



# Plant-Insect Ecosystems Section

## OCTOBER 2021 NEWSLETTER

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## Winners of P-IE Design Contest Announced

We had 10 amazing entries to this year's design contest. Thank you to all the talented artists who participated. **James Earl Pey's** design was selected for first place and **Kirsten Pearson's** was selected for second place. Join us at the networking session at the annual meeting to see the first place design in action!

### 1st place



PLANT-INSECT  
ECOSYSTEMS

ENTOMOLOGICAL SOCIETY OF AMERICA

*"The logo depicts the interaction of butterfly and flower through pollination. The yin and yang symbol signifies the balance between the plant and the insect. The objective is to craft a representation that has balance, connection, and harmony. Each player in the ecosystem has its own function that can maintain or disrupt the ecological balance."*

- James Earl Pey

### 2nd place



*"For this logo, I chose a single beetle to represent the P-IE Section, as beetles can easily bring to mind well-known biological control agents, herbivores, and pollinators. To make the logo more cohesive, I included a stripe across the beetle's back to follow the path of the leaf's mid vein, and I positioned the beetle's legs to mimic lateral leaf veins."*

- Kirsten Pearson

# Upcoming Changes in Leadership

## New Representative to Science Policy Committee Selected

The P-IE Governing Council selected Dr. Monica Farfan of Colorado State University to be our next representative on ESA's Science Policy Committee. She will replace Dr. Keri Carstens.

## Changes to P-IE Section Governing Council

On 1 November, David Onstad will become Past-President, Rebecca Schmidt-Jeffris will become President, Surendra Dara will become Vice-President, and Cesar Rodriguez-Saona will become VP-elect. Nicole Quinn will replace Nicholas Larson as Early Career Professional representative on the Council. The Council thanks Past-President Jeff Bradshaw and Nick Larson for their service over the past few years.

## Networking Session at the Annual Meeting in Denver

The Session on 1 November should last about 90 minutes. The P-IE Governing Council decided to pre-record the Awards Ceremony this year. The video will be shown at the beginning of the Networking Session. However, we expect most of the winners to be present at the Networking Session, so we will be able to celebrate their accomplishments in-person, too. A 60-minute feedback session will follow ESA President Michelle Smith's short speech. During this time we will enjoy soft drinks and pie. The feedback session is the Governing Council's annual opportunity to engage directly with the members. Some of our best ideas for field tours and other activities come from these sessions. Some surprises will be revealed.

## Introducing New P-IE Undergrad Student Travel Award!

P-IE Section aims to increase the diversity, equity, and inclusion (DEI) engagement of under-represented undergraduates who are interested in insects. Visit <https://www.entsoc.org/p-ie-undergraduate-student-stem-travel-award> to learn more!

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## Get to Know a P-IE Member

**Dr. Priya Basu** is an Assistant Professor at Mississippi State University (MSU). Her new lab at MSU studies pollinator health and apiculture. She is going to co-mentor a graduate student with another faculty and another graduate student is joining in January. She also mentors several undergrad researchers. Her lab focuses on understanding the impacts of multiple stressors (individually and in synergy) on bee pollinator health and how best to mitigate them. She employs various techniques and tools across interdisciplinary approaches: multiomics, insect physiology, insect neuroethology, insect nutrition, insect toxicology, molecular ecology, apiculture, and pollina-

tion biology. Of all the stressors, her lab particularly looks into the impacts of poor nutrition, pesticides, mites, small hive beetles, and environmental factors on bee pollinator health. She works at the interphase of basic and applied sciences and coordinates with all our stakeholders (growers and beekeepers) as bee protection and crop protection are mutually inclusive.

### Building a bee diet database

As a new faculty member, we asked Dr. Basu to describe an exciting project in her lab.

"One project in particular that excites me is an USDA-AFRI funded project that Dr. Ramesh Sagili and I share. My lab is helping to build the first ever pollen nutrition database for all bee pollinators in North America. Currently, habitat for

bees is usually chosen based on relative attractiveness of the plants to the bees. What we are trying to do is analyze the nutritional quality of the various bee pollinated plants (crops, non-crop, native plants, and ornamentals) [CONT pg.3]



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## Building a bee diet database

and determine the pollen protein and lipid contents, amino acids, phytosterols, and metabolites. We are partnering with USDA and NRCS to build this database. I am also inviting my collaborators and training various citizen scientists to help collect pollen for us to build this database. Even though this project is only for three years, this is a lifelong commitment for me, and I see myself working towards expanding this database for years.”

Dr. Basu completed her Ph.D. in Zoology from the University of Calcutta in India. She studied the field realistic multiple pesticide exposures on two species of honey bees: *Apis dorsata* and *Apis cerana*. She was also involved with the Darwin Initiative project (collaborative project between India and UK) whereby she closely worked with both growers and beekeepers across multiple states in India. She received the Newton Bhaba Ph.D. Placement Fellowship, jointly awarded by the governments of India and UK, when she studied the gustatory perceptions in bumble bees exposed to pesticides at the Institute of Neuroscience in Newcastle University in UK. She completed a postdoc at Oregon State University’s Honey Bee Lab.

## Long distance relationships

Her position at MSU started about two months ago. She currently holds a Courtesy Faculty appointment at the Department of Horticulture, Oregon State University (OSU). We were curious to know what this entailed. Dr. Basu described it for us:

“Having a courtesy appointment at another university in addition to my tenure-track appointment at MSU may seem challenging but has actually been very advantageous. Even though both Universities are

geographically very distant, my colleagues and collaborators at both institutes share my passion of pollinator research. This gives me the opportunity to build new collaborations at MSU, while continuing the existing collaborations at OSU and I am fortunate to be able to utilize the best resources of both. Somewhat similar to having the best of both worlds (my home country in India and my adopted country USA). This also gives me an opportunity to mentor students officially at both institutes. Not to mention the perks of travelling to the Pacific Northwest often for our shared collaborative work.”

**“ We need to be innovative in how we teach remotely and adapt our experiment needs during the pandemic field season. ”**

Since this is a get to know a PI-E member, we wanted to know how Dr. Basu interacts with our section. She has been a member since she started working in the US and would love to be more involved with the events organized by PI-E. Also as an early-career professional with a rich multicultural background and the fortune of working in various labs across the world, she would like to give back to the entomology community and more importantly learn from the experts within our section.

## Lessons learned during Covid

As a closing, we asked about lessons from the still ongoing pandemic.

“Actually there are quite a few things that I learned during the pandemic: (1) We all value our family but having your loved ones thousands of miles away in another country makes it harder to stay calm during a pandemic; (2) How important undergraduate student interns are for the success of any lab and field experiments (shortage of help due to the pandemic); (3) We need to be innovative in how we teach remotely and adapt our experiment needs during the pandemic field season.”

“I am a lifelong learner and I have so much to learn now that I have started as an Assistant Professor. I am very grateful for all the help, support, mentorship and love that I have received over the years and continue to receive. As a new PI, I now realize what it takes to ensure that the lab is successful from an administrator’s perspective. The pandemic has restricted our social interactions and peer-to-peer connections. This is why we must make an extra effort to stay connected with students and peers alike. I am definitely learning and adapting to new ways of teaching during this period as well as being further cautious about the needs of my students and how best to help them.”

## We want your story!

Every other month we would like to showcase a PI-E member. **All members are welcome to nominate themselves or others to be featured. If you would like to be featured, please contact Kacie Athey [kathey@illinois.edu](mailto:kathey@illinois.edu).**

