Quarterly Newsletter
(Jan 2025 - Mar 2025)

SOIL, PLANT & PEST CENTER
UT EXTENSION
INSTITUTE OF AGRICULTURE
THE UNIVERSITY OF TENNESSEE

May 5, 2025

Puddling swallowtail butterflies from White County, Tennessee

Picture credit: Rebekka Horn, University of Tennessee

New Year, New Beginnings

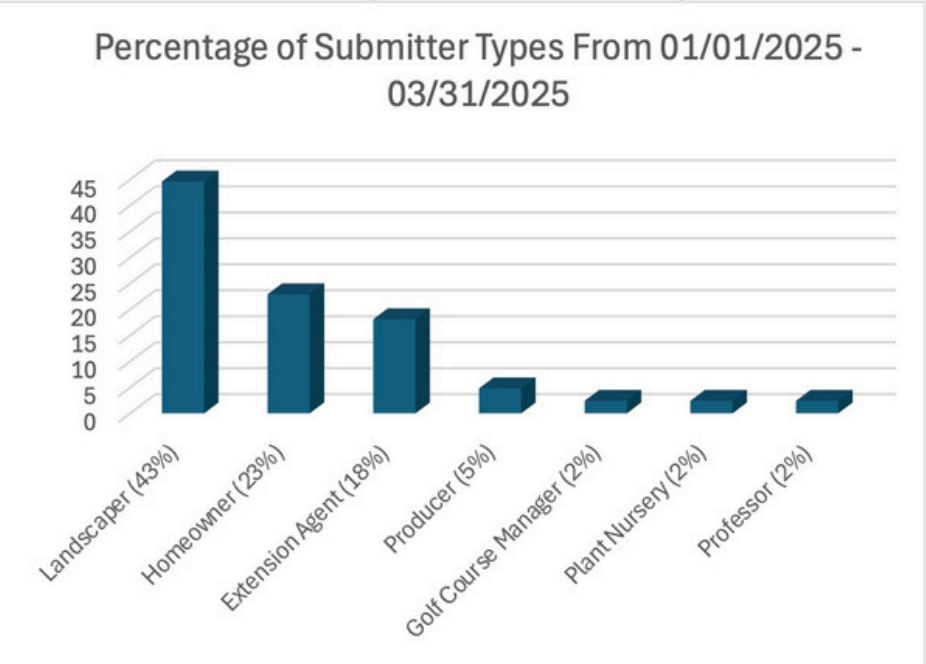
2025 is a third of the way done, which means it is time to kick off spring with a quarterly newsletter! January 2025 - March 2025 were productive months for the UT Soil Plant & Pest Center (SPPC), with 83 total samples arriving from 17 different counties across Tennessee.

SPPC received numerous samples from ornamental crops, and home gardens from a variety of submitters. A detailed description of the submitters, plants, and their pests/diseases will be provided later.

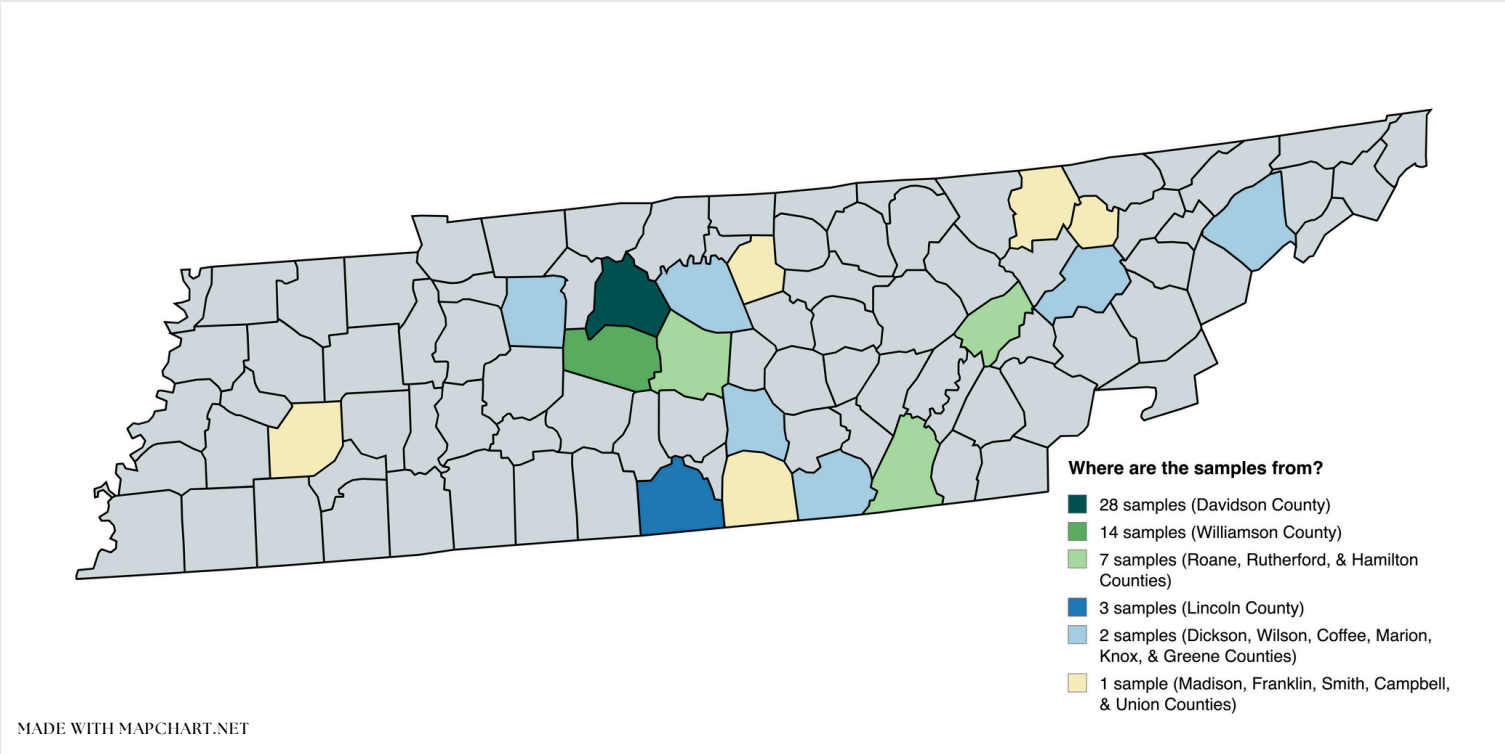
In this newsletter you can expect:

Who sent samples?

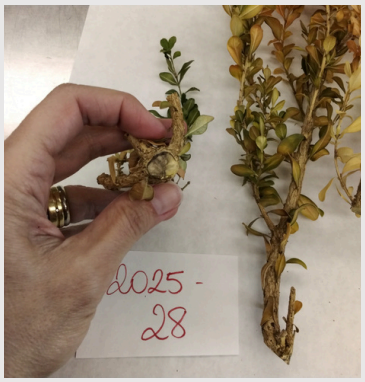
Landscaper (43%)
Homeowner (23%)
Extension Agent (18%)
Producer (5%)
Golf Course Manager (2%)
Plant Nursery (2%)
Professor (2%)



WHERE ARE THE SAMPLES FROM?



HELP! WHAT IS ON MY ORNAMENTALS?!



Picture credit: Sylvia Moraes, University of Tennessee

Boxwood Dieback

Host Plant(s): English, Japanese, & Korean cultivars of boxwood are the most at risk (1, 5).

Cause(s): Boxwood dieback is caused by boxwood dieback is the fungal pathogen, *Colletotrichum theobromicola* (1, 5).

Signs/Symptoms: Boxwood dieback symptoms include random dieback of twigs with tan colored foliage. Leaves that are affected stay attached to the branches. Another symptom of boxwood dieback is the black discoloration on the bark extends into the center of the woody tissue (5). This symptom is noticeable when the twig is cross-sectioned. Other symptoms of this pathogen include leaf spots that are white in the center with dark brown margins. In the right conditions, black fungal fruiting bodies can be seen in the spots.

Picture credit: Javier E. Mercado, Bark Beetle Genera of the US, USDA APHIS PPQ, Bugwood.org

Ambrosia Beetle

Identification: Ambrosia beetles are extremely tiny, rusty brown beetles. Infestations are indicated by the thin strands of sawdust coming out of small holes in tree bark (2).

Host Plant(s): Thin barked, deciduous trees including but not limited to: pecan, ornamental cherry, Japanese maple, crapemyrtle, magnolia, etc (3).

Signs/Symptoms: In early spring, females choose trees based on the amount of ethanol the stressed tree exhibits (3). This stress is caused by overwatering of trees, or frost damage. Females then bore into the tree and make tunnels. As they dig the tunnel, the ambrosia fungus is introduced, and eggs are laid (3). Visible symptoms of ambrosia beetles includes wilted foliage, a thin/fragile strand of boring dust (about the size of pencil lead), and tree death in severe cases. The introduction of the fungus also acts as a vector for other fungi that kill plants, such as *Fusarium spp* (3).

Picture credit: Rebekka Horn, University of Tennessee

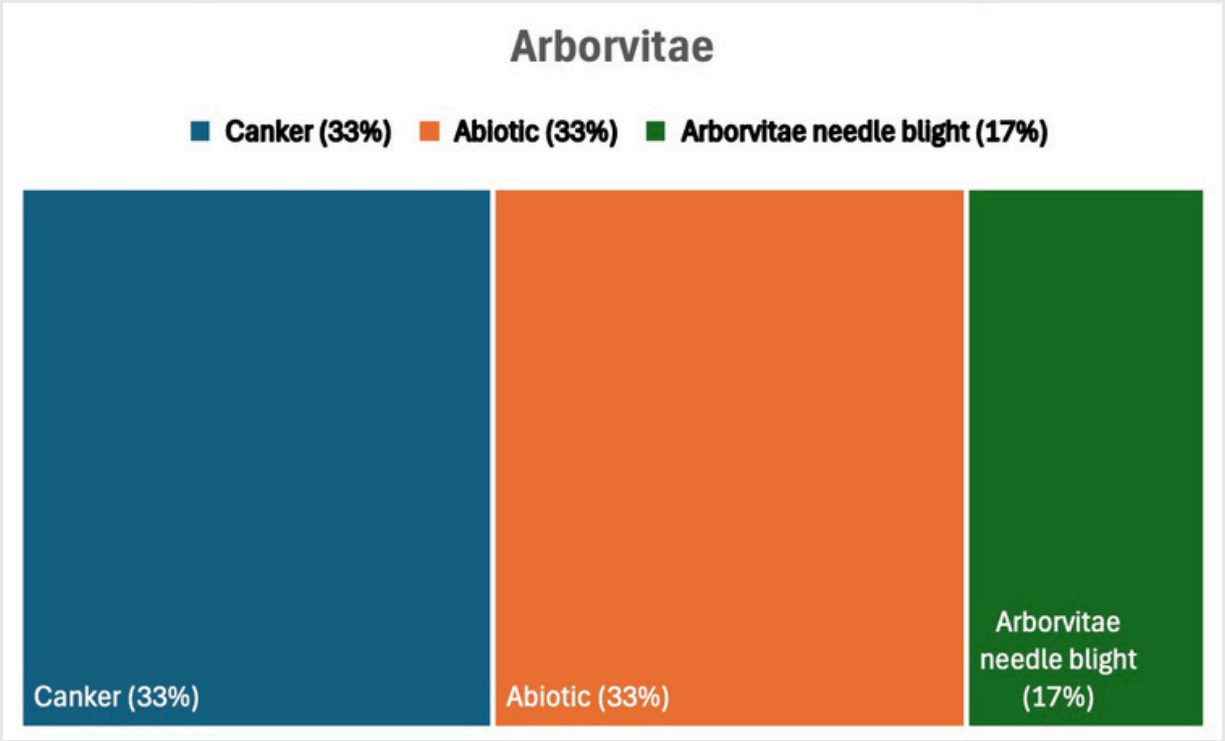
Brood XIV Periodical Cicadas

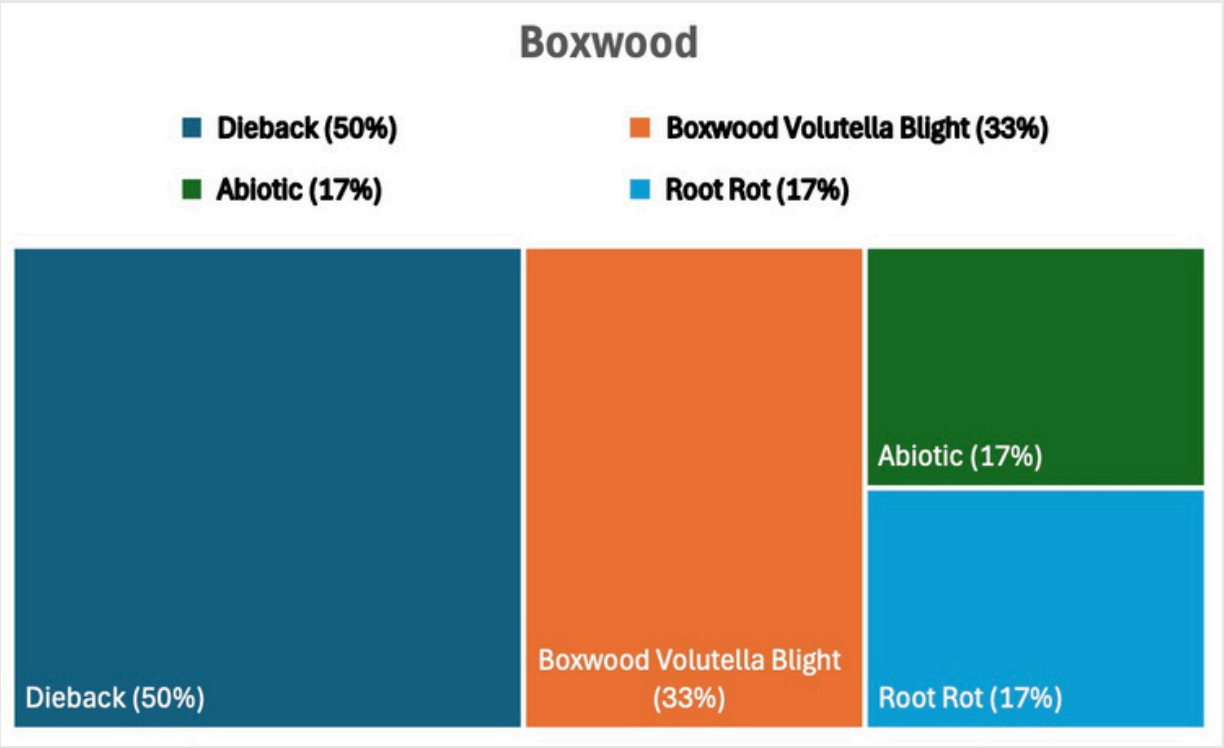
Identification: Brood XIV is a 17-year cicada that will emerge in 2025 (6). Adults are roughly 1-1.5 inches long, and are mostly black in color. Their eyes and wing veins are a reddish-orange coloration (4). Periodical cicadas are different from annual cicadas, which are larger and have greenish wing veins (4).

Host Plant(s): Hosts include but are not limited to oaks, maples, hickories, apple, dogwood, redbud, willow, etc.

Signs/Symptoms: Periodical cicadas emerge from holes in the ground and crawl up trees. After they attach to trees, the nymphs develop into adults and shed their exoskeleton. Their exoskeleton hardens within a few hours, and are able to fly. They are poor fliers, which makes them easy prey (4). Females damage trees when they make slits in branches while laying eggs. However, the mass emergence of cicadas occurs, the mass feeding with their piercing-sucking mouthparts on trees causes twig and branch dieback, which can be fatal (4).

TOP 3 SAMPLES AND THEIR DISEASES/PESTS





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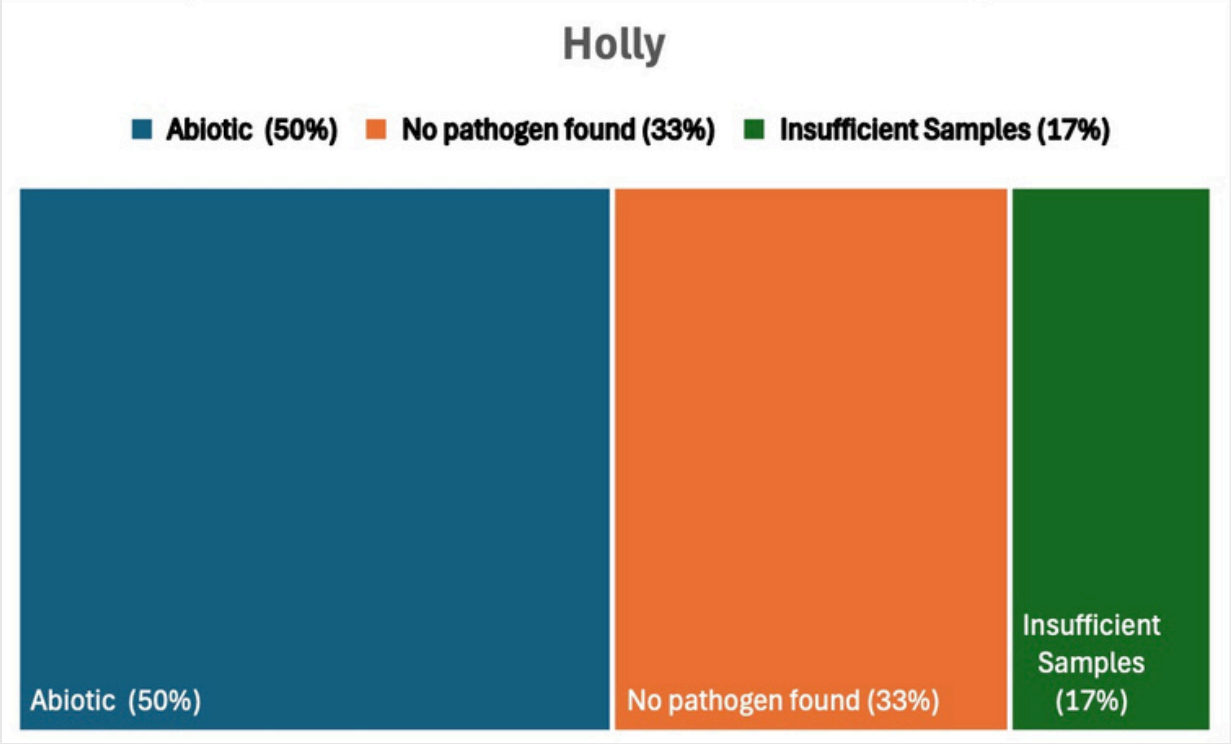

“No pathogen found” means that a pathogen was not in the sample brought in. Why?

- The customer would like to ONLY double check if the plant was healthy before they planted it in their garden,
- The part of the plant that did not contain the pathogen was brought in, OR
- The plant has an abiotic/other external issue.

Sometimes the SPPC recieves inappropriate, or insufficient samples, which may compromise the accuracy of the diagnosis. For information on how to collect and submit your plant sample(s), please click on the following link:
https://soillab.tennessee.edu/plant-pests/plant-disease-diagnosis/

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