



ICAR-National Bureau of Fish Genetic Resources

Canal Ring Road, Dilkusha PO, Lucknow-226002, India



Name Dr. Ajey Kumar Pathak
Designation Senior Scientist
Professional experience 23 years
Qualification (PG and above) Doctorate in Computer Science and Information Technology
 Master in Computer Application
 Master in Physics



Link to Google Scholar Page <https://scholar.google.co.in/>

Current area of Research Freshwater fish diversity management, GIS & Remote Sensing for mapping and modelling fish and fisheries resources, fish and fisheries database development and management, Aquatic Habitat assessment, modelling and management, Fish and fisheries resource conservation and management, Genomic database development and management, Proteomic studies using protein-ligand and protein-protein interactions applying protein modelling, docking and dynamics, Bioinformatics tools for genomic and proteomics data analysis

- Area of Research Expertise**
- Bioinformatics
 - Database and data warehouse development and management
 - GIS and Remote Sensing
 - Freshwater fish diversity assessment, mapping, conservation and management
 - Freshwater aquatic habitat assessment, mapping, modeling and management

Awards/ Recognitions (only National and International)

Publication (no.)

| | |
|---------------------------|----|
| • Research papers | 29 |
| • Reviews | |
| • Books | |
| • Book Chapters | 12 |
| • Popular articles | 08 |
| • Others Databases CD-ROM | 30 |

Training Manual

Important Research Publications

1. Sarkar, U.K., Negi, R.S., Kapoor, D., Deepak, P.K., Paul, S.K. and Pathak, A.K., (2002). New records of *Salmostoma bacaila* (Hamilton Buchanan) from the river Gerua, Katarniaghat Wildlife Sanctuary, Uttar Pradesh. Indian J For, 28(4), pp.417-419.
2. Sarkar U. K., Negi R.S., Kapoor D., Deepak P.K., Paul S.K. and Pathak A.K. (2006). New record of

- Salmostoma bacaila* (Hamilton-Buchanan) from the river Gerua, Katrania Wildlife Sanctuary, Uttar Pradesh. *Indian Journal of Forestry*, 28:417-419.
3. Sarkar, U.K., Kapoor, D., Paul, S.K., Pathak, A.K., Basheer, V.S., Deepak, P.K., Srivastava, S.M. and Tyagi, L.K. (2007). Fish biodiversity in the waterbodies of Samaspur Bird Sanctuary, Uttar Pradesh: towards developing freshwater aquatic sanctuary. *J. Bombay Nat. Hist. Soc.*, 104 (1): 51-54.
 4. Sarkar U.K., Pathak, A.K. and Lakra, W. S. (2008). Conservation of freshwater fish resources of India: new approaches, assessment and challenges, *Biodiversity and Conservation Springer Netherlands*, Volume 17, Number 10/ September 2008, pp. 2495-2511.
 5. Singh, A.K., Pathak, A.K. and Lakra, W.S. (2010). Invasion of an exotic fish-common carp, *Cyprinus carpio* L. (Actinopterygii: Cypriniformes: Cyprinidae) in the Ganga River, India and its impacts. *Acta Ichthyologica*, 40: 11-19.
 6. Pathak A.K., Singh S.P., Soundararajan R., Dayal, Chaturvedi Reeta and Kumar Ravi, (2011). A data repository website on marine ornamental finfishes and shell fishes from Indian waters. *Indian Journal of Geo-Marine Sciences*, 40(4): 502-508.
 7. Sarkar U.K., Pathak A.K., Sinha R.K., Sivakumar K., Pandian A.K., Pandey A., Dubey V.K., Lakra W.S. (2012). Freshwater fish biodiversity in the river Ganga (India): changing pattern, threats and conservation perspectives. *Rev Fish Biol and Fisheries*. 22: 251 -272.
 8. Sarkar U.K., Pathak A.K. Sinha R.K., Sivakumar K., Pandian A.K., Pandey A., Dubey V.K., Lakra W.S. (2012). Freshwater fish biodiversity in the River Ganga (India) changing pattern, threats and conservation perspectives; *Reviews in Fish Biology and Fisheries*; 22(1): 251-272.
 9. Nagpure N.S., Rashid I., Pathak A.K., Singh M., Singh S.P., Sarkar U.K. (2012). Computational analysis of transcriptome of Indian major carp, *Labeo rohita* (Hamilton-Buchanan, 1822) for functional annotation; *Bioinformatics*; 8(21): 1005-1011
 10. Nagpure N.S., Rashid I., Pathak A.K., Singh M., Singh S.P., Sarkar U.K. (2012). FBIS: A regional barcode archival and analysis system for Indian fishes; *Bioinformatics*; 8(10): 483-488
 11. Nagpure N.S., Pathak A.K., Pati R., Singh S.P., Singh M., Sarkar U.K., Kushwaha B., Kumar R. (2012). Fish Karyome: A karyological information network database of Indian fishes; *Bioinformatics*; 8(9): 440-444.
 12. Sarkar U.K., Khan G.E., Dabas A., Pathak A.K., Mir J.I., Robello S.C., Pal A., Singh, S.P. (2013). Length weight relationship and condition factor of selected freshwater fish species found in River Ganga, Gomti and Rapti, India, *Journal of Environmental Biology*; 34(5): 951-956
 13. Sarkar U.K., Pathak A.K., Tyagi L.K., Srivastava S.M., Singh S.P., Dubey V.K. (2013). Biodiversity of freshwater fish of a protected river in India: comparison with unprotected habitat; *Rev Biol Trop*; 61(1): 161-172
 14. Nagpure N.S., Rashid I., Pati R., Pathak A.K., Singh M., Singh S.P., Sarkar U.K. (2013). FishMicrosat: a microsatellite database of commercially important fishes and shell fishes of the Indian subcontinent; *BMC genomics*; 14(1): 630
 15. Verma A.K., Gupta S., Verma S., Mishra A., Nagpure N.S., Singh S.P., Pathak A.K., Sarkar U.K., Singh S.P., Singh M., Seth P.K. (2013). Interaction between shrimp and white spot syndrome virus through PmRab7-VP28 complex: an insight using simulation and docking studies; *Journal of Molecular Modeling*; 19(3): 1285 -1294
 16. Pathak AK, Singh SP, Dayal R, Sarkar UK, Chaturvedi Rita, Kumar Ravi (2013). Database on catfishes of India; *The Indian Journal of Animal Sciences*; 83(1): 102-106.
 17. Dayal R., Singh S.P., Sarkar U.K., Pandey A.K., Pathak A.K. Chaturvedi R. (2014). Fish biodiversity of Western Ghats region of India: A review. *Journal Experimental Zoology India*, Vol. 17, No. 2, pp. 377 -399.
 18. Singh, A.K., Ansari, A., Srivastava, S.C., Verma, P. and Pathak, A.K. (2014). Impacts of invasive fishes on fishery dynamics of the Yamuna River, India. *Agricultural Sciences*, 2014.

19. PATHAK, A.K., SARKAR, U.K. and SINGH, S.P. (2014). Spatial gradients in freshwater fish diversity, abundance and current pattern in the Himalayan region of Upper Ganges Basin, India. *Biodiversitas*, 15(2), pp.186-194.
20. Sarkar, U.K., Khan, G.E., Rebello, S.C., Dubey, V.K., Agnihotri, P., Pathak, A.K., Pal, A. and Singh, S.P. (2014). New biogeographical distribution of fish *Glyptothorax conirostris*, *G. telchitta* and *G. cavia* (Siluriformes: Sisoridae) in northern plain tributaries of the Ganges basin, India. *Research Journal of the Costa Rican Distance Education University*, 6(1).
21. Sarkar, U.K., Pathak, A.K., Pal, Amar, Khan, G.E., Rebello, Sanjay, Agnihotri, Praveen (2015). Pattern of distribution, abundance, diversity and threats to fish biodiversity of the Chambal River (Uttar Pradesh), *Indian Journal of Tropical Biodiversity*, 23(1):11-20.
22. Nagpure, N.S., Rashid, I., Pathak, A.K., Singh, M., Singh, S.P. and Sarkar, U.K., (2015). In Silico analysis of SSRs in mitochondrial genomes of fishes. *Mitochondrial DNA*, 26(2), pp.195-201.
23. Nagpure, N.S., Rashid, I., Pathak, A.K., Singh, M., Pati, R., Singh, S.P. and Sarkar, U.K. (2015). FMiR: A Curated Resource of Mitochondrial DNA Information for Fish. *PloS one*, 10(8), p.e0136711.
24. Lal, K.K., Gupta, B.K., Dwivedi, A.K., Singh, R.K., Chandra, S., Mohindra, V., Tyagi, L.K., Bisht, A.S., Sah, R.S., Pathak, A.K. and Jena, J.K., 2016. Length-weight relationship of selected freshwater fish species from three diverse ecological regimes in India. *Indian Journal of Fisheries*, 63(1).
25. Nagpure, N.S., Pathak, A.K., Pati, R., Rashid, I., Sharma, J., Singh, S.P., Singh, M., Sarkar, U.K., Kushwaha, B., Kumar, R. and Murali, S. (2016). Fish Karyome version 2.1: a chromosome database of fishes and other aquatic organisms. *Database*, 2016, p.baw012.
26. Sarkar, U.K., Pathak, A.K., Gupta, B.K. and Patra, D.D. (2016). Habitat Fingerprinting Using Otolith Trace Metal Profile of Two Catfish Species of Genus *Ompok* (Siluridae) from Ganges Basin, India. In *Proceedings of the Zoological Society* (Vol. 69, No. 2, pp. 237-241). Springer India.
27. Pathak, A.K., Singh, S.P., Dayal, R., Sarkar, U.K. and Chaturvedi, R., 2016. A regional information system on fishes from the Western Ghats, India: Its design, implementation and utility, *Indian Journal of Geo-Marine Science*, 45(10).
28. PATHAK, A.K., SINGH, P., DAYAL, R., SARKAR, U.K. and CHATURVEDI, R., Information delivery system for fishes in North-East India: Its design and implementation. *e-planet*, p.57.
29. Rashid, I., Nagpure, N. S., Srivastava, P., Kumar, R., Pathak, A. K., Singh, M., & Kushwaha, B. (2017). HRGFish: A database of hypoxia responsive genes in fishes. *Scientific Reports*, 7.