



# The Center *for* **POLLINATOR RESEARCH** *at Penn State*



PHOTO: NICK SLOFF

Preserving and  
 Expanding Pollinator  
 Communities to  
 Benefit Global  
 Agriculture and  
 Biodiversity

The Center for Pollinator Research is committed to developing and implementing integrative, multidisciplinary initiatives focused on pollinator health, conservation, and management. Through research, education, outreach, and policy, center affiliates seek to ensure the success of critical pollinator communities in Pennsylvania and around the world.

### Using Every Resource to Save Pollinators

Dramatic declines in pollinator populations, including honey bees, are a source of great concern for researchers, farmers, beekeepers, and home gardeners alike. The loss of these vital insects has a strong negative impact on agriculture and food production worldwide. To combat the loss of valuable pollinator species, the Center for Pollinator Research employs

a variety of approaches that span several academic fields, involving local, corporate, and government organizations and reaching across continents. Emphasizing understanding, education, and advocacy, the overall strategy is exhaustive and pragmatic. Since its foundation, the center has made measurable strides toward achieving its goals of uncovering and correcting the causes of pollinator community deterioration.

### A Diverse and Committed Research Team

The center comprises a dynamic group of more than 25 independent faculty members, including researchers, educators, extension specialists, and outreach coordinators in multiple departments and colleges. We are all committed to understanding the factors affecting pollinator species and

developing and implementing creative strategies to improve the health of their communities.

We utilize a broad array of transdisciplinary research techniques to better examine pollinators and the natural and man-made threats they are facing. Our research programs are aimed at developing deep understanding of pollinator health at the genomic, physiological, organismal, and ecological levels.

### A Range of Varied Projects

Researchers at the Center for Pollinator Research are using all the techniques at their disposal to understand the threats to pollinators and develop approaches to mitigate those threats. We are examining the molecular, physiological, and behavioral responses of honey bees and other pollinators to parasites, pathogens, pesticides, and other stressors. We are using genomic tools and approaches to develop molecular methods for disease diagnosis and management. We are implementing and testing programs to improve pollinator management practices, including modifying natural and agricultural landscapes to support and expand pollinator communities. In the field, we are quantifying the value of native pollinators, assessing and modeling the impacts of invasive species, and evaluating managed and native pollinator health locally, nationally, and internationally. Together, these projects cover a wide range of issues and concerns.



PHOTO: ILLUSTRATION

# The Pollinator Research Center: *More Than Just a Place*



Questions? Get in touch with us.

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College of Agricultural Sciences

## The Value of Pollinator Research in the Local Community and Beyond

Penn State's Center for Pollinator Research is dedicated to sharing results at home and abroad. The center nurtures the next generation of pollinator researchers through training of undergraduates, graduate students, and postgraduate scientists. We share our findings with government, industry, and the public. We provide education and outreach to the public and advocate for policy that supports and strengthens our mission. By offering classes, events, and programs in physical and virtual spaces, we are able to communicate across a wider network than ever before.

## Education and Outreach

The center provides a host of educational experiences designed to engage students, independent researchers, professionals, and hobbyists. The Pollinator Garden Certification Program, created with collaboration from Penn State Extension Master Gardeners, helps homeowners design and build ideal pollinator environments, while the Honey Bee Queen Rearing Workshop, hosted annually by the center, trains beekeepers to breed locally adapted, disease-resistant bee stocks. In addition to local efforts, the center fosters collaborations and student exchanges in countries around the world, including Australia, Brazil, China, Germany, Israel, Kenya, Nepal, New Zealand, and the United Kingdom.

Outreach expands our efforts to a wider audience within central Pennsylvania. Several local pollinator gardens feature pollinator-friendly plants, including the Pollinator Garden at the Arboretum at Penn State, which

attracts more than 50,000 people each year. Center representatives develop and offer interactive exhibits at a variety of events, reaching more than 10,000 people per year. These tactics increase awareness of pollinator issues and help put what we have learned into practice in homes, businesses, and farms in the immediate area.

## Public Policy

Public concern has resulted in new government policies and legislation to promote research, education, and outreach that address declining pollinator populations. Center members actively work with policy makers to find creative approaches to improving pollinator health, provide congressional testimony on relevant pollinator issues, and act as members of the National Honey Bee Advisory Board, Häagen-Dazs Bee Board, and North American Pollinator Campaign Steering Committee. The center is also a Xerces Society research and education partner.

## A Global Response

Threats to pollination populations are global, and Penn State Pollinator Research is responding with global solutions. The center organized the first International Conference on Pollinator Biology, Health, and Policy in 2010. Since then, the conference has ballooned to include more than 230 university, industry, government, and nonprofit representatives from 15 countries. In 2011, the center attracted attendees from eight countries to the first international short course and symposium on harnessing emerging genomics technologies to study the biology and health of honey bees and other pollinators.

## You Can Help!

Here are some great ways to make your home and community friendly for pollinators:

- Plant a pollinator garden: visit our website to learn about the Pollinator Garden Certification Program
- Start your own honey bee colony: go to [beekeeping101.psu.edu](http://beekeeping101.psu.edu) to sign up for Penn State's Beekeeping 101 course
- Support policy makers and legislation in favor of pollinator conservation

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We gladly accept financial donations to fund our research, education, and outreach programs. Contact us for more information or visit [giveto.psu.edu](http://giveto.psu.edu) to donate to pollinator research through the College of Agricultural Sciences.

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