

Weed It and Reap

FRANKLIN COUNTY
COOPERATIVE EXTENSION
FEBRUARY 2024 NEWSLETTER

Franklin County
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Frankfort, KY 40601-8750
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The Buzz on Kentucky's Native Bees

By Katie Cody, Office of Kentucky Nature Preserves

Our native plants need native pollinators; they support nearly 90% of the world's flowering plant reproduction. This pollination is mainly carried out by insects.

Pollinators are considered a *keystone* species because they are the glue that holds an ecosystem together; without these species, the ecosystem could collapse. In this way, pollinators are helping maintain the structure and function of our natural communities. Given their importance, the alarm has recently been sounded on their decline, which is happening worldwide. These declines are being driven by many factors, such as climate change, introduced species, agricultural intensification, land use change, and pesticide use, among others.

Of the pollinating insects, bees are the star of the show. But when many people think about bees, their minds may immediately go to the European honey bee (*Apis mellifera*). However, when we talk about our native bees, it isn't fair to include this species — there are no honey bees native to the United States.

(Continued on pg. 2)

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Honey bees are a predominantly managed species and have vastly different life histories than most of our native bees.

It's important to also acknowledge that honey bees can negatively impact our native bees by outcompeting them for forage foods, decreasing their forage rates. They can even exacerbate the spread of invasive plants, which can distract our native bees from our native plants. Our native flowering plants and diverse natural areas depend on native bee visitation and diverse native pollinators to persist, not honey bees.

Native bee diversity and botany

Native bees are the most significant pollinator of flowering plants, and they are incredibly diverse. There are over 20,000 species found worldwide, and they occur on every continent except Antarctica. In the United States, there are around 4,000 species. Kentucky's current state list of bees contains just under 200 species. Our native bees come in all shapes, colors, and sizes. They range from the extremely small, just a few millimeters, up to an inch or more. They come in brilliant blues, metallic greens, and bright yellows. They can be fuzzy and fluffy, hairless and bumpy, and everything in between. All these spectacular species have the incredibly important job of pollinating our native plants.

Native bees have evolved to be extremely effective pollinators. Bees are the only pollinators that will actively gather pollen and move it across the landscape (with a few exceptions in the wasp world). Other pollinator groups, such as beetles, flies, wasps, butterflies, and moths, will visit flowers to drink nectar or consume pollen, but don't intentionally move pollen around.



Microscope views of Halictus ligatus (left) and Megachile petulans (right) showing the large amount of pollen bees can collect in their "hairs"; Photo credit: Katie Cody, Office of Kentucky Nature Preserves

Bees have evolved specialized morphology for gathering and carrying pollen. Their bodies are covered in hairs and parts of their body will be thick with specific pollen-carrying hairs called "scopa." Scopa are usually dense on one part of the body, such as the legs or underside of the abdomen and are highly branched.

Some bees, such as the bumble bees, also have "corbicula" or "pollen baskets," which are wide, smooth areas on their hindlegs surrounded by a dense fringe of hair to hold large loads of pollen. This is why you see bumble bees flying around with large orange balls on their back legs. Beyond morphology, bees also have flower constancy — they will repeatedly visit the same flower species on a foraging trip, making them very effective pollinators.

Native bees also have unique life history strategies. Very few are eusocial like the European honey bee, meaning that they have a social organization, a single queen producing offspring, cooperative brood care, and a division of labor. One of the few groups of native bees that are eusocial are our bumble bees, of which there are around 12 documented native species. The vast majority (over 90%) of our native bees are solitary and the female has her own nest that she cares for.

(Continued on pg. 4)

Interaction Disruption

Climate change is affecting ranges globally. Here ants are invading and consuming wildlife in cloud forest never before exposed to these marauders.

Fire

Global warming elevates fire risk. Fires in Australia, Amazonia, and California burned an unprecedented >5 million hectares of forest in 2019.

Storm Intensity

Climate changes bring stronger, more frequent storms and hurricanes; more fire-igniting lightning; and damaging flooding.

Global Warming

Arctic sea ice is declining precipitously, arctic-alpine and other cold-adapted communities are contracting, while sea-level rise threatens coastal ecosystems.

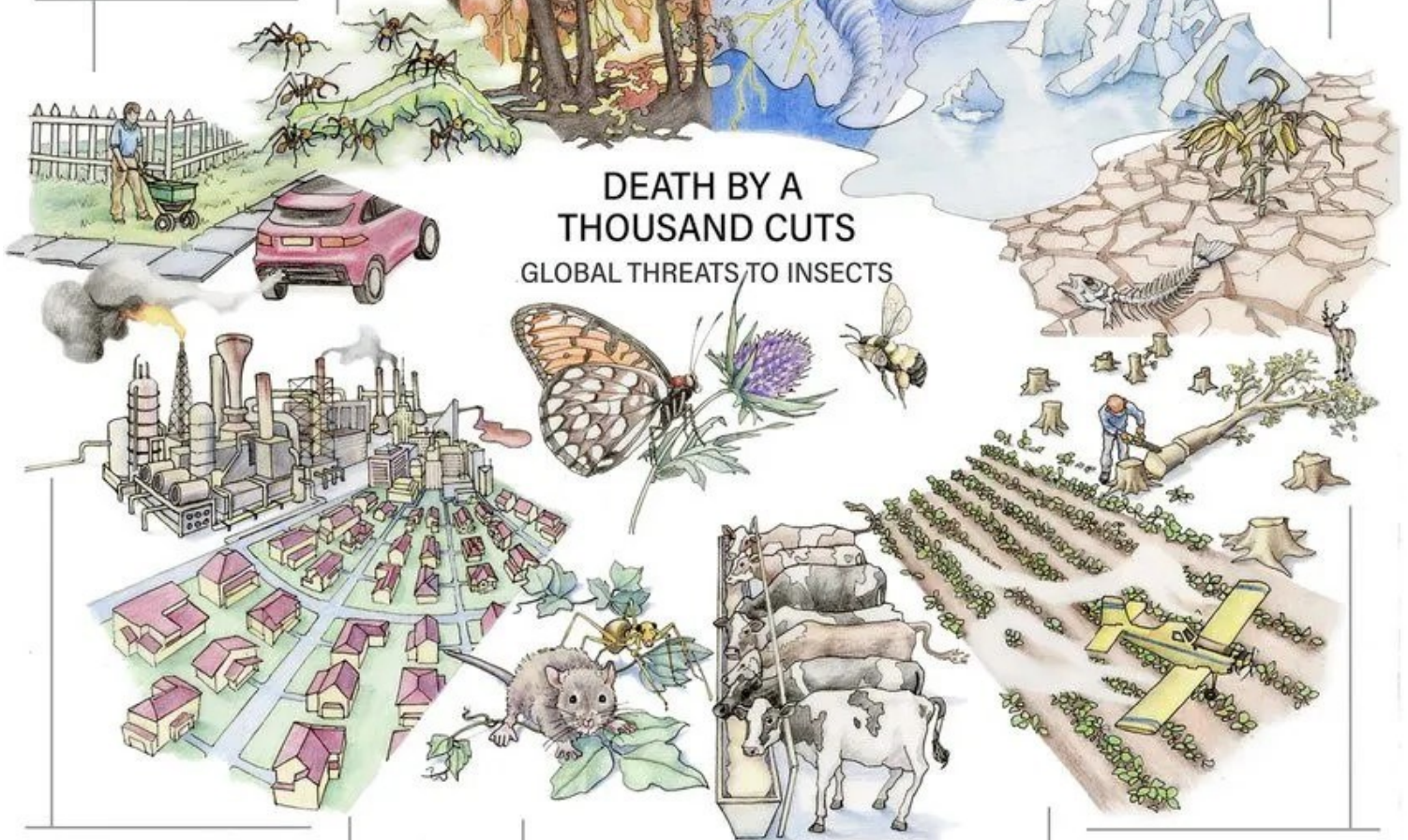
Droughts

Periods with diminished precipitation are becoming longer, more frequent, and warmer, with grave consequences for all life.

Nitrification

Fertilizer and products of fossil fuels combustion are nitrifying the planet, challenging the biotas adapted to low-nutrient conditions.

DEATH BY A THOUSAND CUTS
GLOBAL THREATS TO INSECTS



Pollution

Chemical, light, and sound pollution of water, air, and soil are impacting plant and animal life worldwide.

Urbanization

Our global population of 7.8 billion, spread planet-wide, comes at great cost to biodiversity and wildlands. Already, over 500 vertebrates have been driven to extinction.

Introduced Species

Global trade is accelerating the movement of pernicious plants, animals, and pathogens to new regions—often with devastating consequences.



Agricultural Intensification

Industrialized agriculture, with its attendant increases in scale, monoculturalization, nutrient input, and pesticide use, is becoming increasingly nature unfriendly.

Deforestation

The tropics lost 11.9 million hectares of forest in 2019, mostly to agriculture.

Insecticides

Modern, industrialized agriculture, with its increasing reliance on chemical insecticides, has led to chronic contamination of wildlands and impacts to non-target insects.

Graphic credit: Virginia R. Wagner, 2021 in: Wagner DL, Grames EM, Forister ML, Stopak D. 2021. Insect decline in the Anthropocene: Death by a thousand cuts. Proc Natl Acad Sci U S A. 118(2): e2023989118

(Continued from pg. 2, The Buzz on Kentucky's Native Bees)

Most native bees (around 70%) are also ground nesters and will excavate bare soil to create their nests. The other 30% nest in dead stems, woody debris, abandoned rodent burrows, or other cavities.

Despite all we know about these incredible pollinators, there is still much to learn. Native bees are severely understudied and there's a substantial gap in our knowledge of the diversity and distribution of Kentucky's species. In light of their declines, it's more important than ever to document, monitor, and manage their persistence.

The Office of Kentucky Nature Preserves (OKNP) recently established the Kentucky Native Bee Inventory and Monitoring Program to document

and assess the conservation status of our native bees across the state. And you can help too! Native bees and native plants need each other to thrive, so planting a diversity of native plants with blooming times throughout the year can provide forage for most species. If you'd like to go a step further, you can provide nesting habitat by leaving last year's pithy stems, areas of bare soil, and fallen woody debris near your flowering plants. You can also join in on OKNP's monitoring efforts by snapping photos of any bee observations and uploading them to [iNaturalist!](#) These observations will be added to data collected by OKNP's monitoring program to assess the rarity of bees across Kentucky. To stay up to date on our monitoring program, be sure to follow us on [Facebook](#) for updates and exciting finds!

INTERESTED IN

BACKYARD COMPOSTING

JOIN FRANKLIN COUNTY SOLID WASTE FOR A CLASS COVERING THE BASICS. PARTICIPATION* IN THE PROGRAM GETS YOU A FREE COMPOST BIN OR TUMBLER!



When: February 28th 6:00-7:00
Where: Paul Sawyer Library Community Room

SPACE IS LIMITED!
 email: ally.hall@franklincounty.ky.gov

*PARTICIPATION INCLUDES QUARTERLY DATA SHARING WITH THE SWM DEPARTMENT

Pre-registration required!

FREE TREE SEEDLINGS

One Day Only - March 21, 2024

Tree Seedlings will be given away at the Franklin County Conservation District office, on a first come basis, on Thursday, March 21, 2024, from 8:00 am until supply is gone. The office is located at 103 Lakeview Court.

Individuals will be limited to a total of seven tree bags only - each bag will consist of two trees of each species

Persimmon, Pecan, Pawpaw, Bald Cypress, Silky Dogwood and White Pine





Saturday, March 2, from 11:00 AM - 3:00 PM
 Paul Sawyer Public Library
 319 Wapping Street | Frankfort, KY 40601

Pick up some new seed packets, and bring your own to share. Meet other local gardeners, and exchange gardening tips. Franklin County Horticulture Extension Agent Adam Leonberger and Capital Area Extension Master Gardeners will be on hand to answer questions. Drop in while supplies last!



No registration necessary. For more information, please contact Diane Dehoney at diane@pspl.org.
 All library programs are accessible to people with disabilities.

Simple Pruning Tips for Your Fruit Trees During the Dormant Season

Source: Delia Scott, Department of Horticulture Extension Associate

All fruit trees must be pruned and trained to enhance fruit production, as the way the tree is shaped will impact fruit yield, fruit size and ripening. In Kentucky, the ideal time to prune fruit trees is in late winter or early spring.

Both newly planted and mature fruit trees must be pruned to maintain size and shape. Here are some easy tips:

- For young trees, pruning to a strong central leader with four to five lateral branches is most common.
- Heading cuts can be done on mature trees to control the tree's height; thinning cuts can open up the canopy and maximize sunlight and airflow. For older, overgrown trees that need heavier pruning, removing up to 1/3 of the larger branches over several years will help rejuvenate the tree.

- Pruning cuts should be made at the base of the branches, leaving a ¼" to ½" branch collar intact for proper healing. Dead and diseased shoots and limbs should be removed, as well as any shriveled or 'mummy' fruit remaining on the tree.

- Sharp pruners or loppers should be used to ensure clean cuts. Sanitize the tool blades between each cut with rubbing alcohol or a 10% bleach solution so as not to spread any disease that may be present.

For more information on pruning apple trees, visit the UK Martin-Gatton College of Agriculture, Food and Environment [YouTube channel](https://www.youtube.com/user/UKAgriculture) at <https://www.youtube.com/user/UKAgriculture>.

[Pruning Central Leader Apple Trees \(https://bit.ly/48VR31Q\)](https://bit.ly/48VR31Q) discusses trees that are pruned to the classic pyramid or oval shape.

[Pruning Tall Spindle Apple Trees \(https://bit.ly/4bh85JA\)](https://bit.ly/4bh85JA) focuses on the high-density supported training system with trees planted on dwarf rootstocks, producing a crop as little as a year after planting.



FRANKFORT COMMUNITY GARDENS

STARTING TRANSPLANTS INDOORS



Join us for a hands-on indoor seeds starting project and learn how to start your vegetable plants early for a successful growing season and take home a transplant!

THURSDAY MARCH 7TH
5:30PM-6:30PM

SATURDAY MARCH 9TH
10AM-11AM

LOCATION:

THORNHILL LEARNING
CENTER GYM.
700 LESLIE AVE,
FRANKFORT, KY 40601

RSVP BY:

EMAIL: CGNFRANKFORT@GMAIL.COM

FB:



SPONSORS:

COOPERATIVE EXTENSION



GROW IT, EAT IT, COOK IT

GROW YOUR OWN FOOD, COOK DELICIOUS RECIPES,
AND ENJOY A TASTY MEAL TOGETHER!
EACH PARTICIPANT WILL GET TRANSPLANTS
OR SEEDS TO GROW AT HOME.

- Mar 14** -Potatoes
- April 18** -Broccoli & Cauliflower
- May 16** -Tomato
- June 20** -Pepper
- July 18** -Summer Squash
- Aug 15** -Spinach
- Sept 12** -Radishes
- Oct 10** -Garlic



SCAN THE QR CODE OR
ENTER THE LINK TO
REGISTER.

[HTTPS://FORMS.GLE/SGBQOKHNX93JMjXQ6](https://forms.gle/SGBQOKHNX93JMjXQ6)

YOU MAY ALSO CALL TO REGISTER:
502-695-9035



FRANKLIN COUNTY COOPERATIVE EXTENSION SERVICE
101 LAKEVIEW COURT, FRANKFORT, KY 40601
502-695-9035

**Cooperative
Extension Service**

Agriculture and Natural Resources
Family and Consumer Sciences
4-H Youth Development
Community and Economic Development

MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT

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Disabilities
accommodated
with prior notification.



Martin-Gatton
College of Agriculture,
Food and Environment
University of Kentucky.



Tulips

Family and Consumer Sciences
Franklin County
101 Lakeview Court
Frankfort, KY 40601-8750
502-695-9035
<http://franklin.ca.uky.edu>

Join us on Friday, March 15, 2024 at 5:00 p.m. No experience required! Marjorie Duncan Doneghy Willis will walk you through the painting process, and you will take home your completed 16"x20" painting at the end of the night.

Cost is \$25 per person, including supplies. Space is limited! Refreshments provided at 4:30 p.m. Painting at 5:00 p.m.

The event will take place at:
Franklin County Cooperative Extension
101 Lakeview Court
Frankfort, KY 40601
(502) 695-9035



YES! Please register me for the Tulips Paint Party.
March 15, 2024 at 5:00 p.m.
(Please Print)

NAME: _____

ADDRESS: _____

CITY: _____ ST: _____ ZIP: _____

PHONE: _____ EMAIL: _____

_____ ATTENDING (\$25.00 per person)

Enclose a check or money order made payable to:
Franklin Co. Cooperative Extension Service or FCCES
Mail to: FCCES, c/o FCS Painting
101 Lakeview Ct, Frankfort, KY 40601

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University of Kentucky, Kentucky State University, U.S. Department of Agriculture, and Kentucky Counties, Cooperating.
Lexington, KY 40506



Disabilities accommodated with prior notification.



Reforest Frankfort 2024

TREE PLANTING, MUSIC, ENVIRONMENTAL ACTIVITIES, FOOD.
FREE FOR THE COMMUNITY!

SAVE THE DATE

SATURDAY, APRIL 13 | 8 AM - 12 PM
WEST SIXTH FARM

MORE INFORMATION COMING SOON!



2024

BIG TREE CONTEST

OSAGE ORANGE (HEDGEAPPLE)

RULES

1. Must be Osage Orange (Hedgeapple)
2. Measure circumference of tree at 4 ½ feet from the ground on the high side.
3. Tree must be 75% live and be located in Franklin County.
4. Tree measurement and date **must** be verified by landowner.
5. Same tree eligible for only one category.
6. **All entries must be submitted to the Franklin County Conservation District located at 103 Lakeview Court no later than March 22, 2024.**

The Winner in each Category will be presented a \$50 cash award

K-5 grade	18 to 55 Years of Age
6-8 grade	Senior Citizen (56 & Over)
9-12 grade	FFA Chapter
Organizations	Over All Winner

Prizes will be awarded in conjunction with Reforest Frankfort/Arbor Day activities.

For any questions, contact the Franklin County Conservation District at 502/352-2701.

ENTRY FORM

Participant Name: _____ Age: _____

Address: _____ Grade: _____

Phone: _____ Date: _____

Measurement at 4 ½ feet from ground: _____

Address of Property (tree location): _____

Directions/Map to Tree: _____

Landowner Verification: On the back, draw a map showing location of tree from nearest designated state highway in Franklin County (Give point to point distance).

The Winner in each Category will be presented a \$50 cash award

Franklin County Conservation District

Backyard Conservation Program
Urban Cost Share Program

August 1, 2023 to August 1, 2024

Raised Garden Beds, Rain Barrels, Compost Bins,
Pollinator Gardens and Beives

- First come, first serve
- Franklin County Residents only
- One application per household
- 50% cost share up to \$250 maximum

**Must have approval before you
begin project**



Franklin County Conservation District
103 Lakeview Court
Frankfort, KY 40601
502-352-2701



2023



106 OPPORTUNITIES TO SHOP AND SELL

Including year-round markets, curbside pickup, online sales, and delivery to 15 workplaces



\$10,000+ OF LOCAL FOODS SERVED IN SCHOOL MEALS



SO MUCH VARIETY!

Local produce, preserves, baked goods, plants, cheese, flowers, meats, honey, artisan crafts . . .



OVER \$50,000 OF FRESH FOOD INCENTIVES

Increasing access to fresh food = a win for families, farmers +our community



CELEBRATE KSU! MARKET + KIDS DAYS + FOOD SHARE

& other events, welcome folks downtown to celebrate fresh food & connect community members & local organizations



TENS OF THOUSANDS OF ANNUAL VISITS

The Market's 75 downtown events offer cooking demos, live music, kids activities, hot food, and many conversations

- 75 DOWNTOWN EVENTS
- \$10,000+ FRESH PRODUCE FOR PREGNANT MOMS
- OVER \$610,000 SPENT WITH 60+ LOCAL FARMERS & PRODUCERS



Horticulture



Martin-Gatton
College of Agriculture,
Food and Environment



HIKE! EXPLORE! LEARN!

OUTDOOR ADVENTURE CAMP



**Get together with friends and
learn outdoor survival skills!**



MARCH 29-30, 2024
Registration 10-12
Lunch and Orientation 12
\$100 PER PERSON



LAKE CUMBERLAND 4-H CAMP
17500 KY-196
NANCY, KY 42544

**Open for people Grades 6-12.
Shelter Building, Firebuilding, Tracking, and More!**

Youth Events

KENTUCKY  KENTUCKY STATE UNIVERSITY
COOPERATIVE EXTENSION



GARDEN CLUB

For youth ages 9-18

4-H GARDEN CLUB WILL BE GROWING AND LEARNING ABOUT :

- ✓ Seed to Supper Program
- ✓ Grow and harvest your own garden
- ✓ Pollinator Gardens
- ✓ Horticulture, Floral design and Flower Shows



3rd Thursday of the month
@5:00 pm



Franklin County Extension Office **101 Lakeview Ct.**
Frankfort KY 40601

QUESTIONS? CONTACT THE FRANKLIN COUNTY EXTENSION OFFICE AT 502-695-9035 OR EMAIL THE CLUB LEADER BETSY KENNEDY @ YARNADDICTION62@GMAIL.COM





Chicken and Brussels Sprouts One Pan Meal

2 skinless, boneless
chicken breasts
(about 1 pound)
1 **tablespoon** olive oil
Salt and pepper to taste

12-14 Brussels sprouts,
trimmed and quartered
1 **cup** sliced fresh
mushrooms
1 red bell pepper, diced,
about 1 cup

1 medium yellow onion,
diced, about 1 cup
2 cloves garlic, minced
½ **cup** half-and-half
¼ **teaspoon** nutmeg
¾ **cup** Parmesan cheese

Preheat oven to 425 degrees F.
Cut chicken into bite-sized pieces.
Heat oil in a heavy, oven-safe skillet
or pan over medium heat. **Add** chicken
and sauté 3-4 minutes. Lightly **season**
with salt and pepper. **Add** vegetables
and **stir** gently to combine. **Cook**
3-5 minutes until vegetables are tender.
Remove from heat. If skillet or pan
is not oven-safe, transfer mixture to a
baking dish. In a small bowl, **combine**
half-and-half, nutmeg and salt and

pepper to taste. **Pour** mixture over
chicken and vegetables. **Sprinkle** with
Parmesan cheese. **Bake** 25-30 minutes
until lightly golden on top. **Serve** hot.

Yield: 6, 1 cup servings

Nutritional Analysis:
220 calories, 9 g fat, 3.5 g saturated fat,
0 g trans fat, 70 mg cholesterol,
340 mg sodium, 11 g carbohydrate,
3 g fiber, 4 g sugars, 23 g protein.

FRANKLIN COUNTY FARMERS MARKET

Winter Market

FRANKLIN COUNTY FARMERS MARKET 404 WILKINSON BLVD

Jan. 6th 10-11:30am **Mar. 2nd 10-11:30am**

Jan. 20th 10-11:30am **Mar. 16th 10-11:30am**

Feb. 3rd 10-11:30am **Mar. 30th 10-11:30am**

Feb. 17th 10-11:30am **Apr. 13th 10-11:30am**


Adam Leonberger

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