

Expanding Pollinator Habitats Through a Statewide Initiative

Abstract

Due to changing federal and state policy as well as increased community concerns about pollinators, assisting clients interested in pollinator health is taking more Extension agent time and resources. In addition, many gardeners tend to be beginners in need of support to recognize best management practices related to pollinating and beneficial insects. In Georgia, the Pollinator Spaces Project provides tools gardeners can use to create pollinator habitats, learn about pollinating and beneficial insects, and be recognized for their efforts. As a low-cost, agent-friendly program, it is a model that can be easily replicated in other states.

Keywords: [pollinator habitat](#), [pollinator health](#), [pollinators](#), [Georgia pollinators](#), [pollinator programs](#)

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Introduction

On March 21, 2017, the rusty patched bumble bee was listed as endangered under the Endangered Species Act (U.S. Fish and Wildlife Service, 2017). Also in 2017, the U.S. Environmental Protection Agency advised each state to create a managed pollinator protection plan (U.S. Environmental Protection Agency, 2017). These federal-level actions regarding pollinators have stimulated action at the state level. Georgia answered the call to create a state-level plan with Protecting Georgia's Pollinators. Locally, the policies delineated in Protecting Georgia's Pollinators have increased public awareness of pollinator issues, with many citizens showing interest in creating pollinator habitat and understanding the role of beneficial insects in their gardens.

Background

With the increased interest in pollinators, local Extension personnel are called on more often for assistance with pollinator gardening issues. It is not uncommon to find gardeners spraying broad spectrum insecticides throughout the growing season, thereby killing needed pollinators, or misidentifying pollinating insects as pests. Many pollinator gardens are overseen by teachers or community members with little to no gardening experience. With the increasing number of pollinator gardens, there are opportunities to educate and support novice gardeners on pollinator health and the role of all beneficial insects. Our experience has shown that many gardeners express enthusiasm for pollinator health and indicate a willingness to learn more.

Research has shown that creating a habitat to assist pollinators also assists other beneficial insects, such as pest predators and parasitoids (Wratten, Gillespie, Decourtye, Mader, & Desneux, 2012). By assisting in the creation of strong pollinator habitats, we in Extension help local gardeners grow insect populations needed to support strong garden ecosystems. In addition to addressing community needs, a pollinator habitat program aligns with national and state ecological and education standards. As a response to all of these issues, we created the Pollinator Spaces Project in Georgia.

Project Development

We determined that the key to a successful pollinator project was a user-friendly program that could be implemented easily by the state's 158 agriculture and natural resources Extension agents. The Pollinator Spaces Project comprises research-based training materials housed on a website (<https://ugaurbanag.com/pollinators>) and augmented with social media pieces, handouts, and seed packages. It is easily adaptable to individual county needs.

The first step in creating our statewide initiative was to develop the website and populate it with research-based information on pollinator plants specific to Georgia ecosystems (Harris, Braman, & Pennisi, 2016). The website content includes information on native Georgia plants to encourage sustainability (Hostetler & Main, 2010). The website also contains links to lesson plans for teachers, plans for habitat enhancement projects, and emphasis on best management practices. Additionally, we used social media platforms, such as a Facebook page and YouTube videos, to provide easily deliverable educational pieces.

Hard-copy materials we created include educational pamphlets and colorful plant lists that can be handed out in offices, at conference booths, or at farmers' markets. We also secured a grant to create project-specific seed packets. The appealing packet covers were designed by a local artist and include the URL for the project website and the Extension logo. As a result of the grant, we were able to make 4,000 packs of cosmos seeds available to agents for giveaways.

Statewide Program Use

After completing the development of all materials, we began conducting workshops on pollinator health. Many agents adopted the pollinator project in their plans of work and centered workshops and booth themes around the project, using the developed materials. At the local level, agents worked with their county partners on the project. For example, one agent worked with local growers to offer discounts to gardeners purchasing plants from the pollinator list. Another worked with local officials to add habitat to the county's green space. An agent in southern Georgia worked with a collaborator on an existing trail system to enhance the area by adding pollinator plants.

We found that school gardeners were especially interested in the program as it aligns with objectives in the Georgia school system's STEAM (science, technology, engineering, art, and math) certification. In addition to environmental science, the topic of pollinator health can be applied to many academic disciplines. Teachers have used the project in their classrooms and in afterschool clubs.

Results

During the first year of the program, 22 workshops were conducted with 621 attendees. Sixty pollinator gardens were created in 20 Georgia counties. Over 9,000 face-to-face contacts were recorded. The Pollinator Spaces

Project proved to be a statewide program with local impact. The agents appreciated having resources at little to no cost that they could readily incorporate in their existing work. The initiative also gave agents an easy way to be a visible part of the growing movement for pollinator health.

Recognition of efforts was an important aspect of the project. As new habitats were created, gardeners were asked to share their progress with us so that we could demonstrate behavior change. The gardeners sent in photos and details about their new habitats. In return, each received an artistically designed personalized certificate of participation via email. These certificates appear in community garden kiosks and on classroom walls across the state. They have been publically presented at garden open houses and school meetings, suggesting that gardeners want to show that their work has been recognized by a state organization.

Photos of the gardens were featured on the project Facebook page (<https://facebook.com/UGAcommunityandschoolgardens>) and in the "collection of gardens" section of the website. Teachers have indicated that they are grateful for this public feature of the project because it shows others outside their schools what they are doing with their gardens. Also, students like to see their photos on a public forum.

Conclusion

The low-cost, agent-friendly Georgia Pollinator Spaces Project serves as a model approach to supporting communities in improving their pollinator habitats and can be adapted by Extension professionals for use in other states. It is our hope that the program will result in an increase in pollinators as well as other beneficial insects. More research is needed to measure the benefits of the program for pollinator health; however, we expect that the new habitats and the use of best management practices will increase overall garden health.

References

- Harris, B. A., Braman, S. K., & Pennisi, S. V. (2016). Influence of plant taxa on pollinator, butterfly, and beneficial insect visitation. *HortScience*, *51*(8), 1016–1019.
- Hostetler, M. E., & Main, M. B. (2010). Native landscaping vs. exotic landscaping: What should we recommend? *Journal of Extension*, *48*(5), Article 5COM1. Available at: <https://www.joe.org/joe/2010october/comm1.php>
- U.S. Environmental Protection Agency. (2017). Policy to mitigate acute risk to bees from pesticide products. Washington, DC: Office of Pesticide Programs.
- U.S. Fish and Wildlife Service. (2017). Endangered and threatened wildlife and plants; endangered species status for rusty patched bumble bee. *Federal Register*, *82*(7), 3186–3188.
- Wratten, S. D., Gillespie, M., Decourtye, A., Mader, E., & Desneux, N. (2012). Pollinator habitat enhancement: Benefits to other ecosystem services. *Agriculture, Ecosystems & Environment*, *159*, 112–122.

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