryul Ravine section, Kashmir, India: implications for Tethyan–Gondwanan correlations. *Earth- Science Reviews*, **149**: 53-66. **IF**:12.038
27. Singh V, Pandita SK, Tewari R, Hengstum PJV, **Pillai SSK**, Agnihotri D, Kumar K, Bhat GD (2015) Thecamoebians (*Testate amoebae*) Straddling the Permian-Triassic Boundary in the Guryul Ravine Section, India: Evolutionary and Palaeoecological Implications. *PLoS ONE* **10**(8): e0135593. **IF**:3.240
28. Joshi A, Tewari, R, Agnihotri D & **Pillai SSK** (2015). Occurrence of *Vertebraria indica* - an evidence of coal forming vegetation in Kothagudem Area, Godavari Graben, Andhra Pradesh. *Current Science* **108**(3):330-333. **IF**:1.169
29. Govind N, Tewari R, **Pillai SSK** & Joshi A (2014). *IGMIS* – a computer-aided information system on Indian Gondwana megaspores. *Current Science* **106**:434-439. **IF**:1.169
30. Ram-Awatar, Tewari R, Agnihotri D, Chatterjee S, **Pillai SSK** & Meena KL (2014). Late Permian and Triassic palynomorphs from the Allan Hills, Central Transantarctic Mountains, South Victoria Land, Antarctica. *Current Science* **106**: 988-996. **IF**:1.169
31. Meena KL, **Pillai SSK** & Vethanayagam SM (2013). Palynostratigraphy of Permian Succession from Chaturdhara Nala section, Baki Bihar Area, Ib-Hingir Basin, Odisha, India. *Indian Geological Congress* **5**:25-31.
32. Meena KL, **Pillai SSK**, Murthy SK & Vethanayagam SM (2013). Palynostratigraphic Studies on Permian Succession from Ib-River Coalfield, Son-Mahanadi Basin, Odisha, India. *International Journal of Earth science and Engineering* **6**(2):297-305.

33. Meena KL, **Pillai SSK**, Murthy SK & Vethanayagam SM (2013). Early Talchir palynozone recorded from the sediments of Baikunthpur Area, Chirimiri Coalfield, Chhattisgarh, India. *Gondwana Geological Magazine***28**:45-52.
34. Gautam S, **Pillai SSK**, Goswami S & Ram-Awatar (2013). Further contribution to the mega- and microfossil assemblages from the Johilla-Ganjra Nala confluence, South Rewa Gondwana Basin, Madhya Pradesh, India. *The Palaeobotanist***62**: 199-209.
35. Tewari R., Pandita S.K., Agnihotri D., **Pillai S.S.K.** and Bernardes Mary E.C. (2012). An Early Permian Glossopteris flora from the Umrer Coalfield, Wardha Basin, Maharashtra, India. *Alcheringa*, **36**: 355-371.**IF**:1.395
36. Tewari R, Mehrotra NC, **Pillai SSK**, Pandita S K and Agnihotri D. (2012). Gymnospermous seeds from the Barakar Formation of Umrer Coalfield, Wardha Basin, Maharashtra. *Palaeobotanist*, **61**: 123-130.
37. **Pillai SSK** (2012). *Cheirophyllum maithyi* sp. nov. from the Early Permian of Pench Valley Coalfield, Satpura Gondwana Basin, India. *Palaeobotanist*, **61**: 139-143.
38. Tewari R. and **Pillai S.S.K.** (2011). An evaluation of the Late Palaeozoic flora of India. *Paleontologia: Cenarios de Vida*.**4**: 33-44.
39. Meena K.L. and **Pillai S.S.K.** (2011). Palynodating of sub-surface sediments from Kuraloi block, Ib-river Coalfield, Jharsuguda, Orissa, Son-Mahanadi Graben, India. *Palaeobotanist*, **60**:335-343.
40. **Pillai S.S.K** (2011). Glossopteris flora from Rawanwara area of Pench Valley Coalfield, Satpura Gondwana Basin, Central India. *Paleontologia: Cenarios de Vida*, Vol.**4**: 69-80.
41. Tewari Rajni, Mehrotra N C., Meena K. L., **Pillai S.S.K.** (2009). Permian Megaspores from Kuraloi Area, Ib-River Coalfield, Mahanadi Basin, Orissa. *Journal of Geological Society of India*, Vol. **74**(6): 669-678. **IF**:1.44
42. Brahman M. **Pillai S.S.K.**, Pati U.K.(1997). Influence of rubber (*Hevea brasiliensis*) tree shade on growth performance and seeds yield of pigeon pea (*Cajanus cajan*) intercrop, *Indian Journal of Forestry*. **20**(2): 181-182.**IF**:0.1

Books/Reports/Chapters/General articles etc.

1. Ghosh AK, Tewari R, Agnihotri D, Ratan Kar, **Pillai SSK**, Bajpai S, Tripathi, SC (2015). Gondwana formations of South Rewa and Upper Narmada basins, Central India. Field guide Book, BSIP, Lucknow: 1-39.

PARTICIPATION IN CONFERENCES/SEMINARS/ WORKSHOPS

In India

- 2008 XXV Annual Convection of Indian Association of Sedimentologists and National Seminar on Sedimentary Basins of India: Their Geological Significance and Economic Prospects Maharaja Sayajirao University of Baroda. Vadodara.
- 2009 Plant Life through Ages, BSIP, Lucknow.
- 2009 Participated in 96th Indian Science Congress, at NEHU, Shillong.
- 2009 Participated in Professional Course in Geology at Department of Geology, Lucknow University, Lucknow.
- 2010 Participated in Science Expo-at Regional Science Centre, Lucknow.
- 2013 Participated in “24th Indian Colloquium on Micropalontology and Stratigraphy” at Wadia Institute of Himalayan Geology Dehradun.
- 2013 Participated in “Recent Developments in Plant and Earth Sciences”on at Birbal Sahni Institute of Palaeobotany Lucknow.
- 2013 Workshop on “Paleosols”, BSIP, Lucknow.
- 2015 Refresher course on ‘Palaeontology and biostratigraphy organized by BSIP and GSI at GSI and BSIP
- 2015 International conference on “Current perspective and emerging issues in Gondwana evolution” at Birbal Sahni Institute of Palaeobotany, Lucknow.
- 2015 Attended 36th IGC- An unique opportunity for advancement in Geosciences-Brain storming session.
- 2016 Attended 2nd Indian International Science Festival.
- 2016 2016 convention & 13th international Conference on Gondwana to Asia.

Abroad

- 2019 International Congress on the Carboniferous and Permian (ICCP) University of Cologne, July 29th to August 2nd Cologne, **Germany**.
- 2012 XV Simposio Argentino De Paleobotanica Y Palinologia II Simposio Argentino De Melisopalinologia. Corrientes, **Argentina**.
- 2011 XXII Brazilian Congress of Palaeobotany, 2nd Indo- Brazilian Symposium on Glimpses of Gondwana Research, Natal, **Brazil**.
- 2011 Visited Institute of Geosciences, Department of Palaeobotany, Paulo University 29th to 5th November 2011 Guarulhos, **Brazil**.

DEVELOPMENT OF FOSSIL PARK IN INDIA

2022: I headed along with BSIP team to develop of Mandro Fossil Park located in Mandro, a community block in the Sahibganj District of Jharkhand lying in the forested hilly area of Gumri in the Rajmahal Hills of Sahibganj, Pakur, Dhumka, Godda district, Jharkhand.

2023: I along with BSIP team are developing the Marine Fossil Park at Manendragarh, Chhattisgarh. The work is under progress.

COORDINATOR OF ACSIR B3.3

2023: Coordinator of AcSIR B3.3, Palaeobiology and biogeography, Megafloral study and coastal ecology mangroves. Delivered lectures for AcSIR students.

PhD STUDENTS

Three students doing Ph.D. under my supervision

TRAINING IMPARTED

Six students have completed dissertation under my supervision

INSTITUTIONAL MEMBERSHIP

1. Member of Palaeobotanical Society
2. Member of Palaeontological Society of India (Life fellow; ID: 161)

DECLARATION

I, S. Suresh Kumar Pillai, declare that all the above information about me and my career are true to the best of my knowledge.