**Great Plains Tree Pest Council –Meeting Minutes**

**Olathe, Kansas April 16 – 18, 2012**

**Attendees**

**Participant Agency/Organization/State Representation**

John Strickler Guest Speaker

Larry Biles State Forester, KFS

Robert Atchison Rural Forester Coordinator, KFS

Tim McDonnell Community Forester, KFS

Nicole Ricci Forest Health Specialist, KFS

Dennis Carlson District Forester SC, KFS

Dave Bruton District Forester NE, KFS

Gerard Adams University of Nebraska, Plant Pathology

Rachel Allison Nebraska Forest Service

John Ball South Dakota State University

Jason Griffin Assoc. Professor HFRR, Kansas State Univ.

Charles Barden Professor HFRR, Kansas State Univ.

Robert Buhler Kansas Dept. of Agriculture

Jared LeBoldus North Dakota State University, Plant Pathology

William Jacobi Colorado State University

Laurie Stepanek Nebraska Forest Service

Sky Stephens Colorado State University

James Walla North Dakota State University, Plant Pathology

Simeon Wright Missouri Dept. of Conservation

Judy O'Mara Kansas State University

Mark Harrell Nebraska Forest Service

Bob Cain US Forest Service

Les Koch Wyoming State Forestry

Jim Blodgett USDA Forest Service South Dakota

Aaron Bergdahl North Dakota Forest Service/NDSU

Rob Lawrence Missouri Dept. of Conservation

Jerold Spohn Ft. Riley, KS DPW, Conservation Branch

Sherie Copeland Kansas Dept. of Agriculture

Jeremy Maples Kansas Dept. of Agriculture

Jeff Witcosky USDA Forest Service-Colorado

Rick Spurgeon Olathe City Arborist

Bill Maasen Guest Speaker

*Minutes were compiled by the 2011 Secretary of the Great Plains Tree Pest Council, Aaron Bergdahl.*

**Meeting Notes (April 17th 2012)**

**The History of Forestry in Kansas**

***Speaker: Larry Biles – KFS State Forester***

* Overview of Kansas forestry and history of the Kansas Forest Service
* In earlier times there were bounties awarded for planting trees
* Railroad nurseries
* Early nursery production in 1891-1892: 4.25 million seedlings
* 1909 Division of Forestry established
* 1902 Forestry courses begin to be offered at Kansas State University
* Currently 300,000 acres in shelterbelts in KS
* Currently 25 staff
* Contemporary issues of focus: water quality, biomass. forest health, forestry management of community and rural forest resources

**Assessing Windbreak Health with Remote Sensing**

***Speaker: Bob Atchison – KFS Rural Forestry Coordinator***

* Project is part of Redesign: target resource concerns
* How to provide services? Windbreaks did not meet Forestry Inventory and Analysis criteria
* Great Plains Initiative: Concerns about emerald ash borer, State Assessment also calls for basic information about Kansas windbreaks
* 43,436 miles of windbreaks, 44% fair to poor condition
* Remote sensing project to assess size and condition
* Identify areas to address ecosystem service values
* Object-based classification
* Criteria by NRCS to assess windbreak condition (Number of acres in each class)
* Dovetail results with qualifications for the Environmental Quality Incentive Program
* 5 steps to the methodology
* image pre-process
* identify objects
* in ArcGIS edit features
* clean up photos
* calculate attributes
* This was done for 7 counties (1116 windbreaks)
* Valuable partnering with NRCS
* Condition assessment based on ‘brightness’/texture values followed by groundtruthing
* Final steps
* identify poor windbreaks, qualification for EQUIP
* approach landowners about participation

**Improving Red Elm Propagation: An important species for Native Americans**

***Speaker: Charles Barden – Professor & State Extension Forester***

* USDA funded project, 1998 funding
* Cooperation with local Native American group to bring red elm back to tribal land
* Red elm is not available in production nurseries
* Difficulties growing red elm, seeds did not germinate in the first year
* USDA funded grants program for new techniques for propagating culturally important plants
* Successful planting of red elm were transferred to the reservation
* Characteristics of red elm
* medicinal and use for traditional fires
* Techniques for improving propagation of red elm
  + cold stratification, various concentrations of giberellic acid, or a combination of the two
* Best results from treating fresh seeds with giberellic acid right away and planting (?)
* Bank stabilization projects: (6 altogether) including Little Soldier Creek
* Overview of working with the Potawatomi/sovereign nations: do projects *with*, not *for* tribes

**Pine Wilt Vectors & “Insect Borers” of Kansas**

***Speaker: Bob Bauernfeind – Professor & Extension Specialist***

* Borers are secondary invaders
* Final nail in a tree’s coffin
* Cut off vascular elements
* Control: cottonwood borers lay eggs at base of tree, treat that area
* red oak borer: three-year life cycle
* twig girdler
* scolytids small beetles
* Lepidopteran moths: carpenterworm has a three-year life cycle
* Pine wilt is very common in KS: slow the spread program in western KS
* Three things needed for pine wilt: nematode (native), host (pine), vector (pine sawyer beetle and other beetles capable of harboring nematodes, that feed on pines)
* Beetle larvae feed under bark for first three instars, then feed into wood
* Rapid expression of pin wilt symptoms
* Management: some say don’t plant pines
* sanitation: cut and burn before beetle emergence
* Point raised that adult beetles can do maturation feeding on a number of trees before mating, so trees can have zero beetle population, but have pine wilt, due to nematodes
* trees showing wilt-like symptoms may not have nematodes
* since nematodes are native to North America, can there be false positives, for example if a tree dies due to drought and happens to host nematodes (?)
* Questions about beetle host preference and pine susceptibility

**Continued Conifer Work in Kansas**

***Speaker: Jason Griffin – Ornamental Trees & Shrubs Specialist***

Part 1

* Management steps for pine wilt: don’t plant non-natives, maintain vigor, remove dead pines, properly dispose
* What kills the trees in pine wilt situations? This is not known for sure
* Options for prevention: preventative treatments, sanitation, curative, break disease cycle, plant alternative species, plant resistant pines
* Feeding preference of the southern pine beetle
  + Collect felled logs, capture beetles in beetle trapping unit (a camping tent), place in feeding arenas, insects pick a material and feed voraciously
* Recorded feeding area and % feeding after 48hrs
* No feeding preference seen, except for southwestern white pine – maybe has some resistance, like loblolly pine (?)
* Trial reduced to only southwestern white pine – 9 of 11 beetles still fed on samples

Part 2

* New species: Arizona cypress, transplants well, grows well, looks good, drought and heat tolerant – cold tolerance is still questionable.
* Drought tolerance observed by periodic watering followed by extended periods of no water.
* AZ cypress put on a lot of root growth, and therefore did well in drought conditions
* Green Giant Arborvitae: did OK, responded to drought
* Efforts to collect seeds from high elevation Arizona cypress for better cold tolerance

**Relative resistance of Rocky Mountain Region pines to *Diplodia pinea***

***Speaker: J.T. Blodgett – USDA Forest Service, Forest Health Protection***

* Objective: to test relative resistance
* Compare aggressiveness of Diplodia isolates collected from symptomatic and asymptomatic hosts
* 6 species/360 trees
* trees inoculated by scalpel = water agar agar plug and wrapped in parafilm

- symptoms started in 5 days

- symptoms were evaluated, fungus was isolated

- 98% recovery rate of Diplodia from seedlings

- 4% recovery of Diplodia from controls

- Summary: Diplodia can be aggressive/hosts differ in terms of relative resistance

- Isolates from asymptomatic ponderosa pine can be as (or more) aggressive than isolates from symptomatic branches

**Discussion continued & GPTPC attending N.A. Int’l Forest Disease Workshop**

**Possible resurrection of the old GPTPC website**

-Generally people in the group more geared toward diseases of trees and shrubs expressed interest in the meeting, but many were concerned about the impact of travel restrictions on their ability to attend.

**Discussion: Update on Tree Diseases of Great Plains Book**

**Field Tour:**

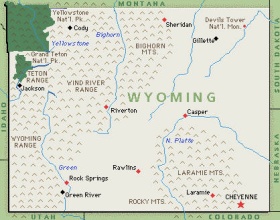
**History of Forestry at Sunflower and Research Station along with guided tour of the ammunition plant and relic trees**

***Speakers: John Strickler & Bill Maasen – JCPRD Sup. of Parks & Golf Courses***

**Discussion: Update on Tree Diseases of Great Plains Book continued after supper**

**Meeting Notes (April 18th 2012)**

**State Reports:**

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**Wyoming, Les Koch**

* state funding will be given for management of federal land, related to mountain pine beetle
* cut and chunk operations to control mountain pine beetle
* must be done correctly and at the right time
* bark beetles remain the most significant problem
* awareness activities for invasive pests of concern
* billboard space reserved for invasive pest awareness
* promoting pheromone packets for mtn pine beetle control
* promoting spraying for mtn pine beetle control
* No EAB trapping in Wyoming, some Gypsy moth trapping near Jackson, WY
* Less impact on lodgepole pine in the Big Horns
* pockets of beetle kill across the black hills
* mills are flooded, no market for blue pine

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**North Dakota, Jared LeBoldus**

Jared introduced himself: Jared **M.** LeBoldusjoined the department of plant pathology in the summer of 2011. His research interests lie in the areas of tree and turfgrass pathology. His basic research explores the interactions between host and pathogen populations in natural ecosystems and his applied research is focused on developing management strategies for a variety of turfgrass, tree, and nursery diseases. Dr. LeBoldus received a B.Sc. (2003) in Forest Science from the University of British Columbia. He received his M.Sc. (2006) and Ph.D. (2010) from the University of Alberta in the area of Forest Biology and Management.

**North Dakota, Aaron Bergdahl:**

**2011 Summer Flooding:**

- Use of remote sensing to identify areas where assessments can be carried out.

- Jared LeBoldus, NDSU plant pathology, receives a grant from the North Dakota Forest Service to carry out assessments in flooded areas of Missouri and Souris River basins

- Wet weather diseases were significant in 2011

**New needle diseases:**

* Dothistroma was fond in 2010, 2 new counties were identified in 2012; Brown spot needle blight was detected for the first time in ND in a southeastern county

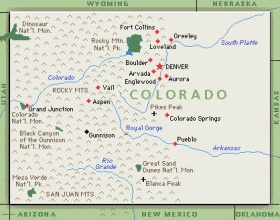
**New insect defoliator:**

- Large aspen tortrix was identified in the Turtle Mountains; aerial survey showed that as much as 25,000 acres were defoliated.

- Trapping, education and outreach focused on invasive species that threaten forest and tree resources continue to be major components of the programs of the ND Forest Health Specialist

**North Dakota, James Walla:**

* overview of stigmina fungicide trials
* evaluation of the disease may indicate a 1-yr life cycle
* potential for rapid spread
* on most susceptible trees, at least some stigmina has a 1-yr life cycle and not a 2-yr cycle
* Rizosphaera needle cast seems to have tree to tree resistance, while stigmina shows less/no variability
* study included assessment of needles – differences in the number of bands
* assessment of resistance across needle age classes – is one class resistant?
* in summary, the longer the needles were protected, the lower the affected area of the needle and the fewer the fruiting bodies

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**Colorado, Bill Jacobi:**

Shade tree issues:

* banded elm bark beetle – artificially infected beetles, annual elm losses are down, banded elm bark beetle s not nearly as effective as elm bark beetle at vectoring Dutch elm disease.
* firewood study
* national elm trial
* thousand cankers of black walnut (TCD) – walnut twig beetle killed at 48°, can survive -26°, some trees in Boulder seem to be escaping the disease – may be right next to dead trees. Questions about resistance in the population
* Red oaks in boulder – bacterial ooze has been noticed to be associated with kermes scale, associated with twig dieback
* mentioned an ice storm (in Boulder?) that was significant and costly (1.5 million USD) –cleanup continues

Forest tree issues:

* white fir decline across the front range
* white pine blister rust
* mountain pine beetle host preference
* dwarf mistletoe
* bark beetles and fungal associates
* overall aspen health in Colorado

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**Nebraska: Mark Harrell**

* mtn pine beetle cost share program
* mtn pine beetle can be found scattered in the panhandle along I80
* invasive tree pest shopping tote made by the Nebraska Dept. of Ag.
* brood survey shows that the beetle is not slowing its spread
* *ips* have been commonly misidentified as mtn pine beetle
* NE is doing the cut and chunk method to dry breeding material
  + questions whether this creates an *ips* habitat?
  + blue stain is very often associated with mtn pine beetle – thought to be from *ips*
* significant time is being devoted to TCD
* tree pest detector program has been active for EAB and 1,000 cankers
  + citizens detectors volunteer time upfront for assisting in the community
* 20 communities are doing street-side surveys
* flooding on the Missouri River (trees were under water for three months)
* pine wilt continues to be a major problem in NE
  + similar westward expansion to that seen in KS
* diplodia blight related to drought stress
* widespread occurrence of 3 types of pine tip moth (Zimmerman pine moth mentioned)
* overview of EAB treatment options – no treatment unless within 15 miles of an infestation
* injections into xylem, EAB feeds on phloem
* arborjet markets for injections for mtn pine beetle
* discussion about products being labeled for human safety, not actual efficacy
* conversation about the EPA and chemical treatments as current routine tree care items
* Walnut quarantine, funding by NE Dept. of Ag.



**South Dakota: Jim Blodgett**

* hiring an entomologist for the Rapid City office, starting in June
* references general insect problems, mtn pine beetle
* aspen health survey – overall about 3% mortality, which is normal for aspen
* limber pine survey – white pine blister rust emphasis transitioning to mtn pine beetle concerns
* to hold insect and disease training in Sheridan, WY June 5th and 6th
* cytospora of aspen on drier sites, some hypoxylon

**South Dakota: John Ball**

* doing some work with EAB along the Mississippi in Minnesota, Iowa
* sees people planting too much freeman maples in replacement of ash – potential for future problems
* community forestry proposes no more than 5% of community trees should be in the same genus
* stay away from the genera found on the three major continents
* Kentucky coffee tree, maackia, hop trees, etc.
* Discusses experiences in northern China
* Ash species *Fraxinus rhynchophylla* discusses as it related to suitability for planting in the USA
* Olympics in Beijing, planted green ash from the USA, having EAB problems there
* discussion about cutting and chunking control for mtn pine beetle
* verbanone does not seem to work on ponderosa pine
* spraying on private land can be cheaper than removing trees
  + spray issues regarding too many trees being sprayed per acre

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**Missouri: Ron Lawrence and Simeon Wright**

* new facilities in Columbia, MO now in operation
* 13-year brood of cicadas was impressive in 2011, causing a lot of flagging and twig drop
* kermes scale also causing flagging on white oak, post oak, red and pin oaks
* EAB – one population known in the southeast part of the state
  + a campground operated by the army corps of engineers
  + in 4 nearby areas with known EAB infestations the traps only picked up an adult EAB at one site
* the infestation was found in 2008 and EAB had been there for 6 years (2002) when it was first found in Michigan
* EAB has not been found outside of Wayne county
  + trapping efforts will continue in 2012 – 1500 planned traps
* EAB biocontrols released in 2012
* EAB firewood outreach/radio and print/displays/billboard/online reporting ability/EAB hotline
* compliance agreements made in order to move ash wood in MO, sent to mills, segregated
* pre-‘SLAM’ (slow ash mortality) activities are underway
* Gypsy moth trapping yielded 4 moths in MO last year (5 to 10 is usual)
* white oak mortality report, mature trees among healthy trees die quickly in a variety of settings
* TCD surveys are underway in MO
  + MO has the most black walnut trees of any state, so the most to lose
* Using FIA data, recorded standing dead black walnut trees were visited to look for TCD
* outreach for TCD
* training the Walnut Council about TCD
* pheromone and Lindgren traps will be used to trap the walnut twig beetle

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**Kansas: Nicole Ricci**

* FIA is complete, focusing more specifically on forest health issues
* First Detector program for pine wilt (EAB?)
* redesign grant for bush honeysuckle survey and management – working with major metro areas
  + sustainable agriculture research and education involved in this grant
  + includes a manual with an education program for agroforestry

**Kansas: Jeremy Maples**

* KS Dept. of Ag. has made 1,300 observations surveying for TCD
* awareness effort toward wood worker organizations, firewood people, mills
  + created a ‘walnut registry’
  + emergency pest fund, funded by the nursery trade (extra fee added to dues?)

**Kansas: Judy O’Mara**

* Seeing a lot of pine problems
* noted general decline in windbreak health
* model for looking at windbreak condition
* survey guide for field assessment of windbreaks
* agents in districts, general ideas about the distribution of problems across the state
* voluntary survey, challenges working with volunteers
* in summary, some decent information was gathered ‘on the cheap’
* tip moth samples have been seen often
* pine wilt samples coming in…but negative; symptoms were due to drought
* imprelis injuries on conifers was common
* oak shoot dieback: kermes scale and perhaps some associate
* obscure scale, lots of sooty mold on elms
* lots of tubakia on red and bur oak

**Kansas (Fort Riley): Jerold Spohn**

* 16,000 acres of actively managed forest
* mixed plantations (walnut, etc.)
* 10-yr forest stand inventory (to be done this year)
* bagworms, hackberry butterfly
* bush honeysuckle management
* one acre of kudzu under management (85% control with Rodeo)
* does timber sales (walnut and other plantations)
* management of hedgerows for migratory birds
* stresses the importance of local knowledge when dealing with native trees and plants – what the general wants, isn’t always what the general gets

***General Membership Business Meeting.* Changing of the Guard, Nominations/Election for board member positions**

-As has been done in the past, the secretary, Aaron Bergdahl, will transition to the position of Chair. Nicole Ricci is thanked for her year of service as GPTPC Chair and organizer of this year’s meeting

-The position of secretary will be held by a representative from Colorado (Either Bob Cain or someone else from USFS in Colorado)

- The 2013 Great Plains Tree Pest Council meeting will be held in Fargo, North Dakota near the end of June. A survey will be sent out in the future to gauge the level of participation on certain dates

**American Walnut Company Tour**

**Conclusion of the Meeting**