

Academic curricula vitae

DR. SHEIKH NAWAZ ALI

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Research Areas

My research focus on Quaternary geomorphology, palaeoclimatic reconstructions and geochronology (OSL) with emphasis on the dynamics of late Quaternary glaciations and climatic variability in Indian Himalaya

Education

Ph.D. (Geology) 2008-2011, Thesis title: Late Quaternary Palaeoclimatic study using different proxies along the upper reaches of Pindar Valley, Kumaun Himalaya. University of Lucknow, Lucknow (U.P.), India

M.Sc. (Geology) 2004-2006, Dept. of Geology, University of Jammu, Jammu and Kashmir, India

B.Sc. (Geology, Zoology, Botany, English) 2001-2004, G.G.M.Sc. College, University of Jammu, Jammu and Kashmir, India

Appointments

2021– Present	Scientist ‘D’, Birbal Sahni Institute of Palaeosciences, Lucknow
2016 – 2020	Scientist ‘C’, Birbal Sahni Institute of Palaeosciences, Lucknow
2013 – 2015	Scientist ‘B’, Birbal Sahni Institute of Palaeosciences, Lucknow
2011 – 2013	Post-Doctoral Fellow, Physical Research Laboratory, Ahmadabad
2007 – 2011	Research Fellow, University of Lucknow

Research expeditions & professional experiences

- Principal investigator and leader of Three Ladakh field expeditions
- Principal investigator and leader of Four Sikkim Himalaya expeditions in the course of the Department of Science and technology research project on “Himalayan glaciers”
- Principal investigator and leader of Four central Himalaya field expeditions in the course of Young Scientist fellowship

Highest Academic Prizes/Recognition

Prof. S. K. Singh Memorial Gold Medal – 2018; Palaeontological Society of India

Significant Research Projects Funded

1. Department of Science and technology Young Scientist research project (Fast track)
Role: Principal Investigator " Title: Chronology and climatic implications of Late Quaternary glaciations in the upper Dhauliganga and Alaknanda valleys, Central Himalaya, India".
2. Department of Science and technology research project (Himalayan Glaciology)
Role: Principal Investigator " Title: Glacial chronology, Palaeoclimatic reconstruction and their climatic implications in the Thangu Valley, Sikkim Himalaya, India with special emphasis on luminescence characteristics of feldspar and quartz".

Publications

1. Pandey, P., Chauhan, P., Ali, S.N. and Chauhan, M (2020). Space based observation of a newly found high altitude Red Colored Glacial Lake in Ladakh, Northwest Himalaya. Current Science (in Press).
2. Ali S.N. and Sharma S. 2020. Chronology and climate sensitivity of the post-LGM glaciation in the Dunagiri valley, Dhauliganga basin, Central Himalaya, India': Comments. Boreas- DOI 10.1111/bor.12486
3. Pandey, P., Ali, S.N. and Champatiray, P. K. (2020). Glacier-glacial lake interactions and glacial lake development in the Central Himalaya, India (1994-2017). Journal of Earth Science. <http://kns.cnki.net/kcms/detail/42.1788.P.20200828.1717.003.html>.
4. Kumar, R., Bahuguna, I.M., Ali, S.N. and Singh, R., 2020. Lake inventory and evolution of glacial lakes in the Nubra-Shyok basin of Karakoram Range. Earth Systems and Environment, 4(1), pp.57-70.
5. Ali, S.N., Quamar, M.F., Dubey, J., Morthekai, P., Bisht, P., Pandey, P., Shekhar, M. and Ghosh, R., 2020. Surface pollen distribution in alpine zone of the higher Himalaya: a case study from the Kalla glacier valley, India. Botany Letters, 1-13.
6. Ali, S.N., Agrawal, S., Sharma, A., Phartiyal, B., Morthekai, P., Govil, P., Bhushan, R., Farooqui, S., Jena, P.S. and Shivam, A., 2020. Holocene hydroclimatic variability in the Zaskar Valley, Northwestern Himalaya, India. Quaternary Research, 1-7
7. Ali, S.N., Agrawal, S., Quamar, M.F., Dubey, J., Chauhan, N., Bisht, P., Pandey, P., Arif, M., Shekhar, M. and Morthekai, P., 2020. Climate Variability in the central himalaya during the last similar to 15 KYR: evidence of precipitation variability from multiproxy studies. Journal Of The Palaeontological Society Of India, 65(1), 36-54.
8. Pandey, P., Ali, S.N., Sharma, V. and Champati Ray, P.K., 2020. Focus on Thermokarst Lakes in Indian Himalaya: Inception and Implication under Warming Climate. Journal of Climate Change, 6(2), 59-69.
9. Dubey, J., Thakur, B., Agrawal, S., Sharma, A., Morthekai, P., Srivastava, V. and Ali, S.N., 2020. Diversity of diatom and carbon isotope characterization of soil organic matter in extreme climate, Sikkim Himalaya, India. Current science, 119(4), 649-660.
10. Ali, S.N., Sharma, A., Agrawal, S., MG, Y., RA, J., Dubey, J. and Morthekai, P., 2020. Oxygen and deuterium isotope characteristics of Teesta river catchment from Sikkim Himalaya, India: Implications of different moisture sources. Geochemical Journal, 54(5), 327-336.
11. Ali S.N., Morthekai, P., Bajpai, S., Phartiyal, P., Sharma, A. Quamar, M.F., and Prizomwala, S. 2020. Redefining the timing of Tongul glacial stage in the Suru valley, NW Himalaya, India: New insights from luminescence dating. Journal of Earth System Science, 129 (16). doi.org/10.1007/s12040-019-1280-9.
12. Ali S.N. and Sharma S. 2020. A report on the National Symposium on Luminescence Dating. Current Science, 118 (2), 182-183.

13. Pandey, P., Sharma, P., Singh, G., Ali, S.N. and Champatiray, P.K. 2019. Impact of Local Topography on the Evolution of Glacier Lakes in Indian Himalaya. IGARSS 2019 Japan, 4179-4181. <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8898102&isnumber=8897702>
14. Kumar, R., Bahugana, I.M., Ali S.N. and Singh, R. 2019. Lake Inventory and Evolution of Glacial Lakes in the Nubra-Shyok Basin of Karakoram Range. *Earth Systems and Environment*. doi.org/10.1007/s41748-019-00129-6
15. Rana, N., Sharma, S., Ali S.N., Singh, S. and Shukla A.D. 2019. Investigating the sensitivity of glaciers to climate variability since the MIS-2 in the upper Ganga catchment (Saraswati valley), Central Himalaya. *Geomorphology*, 346. doi.org/10.1016/j.geomorph.2019.106854
16. Singh, R., Pandey, P. and Ali, S.N. 2019. Estimation of the Frontal Retreat Rate of the Pindari Glacier, Central Himalaya Using Remote Sensing Technique. *Earth Science India*, 12, 146-157.
17. Ali, S.N., Dubey, J., Shekhar, M. and Morthekai, P., 2019. Holocene Indian Summer Monsoon variability from the core monsoon zone of India, a pollen-based review. *Grana*, 58(5), 311-327. doi: 10.1080/00173134.2019.1629695.
18. Ali, S.N., Dubey, J., Morthekai, P., Sharma, A., Singh, R. and Prizomwala, S., 2019. Climate forcing and the initiation of glacier advance during MIS-2 in the North Sikkim Himalaya, India. *Journal of Asian Earth Sciences*, 174, 381-388.
19. Dubey, J., Ali, S.N., Sharma, A., Morthekai, P., Singh, R., Sharma, R.K., Pandey, P., Thakur, B. and Srivastava, V., 2019. Glacial Geomorphology and Landscape Evolution of the Thangu Valley, North Sikkim Himalaya, India. *Journal of the Indian Society of Remote Sensing*, 47(5), 821-837.
20. Ali, S. N., J. Dubey, Ghosh, R., Quamar, M.F., Sharma, A., Morthekai, P., Dimri, A. P., Shekhar M., Arif, M. and Agrawal, S. 2018. High frequency abrupt shifts in the Indian summer monsoon since Younger Dryas in the Himalaya. *Scientific reports*, 8(1), 9287.
21. Quamar, M.F., Ali, S.N., Pandita, S.K. and Singh, Y., 2018. Modern pollen assemblages from Reasi (Jammu and Kashmir), India: a tool for interpreting fossil pollen records. *Grana*, 57(5), 364-376.
22. Ali, S. N., Thakur, B., Morthekai, P., Farooqui, S., Phartiyal, B., Seth, P. and Sharma, A. 2018. Diatom Diversity under Extreme Climate: A Study From Zanaskar Valley, NW Himalaya, India. *Journal of the Palaeontological Society of India*, 63(1), 119-126.
23. Shukla, A., Mehrotra, R.C. and Ali, S.N., 2018. Early Eocene leaves of northwestern India and their response to climate change. *Journal of Asian Earth Sciences*, 166, 152-161.
24. Ali, S.N., Quamar, M.F., Phartiyal, B. and Sharma, A., 2018. Need for Permafrost Researches in Indian Himalaya. *Journal of Climate Change*, 4(1), 33-36.
25. Quamar, M.F., Ali, S.N., Pandita, S.K. and Singh, Y., 2018. Modern pollen rain from Udhampur (Jammu and Kashmir), India: Insights into pollen production, dispersal, transport and preservation. *Palynology*, 42(1), 55-65.
26. Singh, R., Chandra, R., Tangri, A.K., Kumar, R., Bahuguna, I.M., Latief, S.U., Pandey, P. and Ali, S.N., 2018. Long-term Monitoring of Surging Glaciers in Upper Shyok Valley, Karakoram Range, India: A Case Study of Rimo and Kumdan Groups of Glaciers. *Journal of Climate Change*, 4(1), 1-12.
27. Pandey, P., Ali, S.N., Ramanathan, A.L. and Venkataraman, G., 2017. Regional representation of glaciers in Chandra Basin region, western Himalaya, India. *Geoscience Frontiers*, 8(4), 841-850.
28. Quamar, M.F., Ali, S.N., Morthekai, P. and Singh, V.K., 2017. Confocal (CLSM) and light (LM) photomicrographs of different plant pollen taxa from Lucknow, India: Implications of pollen morphology for systematics, phylogeny and preservation. *Review of palaeobotany and palynology*, 247, 105-119.

29. Ghosh, R., Bruch, A.A., Portmann, F., Bera, S., Paruya, D.K., Morthekai, P. and Ali, S.N., 2017. A modern pollen–climate dataset from the Darjeeling area, eastern Himalaya: Assessing its potential for past climate reconstruction. *Quaternary Science Reviews*, 174, 63-79.
30. Dubey, J., Ghosh, R., Agrawal, S., Quamar, M.F., Morthekai, P., Sharma, R.K., Sharma, A., Pandey, P., Srivastava, V. and Ali, S.N., 2018. Characteristics of modern biotic data and their relationship to vegetation of the Alpine zone of Chopta valley, North Sikkim, India: Implications for palaeovegetation Reconstruction. *The Holocene*, 28(3), 363-376.
31. Quamar, M.F., Ali, S.N., Nautiyal, C.M. and Bera, S.K., 2017. Vegetation and climate reconstruction based on a~ 4 ka pollen record from north Chhattisgarh, central India. *Palynology*, 41(4), 504-515.doi.org/10.1080/01916122.2017.1279236
32. Bali, R., Khan, I., Sangode, S.J., Mishra, A.K., Ali, S.N., Singh, S.K., Tripathi, J.K., Singh, D.S. and Srivastava, P., 2017. Mid-to late Holocene climate response from the Triloknath palaeolake, Lahaul Himalaya based on multiproxy data. *Geomorphology*, 284, 206-219.
33. Bisht, P., Ali, S.N., Rana, N., Singh, S., Sundriyal, Y.P., Bagri, D.S. and Juyal, N., 2017. Pattern of Holocene glaciation in the monsoon-dominated Kosa Valley, central Himalaya, Uttarakhand, India. *Geomorphology*, 284, 130-141. doi.org/10.1016/j.geomorph.2016.11.023
34. Bali, R., Chauhan, M.S., Mishra, A.K., Ali, S.N., Tomar, A., Khan, I., Singh, D.S. and Srivastava, P., 2016. Vegetation and climate change in the temperate-subalpine belt of Himachal Pradesh since 6300 cal. yrs. BP, inferred from pollen evidence of Triloknath palaeolake. *Quaternary International*, 30.<http://dx.doi.org/10.1016/j.quaint.2016.07.057>.
35. Raj, R., Chamyal, L.S., Juyal, N., Phartiyal, B., Ali, S.N. and Thakur, B., 2016. Late Quaternary fluvio-aolian interaction: palaeoenvironment and palaeoclimatic conditions in the pediment zone of Vatrak River basin, western India. *Zeitschrift für Geomorphologie*, 60(2), 151-169.
36. Quamar, M.F., Ali, S.N., Phartiyal, B., Morthekai, P. and Sharma, A., 2016. Recovery of palynomorphs from the high-altitude cold desert of Ladakh, NW India: An aerobiological perspective. *Geophytology* 46(1), 67-73.
37. Bisht, P., Ali, S.N., Shukla, A.D., Negi, S., Sundriyal, Y.P., Yadava, M.G. and Juyal, N., 2015. Chronology of late Quaternary glaciation and landform evolution in the upper Dhauliganga valley,(Trans Himalaya), Uttarakhand, India. *Quaternary Science Reviews*, 129, 147-162.
38. Bali, R., Ali, S.N., Bera, S.K., Patil, S.K., Agarwal, K.K. and Nautiyal, C.M., 2015. Impact of Anthropocene vis-a-vis Holocene climatic changes on central Indian Himalayan glaciers. In *Engineering Geology for Society and Territory-Volume 1*, 467-471. Springer, Cham.
39. Morthekai, P. and Ali, S.N., 2014. Luminescence Dating Using Quartz-for End-Users. *Gondwana Geology Magazine*, 29, 1-10.
40. Sati, S.P., Ali, S.N., Rana, N., Bhattacharya, F., Bhushan, R., Shukla, A.D., Sundriyal, Y. and Juyal, N., 2014. Timing and extent of Holocene glaciations in the monsoon dominated Dunagiri valley (Bangni glacier), Central Himalaya, India. *Journal of Asian Earth Sciences*, 91, 125-136.
41. Ali, S.N., Shekhar, M., Pandey, P., Bhardwaj, A. and Singh, S., 2014. Indian Himalayan capacity and adaptation programme: capacity-building in Himalayan glaciology. *Current Science*, 106(3), 346.
42. Ali, S.N. and Juyal, N., 2013. Chronology of late quaternary glaciations in Indian Himalaya: a critical review. *Journal of the Geological Society of India*, 82(6), 628-638.
43. Ali, S.N., Biswas, R.H., Shukla, A.D. and Juyal, N., 2013. Chronology and climatic implications of Late Quaternary glaciations in the Goriganga valley, central Himalaya, India. *Quaternary Science Reviews*, 73, 59-76.

44. Bali, R., Ali, S.N., Agarwal, K.K., Rastogi, S.K., Krishna, K. and Srivastava, P., 2013. Chronology of late Quaternary glaciation in the Pindar valley, Alaknanda basin, Central Himalaya (India). *Journal of Asian Earth Sciences*, 66, 224-233.
45. Agarwal, K.K., Prakash, C., Ali, S.N. and Jahan, N., 2012. Morphometric analysis of the Ladhiya and Lohawati river basins, Kumaun Lesser Himalaya, India. *Zeitschrift für Geomorphologie*, 56(2), 201-224.
46. Bali, R., Agarwal, K.K., Ali, S.N., Rastogi, S.K. and Krishna, K., 2012. Drainage morphometry of Himalayan Glacio-fluvial basin, India: hydrologic and neotectonic implications. *Environmental Earth Sciences*, 66(4), 1163-1174.
47. Bali, R., Agarwal, K.K., Ali, S.N. and Srivastava, P., 2011. Is the recessional pattern of Himalayan glaciers suggestive of anthropogenically induced global warming?. *Arabian Journal of Geosciences*, 4(7-8), 1087-1093.
48. Bali, R., Agarwal, K.K., Patil, S.K., Ali, S.N., Rastogi, S.K. and Krishna, K., 2011. Record of Neotectonic Activity in the Pindari Glacier valley: study Based on Glacio geomorphic and AMS Fabric evidences.
49. Bera, S.K., Ali, S.N., Bali, R. and Agarwal, K.K., 2011. Impact of pollen rain from the vegetation of alpine-subalpine belt as a reliable measure for palaeoclimatic interpretation: a case study from Pindari Glacier, Kumaun Himalaya, India. *International Journal of Earth Sciences and Engineering*, 4(06), 1010-1019.
50. Bali, R. and Ali, S.N., 2010. Dynamics of Pindari glacier during the last 600 years. *Current Science*, 99(10), 1307.
51. Agarwal, K.K., Bali, R., Patil, S.K. and Ali, S.N., 2010. Anisotropy of magnetic susceptibility in the Almora crystalline zone lesser Himalaya, India: a case study.
52. Bali, R., Agarwal, K.K., Ali, S.N., Rastogi, S.K. and Krishna, K., 2009. Monitoring recessional pattern of Central Himalayan Glaciers: some optimistic observations. In *Proceedings of the Indian Science Congress*, 96, 79-80.