

Saving the Torrey Pine Trees of Del Mar

A Project by: Tyden Chinowsky
Sponsored by: Native Del Mar

Uniqueness

The Torrey Pine is an endangered species growing only in Del Mar area, including the Torrey Pines State Natural Reserve and on Santa Rosa Island.

The Torrey Pine is the rarest species of pine in the United States and not long ago was one of the rarest pine species in the world, with only around 100 trees surviving at one point.

The presence of Torrey pines in Del Mar is probably a relic population from the Ice Age that only survived as a result of the coastal fog during spring and summer along the coast which provides just enough moisture to supplement our limited winter rainfall.

Because of low genetic variability, the Torrey Pine has little capacity to respond to change through natural selection. Native populations should be managed to maintain the maximum number of trees possible to minimize the chance of catastrophic loss.

Benefits

- Beautiful inspirational, artistic trees shaped by the wind
- Keep coastal cliffs from eroding
- Provide shelter and food for birds and animals
- Helps maintain a unique wildlife habitat for and protect existing coastal sage scrub shrubs

Meaning

- The Torrey Pine is a local icon in Del Mar and in San Diego.
- The community names its schools, streets, beaches, businesses and golf courses after it.

Recent Devastation - Torrey Pine trees are one of Del Mar's most prized possessions, but they have suffered a tragic decline.

- They are listed as a category "Risk 1" in the San Diego Multiple Species Conservation Program Covered Species Prioritization:
- Human activity (including permitted activity here in Del Mar) has allowed many large specimens to fall.
- The dry conditions and air pollution (including potentially acid fog) have weakened many of the so called protected trees in the reserve, making them unable to fight bark beetles that have infested and killed hundreds.
- There has been similar devastation within the residential zones of Del Mar.
- Young saplings to replace these trees are few and far between.
- The following pictures show trees in the east annex in the reserve that were alive less than 6-12 months ago.























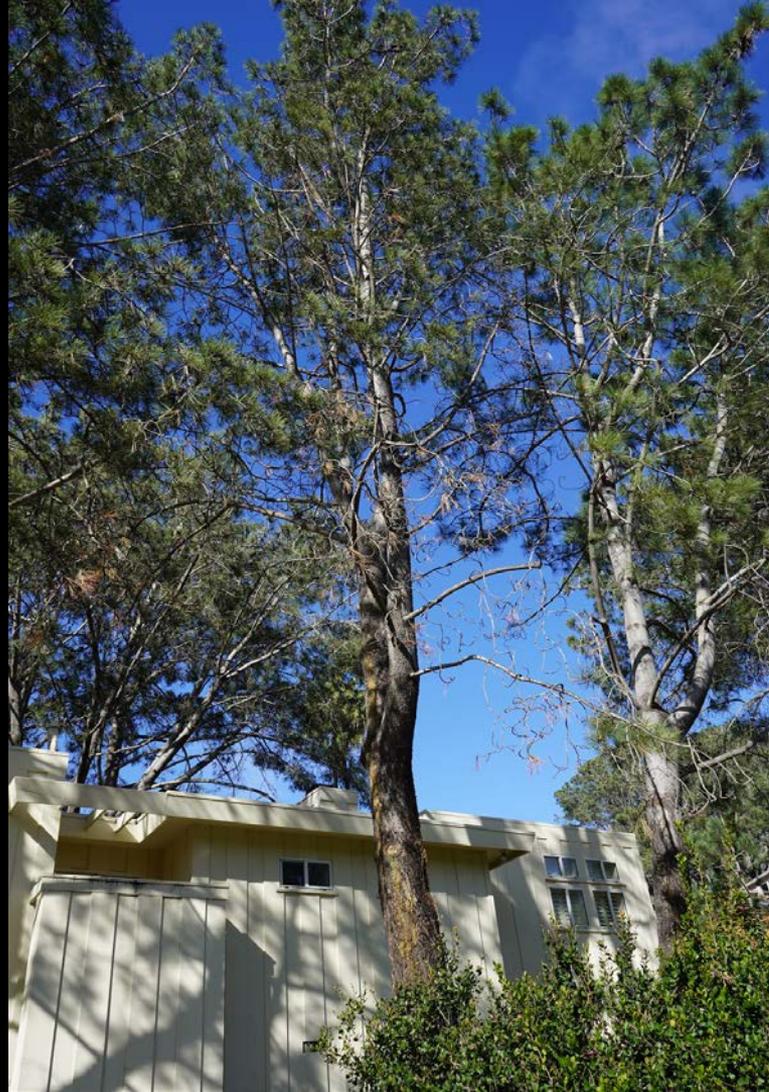










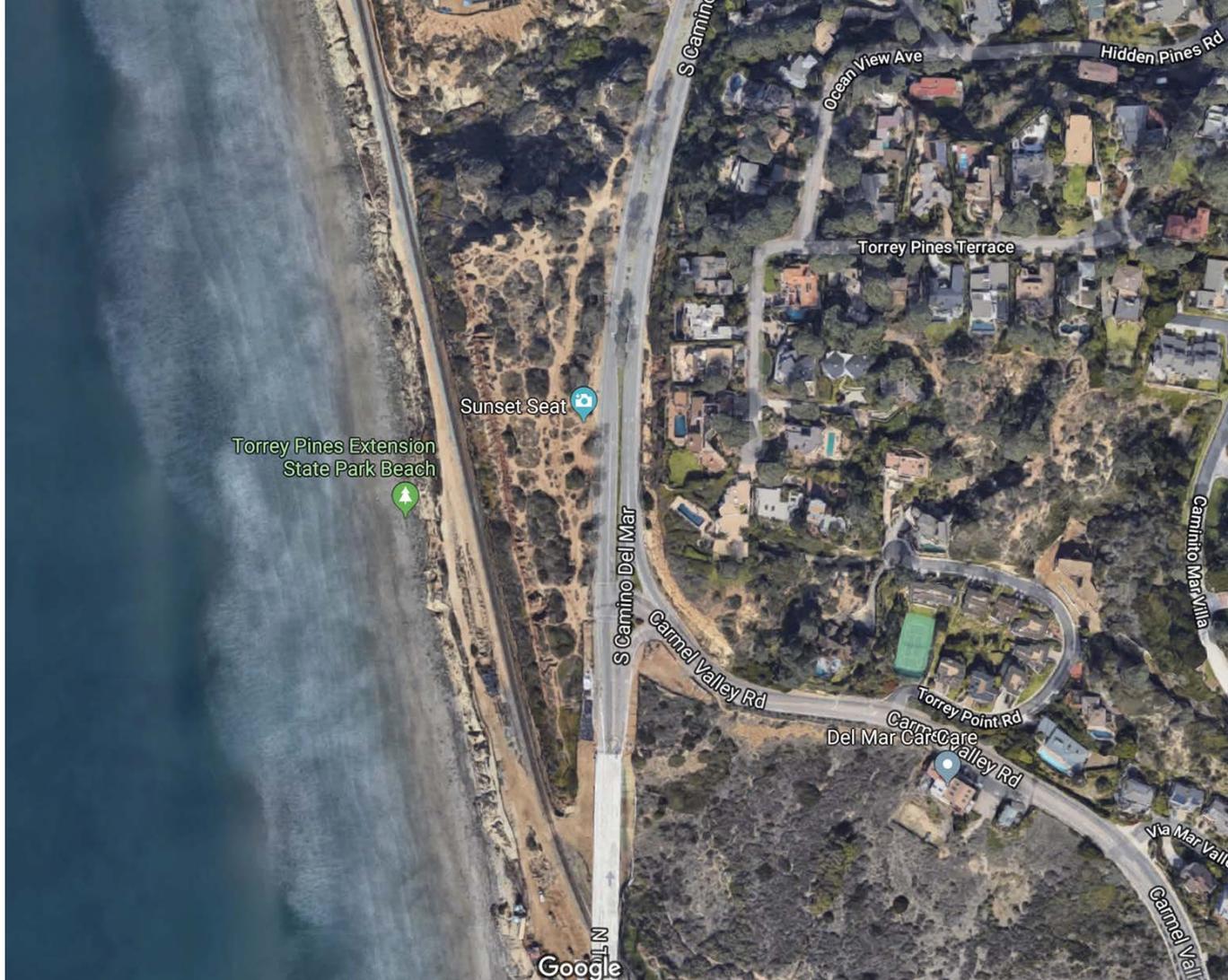


Plan of Action

We will lead volunteers in the following activities:

- (1) removing invasive species from the bluffs above Anderson Canyon;
- (2) replanting native species on the bluffs above Anderson Canyon in Del Mar;
- (3) identifying a sustainable irrigation system for the plants until the plants are mature enough to survive on their own. This may include bringing in a portable watering system and/or connecting into the Del Mar's irrigation system.

Site Above Anderson Canyon



Eradication

- Removal of invasive ice plant
- Ice plant is a coastal succulent native to the coast of South Africa, where the climate is similar to that of coastal California.
- Ice plant was introduced to California in the early 1900s as an erosion stabilization tool used on railroad tracks, and later used by Caltrans on roadsides.
- Unfortunately, ice plant spreads easily, and has become invasive in coastal California. When it establishes in a location, it forms a large, thick mat that chokes out all other native plants and alters the soil composition of the environment. Because it is a coastal invader, it competes with many california natives.
- Ice plant is shallowly rooted, so it is possible to control it manually, and ice plant removal provides a good volunteer day for student groups.







Native Planting

Native Planting



Arctostaphylos glandulosa ssp. crassifolia
Del Mar Manzanita



Artemisia californica California Sagebrush



Aster chilensis California Aster



Ceanothus verrucosus Wart-
Stemmed Ceanothus

Additional plantings...

Plants and small shrubs:

- California sagebrush (*Artemisia californica*)
- Black sage (*Salvia mellifera*)
- White sage (*Salvia apiana*)
- California buckwheat (*Eriogonum fasciculatum*)
- Coast brittle-bush (*Encelia californica*)
- Golden yarrow (*Eriophyllum confertifolium*)

Larger shrubs include:

- Toyon (*Heteromeles arbutifolia*)
- Lemonade berry (*Rhus integrifolia*)

Trees include:

- Torrey Pine (*Pinus torreyana* ssp. *torreyana*)
- San Diego Mountain Mahogany (*Cercocarpus minutiflorus*)







Funding & Support

- Volunteers will help me do the work
- I will raise awareness through a stand at the Del Mar farmers market and I have been asked by the Sandpiper to write an article which they will publish
- My family will commit up to \$15,000 towards the project as a start
- Asking the City to support with approvals, irrigation and any other available resources, including clean-up of green waste

When this project is complete we will not only restore a part of our coastal sage scrub community and helped prevent coastal erosion, but we will have created a peaceful, natural space where members of our community can walk, relax, unwind and contemplate the wonders of life.