



TEXAS A&M
FOREST SERVICE

Texas Forestry Association Landowners Council
Lufkin, TX 12 December 2025

Forest Health Update

Changes and Threats

Allen Smith

Forest Health – Texas A&M Forest Service

TAMFS Forest Health

- Program has been pulled from Forest Health/Water Resources into a stand-alone program.
- New Program Leader – Allen Smith, TFS Longview
- Currently hiring east Texas Regional Forest Health Coordinator – Hudson
- Work in conjunction with RFHC Demian Gomez-Austin

Native bark beetles

Ips calligraphus



Dendroctonus terebrans

Ips pini



Dendroctonus valens

Ips grandicollis



Ips avulsus



Dendroctonus frontalis



Southern pine beetle

Ips calligraphus



Ips pini



Ips grandicollis



Ips avulsus



Dendroctonus terebrans



Dendroctonus valens



Dendroctonus frontalis

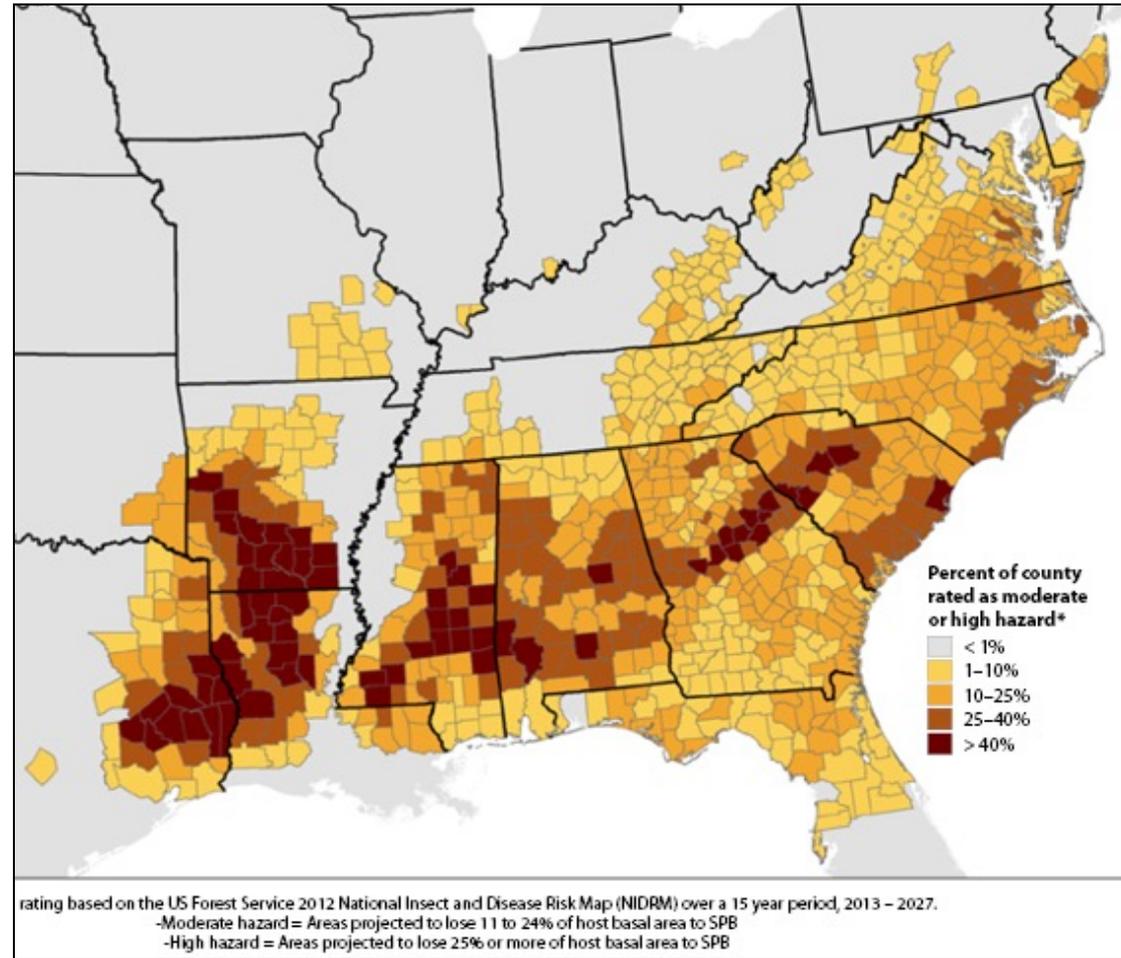


Southern pine beetle

Attack weakened, damaged, or dying trees, then overwhelm healthy trees

SPB populations oscillate (i.e. can “disappear” and then explode)

Outbreaks usually coincide with droughts



2025 Spring SPB Trapping Concluded



**0 SPB found
3,634 clerids
beetles caught**

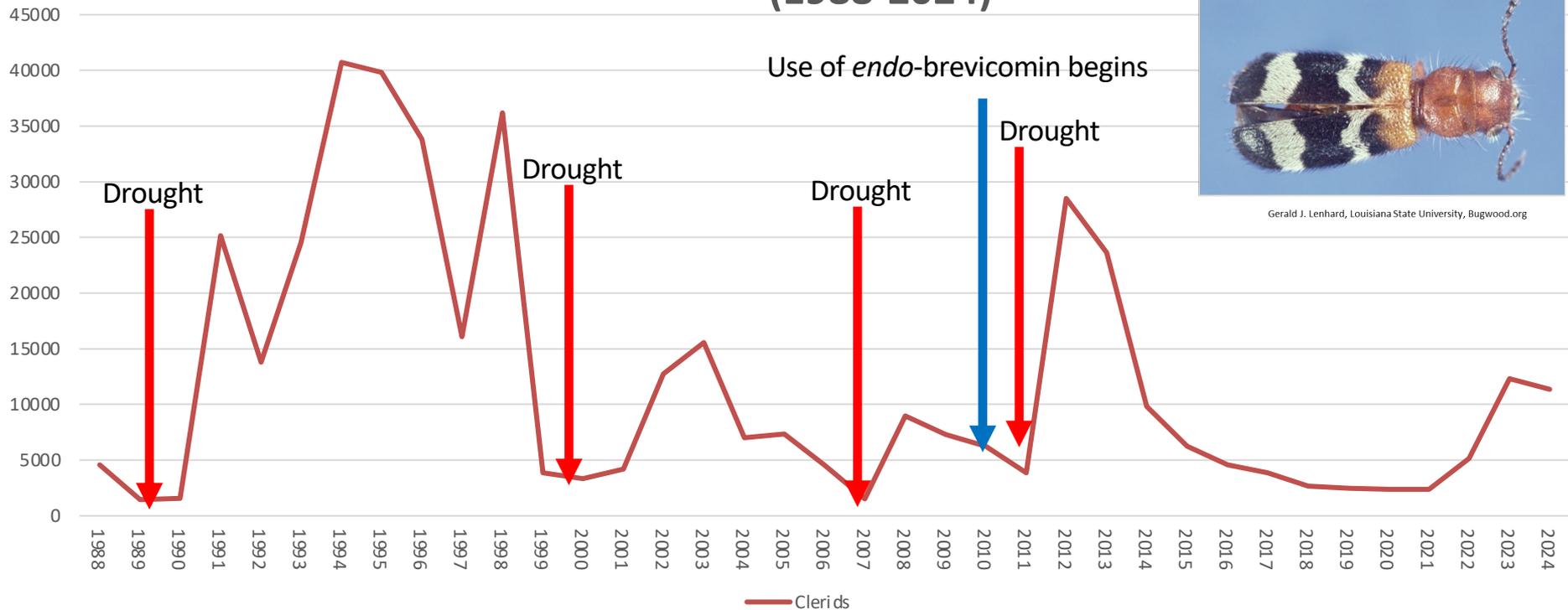
**Probability of SPB
in 2025-2026:
LOW**

State	# Traps	SPB	Clerids
Arkansas	24	0	3,767
Louisiana	15	0	1,691
Oklahoma	5	0	1,424
Texas	45	0	11,351



Texas Clerid Catches

Total (State & Federal) Clerid Beetles, *Thanasimus dubius*, in Texas (1988-2024)



Gerald J. Lenhard, Louisiana State University, Bugwood.org

Numbers increase following climate-induced stressors

Ips bark beetles

Ips
calligraphus



Ips
pini



Ips
grandicollis



Ips
avulsus



Dendroctonus
terebrans



Dendroctonus
valens



Dendroctonus
frontalis



Ips bark beetles



Common in SE US

Generally, attack weakened or stressed trees

Male starts gallery, calls female using odors (pheromones)

Can cause mortality during droughts

Ips Mortality

Ips beetles typically result in random, scattered mortality...





Ips gone wild in much of Louisiana and Mississippi during the fall/winter of 2023, following the scorching summer and where 'severe' to 'exceptional' drought persisted through year's end

Changing *Ips* Attack Pattern



Ips bark beetles (Lunenburg Co., VA)

Ips monitoring

Monitoring is mostly visual assessments on the ground



TAMFS participated in *Ips* trapping in fall 2025 – 10,660 collected

Ips avulsus- 4,692

Ips grandicollis- 4,131

Ips calligraphus- 1,837

Emerald Ash Borer

Emerald Ash Borer

Agrilus planipennis Faimaire



UGA900019

David Cappaert, Michigan State University, Bugwood.org

Emerald Ash Borer

Metallic flat-headed wood-borer

Native to Asia - Siberia, Korea, Manchuria

Many similar native species

Hosts: *Fraxinus* in US. Confirmed in white fringetree (*Chionanthus virginicus*).

Outside of North America EAB in *Juglans* spp., *Pterocarya* spp. and *Ulmus* spp.

All Texas ash species susceptible



- A. Prepupa
- B. Instar IV
- C. Instar III
- D. Instar II
- E. Instar I
- F. Egg
- G. Pupa
- H. Adult
- I. Prepupa curled in chamber

Anulewicz AC, McCullough DG, Cappaert DL, Poland TM. 2008. Host range of the emerald ash borer (*Agrilus planipennis* Fairmaire) (Coleoptera: Buprestidae) in North America: Results of multiple-choice field experiments. *Environmental Entomology* 37: 230-241.

Emerald Ash Borer in Texas - Current

2016 – Harrison County

2018 – Cass, Marion, Tarrant Counties

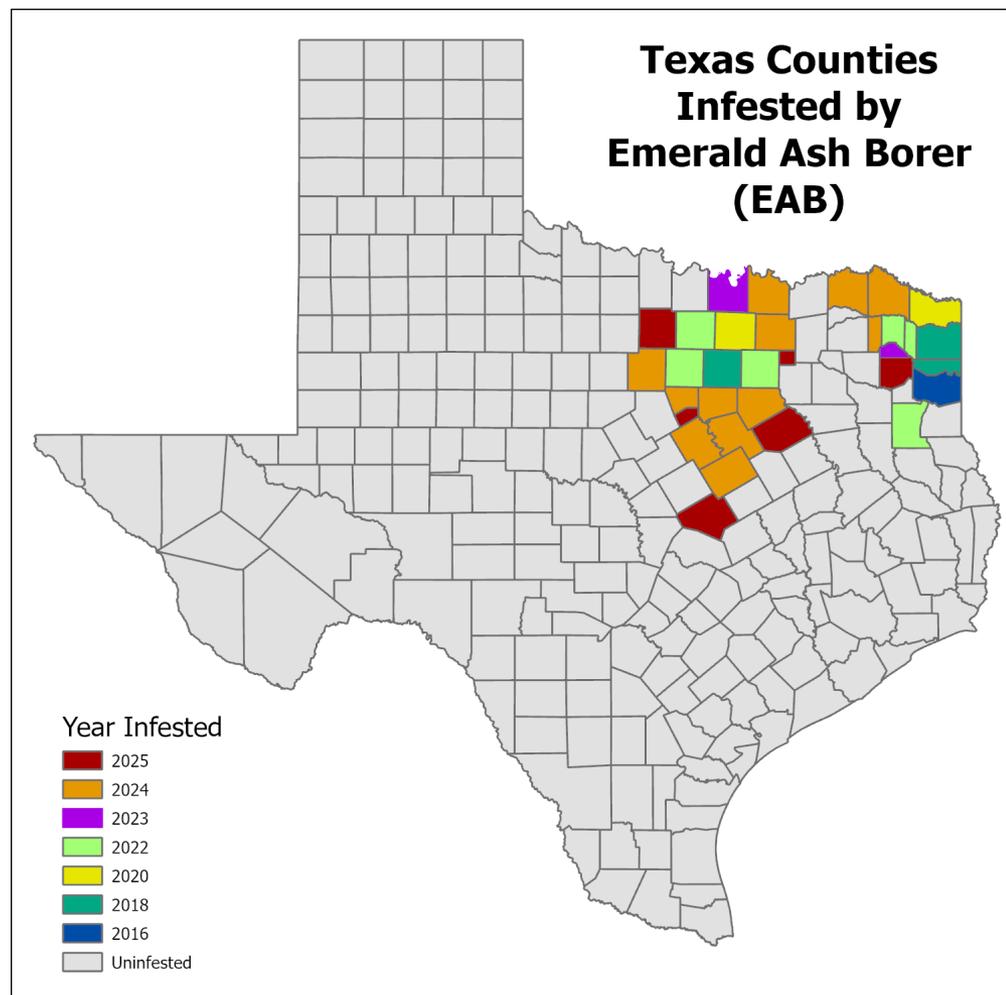
2020 – Bowie, Denton Counties

2022 – Dallas, Morris, Parker, Rusk, Titus, Wise Counties

2023 – Cooke County

2024 – Bosque, Collin, Ellis, Franklin, Grayson, Hill, Hood, Johnson, Lamar, McLennan, Palo Pinto, Red River Counties

2025 – Bell, Jack, Navarro, Rockwall, Somervell, Upshur Counties



EAB State Responsibilities

Texas Department of Agriculture *Must* regulate:

All life stages of Emerald Ash Borer

Ash Logs

Sawmills

Kiln Dry Facilities

Mulch/chips

Wood Packing Material

Ash Nursery Stock

All Hardwood Firewood



TDA Regulates- Quarantines/Fines
TFS operates in a supporting role –
Trapping, Identification and Outreach

Needle Diseases on Loblolly

Needlecast

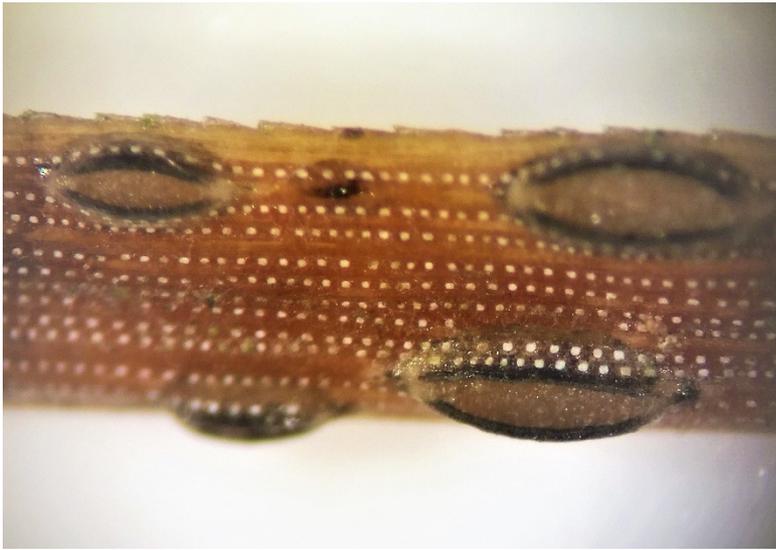
- Caused by several fungal pathogens—*Lophodermella*, *Lophodermium*, *Ploioderma*, *Rhizosphaera*
- Brown bands with yellow halo then brown, dead needle tip
- Weak, opportunistic pathogen
- Episodic—usually not a threat to pine health

Brown Spot Needle Blight (BSNB)

- Caused by fungus *Lecanosticta acicola*
- Lesions similar to needlecast
- Historically caused damage on longleaf at seedling stage but recorded on loblolly as early as 1929
- Observed on all age groups/settings/ thinning practice
- New, emerging issue on loblolly—prognosis unknown

Need to identify based on fruiting bodies (which are not always present) or PCR test

Needlecast by *Lophodermium* spp.



Brown Spot Needle Blight

BSNB by *Lecanosticta acicola*

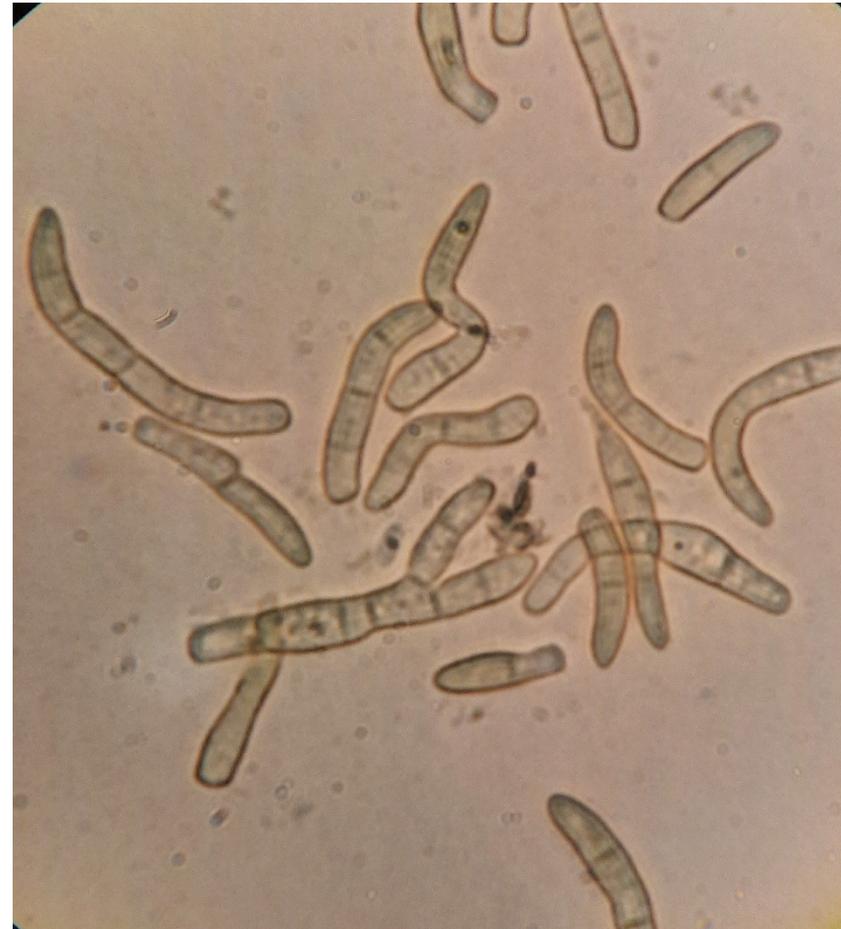


Photo: Colton Meinecke, Villari Forest Pathology Lab, UGA

Brown spot needle blight (*Lecanosticta acicola*)

Primarily damages longleaf, also loblolly/slash

Delays growth, but rarely kills tree

Spores spread by wind/rain



Brown spot needle blight



Brown
spot
needle
blight
can
affect
mature
trees



Brown spot needle blight



**Aerial view of AR Stand
affected by BSNB**

*Photo: Chandler Barton
AR Forestry Division*

Brown Spot Needle Blight



**Times New Roman view of
AR Stand affected by BSNB**

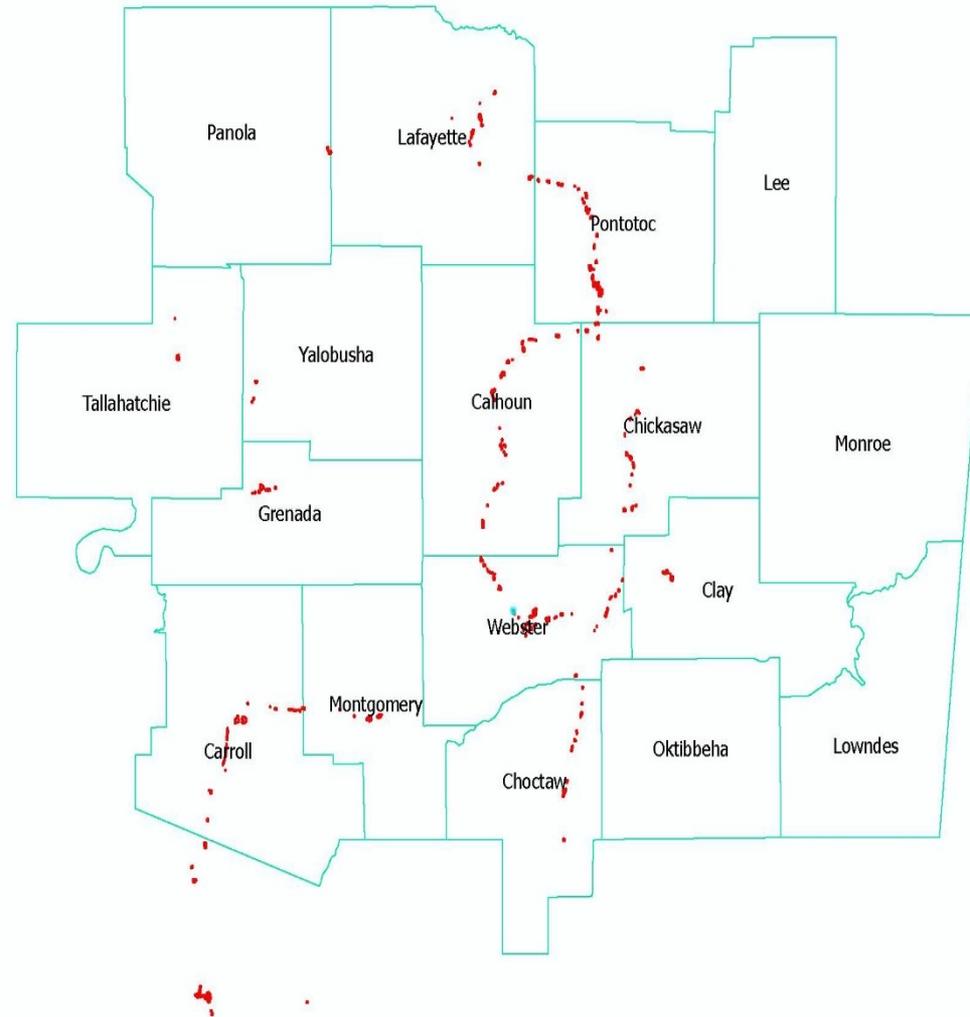
*Photo: Chandler Barton
AR Forestry Division*

History of BSNB on loblolly in SE

- First reported in 1929
- Around 2016, symptomatic needles and damage in loblolly plantations were reported—shortly after, BSNB pathogen was detected from the needles
- In 2020, for a FS-FHP Emerging Pest project, needles were sent to UGA for development of molecular technique to detect BSNB pathogen—floodgates opened for finding BSNB on loblolly
- Region-wide severity of damage and acreages affected are not available

Windshield Survey Northern MS

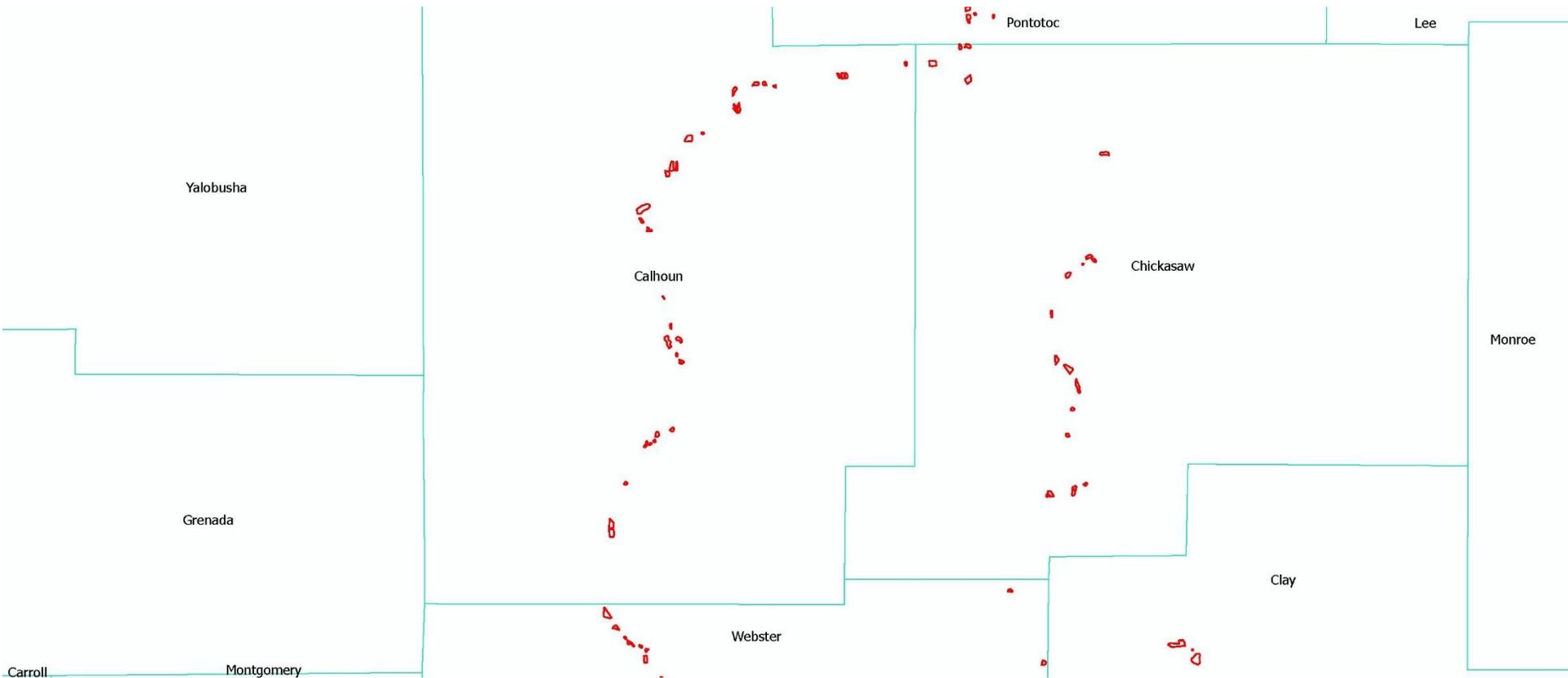
2022



Chris Steiner
USDA FS FHP Pineville FO

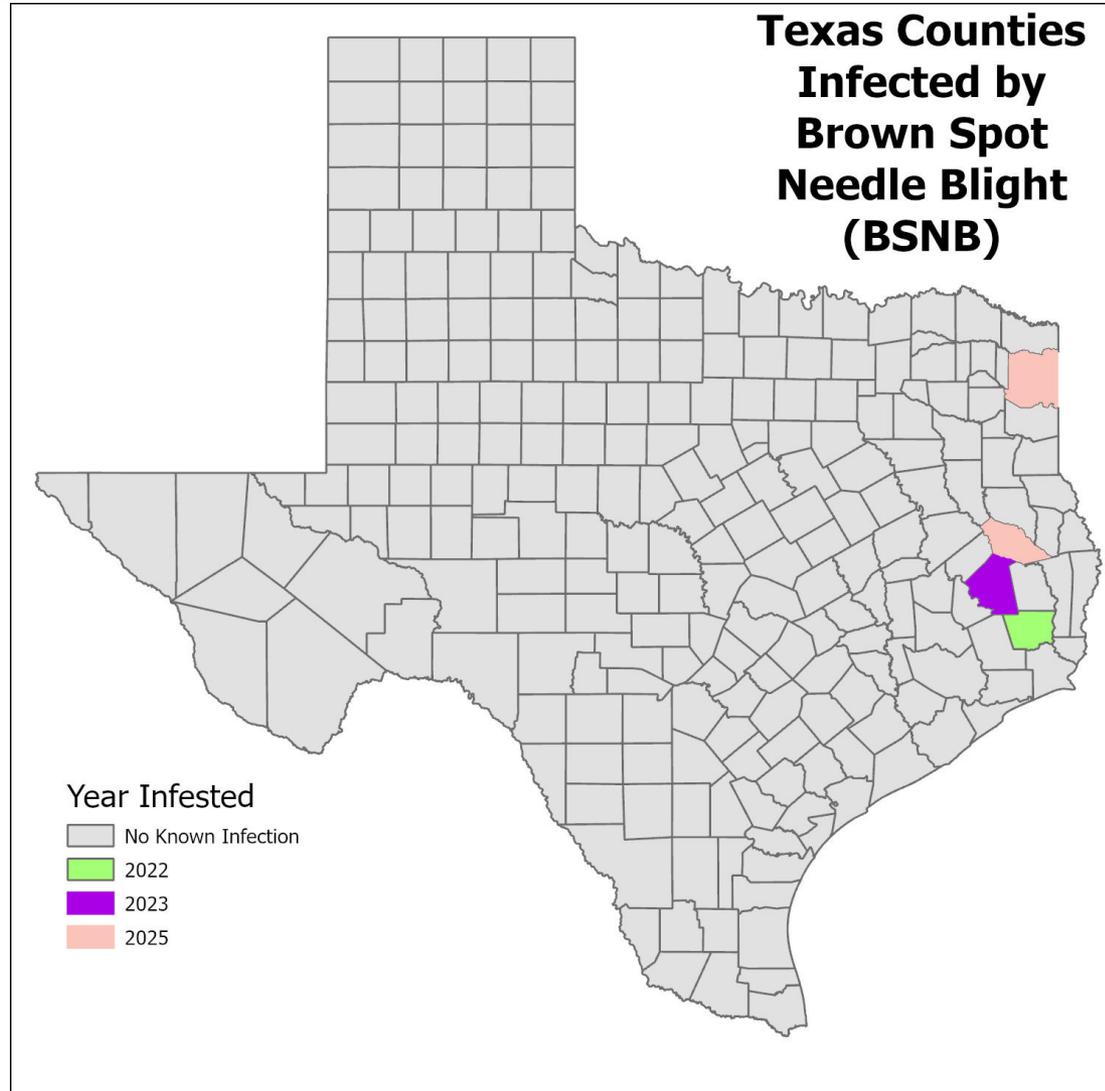
Windshield Survey Northern MS

2022



- 5,685 acres affected from 252 polygons
- 13 samples collected from 13 counties—all positive for *L. acicola*

BSNB in Texas

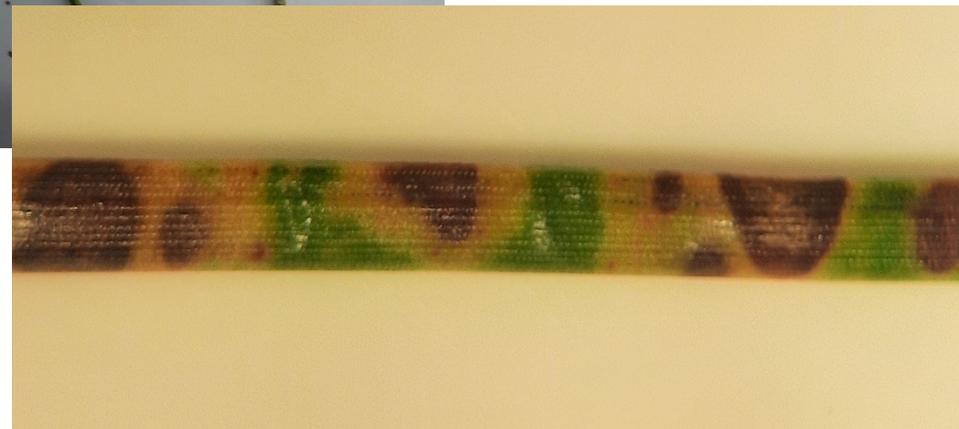


Why are we seeing BSNB on loblolly now?

Only speculation for now...

- Disease Triangle: Shifts in Pathogen-Host-Environment?
- Unknown if this is a new variant/sub-species that is more pathogenic (compared to the BSNB which historically impacted southern yellow pines)
- Shift in susceptibility of loblolly? Trees with similar genetic background which are more susceptible?
- Climate change which favors disease development (prolonged wet periods)
- Research/field data needed to determine prognosis of BSNB on loblolly—episodic but innocuous like needlecast or is it endemic with significant damage?

Brown Spot Needle Blight ID



Brown Spot Needle Blight ID



Easier to identify early in infection

“Bottom Up” infection progression

Difference in susceptibility within a stand

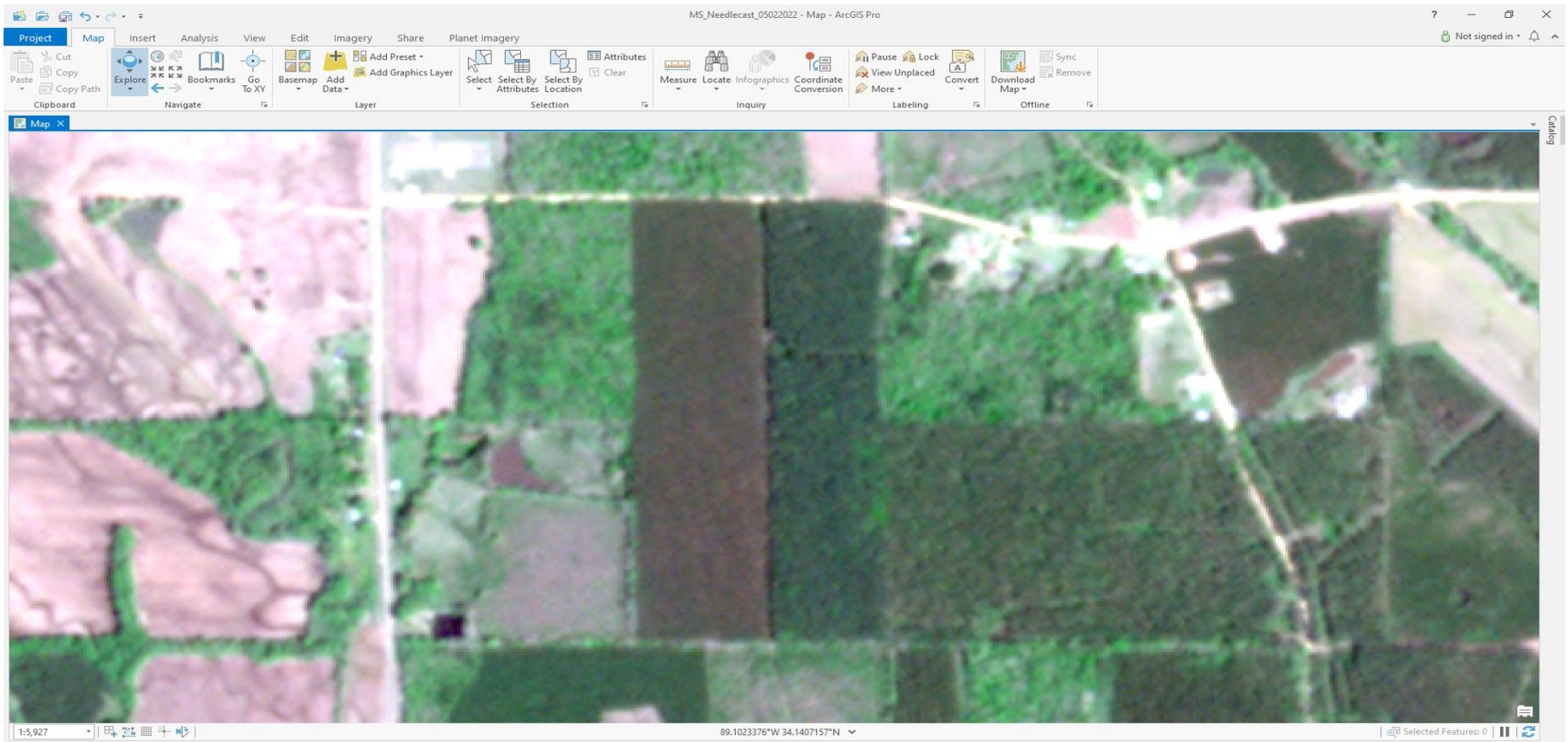


Difference in susceptibility within a stand



Brown Spot Needle Blight

Satellite Image Showing Two Adjacent Stands with Different Level of Needle Damage



Brown Spot Needle Blight

**Ground-
truthing of
the stand in
previous slide**

Separated by 10 yds
Slightly younger
Slightly overstocked
Different family?



Anecdotal Ground Survey Results

Mid-August 2025 – Tom Bigbee NF – lots of prominent BSNB in mature trees



Late September 2025 – Tom Bigbee NF – little sign of BSNB infection

Brown spot needle blight Management

Plant resistant seedlings

Record family/genetics

Promote aeration in young stands

Thinning

Understory control

Prune lower branches

Foliar fungicides

Recommendations TBD

Fire!



Questions ?

Allen Smith

Forest Health Program Leader

Texas A&M Forest Service

903-297-5094

lasmith@tfs.tamu.edu