

THE BEAVERS OF SILICON VALLEY

According to the National Geographic Resource Library the word “habitat,” when viewed in the context of biology, is a “place where an organism makes its home. A habitat meets all the environmental conditions an organism needs to survive.”

So how did Silicon Valley become a beaver habitat?



It was a cool, crisp morning, the sun just beginning to bring a glister to the pond. Trees and sky reflected off the undisturbed surface of the water as a great blue heron waded belly-deep, taking long, slow steps while its Polaroid vision scanned for its next catch. I could hear frogs croak in the marsh, a woodpecker rat-tat-tat in the distant trees, and young beaver kits play in the reeds. It looks like a habitat made for them.

This, however, is only a recent playground for these creatures. Several years ago, when I visited this section of the Los Gatos Creek, it was a stream swiftly flowing over smooth river stones with saplings and scrub at its edge. Salmon would make their way up to this section of the creek to spawn, and I could watch salamanders peek out from beneath a rock, or scamper along a log and disappear into the marsh.

Los Gatos Creek is one of several creeks that flow through Silicon Valley, along with the Guadalupe River. These waterways have parks, walking and bike paths, and other recreational

areas for residents and visitors to the San Jose area. They are also home to wildlife, such as the California ground squirrel, wood ducks, and many bird species.

Beavers are known to build dams in streams and water courses. With their iron-coated teeth they gnaw down trees and saplings that are close to their future dam site. They then drag the trees into the watercourse to create their structure. The beavers continue to add logs, sticks and whatever other vegetation they can scavenge to the area, creating a barrier so water will back up, its current slowing and eventually becoming a pond.

The project will develop into an ideal habitat for producing offspring and managing their family. Their home then provides protection from predators, and houses them for cold winters. Like humans, they have the ability and motivation to change the local environment, and therefore have been labeled “ecosystem engineers.”

These critters are known to have a mostly positive effect on the re-engineering of the environment they inhabit. Besides creating an environment that attracts birds like the blue heron, frogs and many other species, the wetland oasis created by these “ecosystem engineers” assists in raising the water table that acts as a purifying filter. The slowing effect reduces erosion, lets silt collect upstream, and ultimately breaks down toxins via microbes in these wetlands. Thus water downstream of dams is cleaner and requires less treatment for human use.

Beaver communities have been rare in recent years, and were under threat of extinction for centuries due to commercial trapping. The demand for beaver pelts was driven by their high quality, and the felt produced from the skins was ideal for hat making in the 17th and 18th centuries. The demand for pelts, and a depleted beaver population in Europe, generated a trans-Atlantic trade for the product, and American beaver populations had experienced significant reductions by the early 20th century. But the beaver is now returning, and Los Gatos Creek in

Silicon Valley appears to be a home of choice.



I have observed, however, that there seems to be some competition for habitat there. In contrast to this welcome homemaker to the South Bay watercourses, there is another species encroaching on the environment, though with obvious and devastating consequences. Like the beaver, homo sapiens make deliberate efforts to create an environment that will be a comfortable and suitable habitat. But under abnormal circumstances and pressure to survive, the humans of Los Gatos Creek are compromising the environment, disregarding others' health and safety, and seem to be existing purely to satisfy their own needs.

The creeks of South Bay are now home to hundreds of people living in makeshift shelters—tarps strung between trees, tents or anything that will shield them from the elements. These makeshift settlements are creating a string of environmental issues, with the most important concern being human waste. Garbage, from bike wheels to discarded clothing and shopping carts, litters the creeks and surrounding areas. Cigarette butts, batteries, condoms, syringes and many things no longer needed by these people are being discarded in and around the creeks.

While volunteer groups like South Bay Clean Creeks Coalition are making great inroads in cleaning the creeks, it does not take long before the garbage and waste returns. Encampments are continually being moved on by authorities only to return within days, or move to another area of the creek.

Beaver pelts no longer have a market, a demand that once reduced beaver numbers to threatened levels, but can people and beavers now live together, or will this be yet another threat

on a species trying to return and build a home? Perhaps more important, why are people encroaching on a habitat that is not natural to them? What has caused an epidemic of homelessness that drives people to an unnatural state of survival?



Coincidentally, the very name given to the San Jose region may prove to be a clue to the reason behind the growing problem of homelessness. Silicon Valley, named after the product used in computer chips, has become the center of world technology. Silicon Valley is home to the largest and most profitable tech and social media organizations, with a whopping one trillion dollars in combined sales in 2018. Nor is it coincidental that most of these giant money-spinners commenced business between 1970 and 2000, a period when Bay Area statistics began reporting a growing number of people with a household income below what was determined to be the poverty level at that time.

According to an article by Bourree Lam of *The Atlantic* in October, 2015, “When Apple Employees Move In, Housing Prices Go Up,” one of the primary causes of housing unaffordability is addressed. The article highlights the disparities in the median household income in 2010 of \$75,604, while median tech wages were well above \$123,000. At the same time housing costs were increasing proportionately, pointing out that the difference between the price of the median Apple worker’s home and the median San Franciscan’s home of about \$150,000 in 2010 was close to \$400,000 in 2015.

The article also pointed to the lack of supply being a contributing factor. but noted that one of the reasons the supply-demand ratio was out of kilter was the demand generated by the

disproportionate influx of tech workers, citing from a report: “The tech industry has been credited for 30 percent of San Francisco’s job growth since 2010, with tech employees making up an estimated 8 percent of workers in the city in 2013.”

While the tech industry’s influence on housing costs is not the sole cause of the homelessness crisis, the evidence indicates that it certainly has been a major contributor over the last two or three decades.

Other factors are illustrated by homeless folks like Cameron, a man in his late 20’s whom I speak with from time to time, as I occasionally run into him when walking the Los Gatos Creek trail. Cameron has been living in and out of his mother’s home for several years. He has come and gone due to his drug and alcohol addiction. He told me that his mother and step father have lost trust in him and won’t have him back in the family home.

Another denizen of this world, Gracie, a woman in her 40’s, was once a highly-paid marketing consultant. Gracie’s depression developed into a serious mental illness and consequently affected her ability to work. Now Gracie is living among her fellow homeless in the Los Gatos Creek area.

Frank is a Vietnam Vet in a wheelchair. While Frank does have a room to stay in with another veteran, he has a camaraderie with the homeless community and spends most of his time among them. I asked him about his experience in the war, all he could do was speak of the 58,000 young men who gave their lives, while tears welled up in his eyes. Could the lasting psychological effects of the war be the reason for Frank’s unfortunate circumstances?

Cameron, Gracie and Frank are counted among the thousands of local homeless, and their stories tell of how complex the causes are.



So while the social and economic disparities are mostly being ignored, the beaver is making its home in the Los Gatos Creek. Its efforts are improving the environment, assisting the purification of the water supply, and bringing other wildlife to the area. In contrast, the humans encroaching on the natural waterways, a domain that is not their normal habitat and does not “meet all the environmental conditions an organism needs to survive,” they are seriously compromising the ecology that the beavers are making efforts to improve.

The kits playing in the pond, splashing around with their paddle-like tails, may hear the sound of no less than forty luxury private jets departing daily from San Jose International Airport, but they are playing in the moment. Simple lives without concerns for tomorrow. The rising cost of housing, driven primarily by the robust growth of the local business sector, has no influence on the beaver family, except for the recent adoption of their habitat by the homeless.

The tech industry in Silicon Valley certainly has been a significant contributor to the issues, and as I earlier pointed out that the very name of the city is an indicator of its influence. Silicon Valley is home to the fortunes of many big-tech companies and their owners, and it could be said that the gap is rapidly widening between the rich and the less fortunate, and a consequence of these rapidly growing disparities there is a growing need for beavers and humans to get along, as they may be sharing a habitat well into the future.

Yet the trend continues. A few get wealthier while the crowd grows poorer. And, if you are among the average middle-income group, you may be considering how fragile your comforts may be. And people amongst this group could perhaps be the same ones who turn their heads in

the other direction when driving through the freeway underpasses to avoid confronting images of the homeless communities.

I suspect that the middle-income lifestyle security that these people enjoy is the same as Cameron, Gracie and Frank once took part in. But to be sure, the beavers will continue to return, and hopefully repair and bring new life to the landscape for the next generation.