Quarterly Newsletter
(Jan 2024 - May 2024)

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

July 15, 2024


Picture Credit: Rebekka Horn

Last Quarter: An Overview

This past quarter has completely flown by, but not in vain! January 2024 - May 2024 were productive months for the UT Soil Plant & Pest Center (SPPC), with 260 total samples arriving from 41 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:

Last Quarter: An Overview

Submitters of Samples and All Counties Serviced

Top 6 Counties Serviced

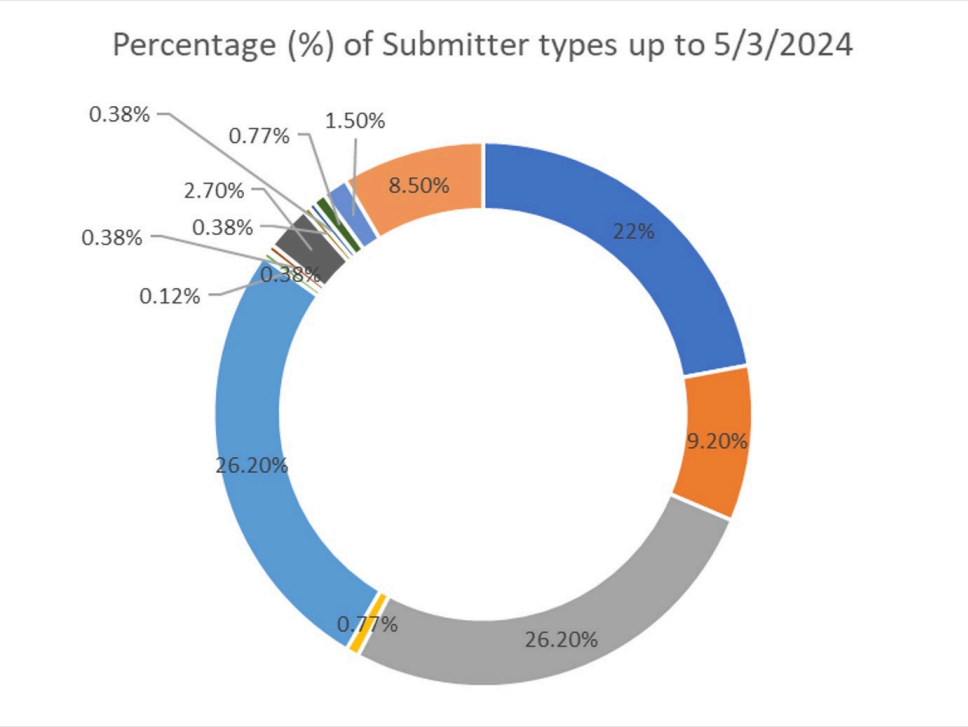
Top Ornamental and Garden Samples

Ornamental Samples: Pests and Diseases

Garden Samples: Pests and Diseases

Who sent samples?

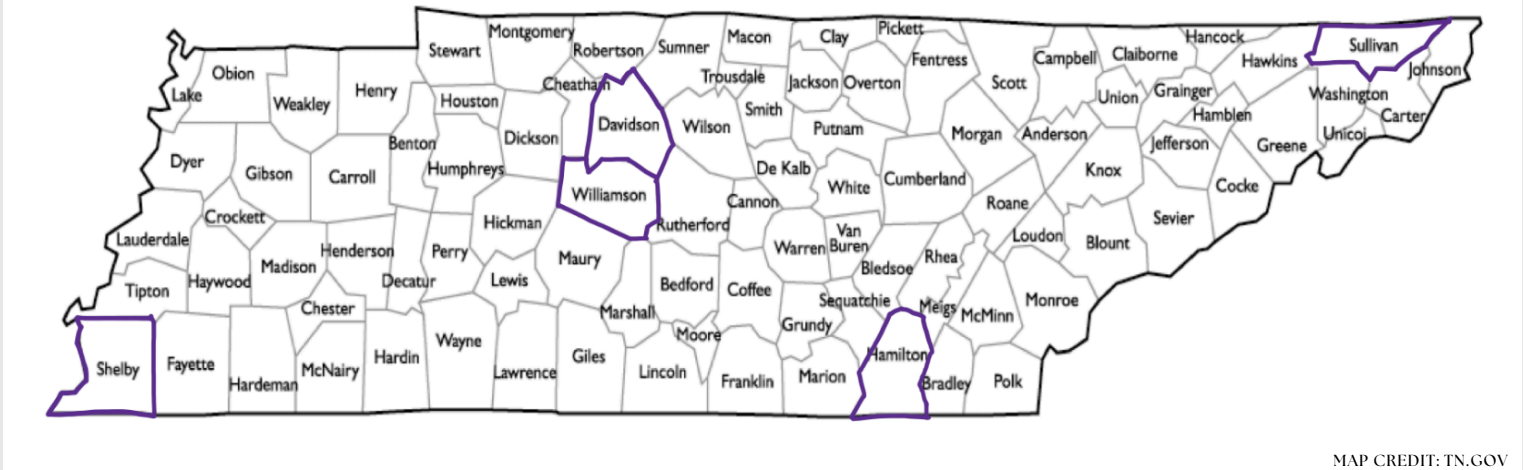
Homeowners (22%)
Producers (9.2%)
Landscapers (26.2%)
Professors (0.77%)
Extension Agents (26.2%)
UT Extension Agents (0.38%)
Extension Assistants (0.12%)
Extension Staff (0.38%)
Golf Course Managers (2.7%)
Doctors (0.38%)
Diagnosticians (0.38%)
Plant Nurseries (0.77%)
TDA Plant Inspectors (1.5%)
Botanical Gardens (8.5%)



Where are the samples from?

MAP CREDIT: TN.GOV

Top 5 Counties Serviced



MAP CREDIT: TN.GOV

HELP! WHAT IS ON MY ORNAMENTALS?!

Cedar-apple Rust

Host Plants: Crab apple, apples, junipers, eastern red cedar, etc.

Cause(s): Cedar-apple rust is caused by a fungal pathogen. This fungus needs two hosts, apple species and juniper/cedar species, to complete its life cycle.

Signs/Symptoms: In the spring, rust fungus infects apple species, and in the fall, it infects juniper and cedar species. On apple trees, the disease appears as orange-red spots with small, raised black dots in the center (3). During the fall, in juniper and cedar trees, the galls take on a greenish-brown appearance with a woody texture. When it rains, these galls produce tentacle-like structures that gives a gummy appearance (3).

Boxwood Volutella Blight

Host Plants: Boxwoods.

Cause(s): Boxwood volutella blight is caused by a fungus that attacks the stems and leaves of boxwood plants. Drought, winter injury, insect damage, poor drainage, etc., put the plant at a higher risk for this disease. This disease is likely to show up during warmer weather with a higher relative humidity (1).

Signs/Symptoms: Leaves of infected plants turn pale yellow, and eventually turn to brown, bronze, or straw coloration. During high humidity, salmon-colored fruiting bodies of fungus develop on the lower surface of the infected leaves, which are visible with a hand lens.

Picture credit (https://bygl.osu.edu/node/697)

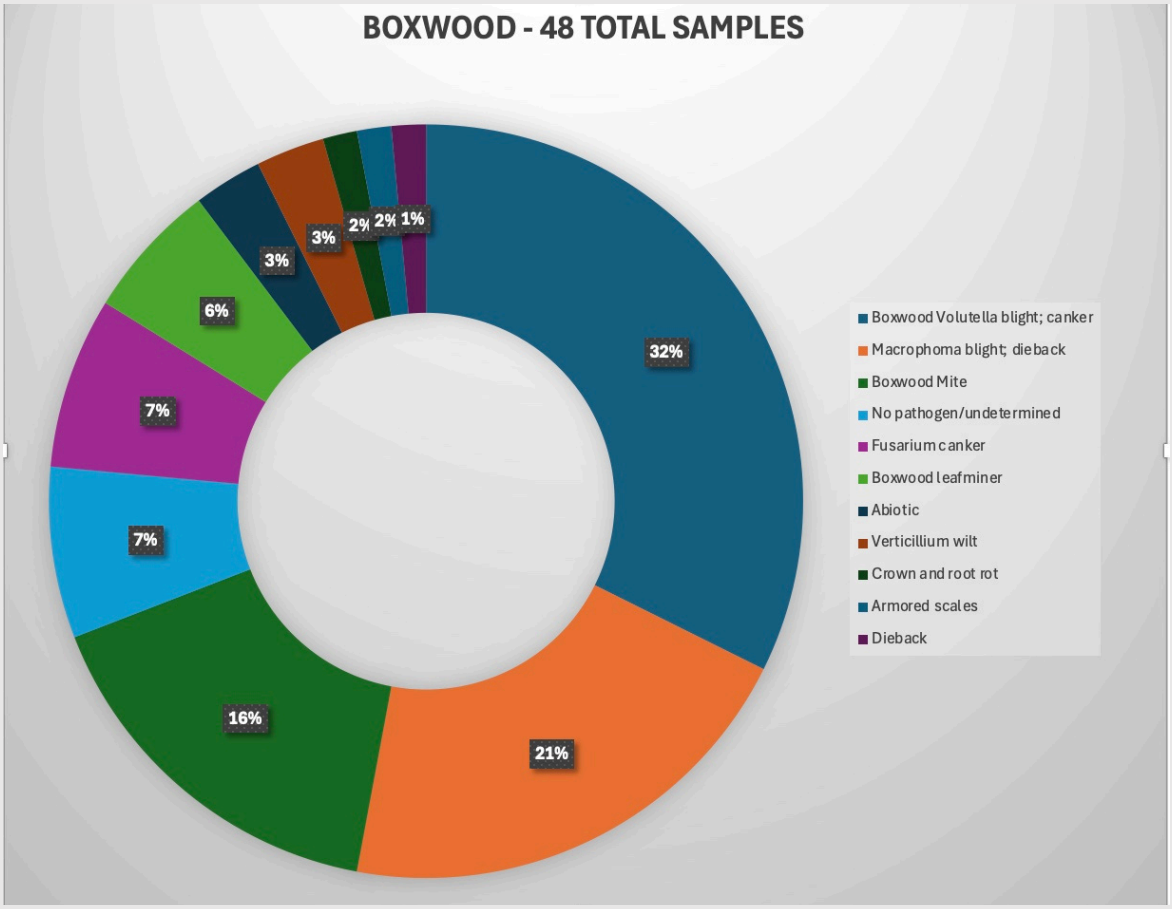
Juniper Scales

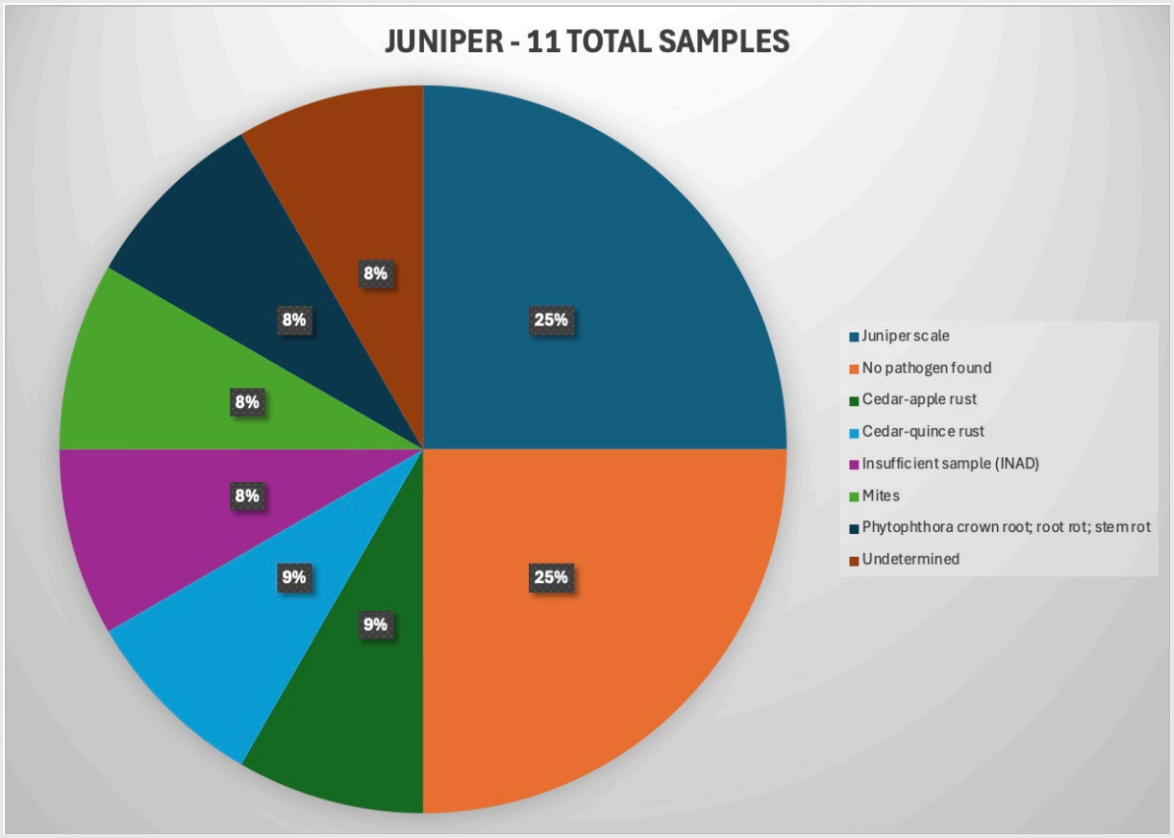
Host Plants: Junipers, cypresses, false cypress, eastern red cedar, and arborvitae (4).

How do I identify this pest? Mature female covers are round, white with yellow center and ~1.5 mm in diameter . Male covers are elongated, white and smaller than females . The crawlers are tiny and yellow in color.

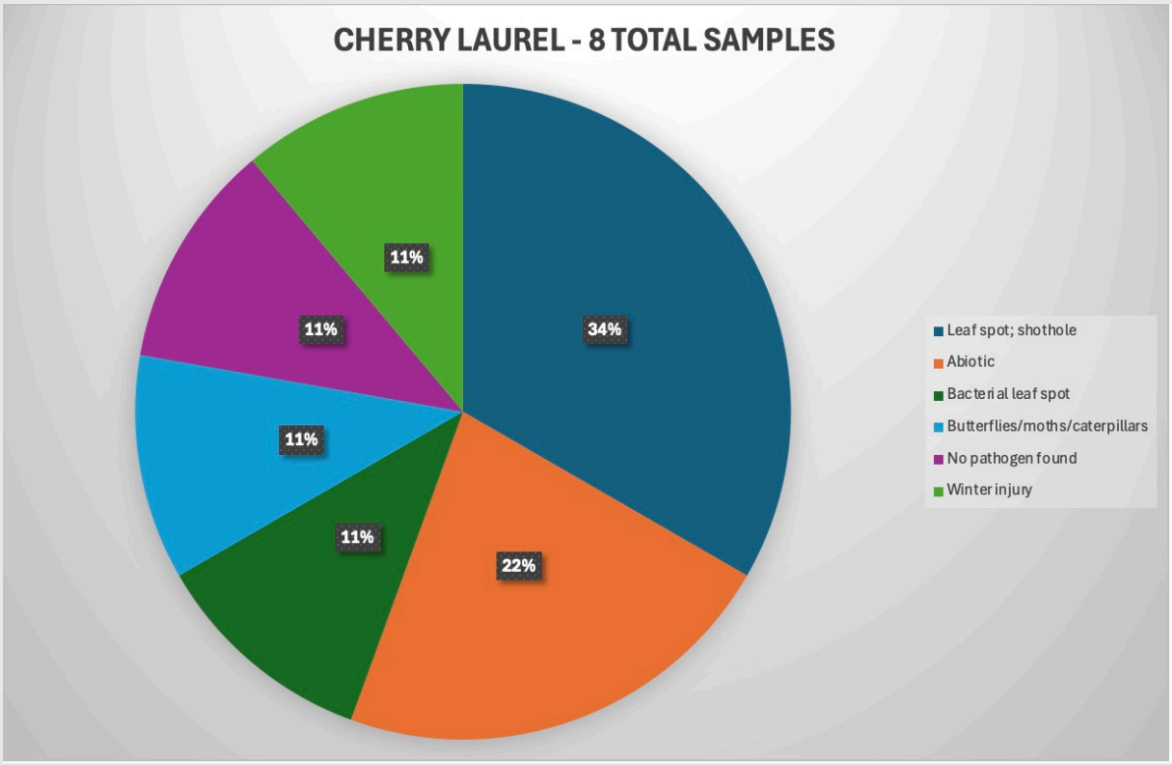
Signs/Symptoms: Affected foliage turns yellow-brown color. The plant looks as if it needs water or chemical treatments, and could show signs of dead branches (2).

TOP 3 SAMPLES AND THEIR DISEASES/PESTS





TOP 3 SAMPLES AND THEIR DISEASES/PESTS



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References

1. Feather, S. 2023. Volutella blight of Boxwood. Penn State Extension. Accessed 05/30/2024. https://extension.psu.edu/volutella-blight-of-boxwood

2. Russell, H. 2013. Juniper scale crawlers are active in Michigan. Michigan State University Extension. Accessed 05/30/2024. https://www.canr.msu.edu/news/juniper_scale_crawlers_are_active_in_michigan

3. Koetter, R. and M. Grabowski. 2024. Cedar-apple rust and related rust diseases. University of Minnesota Extension. Accessed 07/12/2024. https://extension.umn.edu/plant-diseases/cedar-apple-rust#symptoms-on-apple%2C-crabapple%2C-hawthorn-and-other-plants-in-the-rosaceae-family-1173260

4. Larson, J. L. 2021. Juniper Scale. UK Department of Entomology. Accessed 07/12/2024. https://entomology.ca.uky.edu/ef429#:~:text=Common%20hosts%20for%20the%20juniper,there%20is%20snow%20on%20it.