

A satellite image of our study site on the campus (Image courtesy: Souvik Mandal).

Occasionally, we have turned our attention to the related species *Ropalidia cyathiformis*. For reasons that we do not understand yet, this second species does not fare well in the lab, and therefore all our work has been on natural colonies on campus. Two of my PhD students chose not to work on the wasps.

One of them studied the Asian dwarf honeybee *Apis florea*, also on the campus, and the other studied the queenless ant, *Diacamma*, and yes, also on the campus. We have conducted a long-term study of the population dynamics of the ant *Diacamma ceylonense* entirely in the Jubilee Gardens of the campus. During this study, we also found a remarkable karyotypic instability in this ant species. One of my more recent students decided not to investigate the wasps at their nests. Instead, he chose to research the homing and navigational abilities of the wasps when outside their nests. All his sophisticated field studies were done entirely on the campus. We undertook a two-year study developing and standardising sampling methods for estimating the diversity and abundance of forest insects in the Western Ghats. All the pilot experiments in preparation for this study were of course most conveniently done on the campus. My students



and I have undertaken a detailed survey of ants of the campus, finding 112 species so far.

Just as my favourite research subjects *R. marginata* and *R. cyathiformis* reside on the campus, so do their most important predatory wasps, *Vespa tropica* and *Vespa affinis*. These are remarkably large and complex wasp societies building multistoried paper nests. I had a memorable and dangerous experience collecting one of their large nests built on a tree and hanging precariously in front of the nursery. Incidentally, the wire mesh of the Vespiary is designed to keep the predatory wasps out while letting *Ropalidia* through. More recently, I had the great pleasure of teaching organismal biology to the first semester undergraduate students of the Institute for six years. All the practicals for the students utilised the biodiversity on the campus. One of their main projects and perhaps the most interesting one was the ‘ant walk’ during which they learned how to sample ants, compute and explain their levels of diversity and abundance.

I have had the privilege of living on the campus for most of my life, first in the student hostel blocks D-09 and N-17, then in the Kaveri married students’ apartment, followed by staff faculty quarters D-240, E-35 and DQ-18. I have not been away from the campus for more than three months at a time since I joined the Institute in 1974, or indeed from Bangalore since I moved here in 1963. I cannot imagine a better place to raise a family—my son Vikram grew up with the biodiversity of the campus as part of his family, becoming an avid birdwatcher and publishing scientific papers on the birds of the campus even before he graduated from high school, which was also on the campus. He now studies (<https://gadagkar.zuckermaninstitute.columbia.edu/publications>) how the brains of birds help them to learn their species-specific songs.

It surprises me that, barring a few of my colleagues from the Centre for Ecological Sciences who conduct small parts of their research on the campus, many more of us do not take advantage of the animal and plant life on campus for our research and teaching. It bothers me that most people do not even appreciate the uniqueness of our campus – their ignorance is so great that they think that our campus needs re-branding. They fail to appreciate that a rich biodiversity is the brand of our campus, that has been bequeathed to us over millions of years of evolution and by the foresight of JN Tata and the Wodeyars and sustained by the wisdom of our directors such as CV Raman, Satish Dhawan and CNR Rao. If we cannot pursue modern biology on a campus that is home to over 112 species of ants, 25 species of bees, 50 species of wasps, 140 species of butterflies, 110 species of birds, 17 species of snakes, 20 species of dragonflies and damselflies, 60 species of spiders, and 112 species of trees, something must be wrong with us, and/or with modern biology.

I wonder if anyone else has been so blessed as to have their personal and professional lives so intimately linked to the magnificent campus of this hallowed institution. Fifty years of worship at ‘Tata’s Temple of Science’— I cannot imagine a better life.





The entrance to Jubilee Gardens where a long-term study of the population dynamics of the ant *Diacamma ceylonense* was carried out (Photo: Thresiamma Varghese).

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