



# Torrey Pines State Natural Reserve





# General Information and History of the Reserve





## General Information of the Reserve

- The Torrey Pines Natural Reserve is 2,000 acres of coastal state park, located in San Diego, California.
- The Reserve is comprised of eight miles of trails overlooking the coast
- Within the park resides wildlife such as the Bobcat, Grey Fox and Mule Deer.
- The Reserve also home to plants like the Coastal Chaparral and the park's namesake, the rare Torrey Pine





# Location on Global Map

Torrey Pines State Natural  
Reserve (San Diego, California)







## History of the Reserve

- The land that which Torrey Pines Reserve sits on was first inhabited by the Kumeyaay people
- In 1899, the San Diego City Council passed an ordinance to preserve 364 acres of what is now the Reserve, in hopes of protecting the Torrey Pine tree
- Construction Torrey Pines Lodge, now the Ranger Station and Visitor Station, was completed in 1923
- In 1956, after expansion, the park was given to the State of California and a state reserve





# Common Plants and Animals within the Reserve



## General Plants

### Plant Overview:

- The Reserve posses a long growing season due to the nearby ocean and Mediterranean Climate
- Due to the Santa Ana Winds, the vegetation is becomes very dry. Nevertheless, the Reserve is home to a wide variety of plants

### Common Plants:

- Torrey Pine: most restricted and rarest pine in North America
- Laurel Sumac: like through droughts using roots
- California lilac: shallow roots and smaller leave help with water loss
- Coastal Prickly Pear: exploits upper layer of soil for mosture





## General Wildlife

### Wildlife Overview:

- Due to the extensive protection of the Reserve, animals thrive
- While there are numerous animals live within the Reserve, visitors seldom see them, as they dislike and form of human interaction

### Common Animals:

- Mule Deer: the only species of deer in Southern California
- Bobcat: make their dens in rocky outcrops
- Coyote: will eat almost anything, including trash
- Gray Fox: primarily feeds on gophers and mice
- Rattlesnakes: clear by their telltale rattle







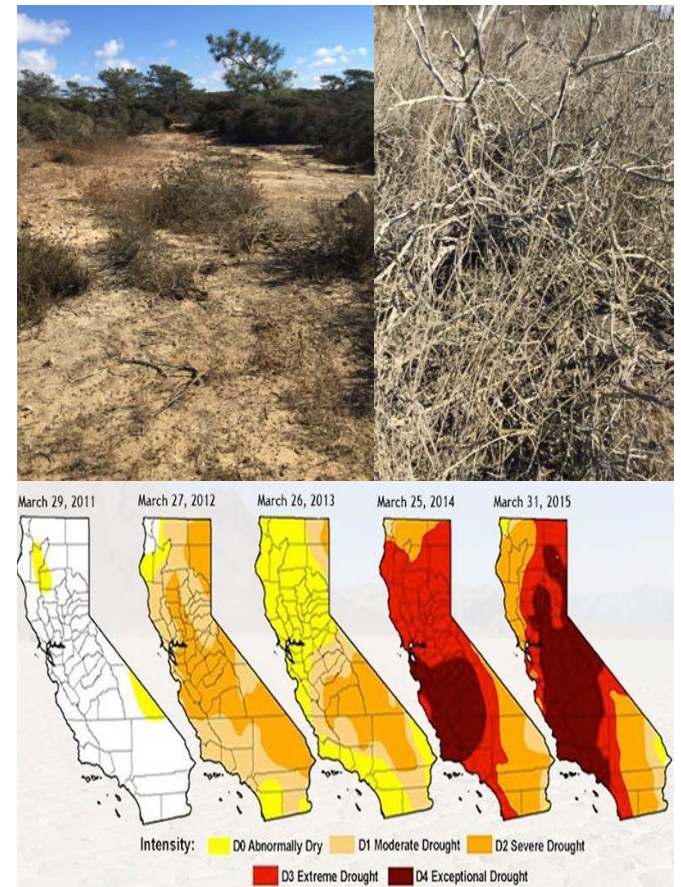
# Condition of the Reserve





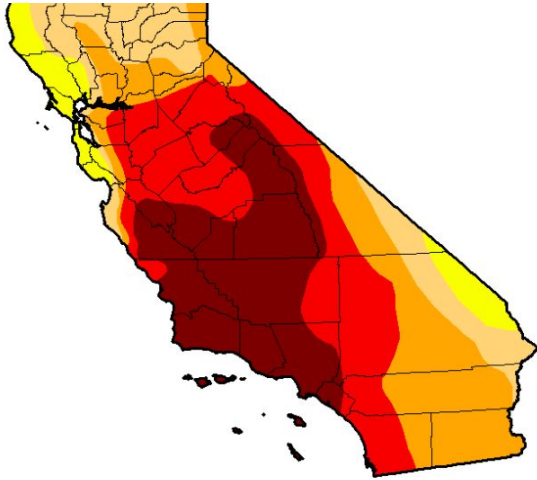
## Destruction of the California Drought Cont.

- Due to the 2014-2017 California drought, the Reserve lost a significant portion of its vegetation.
- Because the land is a State Reserve, the trees cannot be watered or sprayed to aid with the low rainfall
- 25% of the reserve's trees have died from either drought or bark beetles

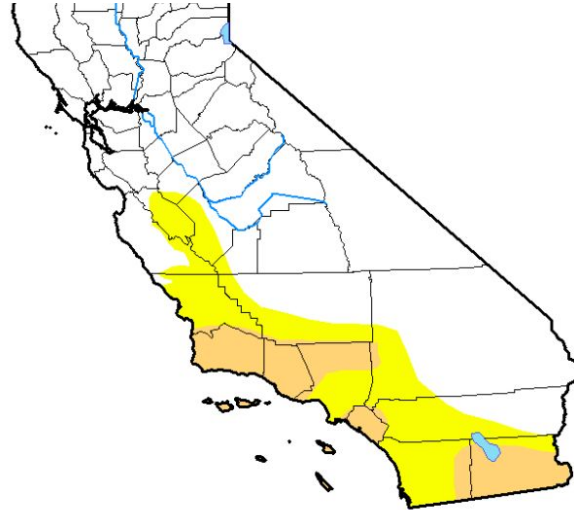




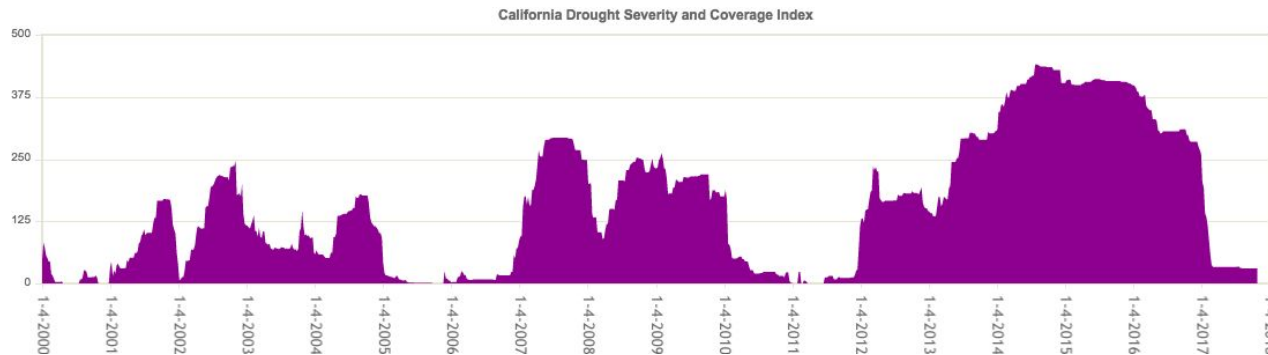
# Destruction of the California Drought



Drought Monitor on October 4,  
2016



Drought Monitor on October 3, 2017



California Drought  
Data Time Series



## Destruction of the Bark Beetle

- The biggest threat to the Torrey Pines is the California Five-Spined Engraver Beetle or “Bark Beetle”
- The beetles are aided by the California Drought, as the dry conditions weaken the Pine trees
- 100 Torrey Pines Trees were removed in 2014 due to the Bark Beetle





# Destruction of the Bark Beetle



Bark Beetle up close



Damage caused by Bark Beetle



Pheromone used traps to decrease Bark Beetle population



## Global Forest Watch

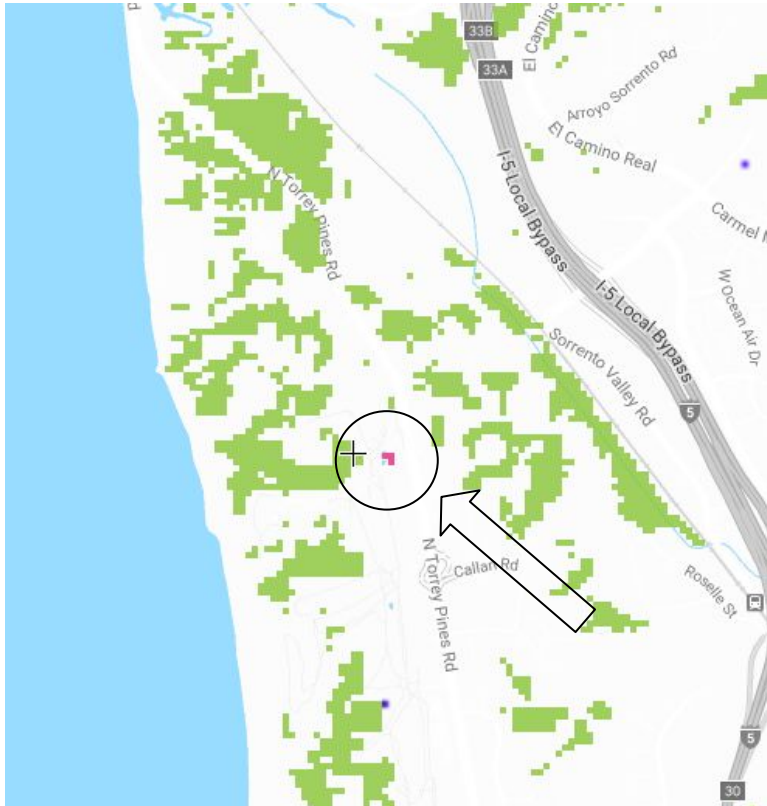
- As the Torrey Pines Reserve became a state reserve in 1995, little forest cover loss has been observed
- Even with the severe California drought in 2104 and the extreme drought in 2015, only minor tree loss was recorded from 2015-16
- Displays the effort put forth by San Diego County to preserve the Torrey Pines

**GLOBAL  
FOREST  
WATCH**

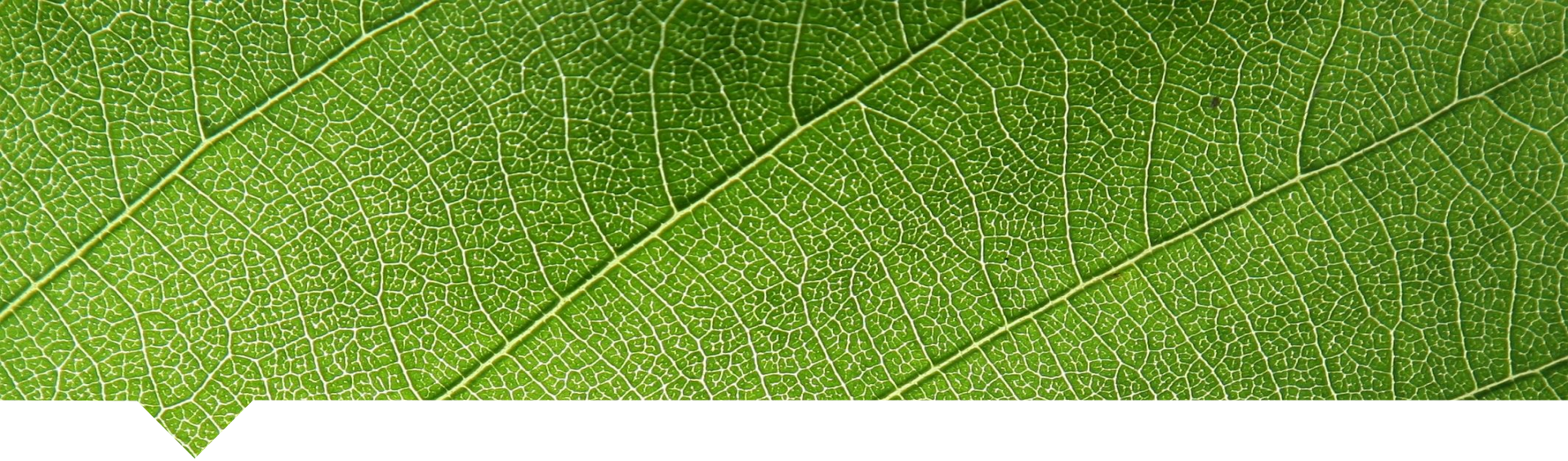




# Global Forest Watch



Minor loss from 2015-2106



# About your authors

Navya Dhir, Julia Sheridan and John Sheridan are students at Francis Parker High School and are passionate about Environmental Science. They hope their project can help in bringing awareness to the Torrey Pines State Park.





## Citations

- <http://droughtmonitor.unl.edu/Data/Timeseries.aspx>
- <https://www.sandiegoreader.com/news/2017/oct/03/stringers-new-torrey-pines-die/>
- <http://torreypines.org/index.php/what-we-do/grants>
- <http://www.sacbee.com/news/politics-government/capitol-alert/article39618351.html>
- <https://www.drought.gov/drought/states/california>
- <http://www.globalforestwatch.org/>