



Vascular Streak Dieback on Trees and Woody Ornamentals Alert and Information

Plant Disease Clinic, 1/30/23

Vascular Streak Dieback Observed in VA Nurseries and Other US States

- Severe dieback on redbud and dogwood
- Sometimes very high incidence (90-100% affected)
- Chlorosis, stunting, leaf scorch, wilt leading to dieback and death



Flowering Dogwood Cultivar

Photo courtesy of Devin Bily, State Plant Pathologist, VDACS

Vascular Streak Dieback (VSD)

- Observed in the field
- In container plants
- In landscapes

VSD on Redbud

Photos courtesy of Devin Bily, State Plant Pathologist, VDACS

A fungus, *Ceratobasidium theobromae*, is Putative Causal Agent of VSD

- Consistently associated with VSD
- Pathogenicity not yet proven
- This fungus causes VSD on cacao in Southeast Asia



Maple with Vascular Streak Dieback (VSD)

Photo courtesy of Devin Bily, State Plant Pathologist, VDACS

Vascular streaking/discoloration visible on redbud & other woody plants, but subtle or absent on dogwood



Redbud

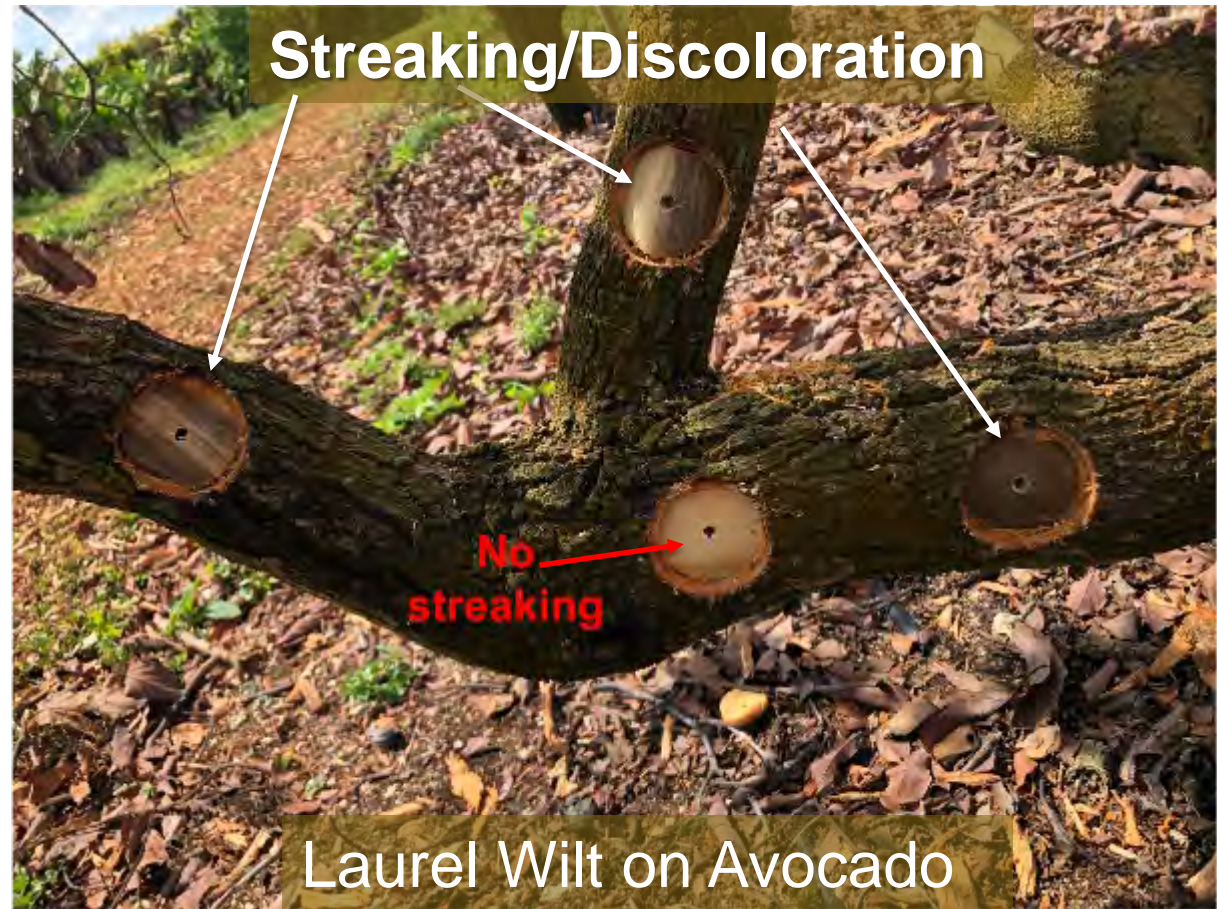


Maple

*Photos courtesy of
Devin Bily, State Plant
Pathologist, VDACS*

Non-uniform distribution of vascular discoloration— an example using laurel wilt disease

- This is an **example** of non-uniform distribution of vascular discoloration in a plant with vascular disease.
- Other vascular disease problems, such as VSD, have similar non-uniform distribution of vascular discoloration in the plant.
- Check for vascular discoloration in multiple locations.
- With VSD and dogwood, vascular discoloration is often not visible.



*Image courtesy of Romina Gazis, University of Florida
Tropical Research and Education Center*

Best Diagnostic Sample

- Select a plant in an EARLY stage of symptom development
 - Off-color, wilting and/or some dieback, but still some living branches with leaves present
 - Plants that are very far gone in decline may have been invaded with opportunistic fungi and this makes finding *Ceratobasidium theobromae* more difficult or unlikely
 - Dead trees are not useful for diagnosis
- Whole plant is best
- Can section it (12" sections)
- Submit roots so we can also check for other problems (shake off most of soil/media)
 - Bag separately from branches and foliage
- Mail early in the week—two day via UPS or FedEx and do **not** refrigerate sample.
 - This particular fungus is difficult to recover after refrigeration.



- A Virginia Cooperative Extension fact sheet on this emerging problem is in the publishing process.
- In the meantime, more details in Purdue fact sheet at <https://www.purduelandscapereport.org/article/vascular-streak-dieback-of-redbud-what-plant-pathologists-know-so-far/>



Virginia Cooperative Extension

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*Questions about
sending a sample,
email clinic@vt.edu*