



Bee City USA Annual Report Pollinator Conservation & Education 2019



Lake City, South Carolina

EDUCATION & OUTREACH



The youngest campers learned the concept of pollination through colorful hands-on games and by interacting with one another like bees



A favorite, summer campers took turns donning a beekeeper's suit, learned about safety around stinging pollinators and their incredible benefits, and made fun craft antennae.

Moore Farms Botanical Garden, our community's premiere botanical institute, hosted three separate educational opportunities for a diverse crowd of students from different socioeconomic backgrounds. In May, we hosted a group of high-schoolers from our state's Governor's School to learn about flower morphology, leaf adaptations, and native pollinators. Then we held two week-long camps in June overlapping Pollinator Week, Culinary Camp and Garden Detectives, both geared towards younger students. Culinary Camp focused on knowing where produce actually comes from, how to grow and harvest veggies, and the critical role of pollinators in having diverse crops each summer. Garden Detectives focused on pollinator behavior, morphology, and importance and this was taught through lots of field activities and games, observing insects on plants, and thoughtful indoor discussions.



Our summer youth groups lovingly raised a pollinator mascot who they dubbed "Phil" and watched as he metamorphosed from caterpillar to butterfly, nourished by tasty fennel sprigs.



Culinary campers learned about the miracle of fruit pollination and learned to appreciate the nuanced flavors of different varieties of the same fruit



Summer campers enjoyed various local honeys, learned how it's derived from honey and the incredible efforts by bees to produce this perfect food

In addition to scheduled pollinator-focused summer camps, our expert garden staff is typically asked 3-5 times yearly by area garden clubs to speak on Pollinator Conservation and how to provide habitat in one's own backyard. Attendance is usually 15-30 participants at each presentation, and attendees go home with helpful handouts, inspiring ideas, and bags of native seed. Horticulturists on staff have also been repeatedly featured on SC's award-winning educational live-recorded program "Making It Grow" hosted by Amanda McNulty, discussing honeybees and native pollinator conservation in an expert panel setting. Live samples of pollinator-supporting plants were also brought into the studio to show-and-tell on television.

POLLINATOR HEALTH & HABITAT

Because of our city's unique relationship with its local affluent botanical garden, most of 2019's pollinator habitat enhancement and creation was performed by employees of said garden, although the hope is to use more volunteer help in the future to continue the enhancement process.

The hired horticulturists of Moore Farms Botanical Garden planted an abundant flower garden around our newest sculpture acquisition with several pollinator habitat, rest, forage, and larval nesting plants. Woody/perennial selections included phlox, milkweed, bee balm, aster, salvia, gaillardia, gardenias, and catmint. Roughly 15 volunteer participants (citizens, business owners, former farmers) created an urban community raised beds-style vegetable garden which funneled excess produce to our city's boutique hotel restaurant and was featured on the dinner menu weekly.

Over at Moore Farms, the longstanding vegetable garden there contributed its abundant herbs, greens, and summer produce not to restaurants, but to the newly erected Community Resource Center. Every other week of summer, families could discreetly pick up picked, cleaned, bagged and labeled produce,

providing their children with healthful food (along with clothing and other essentials) in a way that respected their dignity and privacy.

Also located at the botanical garden is a maintained "Stumpery" which transforms excavated, upended tree stumps into a funky sculptural landscape that provides ample nesting sites and safety for ground-dwelling species. Here, and in select areas of the downtown shopping district, clovers and flowering weeds in right of ways are allowed to grow in times of ornamental flower scarcity (cool seasons) to hold over our pollinators. Patches of native milkweed species are maintained with cutting back and seasonal mulching so that they provide reliable larval support each summer for our migrating Monarch colonies.



Eight towering upright magnolias planted in March 2019 flowered shortly after with a bright lemony fragrance



Moore Farms horticulturists methodically install a fringetree at Lake City's Ron McNair memorial park and library complex



Every year, more landscape attention is paid to the boutique hotel courtyard, with 2019 seeing the installation of flowering vines, huge new permanent containers of perennials, augmented flowerbeds via the addition of perennial herbs

In fulfillment of our community's yearly Tree City USA planting requirement, (85) flowering trees (LOTS of native magnolias) were installed with a cumulative dollar value of \$8,656.15 throughout the 36 acre greenscape. Some of these tree species are fairly tolerant of wet soils, so they were strategically planted along our resident Rain Swale garden, which features an array of perennials (cestrum and swamp hibiscus, as well as flowering cacti on the drier banks), flowering irises, berrying weeping Yaupon hollies, and St. John's Wort.

In addition to creating new pollinator welcoming spaces and enhancing the old, both the botanical garden and urban garden staffs have committed to using the least toxic compounds possible for pest, fungal, and weed control and application is performed on still, non-windy days to prevent drift and at the beginning of the day before pollinators have a chance to activate.



A modern steel geometric artwork is softened by flowering plant material, grasses, a native palm and trees, with a meandering pathway for visitors to engage with art and plants alike



This green space has filled out tremendously in 3 years and careful plant selection ensured an array of flowers and year-round bloom window (also thanks to a forgiving climate and ample rains)

POLICIES & PRACTICES



Roadside plants typically labeled "weeds" like clovers, are not just tolerated, but intentionally sown by the bag-fulls for wintertime bee forage



An example of produce harvested from the community garden that was not treated with chemicals. The hitch-hiking snails are manually removed and set aside because they're not harming anything



Whether it's a strong chemical agent or horticultural oil, we hold ourselves to strict personal protective equipment standards and record-keeping. A noticeable shift towards using biological controls, horticultural oils, and simple scouting and selective pruning has been trending



Horticulturist sprays diluted neem oil to smother persistent scale on a rare magnolia on a still, cloudy day with low pollinator presence. Neem is non-toxic to bees and most pollinators as insects must eat the treated plant itself to be killed, and bees don't act in this way.

A marked shift from all-chemical to mostly-mechanical/scouting-based control has happened over the last 1-2 years, with very seldom chemical application to nuisance pests and weeds.

We have been very fortunate to increase both our botanic garden and downtown staff sizes, so more hand weeding, scouting and removal of insects and damaged foliage is finally reasonable.

At our year-end budget review, we realized spending in the chemical category was far less than the year of 2018 yet the landscapes looked their best ever, and we were so excited at our much reduced dependence on inorganic or harmful agents.

Recommended Locally Native Plant Species List — not available

Regional Native Plant Supplier List — not available

Pollinator Friendly Integrated Pest Management Plan — not available



Local school children harvest produce for the Community Resource Center's food pantry and identify pests as they handle the plants

CONTACT US!



Phenomenal youth educator Nina Franklin shows summer campers the tools and gear necessary to get up close and personal with domesticated honey bees



City horticulture supervisor Bradley Roberts carefully installs 21 trees to enhance and beautify a formerly barren right of way



Moore Farms horticulture manager Katie Dickson takes a macro photograph of a pollen-carrying bumblebee

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