



GET TO KNOW THE PLATEAU

Two-needle Pinyon Pine *Pinus edulis*

Habitat & Ecology

Pinus edulis is a small to medium sized bushy tree often found in dry, rocky areas of mountain slopes, mesas, canyon sides, and plateaus. The two-needle pinyon pine is just one of 4 pines found within the pinyon-juniper woodlands: the most widespread vegetation type of the American Southwest.

The epithet “edulis” refers to the pinyon pine’s edible seeds, known as pine-nuts. The tree regularly produces the pine nuts once it reaches seed-bearing age (around 25 years), but during mast years, the tree populations will synchronously produce huge crops of pine nuts. The large number of pine nuts overwhelm seed-predators, which are unable to eat all the crop allowing many seeds survive to germination.

Pinus edulis is completely dependent on the birds and mammals that gather, cache, and eat their large seeds for seed dispersal. Clark’s nutcracker, Steller’s Jay, and pinyon jay are some key seed dispersal agents of pinyon pines.

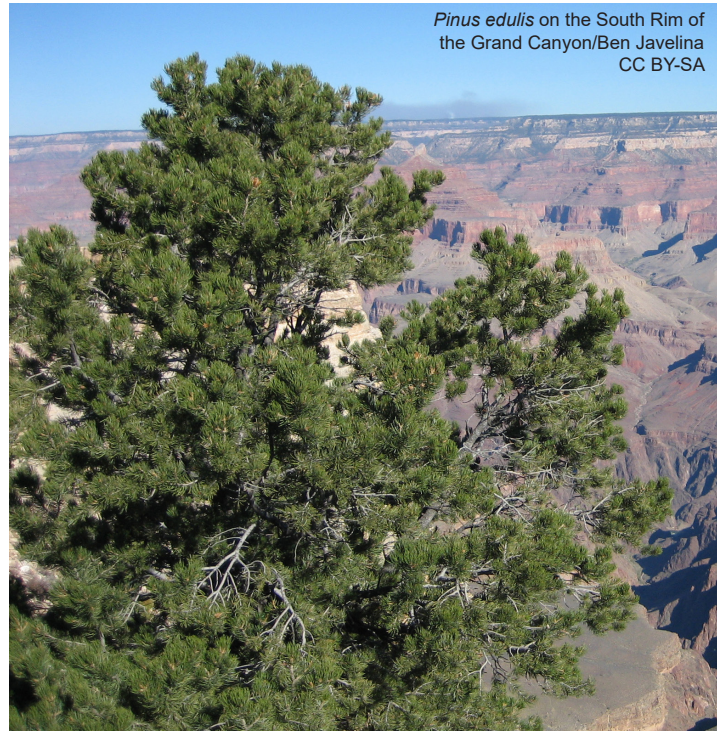
Description

As this long-lived and slow growing tree ages, the crown of the tree takes on a more spreading and flat-topped form. The trunk is usually short and crooked with several large, crooked branches. The bark is a brownish-red color, with scaly ridges, and is defined as being irregularly furrowed.



Pinus edulis cone/Max Licher CC BY-NC

The cone in early stages is vibrantly green and very tight, maturing in 18-20 months where it becomes a yellowish-brown. It opens up revealing its seeds, and is often covered with a very sticky resin.



Pinus edulis on the South Rim of the Grand Canyon/Ben Javelina CC BY-SA

Distribution

Two-needle pinyon pines are found across the southwest, with a distribution centered on the four corners area of AZ, UT, CO, and NM. Specifically for the Colorado Plateau it can be found in many, many parks and monuments, including Arches, Bryce Canyon, Capitol Reef, Grand Canyon and Mesa Verde National Parks, as well as Navajo, Sunset Crater, and Walnut Canyon National Monuments.

Of Note

Pinyon pine nuts (called neeshch’íí’ in the Diné language, tuva in Hopi, and he’sho k’uwe in Zuni) are high in protein and fats, making them an important food source for native peoples of the Colorado Plateau. The seeds are gathered and often marketed commercially. Pinyon pine wood is also revered for its burning qualities.

References

- Anderson, Michelle D. 2002. *Pinus edulis*. In: Fire Effects Information System, USDA Forest Service
- Earle, C.J. 2022. *Pinus edulis*, Gymnosperm Database
- Jacobs, Brian F. 2008. Southwestern U.S. Juniper Savanna and Piñon-Juniper Woodland Communities

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