WANTED!

MOUNTAIN CEDAR

a.k.a. Ashe juniper

a species of JUNIPER TREE, last seen spreading rampant across the Texas Hill Country

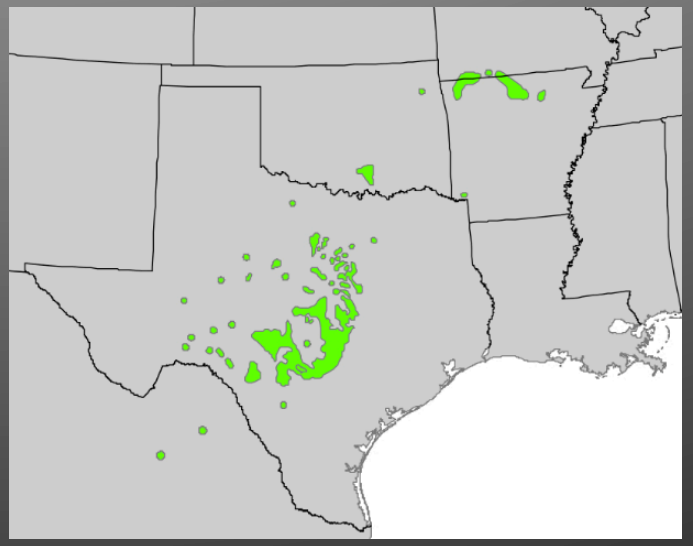
DEAD AND ALIVE

By Elizabeth McGreevy

The Mountain Cedar

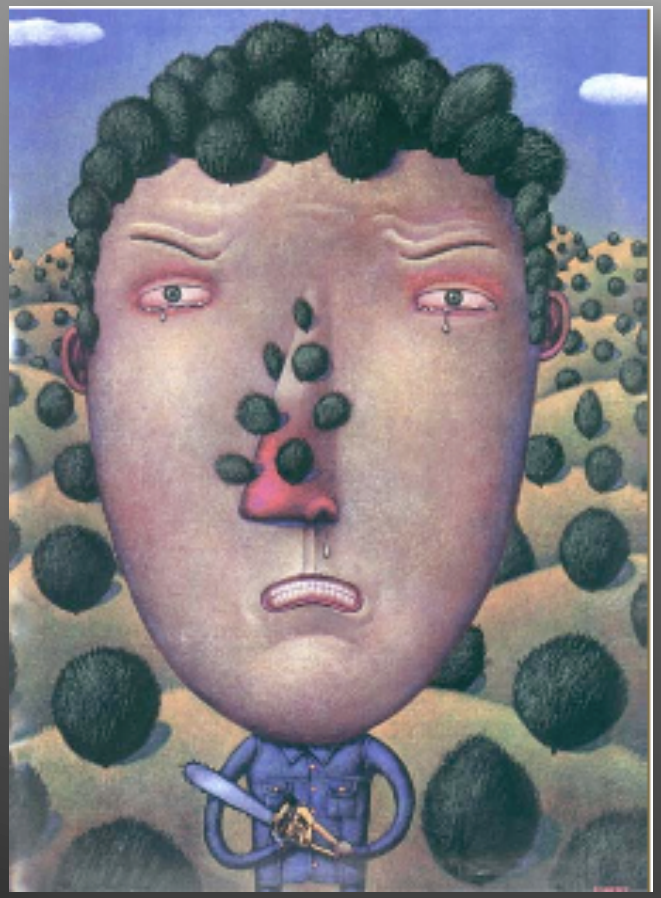
Common Names: Ashe juniper, Post cedar, blue berry cedar, and damn cedar

Scientific Name: Juniperus ashei



Current range

The Trees We Hate



It plagues us with
months of cedar fever

The Trees We Hate

It invades our pastures and is said to steal our water

Then, we are told we couldn't cut any down because of an endangered bird

The Trees We Hate

So we love to chop them down

A Few Mountain Cedar Tall Tales

NOT NATIVE

SHORT-LIVED BUSHES

POLLEN IS TOXIC

USELESS

NOTHING GROWS UNDER IT

WATER HOGS

THE HILL COUNTRY WAS MOSTLY GRASS

MOUNTAIN CEDARS WERE UNCOMMON

NOT NATIVE

"The non-native cedar robs native oaks of water and light."

President George W. Bush, 2002

COMMON NAME *Genus species*	GENERAL CLASS (I - IV)*	WILDLIFE VALUE (4 - 1)*	HILL COUNTRY SPECIES	MATURE HEIGHT (Feet)	DRY SITE	MOIST SITE	WET SITE	FULL SUN	PARTIAL SHADE
ELM, CEDAR *Ulmus crassifolia*	I	4	X	60	X	X		X	
ELM, CHINESE	II	4		60		X		X	
Acacia farnesiana									
JUNIPER ("CEDAR") *Juniperus spp.*	III	4		30	X	X		X	
	*Descending Value								

It's More Native than We Are

Fossilized pollen from Bexar County cave shows here since last Ice Age 10,000 years ago

First Spanish explorers into Hill Country mentioned its presence along rivers and on hillsides and built missions using larger cedar for roof beams.

SHORT-LIVED BUSHES

When most people think of cedars, they think of bushes, such as the one's decorated at Christmas.

Most mountains cedars we see are young growth, not old-growth

Old-growth bark

Juvenille bark

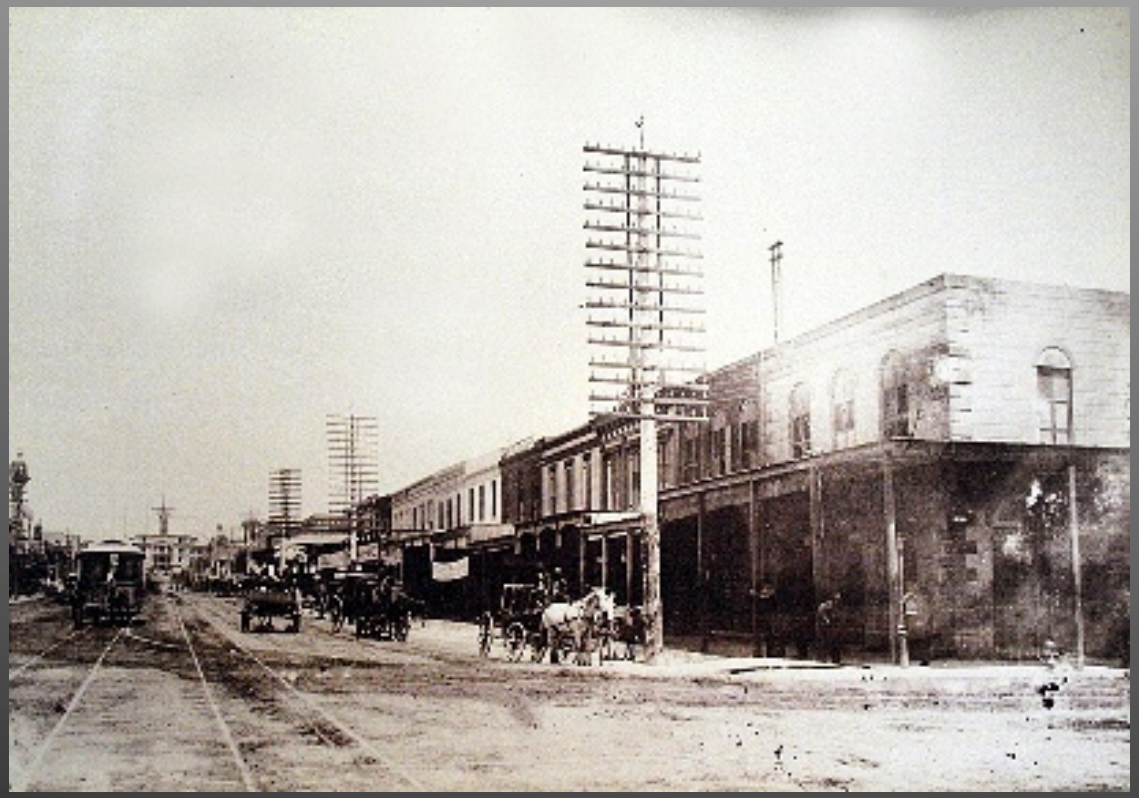
Cedars get Much Bigger

Mountain cedars might invade quickly, but once established, they grow slow and live long

Caren Beardmore developed a formula to properly age Mountain Cedars. One 14" mountain cedar was aged at 177 years.

Cedars get Bigger & Older

Tall Enough to Make Telephone Poles



POLLEN IS TOXIC

"The toxic nature of mountain cedar pollen may lie in its chemical nature"

Klayman Holistic Chriopractic Clinic

Some Remedies!

Use November-February
Neti pot
Allergena Zone 5
Easy Breather
Cedar berries & leaves have camphor & Vitamin C

Cedar Serum by Biostar
http://peoplesrx.com/coldfluallergy-immunity/

Leaky Gut Syndrome. Reduce sugar intake, antibiotics, fluoride and unsprouted grains.

USELESS

"...it behooves land managers to realize that cedars do have an inherent value, albeit as a Dr. Jekyll - Mr. Hyde relationship."

Dale Rollins and Bill Armstrong, 2001

We Use Cedar to Build

We Use Cedar to Build

The Alamo

The Store, Hunt

The Natural Gardener

We Use Cedar to Furnish

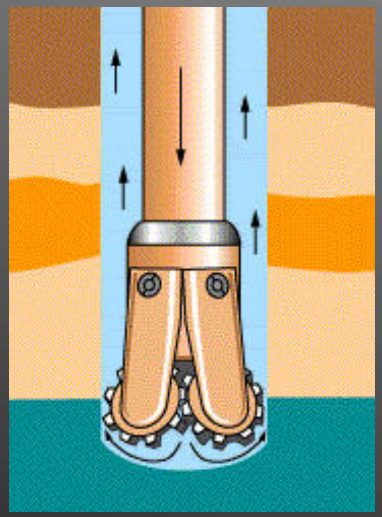
We use Oil, Fruits & Leaves

Leaves and fruits: vitamin C, camphor and anti-viral compounds

Texas Cedarwood Oil produced at Texarome, Chem-Pac, Paks, and Cedar Fiber. Texarome refines their oil and sends it to fragrance companies in New York, Paris and Tokyo.

We use Flakes & Mulch

Cedar Flakes are added to oil drilling mud & as a peat substitute in gardens



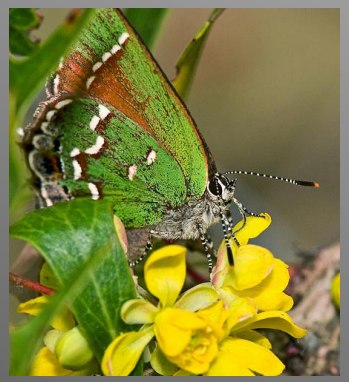
Cedar Mulch is used in gardens to ward off fleas and attract beneficial nematodes

Wildlife Use it for Shelter, Nesting Material & Nest Sites

Wild turkey nest protection

Golden cheeked warbler nest material

Many wildlife eat the leaves & fleshy cone fruits



Wildlife that spread cedars into grasslands

…but only heavily grazed grasslands

NOTHING GROWS UNDER IT

"Ashe juniper can form dense climax stands….that suppress the growth of understory species. Growth inhibitors contribute to such suppression."

US Forest Service website

No Toxins Have Been Found

Reduced understory is a result of shade, matted litter, low branches and overgrazing

Acts as Nursery for New Woodland Plants

Texas madrone

Texas red oak & turk's cap

Texas ash

WATER HOGS

"Cedar trees are notorious in central Texas… sucking up large amounts of water."

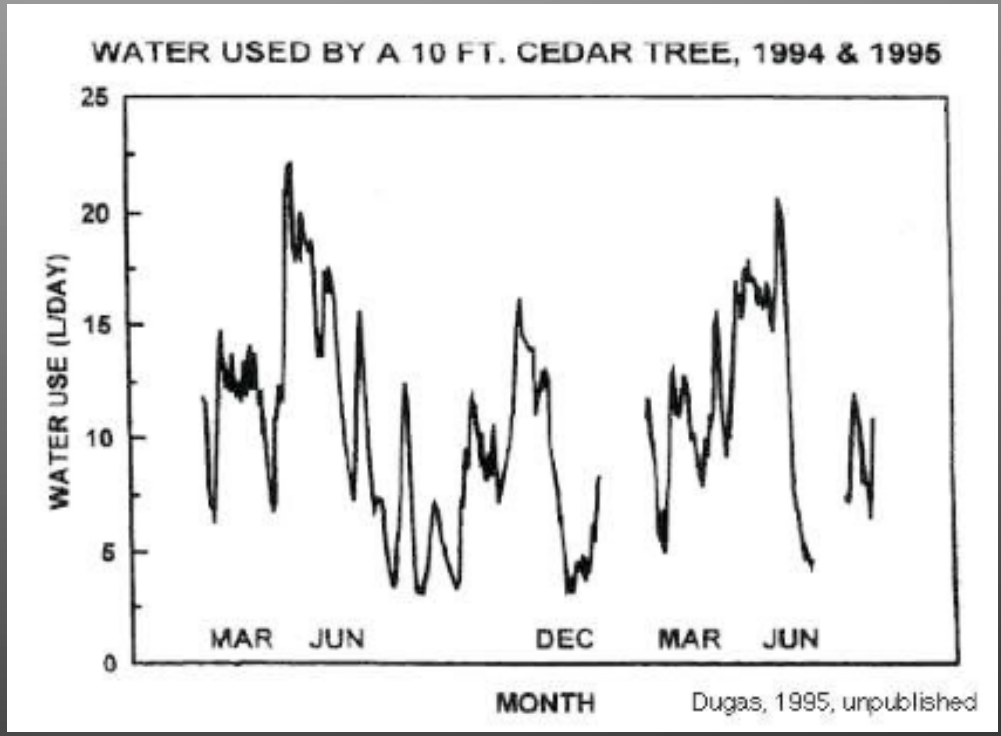
Texas Parks and Wildlife, 1999

Conflicting Studies

Reported 33 gallons per day only applied to 10’ bushes in full sun. Didn’t include old-growth cedars

Interception studies were being conducted in full sun

Water flow down trunks not always measured



Conflicting report not published

New Studies Show Cedars are Not Water Hogs

Cutting back cedar not best approach to saving water

Widespread tree isn't to blame for all woes pinned to it

MIKE LEGGETT

For most of the past 25 years, if you saw a cedar tree you grabbed a chain saw. Unless you were a golden-cheeked warbler.

The little birds that nest exclusively in Central Texas — using long strips of cedar

have been some spectacular successes in restoring spring flow on some ranches where cedar was wiped out.

groundwater supplies in Texas, not to mention dams and water-use practices that have decreased in-stream flows in rivers and affected the amount of water that reaches the Gulf of Mexico.

Blaming cedar is easy. It's thick and forbidding as a community. Nothing grows under cedar, and, though some birds and even deer will pick the berries, there's little food value. Most ranch-

Post Clearing Conditions Tend to Reduce Water "Saved"

Woody vegetation grows back and uses up "savings"

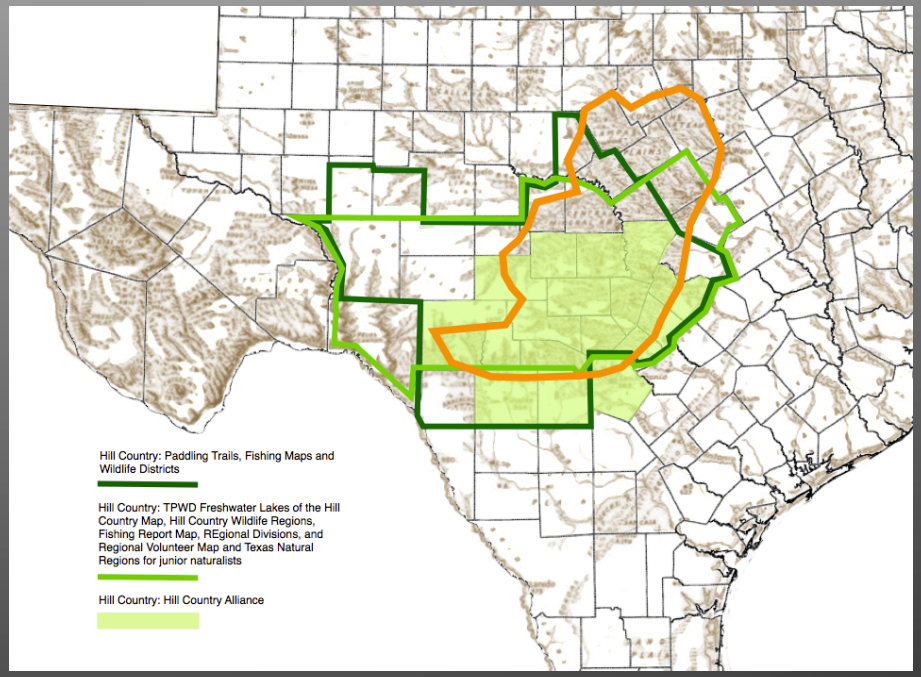
Remaining sparse grass cover allows soil moisture to evaporate

Catch 22

THE HILL COUNTRY WAS MOSTLY GRASS

"These Hill Country vistas…the uplands, hillsides and plateaus were covered with annual and dense, lush grasses…"

Jill Nokes, Austin American Statesman, 1977



Conflicting Hill Country boundaries

Grassland vs. Prairie

Prairie originated from the French word pratum for meadow. Theodore Roosevelt: "Sometimes the prairies were long, narrow strips of meadow land; again they were so broad as to be a day's journey across."


Grassland


Prairie

"…small prairies alternating with large cedar forests…"
Wimberley, 1870

Not all Grass; not all Trees

Bulverde, 1848

Not all Grass; not all Trees

Marble Falls, 1883

Not all Grass; not all Trees

Mount Bonnell, 1890's

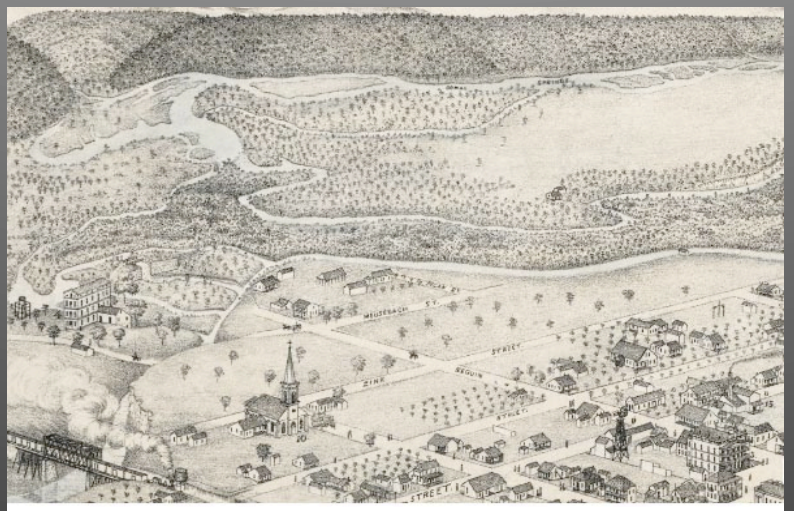
Not all Grass; not all Trees

North of San Antonio, mid-1800s

Fredericksburg, 1850s

The Balcones Escarpment was mostly wooded

"The hills which extend all the way from Austin to New Braunfels, are covered with heavy timber." [1848]



NEW BRAUNFELS IN 1881 OTHER VIEWS FROM 1881

MOUNTAIN CEDARS WERE NOT COMMON

"the Ashe juniper…was inconspicuous, confined to steep-walled draws and such places by occasional prairie fires…"

John Graves, Texas Monthly 2003

Cedars Were Common, but not Commonplace

"…the millions of cedar that cover the Comal hills like a mantle…" [Balcones Escarpment, 1848]

"The forests are heavy. There is an abundance of cedar and various types of oaks…" [near Hunt, 1828]

"…in the mountainous part…and in the canyons is cedar in abundance…" [Uvalde County, 1861]

"…the mountains are cedar bedeckt…" [near Boerne, 1855]

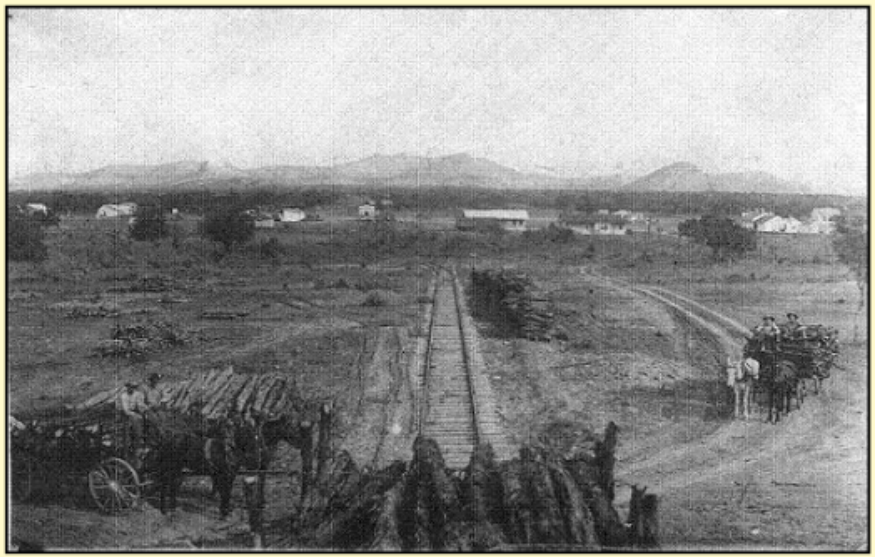
"Cedar…forms a large part of the timber north and west of the Colorado River, and is usually found on the sides and apexes of the hills and mountains." [1887 Texas Census]

"…there was a cedar forest extending for several miles…" Wimberley, 1870

An Abundant Building Material

In 1875, the Austin Daily Statesman reported, "About 30,000 cedar trees were rafted down the river from the hills and shipped out via the railroad.

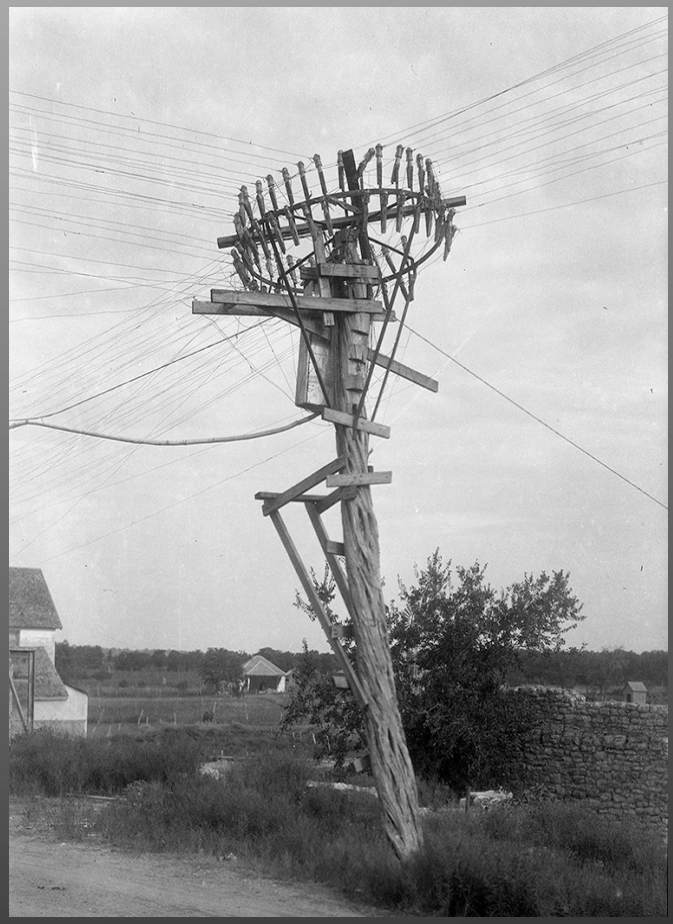
Early image of the Uvalde & Northern



An Abundant Building Material

Worm Fence, modern example at The Salt Lick)

Barbed Wire Posts, mid-1870s



Telegraph Poles, 1860s

An Abundant Building Material

Fischer Barn, 1850s

Claiborne Kyle, 1850

Dietrich Bohl, 1850s

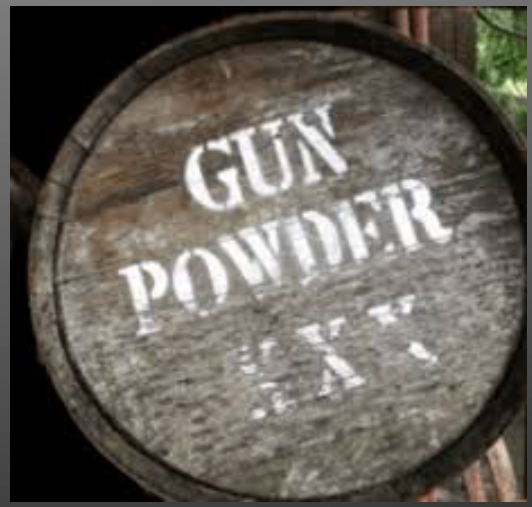
An Abundant Building Material

If not abundant, the Hill Country could not have supported the cedar chopper subculture

An Abundant Source of Charcoal

Charcoal used to heat irons, purify water in cisterns and deodorize

During Civil War: cedar charcoal was combined with bat guano and sulfur from Mexico to make gunpowder



Abundant Habitat & Food for Passenger Pigeons

"The farmers, being afraid that the pigeons were going to ruin their crops, decided to burn the beautiful cedar forests. For weeks and even months the sky was black with clouds of smoke…In this was some of the most profitable forests of mountain cedar in our state were forever destroyed." -San Saba River, 1882

Trees and cedars were common, yet springs still flowed

"The [Great Colorado Spring] gushes forth with such force that is rises some six inches above the common level…the mountains, capped with their evergreen cedars, almost surround it."

Marble Falls, J. Cordova, 1858

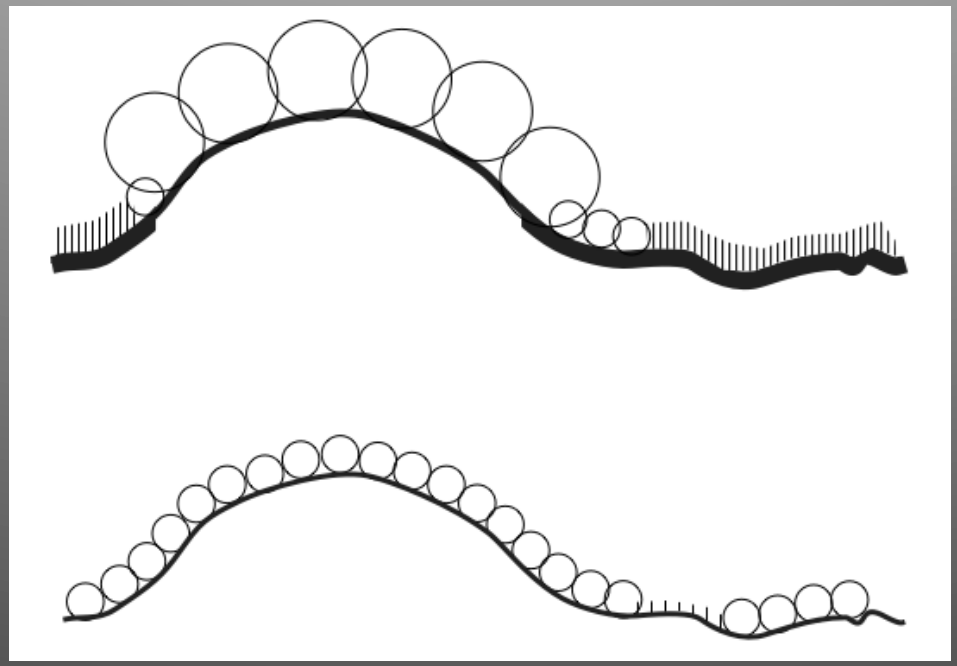
So What Happened?

Clearcutting, over burning and overgrazing destroyed the soil

"…springs and small stream now often shallow or dry three or four months of the year were once deep and ever flowing. This is because lands which were once heavily forested have now been stripped of their timber and the humus covering of the soil destroyed by repeated fires…"

J.H. Foster, 1916, Texas State Forester

Then and Now



Soils eroded and young cedar thickets replaced old-growth woodlands AND lush prairie grasses. Eroded soils could no longer support dense vegetation AND sustained spring flows.

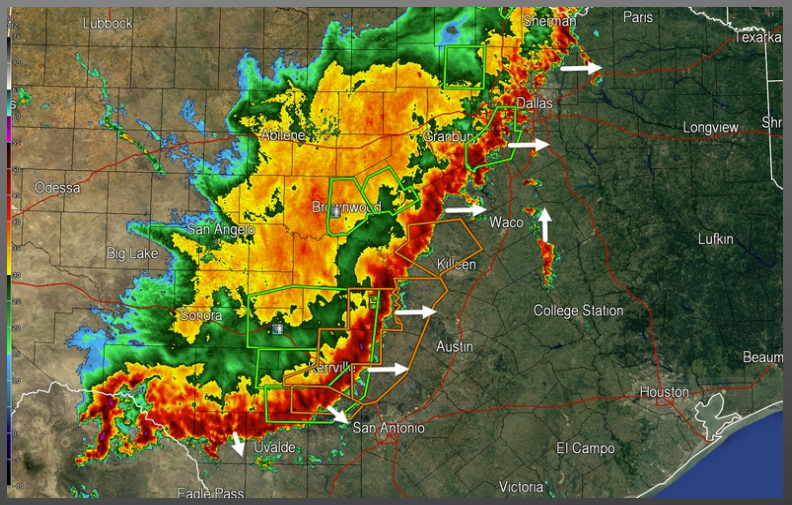
Then and Now

BEFORE 1890
Mostly old-growth cedar brakes with lower water use, deep roots, open canopy fungi rich soil

SINCE 1900
Mostly young cedar thickets with higher water use, shallow roots, dense canopy, caliche dirt

A BETTER PLAN

Stop focusing on the mountain cedar and instead, start managing for our weather extremes: droughts & floods



Keep woody vegetation on slopes

Manage for Old-Growth Cedar

Keep best stick cedars

Look for well defined single to double trunks

Manage for healthy soil & dense vegetation

We CAN get back to the pre-1890s soil conditions where the soil supported both dense vegetation AND sustained spring flows.

Increase soil depth, organic content, and beneficial fungal/bacterial network. Stop using chemicals.

Replace unsustainable management strategies that damage soil

Brush chaining

Chemicals

Burning large brush piles

With sustainable strategies that benefit soil

Rotation grazing

Brush mulching

Prescribed burns

Signs of healthy soil

Clavaria vermicularis

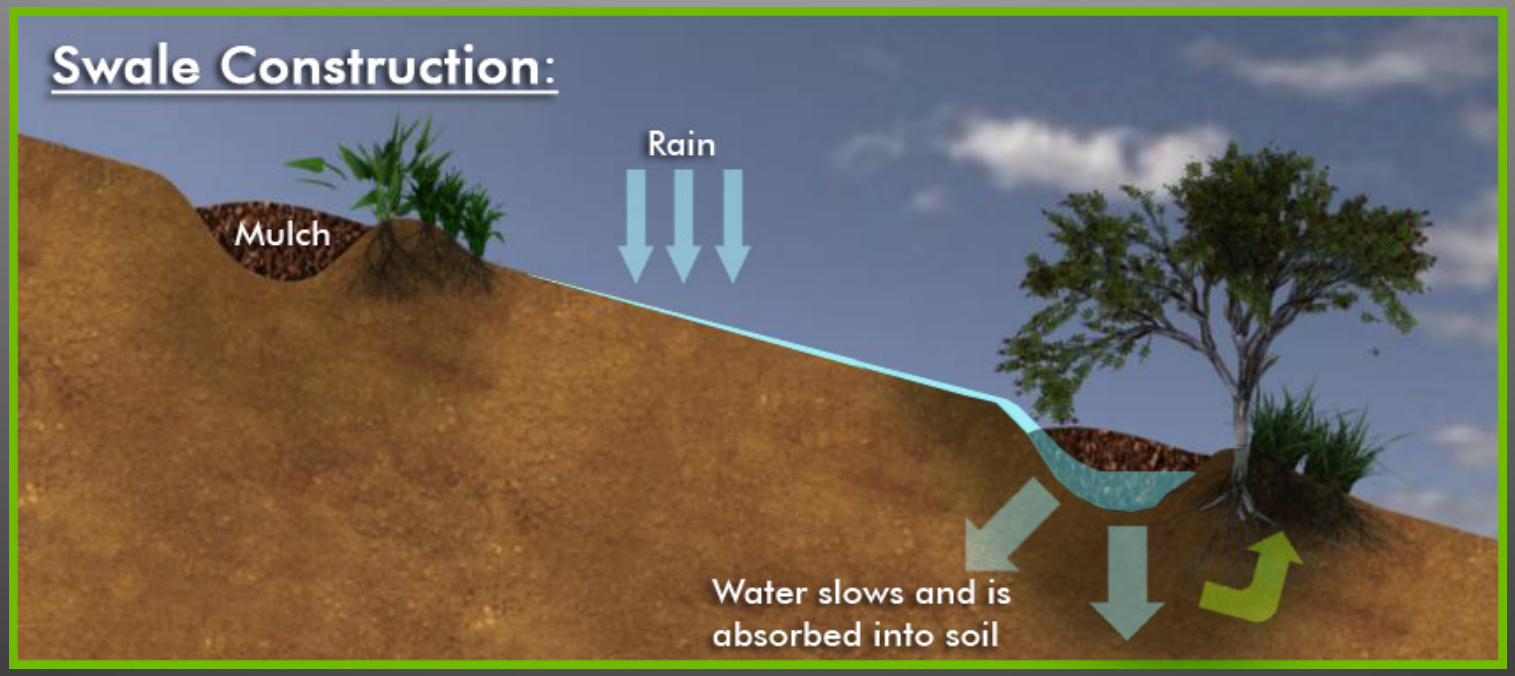
puffball

Boletus viridiflavus

Photos by Lisa O'Donnell

Use swales to manage water

Permaculture 101



Use swales to manage water

Photo by Pete VanDyck

Photo by Elenore Goode

Photo by Elenore Goode

also called
“water ranching”

Use swales to manage water AND restore soil

Taking swales a step further by creating charcoal trenches

and then spray with microbes

WRAP UP

"A dense cover of [mountain cedar] is better watershed protection than a poor cover of grass."
Steve Nelle, 2004

Mountain cedar is improving the conditions of the land we damaged, acting as a stabilizing agent and a mega soil building machine.

We need to stop viewing the mountain cedar as a weedy nuisance, and instead view it as a commodity.

by Elizabeth McGreevy

landsteward.net
on FACEBOOK at Mountain Cedar: Wanted Dead and Alive