

Riverwood Plantation Pollinator Outdoor Classroom



Site Selected for the Riverwood Pollinator Garden



Creation of the garden

Youth Pollinator Presentation



A Youth Volunteer Enjoying the Monarchs



ANA CHRISTINA

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LOCAL LIVING

Riverwood Plantation Pollinator Outdoor Classroom



Osmia lignaria (Mason Bee) on a Sunflower plant



Hemaris difinis (Snowberry Clearwing Moth) on Purple Verbena



Archilochus colubris (Ruby-throated Hummingbird) on Bee Balm



Danaus plexippus (Monarch Butterfly) on Cosmos



Welcome to the Riverwood Plantation Pollinator Garden

The Little Things That Run the World

How YOU Can Help the Pollinators



Bee mindful of **NATIVE** species. Pollinators are "best" adapted to native plants which are more tolerant of drought and poor soils.



Bee **BOUNTIFUL**. Plant big patches of each plant species.



Bee **CHEMICAL FREE**. Types of pesticides: Insecticides - insects, Herbicides - plants, Rodenticides - rodents, Bactericides - bacteria, Fungicides - fungi, and Larvicides - larvae.



Bee **SUNNY and HYDRATED**. Provide areas that are sunny, many pollinators are energized by warmth of the sun. Provide clean and shallow water sources.



Bee **GENTLE**. Most bees will avoid stinging and will use that only for self defense.



Bee **GENEROUS**. Provide nesting boxes for native solitary bees to place their eggs and host plants for butterflies to place their eggs. The host plant will provide food for the butterfly larvae (caterpillar).



Bee **SHOWY**. Flowers should bloom in your garden throughout the growing season.



Bee **THANKFUL**. Every time you enjoy a beautiful flower or eat an apple be thankful for our pollinators. Pollinators include native and honey bees, wasps, flies, moths, butterflies, bats and more. It is estimated that 1 out of every 3 bites of food comes from a plant visited by bees or other pollinators.



Supported by:



Pollinators, Riverwood Plantation HOA, Augusta Area Master Gardeners, Local County UGA Extension Offices



Urbanus proteus (longtailed Skipper Butterfly) on Zinnia



Agraulis vanillae (Gulf Fritillary Butterfly) on host plant Passion Vine



Papilio polyxenes (Black Swallowtail Butterfly) on host plant Golden Alexander



Danaus plexippus (Monarch Caterpillar) on host plant Butterfly Weed Milkweed

Sign Created for the Pollinator Garden

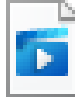


Installation of Irrigation and Multi-use Trail Extension



Girl Scouts Installing the Picnic Table in 2020

Riverwood Plantation Pollinator Outdoor Classroom



Riverwood Plantation 2019.mp4

Video can also be found on the Riverwood Plantation Pollinator Garden Facebook page.

Facebook page (<https://www.facebook.com/RWPpollinatorgarden>)

Riverwood Plantation Pollinator Outdoor Classroom



Williams, T.*¹, Dzurny, K.²

- 1 County Extension Coordinator, University of Georgia Extension, Columbia County, Appling, Georgia 30802
- 2 Extension Master Gardener Volunteer, RWP Garden Project Coordinator, Columbia County, Evans, Georgia 30809



SITUATION

The decline of pollinators has scientists concerned about resulting crop pollination deficits, diminishing native biodiversity, and national and global food scarcity. In America, many species of insect, bird, and mammal contribute to pollination of food plants. Over the last decade, widespread media attention has been given to the decline in honeybee populations due to their prominence in pollination efforts for food production and economic impact, but all pollinators populations are in danger. The five causes of pollinator decline identified by the National Park Service are habitat loss, non-native species, pesticide use, climate change, and parasites and diseases (National Park Service, 2021).

In 2014, President Obama wrote a memorandum that called for increased federal action towards protecting pollinator species. The resulting federal plan developed by the Pollinator Health Task Force in 2015 addresses includes action steps:

- 1) Conduct research to understand, prevent, and recover from pollinator losses
- 2) Expand public education programs and outreach
- 3) Increase and improve pollinator habitat
- 4) Develop public-private partnerships across all these activities

As a result of the federal pollinator health plan, each individual state was tasked with developing a customized strategy with recommendations on improving pollinator health in their area (Environmental Protection Agency). The Georgia plan, titled Protecting Georgia's Pollinators, was developed by the University of Georgia Department of Entomology and the Georgia Department of Agriculture in 2016 (Griffin, 2016). For both federal and state programs, education opportunities on pollinators is a critical component of protecting pollinator species.

OBJECTIVES

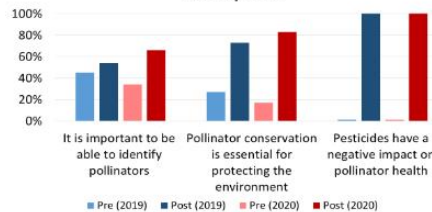
- Design and install pollinator garden and outdoor classroom in the Riverwood neighborhood
- Host hands-on programs to increase participant knowledge of pollinators and encourage adoption of Pollinator Protection Practices

REFERENCES

1. EPA – The New EPA Bee Advisory Box. November 2013, <https://www.epa.gov/sites/production/files/2013-11/documents/bee-label-info-graphic.pdf>
2. Griffin, Becky, Pollinator Protection Plan for Georgia, January 20, 2016 <https://ugaurbanag.com/pollinator-protection-plan-for-georgia/>
3. Obama, Barack, Presidential Memorandum – Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators, June 20, 2014, <https://obamawhitehouse.archives.gov/the-press-office/2014/06/20/presidential-memorandum-creating-federal-strategy-promote-health-honey-b>
4. Pollinator Health Task Force, National Strategy to Promote the Health of Honey Bees and Other Pollinators, May 19, 2015, <https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/Pollinator%20Health%20Strategy%202015.pdf>
5. Spivak, M. (Writer). (2013, June). Why bees are disappearing [Video file]. Retrieved from https://www.ted.com/talks/marla_spivak_why_bees_are_disappearing
6. Theobald, Tom. "Do We Have a Pesticide Blowout?" Bee Culture (2010): 66-69.



Figure 1: Knowledge Change of Program Participants



2019 Activities:

- Hosted over 35 families for the UGA Great Pollinator Count
- Designated as Certified Monarch Watch Waystation
- Hosted five educational programs with 56 attendees

2020 Activities:

- Hosted over 20 families for UGA Great Pollinator Count
- Designated as Certified Monarch Watch Waystation
- Hosted three educational programs with 21 attendees*

*Due to COVID-19 restrictions, in 2020, the garden has only been able to provide 3 educational opportunities reaching 21 attendees (12 adults and 9 youths). Two scheduled events, April Shower Program and May Flowers Program, were canceled due to COVID-19.



METHODS

Riverwood Plantation is a community consisting of 3,000 acres and 1,500 homes that highlights nature and a strong sense of community. Locating the garden centrally in the community was key to successful educational efforts on the importance of pollinators, beneficial insects, and proper plant selection.

In May of 2019, the Riverwood Home Owners Association, Georgia Power, and Columbia County Extension began clearing the proposed garden, a 4,500 square foot space located between residential developments and adjacent to Greenbrier schools. Once cleared, Master Gardener Extension Volunteers added plants donated from local business and supplies procured with grant funding from Monarch Watch, Augusta Area Master Gardeners, Plant America, and Georgia Association of Conservation Districts.

Plant selections were made by referring to publications produced by UGA extension and the Xerces Society. Criteria used for plant selection included their native range, time of year for flowering, growth pattern, and preferred pollinator species.

To allow for continuing communication, Master Gardener Project Leader, Kelly Dzurny, created a Facebook page to ensure community partners were kept up-to-date on educational opportunities related to the pollinator garden.

Evaluation

All educational programs were evaluated using voluntary pre- and post-program surveys. Participants were asked to agree or disagree with the following statements prior to and after the program:

- 1) It is important to be able to identify pollinators
 - 2) Pollinator conservation is essential for protecting the environment
 - 3) Pesticides have a negative impact on pollinator health.
- Data from the evaluations can be reviewed in Figure 1.

