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Torrey Pines Story

On a cloudless and temperate Sunday in October, we made our way to Torrey Pines State Reserve to research the forest. Our first impression was that the forest was in fair health: new tree growth, no trash, no evidence of logging or drought, and plenty of biodiversity. We also noted that the temperature was comfortable, and the ground was not too dry leading us to believe that the precipitation was moderate. As we spent more time in the forest and did research after, however, we made some observations that changed our minds.

First off, the temperature this year turned out to be far lower than all years in the past since 2011. The temperature ranged from 11 to 20 degrees C this year, which is relatively cold for southern California. This could be a good thing for the trees as less water evaporates so the ground is not as dry, but trees also need sunlight and colder temperatures mean less sunlight. The rainfall from 2010 until now has averaged 19.8 inches per year, which is relatively high for San Diego, meaning that the trees have had plenty of water in the past few years.

However, not all observations we made were good. When walking about the forest, we noticed a freshly-cut tree branch on the trail. This branch simply did not fall off from disease; it was unmistakably sawed off. Although it potentially obstructed the trail, it was difficult to ascertain. Regardless of the reason, we were surprised to notice that even in a protected area such as a state reserve, the trees are not always “safe” from human impact.

This observation made us wonder what the overall forest change - loss or gain - was, so we went to the interactive map of Global Forest Watch to find the answer. There seemed to be little change, which is a good thing because many forests today are facing considerable loss. The map was largely white with only a few very small pink or blue colored spots. However, this map does not account for minor forest loss, such as the branch we saw that had been chopped off.

Because there is no major forest loss due to deforestation, it is important to consider other factors that could influence minor forest loss, especially those having to do with humans. Accordingly, we researched population density of the area surrounding Torrey Pines State Reserve. We discovered that Del Mar - the settlement closest to the reserve - has a relatively high population density for an area so close to a forest. There were 2341.9 people per square mile, according to the 2010 Government Consensus. This number has slightly risen since then, as the population is predicted to have grown since then and the size of the city has remained constant. This figure is significant because it means that a lot of people are using the forest since there are so many inhabitants nearby. The high population density explains the chopped branch; if people were not using the forest there would be no need to clear the path from overhanging branches.

Another observation that made us hypothesize that the forest may be in poorer health than anticipated was evidence of bark-beetle infestation. We photographed a tree that was oozing with sap that we wanted to further investigate. What we found in an article from 2014 in

the San Diego Reader was upsetting. It turns out that the sap is a result of the tree being infested by bark beetles, and once a tree is infested, there is no chance of recovery.

We conclude that the forest is in substandard health. Between the bark-beetles and the human impact, the forest needs to be further protected. The state has done a lot of good for the forest by protecting it in the first place, but more needs to be done to restore its health.

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