

PINALES

(Conifers)

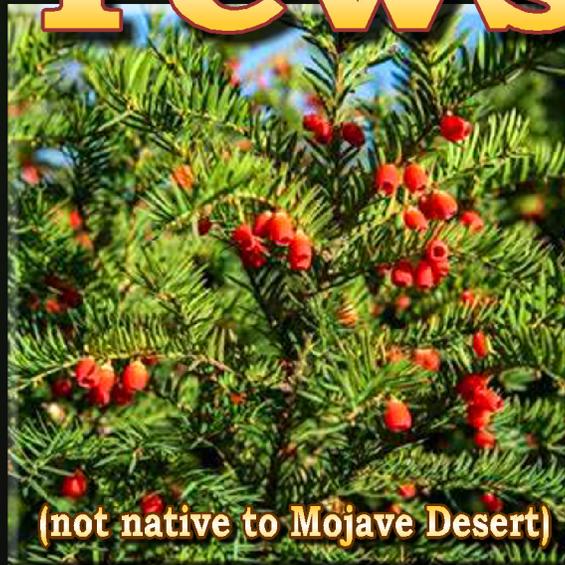
Pines



Cypresses



Yews



(not native to Mojave Desert)

(6 Families Worldwide)

PINACEAE (Pines)

Ponderosa Pine (*Pinus ponderosa*)



typical habitat

Lee Cyn; SMNRA; NV



September

Lee Canyon; Spring Mountains NRA; NV



expanded cones

Lee Cyn; SMNRA; NV



slender trunk

Rt 66; Kingman, AZ



brushy leaf bundles

Desert View; SMNRA; NV

- Cones:** terminal; (m) elliptic, yellow to red, 1.4" (f) ovoid, solitary/pairs, spine-tipped scales, brown, 5"
Stems: upright; monopodal; branched above; platy bark, broad crown; yellow brown; 125+'
Leaves: needle-like; serrulate; 2-5/fascicle; radiate around twigs; long, rounded, flexible; green; 5-10"
Blooms: April to June; seed cones mature in 2 years
Range: western North America; northern Mexico; introduced in Europe and New Zealand
Habitat: loamy to rocky; mountain slopes, canyons; Transition Life Zone

Notes:

common; perennial; grows as an evergreen tree to 200+' (usually less) in w NA from the central Great Plains west to the Pacific coast, and BC, CAN, south to n MEX at elevations of 6,000-7,500'; monoecious; slight turpentine fragrance, drought tolerant, lifespan 300-600 years; red-brown, resinous, ovoid .75" buds; .25" brown seeds; 7 subspecies, many varieties; aka Pacific Ponderosa Pine, Western Yellow Pine, Bull pine, etc.; most economically important yellow pine for lumber; seeds and needles provide food and nesting material for wildlife (birds, chipmunks, etc.); traditional uses include food (inner bark, seeds), needles and sap as an emetic, etc.

Mojave presence: native

Comments:

The most widespread of the pines, this species is commonly encountered in mid- to high-elevation montane habitats. However, a very unusual occurrence is at Pine Creek in the Red Rock Canyon NCA on the foothill of the Spring

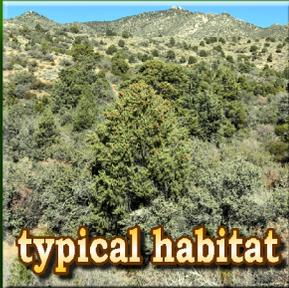
Pi2

Mountains. Still a mystery!



PINACEAE (Pines)

Singleleaf Pinion Pine (*Pinus monophylla*)



typical habitat

Cerbat Mtns; Mohave Co.;



July

Potosi Mountain; Spring Mountain Range; NV



terminal cone

Hualapai Mtns; AZ



gray bark

Potosi Mountain; NV



singles leaves

Hualapai Mtns; AZ

- Cones:** (m) ellipsoid, yellow, .4" (f) ovoid; solitary, terminal, with small prickles; yellow brown, 3"
- Stems:** spreading, ascending; single trunk; densely branched; furrowed, scaly; red brown to gray; 60'
- Leaves:** needle-like; entire; alternate; solitary*; terete, curved; stomatal lines; gray green; 2.5"
- Blooms:** April to May; abundantly only every 4 years on average; seed cones mature in 2 years
- Range:** western US; Baja California, Mexico
- Habitat:** dry, rocky; montane foothills to pinyon-juniper woodlands; Upper Sonoran to Transition LZs

Notes:

common; perennial; evergreen tree growing to over 60' (usually less) from s ID south through w UT, nw-c AZ, NV, sw NM, e CA into Baja California, MEX, at elevations of 3,500-7,500'; *rarely in pairs; needles radiate in all directions around branchlets, rounded crown; resinous, ellipsoid, lt. red-brown, .28" buds; cylindric, brown, .6" seeds; 3 subspecies; seeds important food source for wildlife; traditionally used for food (seeds, roasted cones), firewood, building material, and numerous medical treatments (disinfectant, nausea, rheumatism, indigestion, etc.)

Mojave presence: native

Comments:

This conifer is easily recognized, as it is the only pine in the world with one leaf per fascicle! Older seed-bearing cones are brown and spreading (upper right), while young ones are green (right); both occur on a tree at the same time, since it takes over two years for cones to mature.



PINACEAE (Pines)

Bristlecone Pine (*Pinus longaeva*)



typical habitat

Lee Cyn; SMNRA; NV

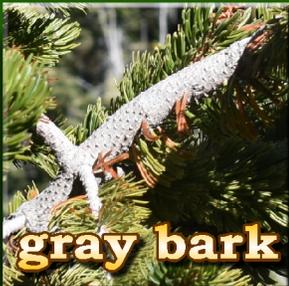


Bristlecone Trail; Lee Canyon; Spring Mountains; NV



young cone

Lee Cyn; SMNRA; NV



gray bark

Lee Cyn; SMNRA; NV



bottle-brush branches

Lee Cyn; SMNRA; NV

- Cones:** (m) elliptic, reddish, .4" (f) oblong, pink incurved prickles, purple (aging to brown); 5.5"
- Stems:** ascending to drooping; monopodal; contorted branching; gray, orange, red brown; 40'
- Leaves:** needle-like; entire; 5/fascicle, connivent; radiate in all directions, 2 resin canals; green; 1.5"
- Blooms:** spring (new cones and twigs); seed cones mature in 2 years
- Range:** western US
- Habitat:** dry, alkaline/calcareous, rocky; subalpine to alpine; Transition to Hudsonian Life Zones

Notes:

rare; perennial; grows as a tall and straight to gnarled and twisted evergreen tree to 40' (usually less) mainly in the Great Basin Province of w US (e CA, NV, UT) at elevations of 7,200-11,500'; longest lived non-clonal tree (to ~5,000 years); rounded to flattened crown; dense, resinous wood; needles can persist for over 30 years; ovoid, resinous, pale red brown, .4" buds; pale brown, .32" red-mottled seeds; 0 subspecies; aka **Great Basin Bristlecone Pine**, **Western Bristlecone Pine**; seeds spread by wind and possibly **Clark's Nutcracker**; protected in the **Ancient Bristlecone Pine Forest** and **Great Basin National Park**

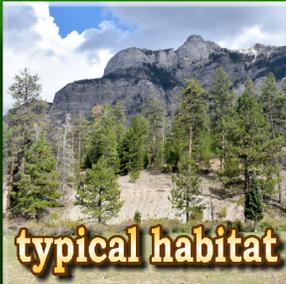
Mojave presence: rare

Comments:

I encountered the "young" specimens shown here, above 8,000-foot elevation, along the Bristlecone Trail in Lee Canyon of the Spring Mountains National Recreation Area in August of 2024.

PINACEAE (FIRS)

White Fir (*Abies concolor*)



typical habitat

Lee Cyn; SMNRA; NV



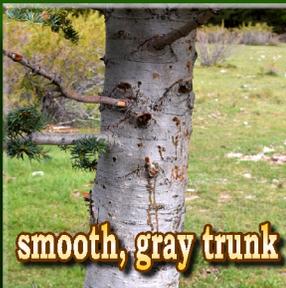
September

Lee Canyon; Spring Mountains NRA; NV



female cone

Lee Cyn; SMNRA; NV



smooth, gray trunk

Lee Cyn; SMNRA; NV



upcurved leaves

Lee Cyn; SMNRA; NV

- Cones:** clustered; (m) conical, yellow to dark red, .36" (f) oblong/cylindric, olive green to brown, 3-5"
Stems: erect; monopodal; densely branched perpendicular to trunk; smooth to furrowed; gray; to 250'
Leaves: needle-like; entire; alternate, solitary, spirally arranged; flattened, curved upwards; green; 2.5"
Blooms: May to June; seed cones mature in 6 months
Range: western US; northern Baja Mexico
Habitat: rocky slopes; coniferous forests; Upper Sonoran to Canadian Life Zones

Notes:

common; perennial; evergreen tree grows to 250' (usually much less) in the w US from OR/ID south to Baja California, MEX, at elevations of 3,000-11,000'; dioecious; lifespan over 300 years; drooping lower branches, spire-like crown; 2-ranked leaves, pungent camphor-like odor; cones upright, only on uppermost branches; conic to blunt, resinous, yellow-brown buds; 2-4 subspecies; aka Concolor Fir, Colorado Fir; host to Fir Mistletoe; important to various wildlife (birds, squirrels, deer, etc.), for food, shelter, nesting; traditionally used for construction (canoes, lodge roofing, bedding, etc.) and various medical treatments; used in landscaping and as a Christmas tree

Mojave presence: native

Comments:

This fir is uncommon in the Mojave region, occurring primarily in the higher elevations of the Spring Mountains west of Las Vegas, NV, such as the ones shown here. They are much more common farther west in the Sierra Nevada, and to the east in the Rockies.

CUPRESSACEAE

(Cypresses)

Utah Juniper

(*Juniperus osteosperma*)



typical habitat

Cerbat Mountains; AZ



May

Red Rock Canyon National Conservation Area; NV



spherical "berries"

Hualapai Mtns; Kingman, AZ



single trunk

Cerbat Mountains; AZ



scaly leaves

Cerbat Mountains; AZ

- Cones:** spherical; usually monoecious*; terminal; (m) yellow brown, .12", (f) powdery blue*, .25-.5"
- Stems:** ascending to erect; usually monopodal; branched; shredding bark; gray brown; 20'
- Leaves:** scaly; denticulate; opposite, 3-whorled, 6-ranked; adpressed; inconspicuous glands; green; .08"
- Blooms:** February to March; seed cones mature in fall
- Range:** western US
- Habitat:** dry, rocky; slopes, canyons, etc. in p-j to pine woodlands to; Lower Sonoran to Transition LZs

Notes:

common; perennial; grows as an evergreen tree or shrub to 20' in the inland w US at elevations of 3,500-8,000'; rounded crown, *rarely dioecious; brown (*blue coating), globose, .5" berry-like cone fruit bearing usually 1 light brown, angular seed; aka **Sabina Morena**; lifespan of over 600 years; used for fence posts, aromatic firewood, Christmas trees, etc.; provides food and shelter for wildlife; traditionally used for food (berries), thatching, fuel, and various medical applications

Mojave presence: native

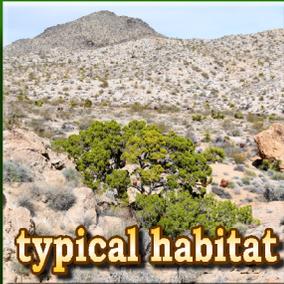
Comments:

This is the most common juniper, growing in the mountains of the western US, especially the Great Basin and Colorado Plateau. Its range slightly overlaps with the similar **California Juniper** (page 7) that mainly grows farther west in the mountains of California, but overlaps in such areas as southern Nevada and northwestern Arizona. The differences are inconspicuous, so close observation

CUPRESSACEAE

(Cypresses)

California Juniper (*Juniperus californica*)



typical habitat

Xmas Tree Pass; AKANM; NV



March

Avi Kwa Ami National Monument; NV



knobby "berry"

Xmas Tree Pass; AKANM; NV



shredding bark

Xmas Tree Pass; AKANM; NV



scaly, pitted leaves

Xmas Tree Pass; AKANM; NV

- Cones:** spherical; usually dioecious*; terminal; (m) red brown, .12", (f) powdery blue*, .25-.5"
- Stems:** erect; single to many; branched underground; shredding bark; brown (young), gray (aged); 20+'
- Leaves:** scaly; denticulate; opposite, 3-whorled, 6-ranked; adpressed; pitted glands; green; .08"
- Blooms:** February to March; seed cones mature in fall
- Range:** southwestern US; Baja California, Mexico
- Habitat:** dry, gravelly to rocky; desert scrub, slopes, to p-j woodlands; Lower to Upper Sonoran LZs

Notes:

uncommon; perennial; evergreen, grows to 40' (usually less) as a shrub or tree in the sw US mainly in CA, into w AZ, s NV, south into Baja, MEX, at elevations of 150-4,500'; *rarely monoecious; brown (*blue coating), sweet (i.e. not resinous), ovoid, .5" berry-like cone fruit bearing 1-3 seeds; 1 subspecies; aka **Desert White Cedar**; host plant for **Sequoia Sphinx Moth** (*Sphinx sequoiae*); provides food and shelter for wildlife; traditionally used for wood products (bows, firewood), food (floured berries), and medicine (berry infusion for colds, leaf infusion as muscle relaxant, etc.)

Mojave presence: native

Comments:

This juniper differs from the **Utah Juniper** by two key features. It has several emergent trunks branched underground from a single main shoot. Secondly, the tiny leaves exhibit obvious glands that make them appear pitted. Interestingly, one of the specimens (upper left) was a rare monoecious variety, possessing female seed cones (upper right) and male pollen cones (left).

