

Juniperus virginiana

Cupressaceae

Eastern redcedar, cedar tree, juniper, savin, evergreen, cedar apple, Virginia red cedar

Description

Distribution in US

Images

Timing of growth

Phenophases to be monitored for NPN

Did you know

Bibliography

Notes

Description: *Juniperus virginiana* is a small, slow-growing, moderately long-lived evergreen shrub or tree, pyramidal, columnar, or rounded in shape, that are typically dioecious (male and female cones on separate individuals) but can also be monoecious (male and female cones on the same individual). Individuals exhibit a single stem with reddish-brown upright or spreading branches and have a terminal leader that does not fork and grows consistently faster than lateral branches, resulting in a crown of conical shape. Trunks are often fluted at the base. Strong cedar scent.

Female cones receive pollen early in the spring from male cones that developed during the previous growing season. Once pollinated, female cones develop into berry-like structures that remain on the tree into the autumn and winter of the second year.

The two recognized varieties of this species are *J. virginiana* var. *virginiana* and southern redcedar (*J. virginiana* var. *silicicola* (Small) J. Silba). Many cultivars of *J. virginiana* exist, including Baker's Blue, Blue Mountain, Brodie, Burkii, Canaerti, Cupressifolia, Dundee, Emerald Sentinel, Glauca, Gray Owl, Hillspire, Idyllwild, Manhattan Blue, Mission Spire, Nova, Pendula, Patt River, Princeton Sentry, Royo, Silver Spreader, Stover, and Taylor.

Size: 30-70 ft. tall.

Bark: Thin, reddish-brown to grayish colored, fibrous and shedding in thin strips.

Leaves: Leaves of eastern red cedar are borne in 2 forms. On seedlings and new twigs, leaves are pointed and awl-shaped (1/4-1/2" long). On mature branches, closely overlapping scale-like leaves (1/16-1/8" long) fit tightly against the twig in opposite pairs. Leaves dark green; sometimes turning reddish brown in winter.

Flowers (cones): Male and female cones are on separate trees (dioecious). Both male and female cones are small on end of short branchlets (twigs).

Male cones: Yellowish-brown, oval, papery single cones (1/16-1/8" long) at the tips of branchlets.

Female cones: Immature female cones are green, inconspicuous (1/16") and on the tips of short branches. Mature female cones are round, pale-blue to blackish-green berry-like cones with a whitish bloom (1/4" diameter) at the tips of branchlets.

Seeds: There are 1-3 yellow-brown, round seeds per female berry-like cone. Seeds are 2-4 mm in diameter, ridged near the base, and sometimes shallowly pitted.

Roots: Shallow, fibrous

Habitat: Occurs in a wide range of soils and growing conditions, from swamps to dry rocky glades. Can tolerate soils ranging from acid sands to those derived from limestone.

Species distribution in US states: AL, AR, CO, CT, DC, DE, FL, GA, IA, IL, IN, KS, KY, LA, MA, ME, MI, MN, MO, MS, NC, ND, NE, NH, NJ, NY, OH, OK, OR, PA, RI, SC, SD, TN, TX, VA, VT, WI, WV.

Species images:

Whole plant:

<http://www.mobot.org/gardeninghelp/images/low/A394-0628050cs.jpg>

http://www.wildflower.org/gallery/result.php?id_image=16773

http://www.wildflower.org/gallery/result.php?id_image=18609

Leaves:

http://www.uwgb.edu/biodiversity/herbarium/gymnosperms/junvir_leaves02web500gf.jpg

Bark:

<http://www.plantatlas.usf.edu/image.asp?imageID=11662>

<http://www.duke.edu/~cwcook/trees/juvi5774.jpg>

Male cones:

http://zipcodezoo.com/Plants/J/Juniperus_virginiana.asp

Female cones:

<http://www.eserc.stonybrook.edu/wise/HSspr2003/Group2/cedarfruit2.jpg>

Fruit:

<http://www.plantatlas.usf.edu/image.asp?imageID=1120>

<http://www.plantatlas.usf.edu/image.asp?imageID=1121>

Expected timing of phenophases:

Bark begins to slip in March and April in Arizona.

Pollen is released from male cones in late March and early April in Arizona; as early as January and as late as March in Indiana.

Female cones open from February to May; they are receptive to pollen several days after male cones have started to shed pollen.

Leader elongation begins in April in Arizona.

Female cones ripen from September through November. As the female cones develop, cones change color from green to greenish-white to whitish-blue and finally to bluish as the season progresses.

Cones develop on male and female trees in the fall.

Bark begins to stick in September in Arizona.

Leader elongation ceases in October in Arizona.

Phenophases to be monitored for NPN:

Budburst

- *Budburst*
In at least 3 locations on the plant, a bud has broken and the newly developing stem has begun to push through the bud scales.

Cone development

- *First male cone*
In at least 3 locations on the plant, a male cone (strobilus) has emerged.

Pollen release

- *First pollen released*
In at least 3 locations on the plant, pollen is released when the cone is gently shaken or blown.

Did you know? *Juniperus virginiana* provides food and shelter for many species of birds and mammals, including winter food for pheasant, mule deer, and whitetail deer.

References:

http://plants.usda.gov/factsheet/pdf/fs_juvi.pdf
http://plants.usda.gov/plantguide/pdf/cs_juvi.pdf
<http://www.fs.fed.us/database/feis/plants/tree/junvir/all.html>
http://www.hort.purdue.edu/newcrop/duke_energy/Juniperus_virginiana.html

Herman, F.R. 1956. Growth and phenological observations of Arizona junipers. *Ecology* 37: 193-195.

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