



ASHIRWAD TRIPATHY

DEPARTMENT OF FOREST ENTOMOLOGY,
FOREST RESEARCH INSTITUTE, DEHRADUN,
UTTARAKHAND

Mr. Ashirwad Tripathy is pursuing his PhD degree from Department of Forest Entomology, Forest Protection Division, Forest Research Institute, Dehradun, Uttarakhand. He is currently working on the species diversity of ants (Formicidae: Hymenoptera) and their biotic interactions in two different forest types of Garhwal, Uttarakhand under the guidance of Dr. Arun Pratap Singh (Scientist G, Officer in Charge), F.R.I., Dehradun and co-guidance of Dr. Himender Bharti (Professor), Punjabi University, Patiala. His focus interest is to compare the ant diversity and taxonomy in Himalayan Moist Temperate Deciduous and Tropical Moist Shiwalik Sal forests of Garhwal, Uttarakhand. In addition, he is studying the potential distribution of important ant species in the high altitude and Shiwalik forests using ecological niche modelling. He is also looking into the biotic interactions of ants in the forest both at inter and intra specific level, and the variations in the antennal sensilla of ant species in different forest types. He states *“forests are not just a piece of land with vegetation but an ecosystem with multiple micro ecosystems inside it. As we go for sight-seeing landscapes, waterfalls, etc., similarly invertebrates encounter these every day in their micro level world”*. In future he intends to carry out studies on the gut microflora of ants in Indian context



ARUN SAI KUMAR

DEPT. OF AGRICULTURAL ENTOMOLOGY,
UNIVERSITY OF AGRICULTURAL SCIENCES,
RAICHUR, KARNATAKA, INDIA

Mr. Arun Sai Kumar is a Ph.D. student working on Fidelity of genetic interferences to improve the resistance against pod borer, *Helicoverpa armigera* in pigeonpea crop under the guidance of Dr. Rachappa. V. and Dr. Jaba Jagadish (ICRISAT, Hyderabad). Goal of the investigation is to explore non-utilized, potential candidate wild relatives to identify new genetic resources resistant to pod borers in pigeonpea and to determine the biochemical and molecular basis of insect resistance mechanisms in contrasting pigeonpea lines through non-targeted metabolomic profiling. Further he is planning to continue his research on *assessing genetic diversity of wild relatives of pigeonpea exhibiting resistance to pod borers* by using morphological, biochemical, and molecular markers.



HEMANT KUMAR

DIVISION OF ENTOMOLOGY,
ICAR-INDIAN AGRICULTURAL RESEARCH
INSTITUTE, NEW DELHI

Mr. Hemant Kumar is a PhD Scholar at the Division of Entomology, ICAR-Indian Agricultural Research Institute, New Delhi, in the major field of Insect Physiology. He is currently working on impact of heat stress on reproductive physiology of *Spodoptera litura* (Fabricius) (Lepidoptera: Noctuidae) under the guidance of Dr. Sagar D. (Scientist), ICAR-IARI. He is studying the expression of differentially expressed transcripts, variations in reproductive parameters, antioxidant enzymes and protein profile in male accessory glands of *Spodoptera litura* in response to heat stress at sublethal temperatures. The common cutworm, *S. litura*, is highly polyphagous affecting many major crops and a notorious pest of agriculture in Indian condition. Such studies can provide preliminary information to predict its future status, distribution, fitness and extent of damage under the changing climatic conditions. As a student of Agricultural Sciences, Hemant says, “*Mother Nature possesses its own regulatory mechanisms to maintain the balance of life on earth, which we refer as biotic and abiotic factors. And I see a great scope of exploration of this nature driven factors which can open innovative ideas for pest management*”. He intends to continue his future research on impact of climate change on insect pests.



AKSHATHA G

DEPT. OF AGRICULTURAL ENTOMOLOGY,
UNIVERSITY OF AGRICULTURAL
SCIENCES, RAICHUR, KARNATAKA, INDIA

Akshatha is pursuing her Ph.D. at the Dept. of Agricultural Entomology, UAS, Raichur under the guidance of Dr. M. Bheemanna. She is working on radiation induced inherited sterility technique for the management of pink bollworm. She is studying the substerilized (doses which carry the inherited sterility to further generations) gamma radiation (100, 150 Gy) induced inherited sterility in *Pectinophora gossypiella* on subsequent generations and the pheromone response of normal and irradiated males. In addition, she wants to know the efficiency of irradiated male *P. gossypiella* at different ratios under caged condition. She is also planning to study the *interaction of gamma radiation (100 Gy and 150 Gy) induced inherited sterility with diapause and proteomic changes on the haemolymph protein of pink bollworm*. She believes that this technique has a great potential and can be an important tool for the eco-friendly management of certain serious agricultural pests, and in future she intends to carry forward her research on SIT in other major insect pests.



SOWMYA M

DEPARTMENT OF BIOCHEMISTRY,
JAIN (DEEMED-TO- BE UNIVERSITY),
BANGALORE, KARNATAKA, INDIA

Sowmya M is pursuing Ph.D. in Biochemistry from Jain (Deemed-to- be University), Bangalore, Karnataka. She is currently working on effect of phytoncides on physiology and biochemistry of *Corcyra cephalonica* (rice moth) under the guidance of Dr. Kesavan Subaharan (Principal scientist, Division of Germplasm Conservation and Utilization ICAR-NBAIR, Bangalore). *C. cephalonica* is serious pest on stored cereals, pulses coffee and nuts. Management of stored product pest is difficult using chemical insecticides due to their ill effects on consumers. To counteract the detrimental effects of the insecticides being used to control this pest, she is working on effect of plant derived essential oils and constituents to control this pest. She exploiting plant derived essential oils and constituents for insecticidal activity against egg, larvae, and adult stages of *C. cephalonica* and also evaluating the effect plant chemicals on insect detoxification enzymes. She is also studying the effect of sub lethal doses of EOs and constituents on growth, development, and macromolecules of *C. cephalonica*. She is also elucidating the physiological and behavioural responses of *C. cephalonica* female moths to plant compounds. ***Due to their volatility, essential oils are particularly susceptible to biodegradation. To over this she is also working on advanced delivery systems to deliver active ingredients to the target species.*** She is eager to carry on with her research into the effectiveness of phytochemicals against other significant pests that attack stored grains.
