

# Bee Campus USA - University of Missouri

Report on 2022

## Pollinator Habitat Creation & Enhancement

Creation: MU's A.L. Gustin Golf Course planted a new acre-size plot consisting of 20-25 species of wildflowers. About 20 children and 20 adults from the Kids in Nature Daily program assisting with planting the plot. Enhancement: With assistance from MDC Community Conservation cost share, University of Missouri Landscape Services staff conducted a series of prescribed burns on areas they are converting from invasive turf species to Missouri-native plants. With the turf killed and bare soil exposed, the crews then seeded with a diverse mixture of native wildflowers and grass. These restoration efforts help sustain healthy forests, fish, and wildlife, while decreasing mowing costs. On MU's Columbia campus, students and staff will soon see more native plants, pollinators, and birds while walking to work and to class. For more information on community conservation, visit: [mdc.mo.gov/community-conservation](http://mdc.mo.gov/community-conservation). The following article was published in Vox Magazine, published by the student of the MU School of Journalism: <https://bit.ly/45ZWYSA> The City of Columbia and numerous community members also take a great interest in pollinator habitat. Following are two articles that appeared in the local newspaper, the Columbia Missourian: Roadside Pollinator Program generates buzz in Columbia [https://www.columbiamissourian.com/news/local/roadside-pollinator-program-generates-buzz-in-columbia/article\\_698c5c96-e5ac-11ec-bf60-d3910dac5604.html](https://www.columbiamissourian.com/news/local/roadside-pollinator-program-generates-buzz-in-columbia/article_698c5c96-e5ac-11ec-bf60-d3910dac5604.html) West Ash Plemmons Pollinator Day [https://www.columbiamissourian.com/news/local/pollinators-planting-and-painting-west-ash-neighbors-gather-for-plemmons-pollinator-day/article\\_6ff1b4de-e51e-11ec-aa66-cff04d587a02.html](https://www.columbiamissourian.com/news/local/pollinators-planting-and-painting-west-ash-neighbors-gather-for-plemmons-pollinator-day/article_6ff1b4de-e51e-11ec-aa66-cff04d587a02.html)

*How many habitat projects did you help to create or enhance last year?*

1

*How many total square feet of habitat were created or enhanced?*

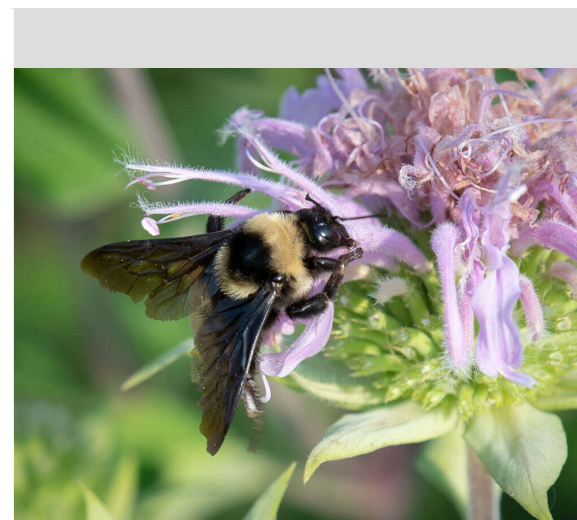
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*How many volunteers helped with those projects?*

40

*Please check all that describe the habitats your affiliate helped to create or enhance last year with pollinator benefit in mind.*

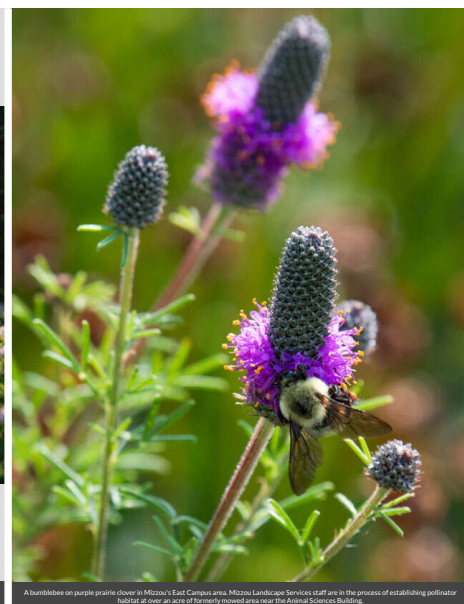
- Other



Bumblebee on bee balm at Mizzou's A.L. Gustlin Golf Course. Staff at Gustlin, in partnership with local conservation groups and community members, have established pollinator plots throughout the course.



Honeybees swarm around the hives at Mizzou's A.L. Gustlin Golf Course. Boone County Regional Beekeeper's Association installed the hives at the edge of one of Gustlin's pollinator plots to see if a bumblebee queen. The group has also been able to relocate colonies here from inconvenient spots on campus and the yards of local homeowners.



A bumblebee on purple prairie clover in Mizzou's East Campus area. Mizzou Landscape Services staff are in the process of establishing pollinator habitat at over an acre of formerly mowed area near the Animal Sciences Building.

## Education & Outreach

University of Missouri hosted events: March – May 2022 Osher@Mizzou Adult learning class: Choosing Attractive Native Trees and Shrubs to Benefit Ecosystems and Home Gardens. Drs. Michael Chippendale and Chris Starbuck, emeritus faculty members in the Division of Plant Science & Technology at MU, discussed the importance of forests, trees and shrubs on a global scale as well as native trees, shrubs and other perennials best adapted to grow in mid-Missouri. The instructors shared ways to select, cultivate and protect these plantings so that they can reach their full potential in home gardens. March – May 2022 Master Pollinator Steward Program. Taught by University of Missouri Extension specialists, this class taught participants about the critical role pollinators play in the production of most fruits and vegetables. This year's class had 50 participants. April 2022 Brown Bag “Lunch and Learn” Seminar Series – Exploring Missouri’s Historic Landscape: Prairies, Savannas, Woodlands, Forests, Glades and Swamps – was presented by Doug Wallace, retired ecologist from the USDA – Natural Resources Conservation Service and the Missouri Ecological Classification Project. July 2022 Mizzou Botanic Garden/Landscape Services hosted Missouri Prairie Foundation's Director of Prairie Management Jerod Huebner to review progress on turf-turned native prairie-type plantings. Huebner has been advising MUBG Operations Manager Blair Crosby on the project, launched with a Missouri Department of Conservation Community Conservation Grant: MU Habitat and Pollinator Restoration. The project replaces 4.2 acres of fescue turf with native Missouri prairie and wildflower plantings. Benefits include the reduction of weekly mowing activities, thereby reducing landscaping expenditures, while at the same time creating pollinator, bird and wildlife habitat. October 2022 Every October, more than 2,200 K-12 students visit Bradford Research Farm to learn about corn, soybeans, wildlife pollinators and more. <https://showme.missouri.edu/2022/photo-gallery-bradford-research-farms-pumpkin-patch/> Other events and activities: April 2022 Mizzou Botanic Garden participated in the City of Columbia’s annual Earth Day celebration with a booth that featured free White Oak saplings and a tour of the native trees and shrubs on the MU

campus/Mizzou Botanic Garden and the benefits they provide. The tour was led by Associate Professor Emeritus Dr. Chris Starbuck. August 2022 Mizzou Botanic Garden's Friends board recently completed a strategic three-year plan of action, which includes more outreach and connection with people living in mid-Missouri, students, parents, alumni, faculty, staff and visitors to campus. One of the board's subcommittees, Garden Programs, has prioritized a more formal, organized offering of garden tours. Interested parties can request a tour from the home page of MUBG's website:

[garden.missouri.edu](https://garden.missouri.edu). November 2022 Mizzou Botanic Garden hosted the GrowNative! annual meeting, which was the first in person meeting since the pandemic. Grow Native! is the native plant marketing and education program of the Missouri Prairie Foundation that helps protect and restore biodiversity by increasing conservation awareness of native plants and their effective use in urban, suburban, and rural developed landscapes. Grow Native! aims to significantly increase the demand and use of native plants in the lower Midwest—Missouri, southern Illinois, eastern Kansas, northern Arkansas, northern Oklahoma, and southern Nebraska. (Source: <https://grownative.org/about/>). Mizzou Botanic Garden and Mizzou's Center for Agroforestry are an institutional members of GrowNative!. Mizzou's A.L. Gustin Golf Course pollinator conservation Gustin is the first college golf course in the country to be certified by Audubon International and has been recognized as an Audubon Cooperative Sanctuary since 1997. The course is recognized for its wildlife habitat management, water conservation and environmentally friendly turf management practices. The Director and Superintendent regularly give tours of the course to other golf course managers who want to implement conservation practices on their own courses. The course has 26 bluebird nesting stations, and staff has counted 3,150 fledglings on their bluebird trail since its inception in 1994. They also have six beehives and have prepared six one-acre or larger pollinator plots throughout the course. (Source: <https://gustingolfcourse.com/about>) In addition to the events listed above, a guest columnist writing for the Mizzou Botanic Garden penned the following articles for the local paper, the Columbia Missourian: Add color in winter landscape with winterberry holly

[https://www.columbiamissourian.com/opinion/local\\_columnists/add-color-in-winter-landscape-with-winterberry-holly/article\\_15ce176c-7fac-11ed-9069-9b99dc9a4509.html](https://www.columbiamissourian.com/opinion/local_columnists/add-color-in-winter-landscape-with-winterberry-holly/article_15ce176c-7fac-11ed-9069-9b99dc9a4509.html) Guest Commentary: fall out of love with your lawn. Turn to native landscapes instead.

[https://www.columbiamissourian.com/opinion/local\\_columnists/guest-commentary-fall-out-of-love-with-your-lawn-turn-to-native-landscapes-instead/article\\_42a23d64-1c1e-11ed-acbf-43f2aa77302e.html](https://www.columbiamissourian.com/opinion/local_columnists/guest-commentary-fall-out-of-love-with-your-lawn-turn-to-native-landscapes-instead/article_42a23d64-1c1e-11ed-acbf-43f2aa77302e.html) Plant it and they will come

[https://www.columbiamissourian.com/opinion/local\\_columnists/plant-it-and-they-will-come/article\\_4c518e54-c9a4-11ec-8107-7baeb777bf1d.html](https://www.columbiamissourian.com/opinion/local_columnists/plant-it-and-they-will-come/article_4c518e54-c9a4-11ec-8107-7baeb777bf1d.html) A seed of an idea that took root is flourishing

[https://www.columbiamissourian.com/opinion/local\\_columnists/a-seed-of-an-idea-that-took-root-is-flourishing/article\\_c6e5064a-b447-11ec-9ff9-cbb16415fd02.html](https://www.columbiamissourian.com/opinion/local_columnists/a-seed-of-an-idea-that-took-root-is-flourishing/article_c6e5064a-b447-11ec-9ff9-cbb16415fd02.html) MU Extension published the following pollinator-related articles and disseminated them through social media:

<https://extension.missouri.edu/news/supersized-moth-looks-like-a-hummingbird-5710>

<https://extension.missouri.edu/g9499>

*How many pollinator-related events did your affiliate host or help with last year (in total)?*

5

*How many people attended those events (in total)?*

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## Courses & Continuing Education

MU Extension offers a (non-credit) Master Pollinator Steward Program. In 2022, the weekly sessions were March through May and 50 people participated. <https://extension.missouri.edu/programs/master-pollinator-steward> Missouri is the first state chapter of the national Heroes to Hives program. Heroes to Hives is a unique program offered through Michigan State University Extension that seeks to address financial and personal wellness of veterans through free professional training and community development centered around beekeeping. Veterans leave the program with a broad depth of beekeeping knowledge, as well as personal and professional relationships that open up new opportunities and ensure long-term peer support. Our students understand the importance of pollinators in US agriculture and stand to protect managed honeybees through small-scale sustainable beekeeping operations. Heroes to Hives students participate in a 9-month comprehensive education program that couples online lectures with hands-on learning. Students receive 2-6 hours of lecture content every month from March-November that is pre-recorded so that they can learn at their own pace. On-ground training takes place April-October at our Heroes to Hives apiary located on the University of Central Missouri Mitchell Street Farm and MU Southwest Research Center. Hands-on training includes hive handling, hive inspections, pest and pathogen management, and beekeeping ergonomics. Students who complete the course are eligible to receive a certificate of completion from Michigan State University. (Source:

<https://extension.missouri.edu/programs/heroes-to-hives> MU Extension also maintains a wealth of information in free,

downloadable PDF's available to the public: Pollination Mechanisms and Plant-Pollinator Relationships

<https://extension.missouri.edu/publications/m402> Honey Bees as Pollinators, Their Habitats and Products

<https://extension.missouri.edu/publications/m403> Native Insect Pollinators and Their Habitats

<https://extension.missouri.edu/publications/m404> Conserving Missouri's Wild and Managed Pollinators

<https://extension.missouri.edu/publications/m405>

*How many of your for-credit courses included pollinator-related information last year?*

*How many students attended those for-credit courses?*

*How many of your continuing education courses included pollinator-related information last year?*

1

*How many participants attended those courses?*

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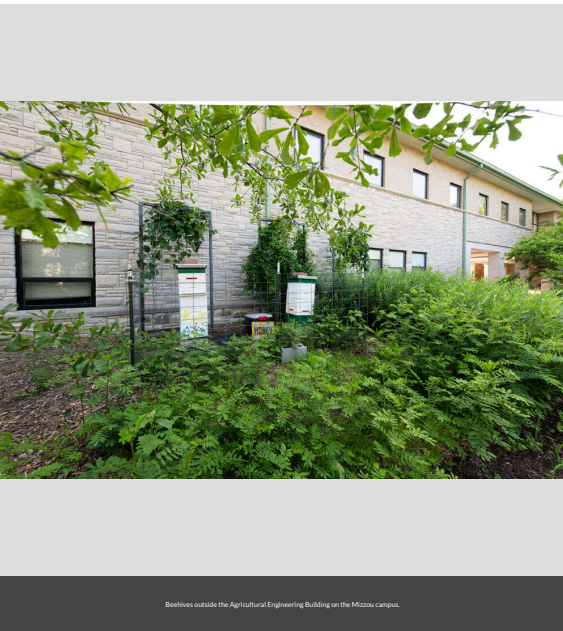


## Service-Learning

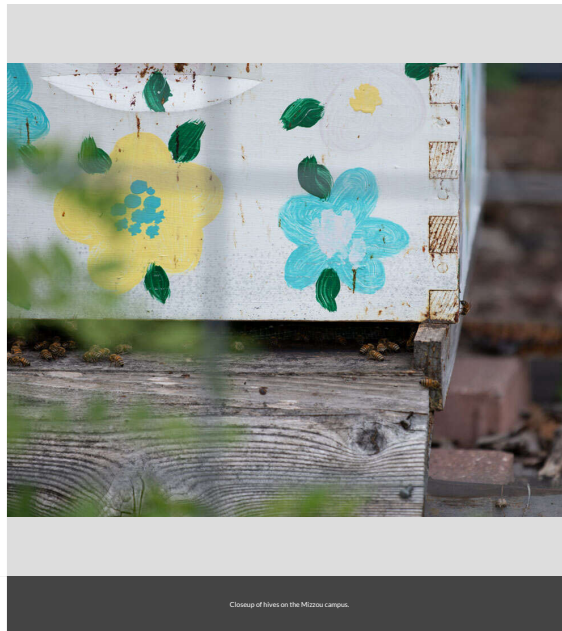
The student organization Sustain Mizzou maintains beehives on campus and hold periodic events and meetings related to beekeeping. April 27 – Sustain Mizzou Beehive Checkup September 14 – Sustain Mizzou Beekeeping general meeting: Climate Anxiety September 28 – Beekeeping general meeting: locomotion One distinct champion of this program is student George Frees. Details can be found in the following article: Getting A's and keeping bees: George Frees has been a beekeeper since he was 7 years old. Now, the sophomore brings his passion and expertise to campus as he cares for some of our smallest black and gold friends. <https://showme.missouri.edu/2022/getting-as-and-keeping-bees/>

*How many service-learning projects did your campus host and/or support to enhance pollinator habitat on and off-campus?*

*How many students participated in service-learning projects last year to enhance pollinator habitat on or off-campus?*



Beehives outside the Agricultural Engineering Building on the Mizzou campus.



Closeup of hives on the Mizzou campus.



Students observe as MJ sophomore George Frees inspects a frame he has removed from the honey super of the beehives located on the MJ campus in fall 2022. Frees has been keeping bees since he was 7 years old. He took over MJ beekeeping duties from his brother Henry, who graduated from Mizzou in 2021. George is on the advisory board of the Boone Regional Beekeepers Association. He hopes to continue making efforts to take up the hobby and will be teaching an honors seminar course about beekeeping starting this fall. The MJ hives are tended by student volunteers with Sustain Mizzou.

## Educational Signage

*Number of permanent interpretive/educational/Bee Campus USA signs installed to date?*

*Number of temporary interpretive/educational/Bee Campus USA signs installed last year?*

## Policies & Practices

*In your city or campus, are any policy initiatives underway to further protect pollinators, people or waterways from pesticides?*

*Please describe actions by your affiliate to attend training on ecologically-based Integrated Pest Management and/or to review IPM plans and programs considered of high quality by Bee City USA?*

**Integrated Pest Management Plan:** [IPM.pdf](#)

**Recommended Native Plant List:**

<https://grownative.org/>

**Recommended Native Plant Supplier List:**

<https://grownative.org/>

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## Learn More

<https://sustainability.missouri.edu/reporting/bee-campus-usa/>

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