

My name's Wes Janssen, and I'd like to briefly introduce some fascinating plants that most of us already have some familiarity with.

**01.** (*slide*: picture of an old bristlecone in snow)

**Family *Pinaceae* [py-NAY-see-ee].**

Shown here is a bristlecone pine, native to California's White Mts. Individual bristlecones live as long as 5K years.

**02.** (*slide*: picture of bristlecone pines on slope)

The pine family of conifers consists of 11 genera and between 220 and 250 species, native to northern temperate regions.\*

- ✦ They bear both male and female reproductive structures on the same plant.
- ✦ Leaves are need-like.
- ✦ Pinaceae often forms the dominant component of boreal, coastal, and montane forests.
- ✦ Eight Pinaceae species are native to San Diego County.

**03.** (*slide*: picture of sugar pines)

All pines are Pinaceae, but not all Pinaceae are pines (Pinaceae includes fir, spruce, etc). All Pinaceae are conifers, but not all conifers are Pinaceae (cypress and juniper are not). Pine trees are gymnosperms and have varying numbers of cotyledons that can range anywhere from 2-24 depending on species, so they are classified as multicotyledonous. Pinaceae are neither monocotyledon nor dicotyledon (are not angiosperms).

**04.** (*slide*: comparative picture of multicotyledonous pine seedling)

**05.** (*slide*: picture of a Torrey Pine in fog)

If San Diego has one native iconic plant, I believe it would have to be *Pinus torreyana*, the Torrey Pine.

**06.** (*slide*: picture of Torrey Pines)

The Torrey pine is listed as Critically Endangered, and it is the rarest pine native to the United States.

**07.** (slide: picture of Torrey pines)

In its native groves, the Torrey Pine is most typically sculpted by strong ocean winds, often wind-shaped to a greater width than height. For “wild” trees, maximum mature height is given as 56 ft, but wild trees are usually under 40 ft.

In cultivation the trees are much larger, sometimes over 100’ tall. The oldest trees are about 150 years old.

**08.** (slide: picture of a Torrey Pine)

Trees grow in shallow, humus poor, alkali soils, often on steep terrain.

Roots are extensive but shallow. A mature tree of less than 60’ may have roots extending 260’.

Trees thrive with little rainfall so long as they frequently have water vapor rich air, i.e., coastal fog. Needles collect water and drop it for the extensive, but shallow roots.

**09.** (slide: map showing where Torrey pines are native)

Two small areas in which Torrey pine occurs naturally. San Diego coast and eastern Santa Rosa Island.

**10.** (slide: picture of pine nuts)

As can be said of other nut producing pines, the nuts have been a food staple for both wildlife and humans.

**11.** (slide: picture of Ips paraconfusus — bark beetle)

As can be said of other western pines, bark beetles kill drought-stressed trees.

**12.** (slide: picture of woman in tree)

In 2016, the City of San Diego slated a huge Ocean Beach Torrey pine for removal, but tree-hugging residents protected the tree with their bodies. The tree remains.

**13.** (slide: picture of Torrey pines on Santa Rosa Island)