

# Bishwarup Paul

## Curriculum vitae

IISER Tirupati  
Tirupati-517507

Andhra Pradesh, India

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📄 <https://bishwaruppaul.github.io/>



## Education

- 2013–2019 **Ph.D.**, *IISER Kolkata*.  
Integrated Ph.D. programme, Department of Biological Sciences
- 2011–2013 **M.S.**, *IISER Kolkata*.  
Integrated Ph.D. programme, Department of Biological Sciences
- 2007–2010 **B.Sc. (Hons.) in Microbiology**.  
Ramakrishna Mission Vidyamandira, University of Calcutta

## Research Experience

- 2019–present **Post-doctoral research**, Supervisor: Dr. Nandini Rajamani, IISER Tirupati.  
Behavioural Ecology of small mammals of India.
- 2013–2019 **Ph.D. thesis**, Supervisor: Dr. Sumana Annagiri, IISER Kolkata.  
Facets of Brood Theft in a Tropical Ant *Diacamma indicum*
- 2013 **M.S. dissertation (2<sup>nd</sup> sem.)**, Supervisor: Dr. Sumana Annagiri, IISER Kolkata.  
Impact of Stress on Nest Relocation in Ants
- 2012 **M.S. dissertation (1<sup>st</sup> sem.)**, Supervisor: Dr. Sankar Maiti, IISER Kolkata.  
Characterization of the ACD domain of the VgrG-1 protein of *Vibrio Cholerae*
- 2012 **Summer internship**, Supervisor: Dr. Sankar Maiti, IISER Kolkata.
- 2009 **Project**, Supervisor: Santanu Maitra, Ramakrishna Mission Vidyamandira.  
Tolerance of microorganisms collected from wastelands of Kolkata against nickel chloride

## Publications

### Published

- 1 Paul, B. & Annagiri, S. (2019). **Caught red-handed: Behaviour of brood thieves in an Indian ant.** *Journal of Experimental Biology*, 222, jeb193755.
- 2 Paul, B. & Annagiri, S. (2018). **Tricks of the trade: Mechanism of brood theft in an ant.** *PLoS ONE*, 13(2): e0192144.

- 3 Annagiri, S., Kolay, S., **Paul, B.** & Sona, C. (2017). **Network approach to understanding the organization of and the consequence of targeted leader removal on an end-oriented task.** *Current Zoology*, 63(3), 269-277.
- 4 **Paul, B.**, Paul, M. & Annagiri, S. (2016). **Opportunistic brood theft in the context of colony relocation in an Indian queenless ant.** *Scientific Reports*, 6 (36166).

### Unpublished

- 1 **Paul, B.** & Annagiri, S. **Achieving a balance between brood rescue and nest relocation on facing an emergency.** [Under review]
- 2 Mukherjee, I., **Paul, B.** & Annagiri, S. **Does Information of Target Nest Impact Relocation Dynamics in an Indian Ant?** [under review]
- 3 Aravind, P. S., Dhanesh, P., **Paul, B.**, D'Souza, S. & Nandini, R. **Commensalism advantages evidenced by anthropogenic nest materials and nesting in close proximity to humans in the three-striped palm squirrel** [In preparation]
- 4 **Paul, B.**, Murmu, S., & Annagiri, S. **Reward reinforces formation of memory in ants rescuing brood.** [In preparation]
- 5 **Paul, B.**, Murmu, S., & Annagiri, S. **Working and long term memory of nest location in the context of colony relocation in an ant.** [In preparation]

### Conferences & Workshops attended

- 2019 **National Symposium on Avian Biology**, IISER Tirupati, India.
- 2019 **Understanding Behaviour**, IISER Kolkata, India.  
Speed talk - cum - poster presentation: Achieving balance between two tasks at hand: Rescue versus relocation in an ant system
- 2018 **ECBB (European Conference on Behavioural Biology)**, Liverpool, United Kingdom.  
Poster presentation: Behaviour of brood thieves in an Indian ant
- 2018 **FIMB (Frontiers in Modern Biology)**, IISER Kolkata, India.  
Poster presentation: Behaviour of brood thieves in an Indian ant
- 2017 **International Conference on Zoological Sciences and Ants (11th ANeT)**, Punjabi University, India.  
Oral presentation: Mechanism of brood theft in an Indian ant
- 2017 **First DST-SERB School on Chemical Ecology**, NCBS, Bengaluru, India.
- 2017 **YETI (Young Ecologists Talk and Interact)**, Tezpur University, India.  
Poster presentation: Intraspecific brood theft in an Indian queenless ant
- 2016 **Speciation and the Web of Life (GIAN)**, IISER Thiruvananthapuram, India.

- 2016 **I-BEE (India - Behaviour, Ecology & Evolution)**, Corbett National Park, India.  
Oral presentation: Intraspecific brood theft in an Indian queenless ant
- 2015 **FIMB (Frontiers in Modern Biology)**, IISER Kolkata, India.  
Poster presentation: Robbing thy Neighbour: A study in an Indian Queenless Ant
- 2015 **NCEE (National Conference on Ethology and Evolution)**, 39<sup>th</sup> Annual Meeting of Ethological Society of India, IISER Mohali, India.  
Poster presentation: Robbing thy Neighbour: A study in an Indian Queenless Ant
- 2014 **SERB School in Neuroscience**, 8<sup>th</sup> Edition (*Brain Circuits*), IISER Pune, India.
- 2013 **FIMB (Frontiers in Modern Biology)**, IISER Kolkata, India.  
Poster presentation: Stealing the Young: A Case Study in the Indian Queenless Ant
- 2013 **Being Social**, IISc, India.
- 2012 **FIMB (Frontiers in Modern Biology)**, IISER Kolkata, India.
- 2012 **FIMB (Frontiers in Modern Biology)**, IISER Kolkata, India.
- 2011 **Microbiology: Development and Challenges in Basic and Applied Research (UGC Sponsored National Seminar)**, Ramakrishna Mission Vidyamandira, India.
- 2008 **Microbiology: An Environmental Perspective (UGC Sponsored National Seminar)**, Ramakrishna Mission Vidyamandira, India.

## Academic activities

### Peer review for journals

**Insectes Sociaux.**

### Participation in events

- 2019 **Basics of Working with R**, *Understanding Behaviour*, IISER Kolkata.  
Conducted the workshop on how to use R for statistical analysis of data in Behavioural Ecology
- 2019 **Understanding Behaviour**, IISER Kolkata.  
Member of the organizing committee and a volunteer during the event
- 2017 **Ambassadors of Evolution**, *ESEB (European Society for Evolutionary Biology) Outreach Initiative*, IISER-Kolkata.  
Acted as a student volunteer for organizing the event

### Teaching Assistantship

- 2018 **Introduction to Biology II**, *Organismal Biology & Evolution*, Integrated BS-MS 1<sup>st</sup> Year, IISER Kolkata.
- 2016 **Biology laboratory X**, *Animal behaviour*, Integrated BS-MS 4<sup>th</sup> Year & Integrated Ph.D. 2<sup>nd</sup> Year, IISER Kolkata.
- 2016 **Biology laboratory VII**, *Ecology and behaviour*, Integrated BS-MS 3<sup>rd</sup> Year & Integrated Ph.D. 1<sup>st</sup> Year, IISER Kolkata.

- 2015 **Introduction to Biology II**, *Evolution*, Integrated BS-MS 1<sup>st</sup> Year, IISER Kolkata.
- 2014 **Introduction to Biology II**, *Evolution*, Integrated BS-MS 1<sup>st</sup> Year, IISER Kolkata.

## Awards & Honours

- 2018 **IISER Kolkata International Travel Grant**, *Participation in ECBB (European Conference on Behavioural Biology) held at Liverpool, United Kingdom.*
- 2017 **Award for best oral presentation**, *International Conference for Zoological Sciences and Ants (11th ANeT), Punjabi Univerity, India.*
- 2012 **Eligibility for Lectureship**, *Joint CSIR-UGC Test for Junior Research Fellowship and Eligibility for Lectureship (NET).*
- 2007-2010 **INSPIRE-SHE scholarship**, *for Higher studies in Basic and Natural Sciences, Department of Science and Technology (DST), India.*

## Skills

OS	Windows and Linux (Ubuntu and derivatives)
Programming	R, L <sup>A</sup> T <sub>E</sub> X, Python, GitHub
Web design	HTML + CSS, R Markdown
Graphic design	Adobe Photoshop/GIMP, Adobe Illustrator/Inkscape
Media editing	Avidemux/Openshot, Handbrake/FFmpeg, Audacity etc.

## References

**Prof. Sumana Annagiri**  
 Dept. of Biological Sciences  
 IISER Kolkata, India  
 ✉ sumana@iiserkol.ac.in

**Dr. Nandini Rajamani**  
 Assistant Professor  
 Dept. of Biology  
 IISER Tirupati, India  
 ✉ nandini@iisertirupati.ac.in

**Dr. Anindita Bhadra**  
 Associate Professor  
 Dept. of Biological Sciences  
 IISER-Kolkata, India  
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