

JEWEL JOHNSON

📍One-carat Blog

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RESEARCH INTERESTS

Interested in behavioural ecology, visual ecology, effect of pollution and climate change on pollinating insects, adaptability in insects, social behaviour and interactions in social insects

EDUCATION

Integrated BS-MS Dual Degree in Biological Sciences Aug. 2015 - Aug. 2020
Indian Institute of Science Education and Research, Thiruvananthapuram. CGPA : 8.31/10

Biology with Maths, Class XII Aug. 2013 - Jun. 2015
St. Michael's Anglo Indian Higher Secondary School Kannur. Percentage Marks : 93%

Class X Jun. 2013
St. Michael's Anglo Indian Higher Secondary School Kannur. Percentage Marks : 90%

SKILLS

Handling honeybees, Data analysis, data wrangling and data visualization in R, Adobe Illustrator and Premiere Pro, Photography, Presentation and communication skills, Team-work and organisational decision making.

RESEARCH EXPERIENCE

Major degree thesis IISER-TVM, India
Limits and adaptations for nocturnal vision in the Giant Honey Bee
(*Apis dorsata*) May 2019 - Apr. 2020

- Project was carried out under the guidance of Prof. Hema Somanathan.
- Performed classical conditioning experiments and video capturing to study vision in dim light in the Giant Honey Bee
- Performed data analysis and data visualization in R

Semester Project IISER-TVM, India
Morphometric analysis on the Asian Bees May 2018 - Dec. 2018

- Handled and maintained around 100 different species of insect specimens
- Performed basic morphometric measurements

Summer Internship IISER-TVM, India
Investigating the role of phenylalanine in the Asian Honeybee
(*Apis cerana*) May 2018 - Jun. 2018

- Investigated whether essential amino acids facilitate learning in The Indian Honey Bee
- Performed classical conditioning experiments and analysed data using R

Summer Internship IISER-TVM, India
Visual associative learning and olfactory preferences of The Greater Banded Hornet (*Vespa tropica*) May 2017 - Jun. 2017

- This work was published on 2021 and was featured in The Wire Science.
- Performed behavioural experiments to study cognitive abilities and olfactory preferences of the hornet
- Performed data analysis in R and helped in the preparation of the manuscript

AWARDS AND HONORS

- Achieved all India rank of **52** in Graduate Aptitude Test in Engineering (GATE) 2020 in Ecology and Evolution Paper. GATE score 606 and GATE Reg no: EY20S57226002.
- Achieved all India rank of **91** in Council of Scientific & Industrial Research - Junior Research Fellowship (CSIR-JRF) and National Eligibility Test (NET) Exam 2019 Fellowship (Reg no. 367970).
This is the qualifying exam for PhD and lectureship in India.
- Recipient of Innovation in Science Pursuit for Inspired Research (INSPIRE) fellowship. (For the duration of 5 years of study in IISER-TVM).

PUBLICATIONS

- Balamurali, G. S., Reshnuraj, R. S., Johnson, J., Kodandaramaiah, U., & Somanathan, H. (2021). Visual associative learning and olfactory preferences of the greater banded hornet, *Vespa tropica*. In *Insectes Sociaux* (Vol. 68, Issues 2–3, pp. 217–226). Springer Science and Business Media LLC. <https://doi.org/10.1007/s00040-021-00820-w>

CONFERENCES & PRESENTATIONS

- Poster: Visual associative learning and odour preferences in a hymenopteran predator** Sep. 2019
Biology across kingdoms : School of Biology Symposium and Department day IISER-TVM, India
- Presentation: Role of phenylalanine in learning in Asian honeybee (*Apis cerana*)** Mar. 2019
Second Bangalore Meeting On Asian Bees NCBS Bangalore, India
- Poster: Visual associative learning in the Greater Banded Hornet (*Vespa tropica*)** Jan. 2018
Young Ecologists Talk & Interact (YETI) 2018 Maharaja Sayajirao University of Baroda, India

EXTRA CURRICULAR ACTIVITIES

- R programming enthusiast. Made tutorials for ‘ggplot2’, ‘dplyr’ and ‘tidyr’ packages in R.
- Makes data visualizations at [whatsthisdata](#), an initiative to promote science communication for the public.
- Co-founder of The Ecological Society of IISER-TVM, a student body for promoting environmental awareness and safe guarding the greenery in the campus.
- Initiated ‘EcoGO’, an ambitious project for mapping the entire fauna and flora in IISER-TVM via iNaturalist.
- Received best exhibit award for the project presentation on DNA Hard drives in the IISER-TVM Annual Science Fest (2016).

INTERESTS AND HOBBIES

Photographing wildlife (500px account), Birding, Trekking and cycling, Badminton, Video games, Listening to instrumental songs, Postal stamp and coin collection.

● References available upon request ●