



Juniperus deppeana

Family: Cupressaceae

Alligator Juniper

Alligator juniper is one species of about 50 in the genus *Juniperus*, native to North America [14], Central America [11], West Indies [5], Bermuda [1] and the Old World [25]. The word *juniperus* is the classical Latin name, while the word *deppeana* is in honor of Ferdinand Deppe (?-1861), a German botanist who had given this species a name previously used for another species. An old scientific name is *Juniperus pachyphloea* Torr. This species was discovered in 1851 in the Zuni Mountains of northwestern New Mexico, by Dr. S.W. Woodhouse, a member of the Captain L. Sitgreaves expedition (Zuni and Colorado Rivers).

Other Common Names: Alligator enebro, alligator genevier, alligator jeneverboom, alligator juniper, alligator wacholder, alligator-en, aori, cedro, cedro chino, checker-bark juniper, eastern alligator juniper, enebro alligator, genevrier, ginepro alligatore, mountain cedar, oakbark juniper, oak-barked cedar, tascate, thick-barked juniper, tlaxcal, western alligator juniper, western juniper.

Distribution

Alligator juniper is native to the mountains of Trans-Pecos Texas northwest to northwestern New Mexico and northern and southeastern Arizona. Also in the mountains of northern and central Mexico, in the states of Coahuila, Michoacan, Mexico, Hidalgo, Tlaxcala, Puebla and Vera Cruz on dry mountain slopes at 6,000 to 8,000 foot elevation.

The Tree

Alligator juniper trees reach heights of 50 feet, with diameters of 3 feet. Record trees have been reported to be 6 feet in diameter at breast height. Older trees may reach ages of 400 years.

The Wood

General

The heartwood of alligator juniper is a light reddish brown. It is soft, light weight, close grained and brittle. It is easily worked.

Mechanical Properties (2-inch standard)

| | Specific gravity | MOE x10 ⁶ lbf/in ² | MOR lbf/in ² | Compression | | WML ^a in-lbf/in ³ | Hardness lbf | Shear lbf/in ² |
|-------|------------------|---|----------------------------|---------------------------------|--------------------------------------|--|-----------------|------------------------------|
| | | | | Parallel lbf/in ² | Perpendicular lbf/in ² | | | |
| Green | 0.48 | 0.45 | 6600 | 3730 | 1030 | 13.4 | 820 | 1280 |
| Dry | 0.51 | 0.65 | 6700 | 4120 | 1700 | 6.5 | 1160 | NA |

^aWML = Work to maximum load.
Reference (5).

Drying and Shrinkage

| Type of shrinkage | Percentage of shrinkage (green to final moisture content) | | |
|-----------------------|--|-------|--------|
| | 0% MC | 6% MC | 20% MC |
| Tangential | 3.6 | NA | NA |
| Radial | 2.7 | NA | NA |
| Volumetric | 7.8 | NA | NA |
| References: 0% MC (5) | | | |

Kiln Drying Schedules: No information at this time.

Working Properties: No information at this time.

Durability: It is reported to be very resistant to heartwood decay (4).

Preservation: No information at this time.

Uses: Fence posts, fuel.

Toxicity: May cause dermatitis and respiratory problems (3, 6 & 7).

Additional Reading and References Cited (in parentheses)

1. Dallimore, W.; Jackson, A. B., and Harrison, S. G. A handbook of Coniferae and Ginkgoaceae. London, UK: Edward Arnold Ltd.; 1966.
2. Elias, T. S. The complete trees of North America, field guide and natural history. New York, NY: van Nostrand Reinhold Co.; 1980.
3. Hausen, B. M. Woods injurious to human health. A manual. New York, NY: Walter de Gruyter; 1981.
4. Little, Jr. E. L. Alligator juniper. Tucson, AZ, USA: USDA Forest Service, Southwestern Forest and Range Experiment Station, Research Note No. 30.; 1938.
5. Markwardt, L. J. and Wilson, T. R. C. Strength and related properties of woods grown in the United States. Washington, DC: USGPO, USDA Forest Service, Tech. Bull. No. 479; 1935.
6. Mitchell, J. and Rook, A. Botanical dermatology: plants and plant products injurious to the skin. Vancouver, BC: Greenglass Ltd.; 1979.
7. Woods, B. and Calnan, C. D. Toxic woods. British Journal of Dermatology. 1976; 95(13):1-97.