

# Ashwini V. Mohan, Ph.D.

**Current position:** Postdoctoral researcher, University of Neuchâtel

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## RESEARCH INTERESTS

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Speciation Genomics, Epigenetics, Adaptation, Evolutionary Ecology

## EDUCATION

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- PhD**      Deutscher Akademischer Austauschdienst (DAAD) Research Fellowship (2017-2021)  
Zoologische Institut, Technische Universität Braunschweig, Germany  
**Thesis title:** Is diversification across islands predictable? Studying macro and microevolutionary trajectories of island radiations of geckos in the genus *Phelsuma*
- M.Sc.**      Ecology and Environmental Sciences (2013-2015)  
Department of Ecology and Environmental Biology, Pondicherry University, Puducherry, India  
**Thesis title:** Phylogeography of the Andaman Keelback (*Xenochrophis tytleri*) in the Andaman Islands
- B.Sc.**      Biotechnology, Genetics and Biochemistry, Jain deemed-to-be University, Bangalore, India (2009-2012)

## RESEARCH

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- **Postdoctoral researcher** (07/2023 – current)  
Biodiversity Genomics lab, University of Neuchâtel, Switzerland  
Project: Unravelling the genomic architecture of chromosomal fusion & fission
- **Postdoctoral researcher, Marie Skłodowska-Curie Individual Fellowship** (07/2021 – 06/2023)  
Natural History Museum London  
Project: Using comparative genomics to uncover the origins of phenotypic modularity in squamate reptiles (ULTRAMOD)
- **Independent project - Principal Investigator** (10/2016 – 10/2018)  
Project: Diversity of geckos in the Andaman and Nicobar Islands: identifying islands and species of conservation importance  
Centre for Ecological Sciences, Indian Institute of Science, Bangalore, India
- **Internship, Molecular phylogenetics of geckos in the genus *Phelsuma*** (08/2016 - 09/2016)  
Zoologische Institut, Technische Universität Braunschweig, Germany
- **Junior Research Fellow (JRF)** (04/2016 – 07/2016)  
Phylogenetic relationships of the Indian egg-eating snake (*Elachistodon westermanni*)  
Centre for Cellular and Molecular Biology, Hyderabad
- **Research fellow** (06/2015 – 03/2016)  
Phylogeography of the Andaman Keelback (*Xenochrophis tytleri*) in the Andaman Islands.  
Centre for Ecological Sciences, Indian Institute of Science, Bangalore, India
- **Internship, Phylogeography studies on Ranidae frogs of the Western Ghats** (11/2012 – 04/2013)  
Principal Investigator: Dr Dinesh K. P., Centre for Ecological Studies (CES), Indian Institute of Science (IISc), India
- **Internship, Kalinga Foundation, Agumbe, Central Western Ghats, India** (06/2012 – 05/2013)

## PUBLICATIONS (Peer-reviewed)

1. Cyriac V. P., **MOHAN A. V.**, Dinesh K. P., Torsekar V., Jayarajan A., Swamy P., Vijayakumar S. P., Shanker K. (2024). Diversifying in the mountains: investigating spatio-temporal diversification of frogs in the Western Ghats. *Evolution*, p.qpae006
2. Cyriac V. P., Dharwadkar S., Mital A., **MOHAN A. V.** (2022). 70 years of Herpetology in India: insights into shifts in focal research areas and gender ratios among authors. *Amphibia-Reptilia* 43(2), 141-153
3. Sinai, N., Glos J., **MOHAN A. V.**, Lyra M. L., Riepe M., Thöle E., Zummach C., and Ruthsatz K. (2022). Developmental plasticity in amphibian larvae across the world: investigating the roles of temperature and latitude. *Thermal Biology*, 106, 103233
4. Gippner S., Travers S.L., Scherz M. D., Colston T. J., Lyra M. L., **MOHAN A. V.**, Multzsch M., Nielsen S. V., Rancilhac L., Glaw F., Bauer A. M., Vences M. (2021). A comprehensive phylogeny of dwarf geckos of the genus *Lygodactylus*, with insights into their systematics and morphological variation. *Molecular Phylogenetics and Evolution*, 165, 107311
5. **MOHAN, A.V.** and Tamma, K. (2021). The Lasting Contribution of Alexander von Humboldt to Our Understanding of the Natural World. *Resonance*, 26(8), pp.1041-1050
6. Tamma, K. and **MOHAN, A.V.** (2021). The Life of Alexander von Humboldt. *Resonance*, 26(8), pp.1035-1040.
7. Baxter-Gilbert J., Baider C.\*, Florens F.B.V.\*, Hawlitschek O.\*, **MOHAN A.V.\***, Mohanty N.P.\*, Wagener K.\*, Webster K.C.\* and Riley J.L. (2021). Nocturnal foraging and activity by diurnal lizards: Six species of day geckos (*Phelsuma* spp.) using the night-light niche. *Austral Ecology*, 46, 501-506. \* Equal contribution
8. **MOHAN A. V.**, Orozco-terWengel P., Shanker K., Vences M. (2020). The Andaman day gecko paradox: an ancient endemic without pronounced phylogeographic structure. *Scientific Reports*, 10, 11745
9. **MOHAN A.V.** (2020). An update to species distribution records of Geckos on the Andaman and Nicobar Islands, Bay of Bengal. *Herpetology Notes*, 13, 631-637
10. **MOHAN A. V.**, Swamy P. & Shanker K. (2018). Population structure in the Andaman keelback, *Xenochrophis tyleri*: geographical distance and oceanic barriers to dispersal influence genetic divergence on the Andaman archipelago. *Peer J*, 6:e5752
11. **MOHAN A. V.**, Gehring P. S., Scherz M. D., Glaw F., Ratsoavina F. M. and Vences M. (2019). Comparative phylogeography and patterns of deep genetic differentiation of two gecko species, *Paroedura gracilis* and *Phelsuma guttata*, across north-eastern Madagascar. *Salamandra*, 15, 55(3), 211-20
12. **MOHAN A. V.**, Visvanathan A. C., Vasudevan K. (2018). Phylogeny and conservation status of the Indian egg-eater snake, *Elachistodon westermanni* Reinhardt, 1863 (Serpentes, Colubridae). *Amphibia-Reptilia*, 1;39, 317-24
13. Srikanthan A. N., Swamy P., **MOHAN A. V.**, Pal S. (2018). A distinct new species of riparian rock-dwelling gecko (genus: *Hemidactylus*) from the southern Western Ghats. *Zootaxa*, 4434, 141-57
14. Constant J., **MOHAN A. V.** (2017) The lanternflies from Andaman and Nicobar: one new *Pyrops* species, new records and illustrated key to the species (Hemiptera: Fulgoromorpha: Fulgoridae). *Belgian Journal of Entomology*, 49, 1-24

## Manuscripts in review

1. **MOHAN A. V.**, Goswami A. Streicher J. W. Landmark-based estimates of genomic disparity. *In review in Nature Methods*
2. **MOHAN A. V.**, Escuer P., Cornet C., Lucek K. *In review in Trends in Genetics*

## Manuscripts in prep

1. **MOHAN A. V.**, Kaliontzopoulou A., Ranchillac L., Scherz M. D., Irissari I., Philippe H., Gippner S., Lemmon E. M., Lemmon A., Glaw F., Bauer A., Vences M., Joan Garcia-Porta J. Isolation and habitat shape phenotypic and phylogenetic diversity in Malagasy day geckoes
2. Kulkarni V., Shanker K. and **MOHAN A. V.** Reassessing biogeographical origins of gekkonids in the Andaman & Nicobar archipelago with insights into phylogeography among island populations
3. **MOHAN A. V.**, Anslan S.\*, Lejeune B.\*, Sauroy-Toucouère S., Florens F. B. V., Baider C., Ibrahim Y., Sanchez M., Webster K., Lepoint G., Steinfartz S., Hawlitschek O. Partitioned dietary niches facilitate co-existence of day geckos in the Comoros and the Mascarenes archipelago. \* Equal contribution

## FUNDING & FELLOWSHIPS

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1. University of Neuchâtel Equality & Diversity Grant 2023 (3000 CHF)
2. European Union Horizon 2020 **Marie Skłodowska–Curie Postdoctoral Fellowship** 2021-2023 (212,933.76 €)
3. **Early Career Grant, National Geographic Society** 2018 (7500 US \$)
4. Research Grants for Doctoral Studies, **German Academic Exchange Service (DAAD)** fellowship, 2017-2021 (~55,000 €)
5. **INSPIRE** fellowship for PhD, Ministry of Science and Technology, **Government of India**, 2016 (not utilized)
6. **Idea Wild** equipment grant, 2016 (~1000 US \$)
7. **Inlaks Shivdasani Foundation & RaviSankaran Foundation** Small Grant, 2016 (100,000 INR)
8. **Rufford Small Grant (RSG)**, 2016 (5000 £)

## SCIENTIFIC PRESENTATIONS & CONFERENCES

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- **Society for Integrative and Comparative Biology (SICB) annual meeting, Austin, Texas 2023** (Oral presentation in-person)  
Title: Ultra-Conserved Elements as landmarks on genomes: extracting ‘genospaces’ from mammalian genomes
- **Evolution 2022, SSB’s Ernst Mayr Symposium** (Oral presentation remote)  
Title: Exploring the role of adaptive diversification in driving congeneric day gecko assemblages in Madagascar
- **BES Macrofest 2022, Sheffield, UK** (Oral presentation in-person)  
Title: Exploring the role of adaptive diversification in driving congeneric day gecko assemblages in Madagascar  
Also served as a **session chair**
- **European Congress of Herpetology (SEH), Milan, Italy 2019** (Oral presentation in-person)  
Title: The Andaman day gecko paradox: an ancient endemic without pronounced phylogeographic structure
- **In-house symposium, CES, Indian Institute of Science, Bangalore, India 2016** (Oral presentation in-person)  
Title: Phylogeography of Andaman keelback (*Xenochrophis tytleri*) in the Andaman Islands
- **Conference on Ethology and Evolutionary Biology, Indian Institute of Science, Education and Research (IISER) Mohali, 2015** (Oral presentation in-person)  
**Best student presentation award**  
Title: Phylogeography of Andaman keelback (*Xenochrophis tytleri*) in the Andaman Islands
- **SERB School of Herpetology, Wildlife Institute of India (WII), 2015** (Poster presentation)  
**Best student and best poster award**  
Title: Phylogeography of Andaman keelback (*Xenochrophis tytleri*) in the Andaman Islands

### Attendance without presentations

- Tree of Sex consortium meeting at the Wellcome Sanger Institute, Cambridge, UK, June 2023
- American Genetic Association: Conservation Genomics: current applications and future directions, October 2021 (virtual)
- Evolution, Joint meeting, Montpellier, France, 2018
- Students Conference on Conservation Science, Bangalore, 2012 & 2013

### Invited talks

- **Linnean Society of London, Lunch Seminar Series, January 2024 (online)**
- **Natural History Museum Bern Seminar, September 2023 (in-person)**  
Title: Geographic isolation and habitat shape phenotypic and phylogenetic diversity in Malagasy geckoes
- **Herpetology Seminar organized by the British Herpetological Society, 2020 (online)**  
Title: The Andaman day gecko paradox: an ancient endemic without pronounced phylogeographic structure
- **Biological and Life Sciences division, Ahmedabad University, India 2022 (online)**  
Title: Diversification on Islands: insights from micro and macroevolution of day geckos (Genus *Phelsuma*) in the Indian Ocean
- **Department of Veterinary medicine, University Sarajevo, 2020 (online)**  
Title: Reptiles of the Andaman and Nicobar Islands

## ACADEMIC ROLES

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- **Masters' Thesis supervisor: Mr. Joe Rees, MRes Biosystematics, Imperial College London (September 2023)**
- **Section editor** Reptiles & Amphibians
- **Reviewer** for Biology Letters, Systematics & Biodiversity, Zootaxa, Herpetology Notes, Heredity, Reptiles & Amphibians
- **M.Sc. Thesis evaluator** Lisa Melina Lenk (Imperial College London/Natural History Museum London - 2022)
- Mentoring a handful of prospective and current PhD students from diverse backgrounds
- **Member, Open consortium of squamate genomics**
- **Member, Tree of Sex consortium 2**
- **Member, IUCN Snake Specialist Group (SSG)**
- **Member, IUCN Skink Specialist Group (SSG)**
- Member, Society for Systematic Biology (2018- current)
- Member, European Society for Herpetology (2019-2020)
- **Judge, Oral presentations, Young Systematists Forum, NHM London (2021 & 2022)**

## EQUITY, DIVERSITY, & INCLUSION ACTIONS

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- **Panelist on a panel discussion on "Being an immigrant in Academia" January, 2023.** Organised by Broadening Representation & Equity With Science (BREWS), Ecology and Evolutionary Biology department (EEB), University of Toronto
- **Diversity talk & panel discussion, Disney Inc. London,** in collaboration with the National Geographic Society, London 2022
- **Natural History Museum Explorer program from under-represented ethnicities in Natural Sciences 2022**  
Events: Fund a museum, Explorers family Festival: Natural History in Islam  
Audience: South Asian children aged 12-16 and families
- **Women in Herpetology, Popular article, 2021 in [Sanctuary Asia](#)** and a resultant scientific publication (listed in the publications section above)
- **Women In Sciences, panel discussion at the National Geographic Society's Spotlight Munich, Germany 2019**
- **Workshop co-host, Scholarship applications & overcoming barriers to (geographical) mobility, Explorers' Conference 2022, Natural History Museum London**
- **Active engagement through in-person diversity conversations and on social media**

## TEACHING

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### Academic

- 2024, Metabarcoding and its applications for ecology and evolution, University of Neuchâtel, Switzerland (8 hours)
- 2022, Guest Lecture, M.Sc. course on Herpetology by Wolverhampton University, NHM London
- 2022, Teaching assistant, Course: An introductory molecular phylogenetics course: integrating molecules with taxonomy, systematics, and evolutionary studies. Sponsored by NERC, UK and NHM London
- 2022, Filling gaps: writing scholarship applications & facing barriers to mobility, Workshop co-organiser, NHM Explorers' Conference, 2022
- 2018, Project supervision of masters' student projects, course: Molecular phylogenetics and evolution, Zoological Institute, Technische Universität Braunschweig, Germany
- 2012 – 2013, Science and Mathematics tutor to grade 8 students

### Science Communication

- Popular article 2022, [Andaman day gecko: Fleet-footed flecks of green](#)
- 2021, Munnota Trust (presentation remote), Public talk in Kannada ಜೈವಿಕ ವೈವಿಧ್ಯ ಮತ್ತು ದ್ವೀಪಗಳು

- 2021-2022, Natural history Museum's Explorers' program events
- 2020, two presentations on 'Evolution on islands' to an audience of age group between 8 to 16, in collaboration with the Kalinga Foundation, Agumbe, India
- Self-illustrated article 2015, [When you are in Agumbe](#)
- 2020, presentation addressing the importance of islands and ecosystem conservation to an audience above 18 years of age, in collaboration with the Kalinga Foundation, Agumbe, India
- Extensive SciComm on social media platforms Instagram & Twitter
- Conducted >15 workshops for children and adults alongside other research scientists about reptiles, conservation, and natural history of herpetofauna in the Western Ghats, India, and designed education material on Amphibians and Reptiles of the Western Ghats (2012-2015)

## COMPLEMENTARY EDUCATION

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1. 2024, **Rigi Workshop on Exploring Epigenetics**, Rigi Kulm, Switzerland (in-person)
2. 2023, Biodiversity Genomics Academy's several courses including genome annotation, quality control, comparative genomic tools and more (online). Taught by various instructors hosted by the Darwin Tree of Life (DTOL), Wellcome Sanger Institute, Hinxton
3. 2023, **Long-read sequencing, genome assembly and DNA methylation** taught by Edinburgh Genomics (online)
4. 2021, **Next Generation Sequencing** and analytical pipeline training taught by Dr Jeffrey Streicher. Natural History Museum, London
5. 2020, **Increase your employability with a PhD** – Workshop on becoming your marketing manager, Technische, Universität Braunschweig, Germany
6. 2020, **MI22: Molecular microbiology, diversity, and Evolution**, taught by Leibniz Institute, DSMZ German Collection of Microorganisms and Cell Cultures GmbH, Braunschweig, Germany
7. 2020, **Tracking down research literature**, Technische Universität Braunschweig, Germany
8. 2019, **Leadership training for PhD students**, Technische Universität Braunschweig, Germany
9. 2019, **Scientific Writing in Life Sciences and Natural Sciences** (for advanced PhD students), Technische Universität Braunschweig, Germany
10. 2018, **Science telling Bootcamp** for Science communication to the public, National Geographic Society, Madrid, Spain
11. 2018, **Fundamentals of GIS**, Coursera online course, taught by University of California Davis
12. 2018, **Programming for Everybody (Getting Started with Python)**, Coursera online course, taught by University of Michigan
13. 2016, **Next-generation Sequencing Symposium**, Centre for Cellular and Molecular Biology, Hyderabad, India
14. 2016, **Molecular Ecology and phylogenetics** course taught by Prof. Miguel Vences, Technische Universität Braunschweig, Germany
15. 2015, **SERB School in Herpetology**, Wildlife Institute of India, India
16. 2013, **Molecular Phylogeny** taught by Dr Praveen Karanth, Centre for Ecological Sciences, Indian Institute of Science, India
17. 2012, Credit course **on climate change and tropical rainforests**, Centre for Environment and Education, India

## FEATURES

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- Behind the Science: [challenges of being an international researcher](#)
- Women in Ecology & Evolution, Podcast guest, 2020. Episode: [Start your PhD with WEE](#)
- [Interview on Nature In Focus](#)
- [Despite progress, fieldwork remains a stumbling block for Indian Women in Science](#). Rukhmabai Initiatives, article by Sharmila Vaidhyanathan

## REFEREES

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**Dr Jeffrey Streicher**, Natural History Museum, London ; **Prof Anjali Goswami**, Natural History Museum, London.  
**Prof Kartik Shanker**, Indian Institute of Science, India. **Prof Kay Lucek**, University of Neuchâtel, Switzerland.