

Our chosen forest ecosystem was the Presidio Hill, from which one can see sweeping views of San Diego and the Pacific Ocean. Home to the historic Junipero Serra Museum and the ruins of the San Diego Presidio, this 40-acre park overlooks the San Diego River and offers over two miles of walking trails. With landscaping that showcases both natural and non-native species and rolling expanses of lush green grass, it comes as a surprise to many that the park was not always this green. According to several articles on San Diego's history, before the 1880s (when water started being imported into San Diego), the park was treeless and dry. Today the park is much greener than in the past, however; typical to San Diego County's naturally dry environment, portions of the trail are browning.

At some points on the trail, there were also some signs of logging, which can be seen in the image to the right (it's possible, though, that these stumps were due to the removal of trees from the park in 2007 to restore historic benches in Balboa Park's Botanical Building, as explained in a San Diego Court document). We observed that there was not a high amount of litter throughout the trails, showing that this park remains one of San Diego's hidden gems. It was surprising to see this because Presidio is right in the middle of a very urban area—the tourist hub of Old Town is 0.6 miles away from the center of the park. There was a high amount of graffiti and noise pollution due to the two major freeways that surround the park.



As for wildlife in the park, there were several different types of birds, the most populous types being quail and dove. It was hard to tell if there were enough insects to be causing insect damage to the plants, as the ground was almost entirely covered with foliage and small-scale deadwood (twigs and small branches). This large amount of ground cover can also be seen in the image to the top right.



There was a lot of dry brush and grass throughout the park, but we believe this was due mainly to the naturally dry San Diego climate, as well as the most recent devastating drought experienced by the entire state of California. The non-native plants introduced at the park's creation remain today the greenest plants in the park (for example, the grass and many of the taller trees), while the plants native to San Diego, being adapted to dry weather, are brown in their dormant seasons. This can lead many visitors to think the park is full of dead plants, however, many are supposed to look this way and will bloom when they are out of their dormant season. One striking aspect of foliage we noticed was the growth of a new sapling on the trail (seen in the image to the left). This shows that not only is Presidio home to many old plants, but it has soil fertile enough to sustain the growth of new ones.

One aspect of the park we noticed was the presence of what we think is diseased growth on some of the trees on the main green (right image). It was hard to determine what kind of tree this specific one was, but with the help of an article on the variety of plants found in Presidio, we identified it as a possible *Cedrus Deodara* of the Pine family, native to India and Afghanistan. The decay of this tree's needles is most concentrated in the lower branches, and there is a heavy coverage of dead needles on the surrounding ground. This decay is most likely due to the dry weather—as the tree is a non-native species it's possible that it's not adapted to receiving such little rainfall in a year. Other possible causes are a disease specific to this tree type or insect damage.



Looking on the GFW website, we found a project on the Presidio from a Parker team last year. The information in the video they made more or less was the same as what we observed in the park: there was plenty of deadwood in the area and on the trail and there was not a large abundance of visible wildlife, possibly due to the amount of human visitors this area receives. There was one observation of theirs, though, that we didn't see in our visit to the park, and that was large amounts of litter. Maybe they saw areas that we did not, but we saw minimal amounts of pollution—this could mean that in the time between their visit and ours, the park's management began taking better care of grounds.

From our observations, our hypothesis on the dryness of plants throughout the park is primarily due to natural causes was proven correct. The park and its trails were cleaner than we expected, and we thought there would be much more visible evidence of negative human impact on this area given how many people visit it. Through our visit to Presidio Hill in the context of GFW and an Environmental Science class, we learned and observed a lot more than is seen only in passing.

Hypothesis about the park:

The park is dry in some areas; this is due to both San Diego's naturally dry environment and the drought we were in for a while

Works Cited

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