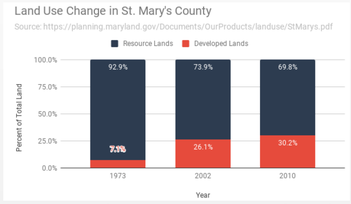
What's the Buzz on Campus?: Opportunities for Pollinator Habitats on College Campuses

By: Meghan Petenbrink |St. Mary's College of Maryland

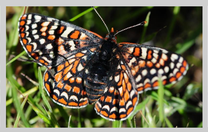
St. Mary's College of Maryland



St. Mary's County has experienced a sharp decline in available pollinator habitats due to an increase in developed lands. St. Mary's College of Maryland's (SMCM) campus has large green lawns void of branches, leaves, or 'weeds' which pollinators use for shelter. There are intentional changes that can be made to increase aesthetic beauty and availability of shelter, food, and water for pollinators. **The aim of this project is to increase pollinator habitats on the college campus and bring attention to the importance of protecting and preserving land for pollinators.**

Pollinators

- Bee populations have been declining since 1945.[1]
- In Maryland, there are over 400 species of bees and 150 species of butterflies.[2]
- Pollinators provide over $3 billion in fruit-production services in the United States.[3]



- Pollinators suffer from habitat destruction. Increased monoculture limits flowering plant species removing essential pollinators.
- Increased urbanization promotes ornamental lawns which provide little or no nutrition to pollinators.
- Pollinators support ⅓ of the world's food supply and between $235-$577 billion worth of food production services.[4]

Plants

Incorporating native species into campus design is imperative. Native species require less water, fertilizers, herbicides, pesticides, pruning, and soil amendments. Native pollinators prefer native plants.[5,6] It is also important to vary species and bloom period to make sure pollinators have food all season long.

Left to right top: Black-eyed Susan, blazing star, bee balm
Left to right bottom: Little bluestem, cardinal flower, milkweed

Table 1: Bloom periods for Pollination Station

Species	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.
Common lilac									
Butterfly bush									
Black-eyed susan									
Pink tickseed									
Wild daffodil									
Salvia									
Purple coneflower									
Winterberry									
Wild bergamot									
Bee balm									
New England aster									
Blazing Star									
Hydrangea									
Milkweed									
Cosmos									
Dahlia									
Daisy									
Zinnia									
Marigold									
Cardinal Flower									

Table 2: Bloom periods for meadow plants

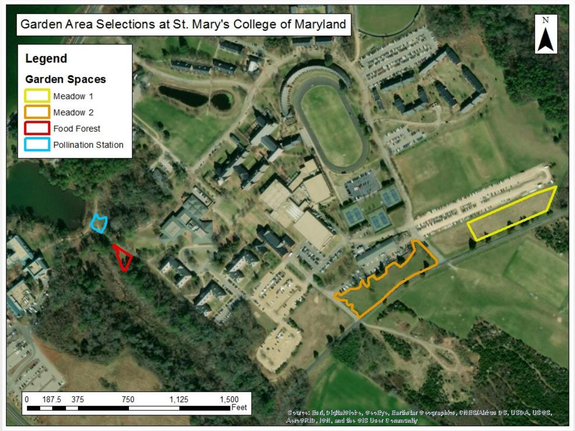
Species	May	June	July	Aug.	Sept.	Oct.	Nov.
Purple coneflower							
Black-eyed susan							
Milkweed							
Common milkweed							
Yellow wild indigo							
New England aster							
Joe-pye weed							
Gray goldenrod							
Purple giant hyssop							
Indiangrass							
Little bluestem							
Boltonia							
Wild bergamot							
Obedient plant							
Beardtongue							

Designs

Pollination Station focuses on the interaction between humans and pollinators, bringing awareness to the connection between pollinator habitats and environmental health.

The design for Food Forest highlights the need for pollinators as a vital part in the process of human food production.

Campus Locations



Implications

- Increase pollinator habitats at SMCM
- Facilitate meaningful collaboration between campus departments, students and faculty.
- Model thoughtful pollinator landscaping for other educational institutions.
- Provide opportunity for SMCM to become Bee Campus USA certified

Acknowledgements

St. Mary's College of Maryland specifically the Environmental Studies Department, the Department of Planning and Facilities, the Office of Sustainability, Dr. Ellen Kohl, Contech Inc., Kaitlin Aaby, Sam Berenschot-Bucciero, Kyla Garvey, Evelyn Hernandez, Hannah Kraus, Rowan Limbach, and Anna Nelson

References

[1]National Research Council (U.S.), & Committee on the Status of Pollinators in North America. (2007). *Status of Pollinators in North America*. Washington, D. C.: National Academies Press.
[2]Wildlife and Heritage Service. (2018). What's the Buzz: All About Pollinators. [3]Kopec, K., & Burd, L. A. (2017). Pollinators in Peril: A systematic status review of North American and Hawaiian native bees. Center for Biological Diversity.
[4]Lumpur, K. (2016). Pollinators vital to our food supply under threat. Retrieved from http://www.fao.org/news/story/en/item/384726/icode/
[5]Frankie GW, Thorp RW, Schindler M, Hernandez JL, Ertter B, Rizzardi M (2005) *Ecological patterns of bees and their host ornamental flowers in two northern California cities*. Journal of the Kansas Entomological Society 78:227–246;
[6]Frankie GW, Thorp RW, Hernandez JL, Rizzardi M, Ertter B, Pawelek JC, Witt SL, Schindler M, Coville R, Wojcik VA (2009) *Native bees are a rich natural resource in urban California gardens.* California Agriculture 63:113–120