

# In conversation with Dr. Chandish R. Ballal



*Charismatic leader and Entomologist speaks to IE Associate Editor Dr. Bhagyasree about her journey from a small town girl to Director of the National Bureau.*

Dr. Chandish R Ballal hails from a small town - Palakkad in Kerala, did her schooling in the English medium section of a Government School, Moyan Girls' High school, Palakkad. She was fond of reading English books and consistently won prizes for English proficiency, versification and elocution in school and college. She completed her B. Sc. in Zoology at Mercy College, Palakkad; Masters in Zoology with Entomology Specialisation at Government Victoria College, Palakkad and M.Phil Zoology at Calicut University, Kerala. She was a University merit scholarship holder throughout. She was and is a connoisseur of dance and music. During her childhood days her dream was to become a teacher, and later on to become a doctor, while destiny led her to turn into a successful, altruistic and generous woman scientist in Entomology and Director of ICAR- National Bureau of Agricultural Insect Resources (ICAR-NBAIR), who contributed significantly in the field of Insect ecology and Biological Control. The focus of her research was on understanding host and host plant interactions and development of mass production technologies for potential parasitoids and predators and evaluating their performance - with emphasis on beneficials like trichogrammatids, scelionids, braconids, ichneumonids, anthorcorids and predatory mites. She is a

prominent "Indian Entomologist" who has more than 220 research articles in her career baggage and a keystone for the Asia's largest live insect repository holding 130 insect cultures during her tenure as Head of the Division of Insect Ecology and presently as Director, ICAR-NBAIR and Project Coordinator, AICRP on Biocontrol.

During the early days of her career, she worked for an year as Senior Research Fellow at CIBC (Commonwealth Institute of Biological Control), Indian station, before joining Agricultural Research Service. In February, 1985, she stepped into the Indian Institute of Horticultural Research as a Scientist, later on moved to the Project Directorate of Biological Control (PDBC). Before taking charge as Director, she spent nearly three decades in the Division of Insect Ecology at NBAIR (then PDBC). She received the prestigious "Dr (Ms) Prem Dureja Endowment Award" 2017-18 instituted by National Academy of Agricultural Sciences, ICAR-Panjabrao Deshmukh Outstanding Woman Agricultural Scientist Award, 2015; Pradhan Memorial Award 2018 and Professor T. N. Ananthakrishnan Award, 2006.

**Bhagyasree S. N. (BSN): Thank you for speaking to Indian Entomologist**

**magazine. How did you pursue career in Entomology??**

**Chandish R. Ballal (CRB):** I am a small town girl from Palakkad, Kerala, where we did not have a whole lot of choices to pursue. Though I was very fond of English literature, wanted to pursue some course in science because those days the strange mindset amongst students was that taking up arts or literature was something not to be proud of. I was not great at physics and chemistry so chose Zoology (which I liked) as major and Botany and Chemistry (which I did not like... but was the only combination available) as minor subjects for my graduation. Later on I did M.Sc Zoology with specialization in Entomology, which again was the only option available other than M Sc Botany. However, I was lucky...I thoroughly enjoyed the entomology classes handled by excellent teachers (one of them Dr Prabhakaran Pillai was Dr Wigglesworth's student) at Govt. Victoria College, Palakkad. I had no idea regarding Agricultural Research Service till at Calicut University while pursuing my M Phil, I met Mariamma Chechi (Sister), (Dr Mariamma Daniel) who was then a Scientist at CPCRI Regional Station at Vittal, and was pursuing her PhD at Calicut University under late Dr T C Narendran. She inspired me to write the ARS exam, if not for her I would not have been here.

*“to the younger generation other than passing on the scientific knowledge, we have to pass on the tradition of science”*

**BSN: Who is your role model or who you admire in your personal and professional life?**

**CRB:** In my personal life, my mother is my role model, she was an epitome of patience, knowledge and strength. She encouraged me in my academic and co-curricular activities. When it comes to professional life I admire late Dr. Sathiamma Madam, retired Principal Scientist, ICAR-CPCRI, a hard working and dedicated scientist and a humble and down to earth human being, who has contributed immensely in the area of biological control of coconut pests.

**BSN: How do you balance between work life and professional life?**

**CRB:** I am fortunate to be receiving enormous and consistent support from my husband, mother in law and my daughters. Being systematic at home and office helps me in maintaining a balance between professional and personal lives. In a lighter vein I should add that I manage to cook myself at home as I plan for tomorrow's task at the Institute and tomorrow's menu at home, well in advance.

**BSN: How do you react when things go out of hand or messy?**

**CRB:** Generally, I do not react to unpleasant situations in an impulsive manner, and try to handle situations calmly. First and foremost, I try to understand the situation and if it is to do with a person who is accessible, I try to clarify the issues across the table. Most of the times, I have managed to ease the situation. However, when the person is not accessible either due to distance or due to mental set up of the concerned individual, I prefer to ignore for the well being of all concerned. When

needed, I do discuss with my colleagues and take their opinions while trying to resolve some of the sensitive issues.

**BSN: What is most memorable thing you would like to cherish as biological control specialist?**

**CRB:** My mentor, the founder Director of PDBC, Late Dr S P Singh used to always discuss with us on the challenges involved in multiplying host insects and novel bioagents. Developing production protocols for biological control agents like predators and parasitoids and their hosts is truly a challenge and when you succeed in “taming” a difficult to multiply insect it really gives you a sense of great satisfaction. I have developed trays for mass production of lepidopteron host insects, developed technologies for continuous production of ichneumonid and scelionid parasitoids, anthocorid predators and predatory mites. I also feel extremely proud of the fact that NBAIR holds Asia’s largest live insect repository, with 130 insect cultures maintained year round.

**BSN: What are the biggest hurdles you have faced as a biocontrol specialist?**

**CRB:** Upscaling the production of macrobials and microbials; making the bioagents available to the farmers; ensuring large area coverage with bioagents and enabling registration of the potential local isolates of microbial biopesticides are the greatest hurdles faced by any biocontrol researcher not only in India, but even globally. Unless there is a mechanism enabling the generation of toxicology data for effective indigenous isolates at reasonable cost, registration of these isolates and making them available to farmers would remain a far cry.

**BSN: How would you like to see biocontrol in the future?**

**CRB:** I would like to see more companies producing microbial and macrobial biocontrol agents. Quality microbial biopesticides should be available on the shelves of local “Biopesticide outlets”, where farmers should be able to buy them as per need, the way they buy chemicals. It is encouraging to note that some chemical pesticide companies have opened units exclusively for producing bioagents. Wherever biocontrol options are available for the management of any pest, farmers should be aware of them and should be able to adopt the same. In several cases, it could even be a simple strategy of not resorting to chemical insecticides and thus conserving the natural bioagents to act and manage the pest.

**BSN: What are the traits/attitude that can help women to achieve/perform prominent role in their organization?**

**CRB:** Women should come out of the mindset that they are not being treated on par with men. If we are confident, we would be able to create an identity and a distinguished slot for ourselves in our sphere of work. It is for us women to remain strong and confident and to prove to the world that besides being great home makers, we can be dedicated researchers, capable administrators, great innovators, while we continue to be sensitive and wonderful human beings.

**BSN: What are the leadership lessons you would like to pass on to younger generation?**

**CRB:** Take your colleagues into confidence, work with them as a team, be conscious and

concerned about their future and what they need in order to achieve their goal. Involve youngsters along with seniors in institutional activities. In one of the inspiring talks, Dr CNR Rao said “to the Younger generation more than passing scientific knowledge, it is important to pass on the tradition of science”. Youngsters should not hesitate to collect and imbibe knowledge and wisdom from their seniors, which would truly help them in their careers. I believe that in order to maintain a clean and scientific work culture in an organisation, it is important for all the staff members to understand each other and have open discussions. Encourage guide and create opportunities for youngsters and this in turn would make them feel responsible not only for their allotted responsibilities, but also for the growth of the organisation.

**BSN: How did you feel when you received “Panjabrao Deshmukh Outstanding Woman Agricultural Scientist Award”, 2015 for your contribution in Biological control??**

**CRB:** Humbled, honoured and overwhelmed. I felt “Probably I should have contributed more to deserve this...now will I be able to live up to the expectations?”

**BSN: What is your advice to young females of entomology fraternity?**

**CRB:** It is important to document and record your work, not only to retrieve as and when required, it will also help in self assessment. Work hard, be sincere, work as a team, be organized not only at work, but in your personal life too. Enjoy work and spend quality time with family. Always try to keep aside some “ME TIME” to do what you enjoy doing!!

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Photo: Dr. S. N. Bhagyasree with Dr. Chandish Ballal during the interview.