

For those with an interest in the Cross Timbers forests of TX, OK and KS a few tidbits I picked up at recent conf that are interesting. For everyone else just delete now!

There was a day of presentations mostly by researchers from OU, OSU and Univ of Arkansas (the later is where the Ancient Cross Timbers Consortium is headquartered). As I said, these aren't anything deep, just "tidbits".

- Most of us know that the two primary tree species that define the region are post oak (*Quercus stellata*) and blackjack oak (*Q. marilandica*) but it seems that has not always been the case. Bruce Hoagland from OU compared inventory data for the Arbuckle Mountains from 1870 to that only 20 years later in 1890. (Arbuckles are about 2 hrs north of Ft Worth). Both years showed post oak dominant however in 1870 #2 species was black oak (*Q. velutina*) and there was almost no blackjack oak. In 1890 these two species flipped.
- The 1870 survey found no juniper and the 1890 only in 3 locations.
- Other common species of the region *today* are Ashe juniper and Eastern redcedar, American, slippery, cedar and winged elms; Shumard & Texas red oaks and netleaf hackberry.
- DeSantis from OSU reported on changes in vegetation of the entire Cross Timbers region.
- Post and blackjack oak seedlings densities have dramatically decreased since the 1950's, from 70% of the stand to only 20% while juniper has increased.
- Decrease in fire frequency is thought to be the main reason. Juniper is not fire resistant as much as the oaks are. More closed canopy forests now ("Mesophication")
- What's really interesting is this trend does not seem to be occurring in the confirmed stands of *ancient* crosstimbers (old, undisturbed woodlands)
- Dr Thomas from OSU compared region in 1870 to now in relation to effects of urbanization.
- He also noted the replacement of black oak with blackjack oak over that time period.
- Interesting theory on why.... Maybe black oak decline is due to cultivation since that species indicated the best soils for farming at settlement time....OR, drought could be contributor
- Old growth shortleaf pine in the Cross Timbers. McCurtain Co, OK has largest stand left in the US (SE Oklahoma)
- Tree Ring Chronologies of Eastern Redcedar by Jessie Edmondson of U or Ark.
- Can get very old, older even than the ancient post oaks of 300 and 400 years.
- 630 yr old redcedar found near Cedar Hollow, OK.
- Kelly DeRemaux of OSU spoke on 10 year research plot on Nature Conservancy land. Land managed with fire and buffalo grazing.
- Found 20% mortality of post oaks and 40% mortality of blackjack oaks. Only 5 new trees became established during the decade, all post oaks. Maybe a more natural state since there is fire and grazing?
- Fire frequency. 250 years ago North Central Texas had a 2 - 4 year interval.
- Tree Ring Records and false rings in post oaks by Dr Stahle from U of Ark. Post oaks have about 20 false rings per century. Occurs whenever temps drop to 23 F or below in the springtime after tree break dormancy.
- Basal sprouts are much more common in blackjack oaks than post oaks. Therefore the relative reduction in numbers of blackjacks to post oaks in past 100+ years seems likely tied to the loss of fire.

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