

CURRICULUM VITAE

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Date & Place of Birth: April 4, 1972, India

Academic Qualifications:

- (1) Bachelor of Science (1992), University of Delhi, India. (Subjects: Botany (Main), Zoology, Chemistry)
- (2) Master of Science (1994), University of Delhi, India (Subject: Environmental Biology)
- (3) PhD. (2002), Centre for Ecological Sciences, Indian Institute of Science, Bangalore, India. (Thesis supervisor: Prof. Madhav Gadgil)

Positions held

- 1) Worked as Research Assistant at the Central Pollution Control Board, Delhi, India for the project- Ground Water Quality Monitoring of Delhi (Oct.'94- July'95).
- 2) PhD studentship at Centre for Ecological Science, Indian Institute of Science, Bangalore. (Aug. 1995- July 2000).
- 3) Research Assistant at Jawaharlal Nehru Centre for Advanced Scientific Research (July 2000- July 2002)
- 4) Research Fellow, Botanical Institute, University of Bonn, Germany (Mar. '03 – June '03). Worked on the Biota-Africa project dealing with development of biodiversity models for the African subcontinent using data on plant species richness and climactic parameters.
- 5) Postdoctoral Research Fellow (2004-2006), Gatty Marine Laboratory, University of St Andrews, St Andrews, UK.
- 6) Postdoctoral Research Fellow (2006-present), Department of Biology, Indiana University, Bloomington, USA.

Research Experience

- (1) "Phytoplankton- Zooplankton Interactions in aquatic ecosystems: a review". Dissertation submitted to the Department of Environmental Biology, University of Delhi, in partial fulfilment of Masters Degree (1994).
- 2) Ground water quality assessment for Delhi- using laboratory analyses (organic and inorganic) of water samples- at Central Pollution Control Board, New Delhi, India (1994-1995).
- 3) Ph.D Dissertation (Thesis title: A study of the diversity and ecology of the freshwater fishes of four river systems of Uttara Kannada District, Karnataka, India) at the Centre for Ecological Sciences, Indian Institute of Science, Bangalore, India (1995-2002).
- 4) An investigation of the pattern of distribution and vertical migration of European whitefish in relation to zooplankton population distribution in Lake Constance, Germany. Research conducted as a visiting fellow at the Limnological Institute, University of Konstanz (June – Sept., 2003).

5) Conservation models for freshwater riverine fish communities of tropical systems (2004-2005)

Grants/ Fellowships Awarded

- 1) PhD research fellowship (1995-2000): Indian Institute of Science, Bangalore, India.
- 2) Royal Society (India) International Fellowship for postdoctoral research (2004-2005).
- 3) Small Research Grant from the Fisheries Society of the British Isles (2005-2006).

Publications

- (1) **Bhat, A.** & A. E. Magurran (2007). Does disturbance affect the structure of tropical fish assemblages? A test using null models. *Journal of Fish Biology*, 70(2), 623-629. doi:10.1111/j.1095-8649.2006.01252.x.
- (2) **Bhat, A.** & A. E. Magurran (2006). Taxonomic distinctness in a linear system: a test using tropical freshwater fish assemblages. *Ecography*, 29 (1),104-110. doi: 10.1111/j.2006.0906-7590.04418.x .
- (3) **Bhat, A.** & A. E. Magurran (2006). Benefits of familiarity persist after prolonged isolation in guppies. *Journal of Fish Biology*, 68, 759-766. doi:10.1111/j.1095-8649.2006.00963.x.
- (4) **Bhat, A.** (2005). Ecomorphological correlates of tropical stream fishes of Southern India. *Environmental Biology of Fishes*, 73(2):211-225.
- (5) **Bhat, A.** (2004). Patterns in the distribution of freshwater fishes in rivers of Central Western Ghats, India and their associations with environmental gradients. *Hydrobiologia*, 529: 83-97.
- (6) Dahanukar, N. R. Raut & **A. Bhat** (2004). Distribution, endemism and threat status of freshwater fishes in the Western Ghats of India. *Journal of Biogeography*, 31: 123-136.
- (7) **Bhat, A.** & K.C. Jayaram (2004). A new species of the genus *Batasio* Blyth (Siluriformes:Bagridae) from Sharavati River, Uttara Kannada, Karnataka State. *Zoos' Print Journal*, 19 (2): 1339 - 1342.
- (8) **Bhat, A.** (2003). Diversity and composition of freshwater fishes in streams of Central Western Ghats, India. *Environmental Biology of Fishes*, 68: 25-38.
- (9) **Bhat, A.** (2001). New report of the species, *Horabagrus brachysoma* in the Uttara Kannada District of Karnataka. *Journal of the Bombay Natural History Society*, Vol. 98 (2): 294-296.

Articles in Edited books

Bhat, A. (2000). Fish germplasm inventory of Sharavati, Aghanashini, Bedti and Kali Rivers, Uttara Kannada. pp. 148-151. In: Ponniah, A.G. and Gopalakrishnan, A (Eds.). *Endemic Fish Diversity of Western Ghats*. NBFGR- NATP Publication- 1, 347 p. National Bureau of Fish Genetic Resources, Lucknow, U.P., India.

Manuscripts in Submitted/ Preparation

- (1) Bhat, A. & A. E. Magurran. More than the sum of the parts: diversity partitioning and conservation priorities in tropical river ecosystems.
- (2) Bhat, A. Impact of human disturbances on the fish communities and their habitats in the river catchments of Central Western Ghats, India -- an initial investigation. (in preparation)

Other Articles

- (1) **Bhat, A.** (2000). "Freshwater fishes of the Indian region" by K. C. Jayaram: A Book Review. *Current Science*, 79 (3): 382- 383.
- 2) Gadgil, M., H. N. Chandrashekhariah, & **A. Bhat** (2001). Freshwater fish: Out of sight, out of mind. *The Hindu Survey of the Environment*: 137-142.
- 3) **Bhat, A.** (2004). Coral Reefs and their Fauna: An Underwater Fantasyland, *Resonance: Journal of Science Education*, 9 (9): 62-73.

Workshops and Conferences attended

- (1) Workshop on Germplasm Inventorisation and Gene Banking of Freshwater fishes. Organized by National Bureau of Fish Genetic resources, Lucknow at CMFRI, Cochin (12th-13th October 1998).
- (2) National Bureau of Fish Genetic Resources- Kerala Forest Research Institute: Training Workshop on Taxonomy of Western Ghats Fish Fauna. Organized by NBFGR, Lucknow at KFRI, Peechi, Kerala (1st-5th March 2001).
- (3) Students' Conference on Conservation Science, 2002: Organised by the Department of Zoology, Cambridge UK. (25th-27th March 2002).
- (4) 2nd European Conference of Poeciliid Biologists, 2005, Trondheim, Norway (4th-6th December 2005).

Talk and Posters presented in Conferences

- 1) Talk : "Diversity and Distribution of freshwater fishes in the rivers systems of Central Western Ghats, India" at the Students' Conference on Conservation Science (25th to 27th March 2002) at University of Cambridge, Cambridge, UK.
- 2) Poster : " Ecomorphological adaptations in some species of freshwater fishes of Central Western Ghats, India" at the Students' Conference on Conservation Science (25th to 27th March 2002) at University of Cambridge, Cambridge, UK.
- 3) Talk : "Benefits of familiarity persists over prolonged isolation in guppies" at the 2nd European Conference of Poeciliid Biologists, Trondheim, Norway, 2005.
- 4) Poster: "Variations in behavioral traits among natural populations in zebrafish (*Danio rerio*)" presented by **Anuradha Bhat**, Deanna Soper, Emília P. Martins at The 14th Annual Indiana University Animal Behavior Conference, Indiana University, Bloomington, USA (23rd April 2007)

Invited Talks

- "Studies on the diversity and ecology of freshwater fishes in rivers systems of Central Western Ghats, India" at the Institute of Limnology, Univ. of Konstanz, Germany (3rd April 2002)
- "Factors affecting distribution patterns of freshwater fishes in rivers of Central Western Ghats" at the Institute of Ecology, Univ. of Jena, Germany (5th April 2002)
- "Measuring ecological and taxonomic diversity" at a training course on Measuring Biodiversity and Ecosystem functioning in Estuarine ecosystems at the Gatty Marine Laboratory, Univ. of St Andrews, Scotland, UK (5-9 June 2006)
- "Conservation of stream fish assemblages: a multiscale approach" at Ashoka Trust for Research in Ecology and the Environment, Bangalore, India (24th April 2006)
- "Role of familiarity in schooling decisions among guppies" at Centre for Ecological Sciences, Indian Institute of Science, Bangalore, India (31st July 2006)
- "Additive partitioning of diversity in freshwater fish communities: a multiscale approach to conservation" at School of Environmental Sciences Jawaharlal Nehru University, New Delhi, India (31st August 2006)
- "Distribution patterns of fish assemblages and their habitat structure in tropical aquatic systems of India" at Brown Bag Series, Department of Biology, Indiana University, Bloomington, USA (6th March 2007)

Teaching Experience

- 1999-2001. Coordinating and conducting field studies for sampling freshwater fishes in streams of Western Ghats (as part of a project, "Western Ghats biodiversity network" headed by Prof. Madhav Gadgil)
- 2001-2002. Assisted in preparing a manual for taxonomic identifications of fish for local organizations and schools and also have helped in specimen identification (as part of the

project "Karnataka Biodiversity Strategy and Action Plan", of the Ministry of Environment and Forests, India, coordinated by Prof. Madhav Gadgil).

Spring 2005. Special Lecture on Tropical stream fish ecology for undergraduate course in Ecology & Conservation at Gatty Marine Laboratory, University of St Andrews, St Andrews, Scotland, UK

Spring 2005. Assisted in laboratory sessions for undergraduate course in Ecology & Conservation at Gatty Marine Laboratory, University of St Andrews, St Andrews, Scotland, UK

June 5-9 2006. Lecture on "Measuring ecological and taxonomic diversity" at a training course on 'Measuring Biodiversity and Ecosystem functioning in Estuarine ecosystems' at the Gatty Marine Laboratory, Univ. of St Andrews, Scotland, UK

Summer 2007. Research Experience for Undergraduate Program (REU) mentoring- Melissa Greulich

Research Interests

- 1) Community ecology of freshwater systems: Spatial and temporal factors determining community compositions, and their variations (Bhat 2003); Geographical species distribution patterns and status of threats for tropical Indian stream fishes (Dahanukar, Raut and Bhat 2004); Ecomorphological correlates in stream fish (Bhat 2005)
- 2) Biotic (predation, competition and territoriality) and abiotic (environmental and habitat parameters, climate and geography) factors that influence structure of aquatic communities (Bhat 2004).
- 3) Biodiversity monitoring of aquatic ecosystems and conservation of these habitats (Bhat & Magurran 2006, 2007). Partitioning of diversity at multiple hierarchical scales and its implication to conservation of river ecosystems (manuscript in review)
- 4) Application of generalized linear models to stream fish and abiotic data to predict native species richness and the impact of alteration in stream abiotic characteristics (e.g. impoundments and pollution) to river habitats and their communities (in preparation).
- 5) Fish behavioural studies on the tropical fish species *Poecilia reticulata* (the guppy), to understand preferences of individual fish to familiar individuals and their implications to shoaling in natural populations. These studies involve conducting laboratory based choice experiments on guppies to investigate shoaling preferences (Bhat & Magurran 2006).
- 6) Genetic basis of behavioural traits in the zebrafish (*Danio rerio*) model system. Variations in complex behavioural traits between laboratory-bred zebrafish and natural populations to understand their relationship at genetic and physiological levels (Soper, Bhat & Martins, in preparation). These studies are based on a combination of behavioural tests, physiological assays, QTL analyses and microarray methods.

Journal reviews

Behaviour, Behavioral Processes, Ecology Ethology & Evolution, Ecology of Freshwater Fish, Journal of Tropical Ecology, Journal of Fish Biology, Journal of Biosciences

Memberships

British Ecological Society
Fisheries Society of the British Isles
Animal Behavior Society