Curriculum Vitae

Yashraj Chavhan

The Lind Lab, Department of Molecular Biology
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Current position: Postdoctoral Fellow, Department of Molecular Biology, Umeå University, Umeå (Sweden)

PhD thesis title: The Effects of Population Size on Adaptation and Trade-offs: Insights from Experimental Evolution with *Escherichia coli* and Individual-based Models *(Defended on September 06, 2019, under the supervision of Prof. Sutirth Dey at IISER Pune)*

Publications:

- Chavhan, Y., Malusare, S. and Dey, S. (2021). Interplay of population size and environmental fluctuations: A new explanation for fitness cost rarity in asexuals. *Ecology Letters* 24, 1943–1954.
- Chavhan, Y., Malusare, S., and Dey, S (2020). Larger bacterial populations evolve heavier fitness trade-offs and undergo greater ecological specialization. *Heredity* 124, 726–736.
- Chavhan, Y., Karve, S., and Dey, S (2019). Adapting in larger numbers can increase the vulnerability of *Escherichia coli* populations to environmental changes. *Evolution 73*, 836–846.
- Chavhan, Y., Ali, S.I., and Dey, S. (2019). Larger numbers can impede adaptation in asexual populations despite entailing greater genetic variation. *Evolutionary Biology 46*, 1–13.
- Karve, S.M., Daniel, S., Chavhan, Y., Anand, A., Kharola, S.S., and Dey, S. (2015). *Escherichia coli* populations in unpredictably fluctuating environments evolve to face novel stresses through enhanced efflux activity. *Journal of Evolutionary Biology 28*, 1131–1143.

Previous academic position:

- Postdoctoral Research Associate, IISER Pune (September 2019 – June 2021)

Academic fellowships:

- Wenner-Gren Postdoctoral Fellowship for Foreign Postdoctoral Fellows (awarded by the Wenner-Gren Foundations, Sweden (July 2021 - present))
- Senior Research Fellowship (awarded by the Council for Scientific and Industrial Research, Government of India (April 2017 – January 2019))
- Senior Research Fellowship (awarded by the Ministry of Human Resource Development, Government of India (August 2015 – March 2017))
- Junior Research Fellowship (awarded by the Ministry of Human Resource Development, Government of India (August 2013 – July 2015))

Conference presentations, awards, and workshops:

- Presented a talk titled *"An interplay of population size and environmental stability explains why fitness costs are expected but rarely detected"* at the Indo-Swiss meeting on Evolutionary Biology at the Centre for Human Genetics in Bengaluru (December 2019)
- Presented a poster titled *"Periodic bottlenecks can impede adaptation to selection environments and maladaptation to novel ones despite entailing greater variation"* at the II Joint Congress on Evolutionary Biology in Montpellier (August 2018)
- International Travel Award from the Society for the Study of Evolution, United States of America (August 2018)

- Participated in the Second Bangalore School on Population Genetics and Evolution, organised by the International Centre for Theoretical Sciences in Bengaluru (January 2016)
- Leader of the winning team in Mimamsa, a nationwide interdisciplinary science competition organized by IISER Pune (January 2010)

Educational record:

Exam date	Degree/School examination	Institute/School	Score
March 2005	Secondary School Certificate Exam	Kendriya Vidyalaya, Ratlam	92.80%
March 2007	Senior Secondary School Exam	JP School, Ratlam	78.22%
May 2012	Integrated M.Sc. in Biotechnology	Institute of Bioinformatics and Biotechnology, University of Pune	CGPA: 8.30/10,
September 2019	Doctor of Philosophy in Evolutionary Biology	Indian Institute of Science Education and Research (IISER) Pune	Coursework CGPA: 9/10

Record in competitive examinations:

- Graduate Aptitude Test in Engineering (GATE) - Life Sciences (February 2012), conducted by the Indian Institutes of Technology: Qualified amongst the top 5% candidates in the country
- Selected for the 2007 batch comprising top 27 candidates at the Institute of Bioinformatics and Biotechnology (IBB), University of Pune (July 2007)

Undergraduate research projects:

- M.Sc. Thesis Project (August 2011 – July 2012): The effects of neutral genetic variation on the dynamics of bacterial response to novel environments (Under the guidance of Prof. Sutirth Dey, IISER Pune)
- August 2010 – July 2011: Evolution of evolvability in randomly fluctuating environments (Under the guidance of Prof. Sutirth Dey, IISER Pune)
- May 2010 – July 2010: Strategies in a co-evolutionary arms race between a benign brood parasite and its host (Under the guidance of Dr Suhel Quader, National Centre for Biological Sciences, Bangalore)

Mentorship:

- Mentored one year-long Master's thesis project in evolutionary biology at IISER Pune (in conjunction with Prof. Sutirth Dey)
- Mentored six undergraduate research students pursuing semester projects in evolutionary biology at IISER Pune (in conjunction with Prof. Sutirth Dey)

Teaching assistantship:

- Teaching Assistant for an undergraduate course titled "Ecology and Evolution" at IISER Pune (2 semesters (Fall 2013 and Fall 2014))
- Teaching Assistant for a public course titled "Biostatistics: A user's perspective" at IISER Pune (February 2019 – July 2019)

Academic references:

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