

In conversation with Dr. Janakiraman Poorani

A woman with decades of dedication, passion and hard work, speaks to IE associate editor Dr. S. N. Bhagyasree on her committed journey in the field of insect science.



Dr. Janakiraman Poorani is a self made, self taught, independent woman scientist. She comes from a humble rural background and was born in the temple town of Srirangam in Tamil Nadu. She did her schooling from various towns in Tamil Nadu including Sendamangalam, Erode, Avinashi and Trichy because her father was a bank employee and frequently transferred. She did her B. Sc. (Agriculture) from TNAU, Coimbatore, in 1988 and M.Sc. (Agricultural Entomology) from AC & RI, Madurai (TNAU), in 1990. She completed her Ph.D. with specialization in insect taxonomy at the ICAR-Indian Agricultural Research Institute, New Delhi, in 1994. She joined ARS in 1994 and was initially posted at the Trainers Training Centre, ICAR-IIHR, Bengaluru in 1995. She shifted to the Project Directorate of Biological Control (now National Bureau of Agricultural Insect Resources (NBAIR)), Bengaluru in 1996. She was the only insect taxonomist at PDBC until 2009 when PDBC was renamed as ICAR-NBAII (National Bureau of Agriculturally Important Insects) and later as ICAR-NBAIR (National Bureau of Agricultural Insect Resources). She was involved in the cataloguing of the reference collections at PDBC / NBAIR and contributed substantially to the successful biological control programmes against invasive pests such as the spiralling whitefly and papaya mealybug. She is an expert in the taxonomy of lady beetles (Coleoptera: Coccinellidae) of the Indian Subcontinent /Oriental region with an academic interest in the taxonomy of insect pests, parasitoids and predators. She is keenly interested in developing online diagnostic aids to economically important insects in Indian

agriculture for the benefit of entomology students and researchers. As a Principal Investigator of the Network Project on Insect Biosystematics at NBAIR, she was instrumental in augmenting and strengthening the insect collections at NBAIR. She has constructed and hosted as many as eight major databases on agriculturally important insects of India such as Insects in Indian Agroecosystems, Featured Insects, Aphids of Karnataka, Indian Genera of Mymaridae, Aphelinidae and Diapriinae, all of which are hosted on NBAIR's official website and these databases have received more than 14 lakh hits so far. She initiated the digitization of the type collections at NBAIR and hosted the web content on the type material at NBAIR. At present, she is working as a Principal Scientist at ICAR-National Research Centre on Banana, Trichy. She has been revising the Coccinellidae of the Indian region and working on pest mapping, diagnostics and management of banana insect pests. She has visited the Smithsonian National Museum of Natural History, Washington, DC; Australian National Insect Collection, Canberra; and the Natural History Museum, London, for various projects on Coccinellidae and study of type material. She is a strong proponent of more funding and opportunities for insect taxonomists and advocates better networking and collaborations for sharing of specimens and other resources to stem the declining trend in Indian insect taxonomy.

BSN (Bhagyasree S N): Thank you for speaking to Indian Entomologist magazine. How did you pursue career in Entomology and how did you choose working especially on Taxonomy?

J Poorani (JP): My undergraduate classes in entomology were full of fun and the entire class was fond of the entomology teachers who were very good. Many of my classmates including me opted for postgraduation in Entomology because of their influence. When I joined IARI for my Ph.D. programme, I had to choose between Insect Pathology and Insect Taxonomy and I opted for the latter without any hesitation because of the bad smells we used to associate with the insect pathology lab! I was the first Ph. D. student of Dr. V. V. Ramamurthy and worked on entomine weevils, but I was very casual at that time with a lot of other interests particularly in history, literature and sports overriding my academics. I did not do a great job as a Ph.D. student and only after joining ARS as a scientist, I began to do serious taxonomic work.

BSN: *Taxonomy of natural enemy of pests was the mandate of NBAIR at that time, still why did you choose to work on Coccinellidae, when parasitoids are considered more important in biological control?*

JP: When I joined the Project Directorate of Biological Control (now NBAIR) in 1996, I was asked to choose a group important in biological control and due to my Ph.D. background in Coleoptera, Dr. C. A. Viraktamath suggested Coccinellidae would be the best choice because of its economic importance and the need for revisionary studies on the Indian fauna. There was no dearth of expertise on Indian Hymenoptera then as many Hymenoptera stalwarts like Dr. T.C. Narendran, Dr. M. Hayat, Dr. Farooqui and Dr. Jonathan were actively working and all were prolific publishers of voluminous revisionary works. Besides, though predators and parasitoids are equally important in biological control, there is very little expertise on predatory insects in India. For your information, many groups of Indian Coccinellidae have not been systematically revised even now.

BSN: *Role model/the person you admire/follow in your life as well as in profession?*

JP: My mother was and will always be my first role model – she was an extraordinary person with monumental patience, will power, magnanimity and compassion. I have tried to follow her without much success. My teacher, Dr. K. Gunathilagaraj, former

Professor of Entomology, TNAU, made a huge impact on me when I joined M.Sc. (Ag.Entomology) at AC & RI, Madurai. I admire his impish and sardonic sense of humour, outspoken, no-nonsense style and practical approach to life in general and also entomology and I have not seen many people of his ilk. His contribution

“Taxonomy in general is demanding and one needs to be patient - to develop minimum scholarship on a group, intensive benchwork over many years is indispensable”

in kindling the interest of the students in entomology is immense. He is like a father to me and it is a pity his talents and services were largely wasted in TNAU but he is universally loved by his students. Dr. V.V. Ramamurthy, my Ph.D. guide, has been a big influence because he is calm and never gets rattled by anything – I understand now stoicism is a virtue required for Indian taxonomists! I have met and interacted with Dr. C.A. Viraktamath more frequently because I worked in Bangalore and he is a rolemodel, father figure and inspiration to me in every way – I have seen him from closequarters and admire his patience and profound knowledge of insect taxonomy. Among other Indian taxonomists, I have deep respect and admiration for Dr. Mohammad Hayat for his phenomenal scholarship, Dr. K.D. Prathapan for his passion, and Dr. Kumar Ghorpade for his genius. I remain grateful forever to the late Dr. S.P. Singh, Former Director of PDBC, who gave a lot of encouragement and support in my early years as a taxonomist. He was a great administrator who knew the strengths and weaknesses of all the scientists and managed to get the best out of every person – he gave the space and freedom for every scientist irrespective of their age and position.

BSN: *How do you react when things go out of hand and messed up in your professional life?*

JP: As a person, I am very emotional and straight forward - not a good combination. These days I try to be quieter and not react to adverse comments or do anything whatever the provocation.

BSN: What are the biggest challenges you've come across in your profession?

JP: I was the only insect taxonomist in PDBC for nearly 15 years before the PDBC was renamed as NBAII / NBAIR in 2009. I was forced to dabble in so many groups of insects though I was supposed to specialize in Coccinellidae and I had to spend a considerable part of my time in extending identification services to students, researchers, various AICRPs, etc. The most challenging part for an Indian insect taxonomist is that people think a taxonomist should be able to identify all groups of insects. Worldwide, taxonomists work on one superfamily or one or two related families at the most. It is difficult to make people understand that one person cannot identify all groups. I have a lot of ongoing revisionary work on Coccinellidae, which is difficult to finish now because most of my collections are left behind at NBAIR. Taxonomists are like wine, they mature with age – to attain the kind of scholarship of Dr. Viraktamath or Dr. Hayat, you need to work for 25–30 years. Now I am better than I was some 10 years ago, but I do not have the kind of resources I used to have. I wish to complete my illustrated guide to Indian Coccinellidae and bring it out as a free, open source publication and it is taking a long time due to various constraints. In any case, Indian taxonomists have to work against the odds all the time!

BSN: Why have you always kept yourself away from awards? What do you think of awards in general?

JP: Every scientist wants recognition for his/her scientific contributions and I too strongly believe good work should be appreciated and recognized. But the way awards are given away by Professional Societies leaves a lot to be desired because quantity of work, particularly number of publications, gets priority over quality and the most worrisome part is, you can buy an award by paying a nominal fee of Rs. 3000–5000. The dictum “awards beget awards” is absolutely true in India because scientists get multiple awards for the same work submitted repeatedly to various societies and use them to get higher positions and climb up the ladder.

I am completely put off when I see the application procedure prescribed by various societies like

submission of voluminous supporting documents, reprints of papers, etc. that require enormous quantities of paper, time and resources. The carbon footprint of preparing an award application must be enormous at this rate! I have decided I will not go through the rigmarole of this tortuous application process for awards. When I see the craze for awards in young scientists, I am deeply amused and disturbed at the same time. I have noticed even single applicants ended up as winners in the absence of competition in many cases and lifetime achievements have been given in taxonomy to people with, say 10 years' experience. It makes no sense at all!

BSN: How would you like to see taxonomic work in future?

JP: The advent of the internet and online resources has made the task of taxonomists a lot easier now. It is inevitable that Indian insect taxonomists will have to do a lot of alpha taxonomy because only about one-third of our insect fauna is known at present. Large scale revisionary taxonomic studies are required for the known taxa because higher phylogenetic classifications of insect orders / families have undergone monumental changes due to combined analysis of molecular and morphological data. It is a sad fact that the most of described insect fauna remains unidentifiable due to lack of revision. We need to discover, describe and document the undescribed ones also in this process. The only way we can make it more acceptable is by integrating the taxonomic revisions and further alpha taxonomy with at least minimum molecular characterization (say a barcode sequence) and include immature stages, biology / ecology, natural enemies, etc.

BSN: Do u think the journey of recognition would be longer for an honest and most patient researcher?

JP: Taxonomy in general is demanding and one needs to be patient - to develop minimum scholarship on a group, intensive benchwork over many years is indispensable. When I began working, it took me six years to complete a checklist of Indian Coccinellidae because I did not have the library resources and had to toil to get the original descriptions. All the old taxonomists had to do a lot of backbreaking work,

particularly for making illustrations using a camera lucida, etc. It is a lot easier now - As a taxonomist who began to work in the pre-internet era, I can only marvel at the kind of literature resources, microscopes and imaging facilities, etc. available now to the younger generation of taxonomists. But it is a world full of inequalities and many committed workers in small institutions do not have access to these facilities.

BSN: What is that one thing young taxonomists need to change to bring more authenticity to science?

JP: Many young taxonomists do not even know how to use traditional literature resources like the Zoological Record and have poor knowledge of the ICZN code. Online databases and other resources are very handy and useful but many younger taxonomists will be hard put if the internet is switched off. Training/HRD, funds to travel to foreign repositories, and networking are needed for young taxonomists.

BSN: How does shift from NBAIR to NRC on Banana changed you?

JP: I have not changed in any way except for my location. I shifted to NRCB for only one reason – I left my home in 1984 to pursue B.Sc. (Ag.) at TNAU, Coimbatore and I was away from my parents and family for 31 years for my higher education and employment. My aged mother had severe arthritis and hypertension and she had expressed the wish to be with me for a few years, but she could not come to Bangalore. In 2014, I witnessed the death of Mr. Munuswamy, one of my most valued colleagues at PDBC, who died of old age – I was deeply moved by his demise. On that day, I took an impulsive, immediate decision to get a transfer to NRCB to be with my aged mother because I wanted to take care of her in her old age. Unfortunately, I could spend only three years with my mother who passed away in 2018. In a philosophical vein, I have understood that everything in life is ephemeral and fickle - in ICAR also, people forget your contributions when you move to a new place and it is difficult to rebuild your career in a new place where your work is treated as unimportant.

BSN: What working women should possess to have balanced and healthy life?

JP: Being a single woman, I have not faced the pressures of having my own family but I have shouldered family responsibilities whenever required because my siblings and their families are all part of my extended larger family. It is difficult for women because they are natural care givers and have more pressures and work to do for the family, raise the kids, etc. when compared to men. I always marvel at the ability of many women who balance family and work successfully because I cannot cook well even today. I am not competent enough to give tips on this aspect.

BSN: A change you would like to see in young agricultural entomologists?

JP: When I see young scientists/entomologists working with the singular aim of building their score card, it is distressing. In my opinion, the ICAR score card has done incalculable damage to the system. All the time young scientists are working out the number of papers to be published, conferences to be attended, technologies/commercialization/institution building and what not for getting the next promotion. I feel the scorecard is also a major reason for young entomologists' reluctance/aversion towards taxonomic research. There should be a more rational, impartial and objective system for evaluating the output of scientists and this is the only way to reduce the undue pressure to perform to fulfil the scorecard requirements. Youngsters should do their job without too much aggression and open self-aggrandisement – if you work hard with sincerity, rewards will come.

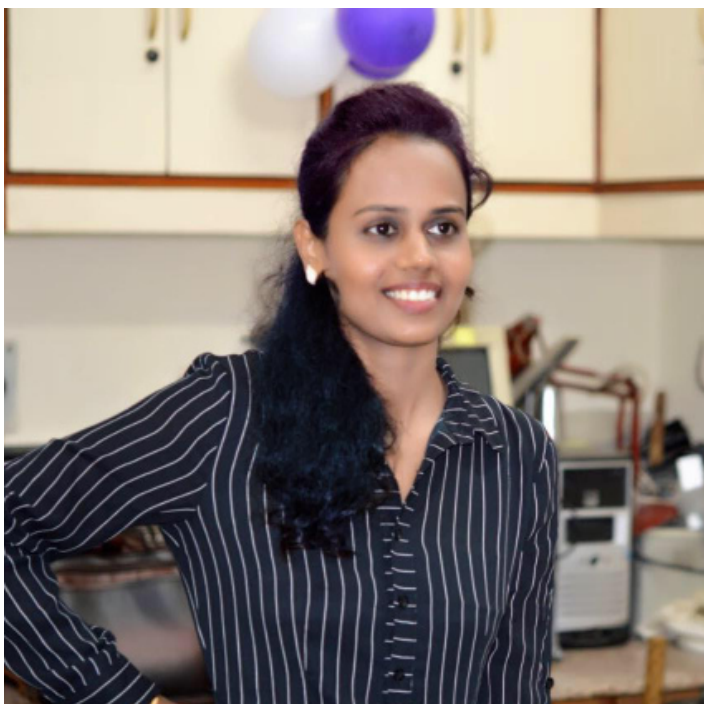
Things were much better in my younger days with fewer meetings to attend and fewer reports to submit. I feel young entomologists and other scientists have a lot of distractions now with many unproductive meetings, report submissions, etc. and have less time for productive work. This is a worrying situation and I do not know how this can be changed.

BSN: No doubt you are a brilliant scientist with extreme intellect, why don't you think of good administration?

JP: Administration is not my cup of tea – I am not fit to be an administrator because I am a bit of a nerd, basically an introvert and averse to protocol and VIP

culture. Most importantly, I am positively allergic to long meetings, in person or online. I am completely overwhelmed by the number and frequency of various meetings we seem to be having these days! I feel I can contribute more and do good as a scientist than as an administrator.

BSN: Thank you for talking to Indian entomologists and its liberating to here the way you spoke certain facts with elegance.



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