

Jade Ishimine, Hawai'i Island other 2nd

Even before I was born, my mother has been obsessed with the Hawaiian culture. She loves learning the history, celebrating the culture, and understanding its importance. Because of this, it is unsurprising that she was drawn to the beautiful Waipi'o Valley. She established roots in Hāmākua town and met farmers of the valley who took her in. Ever since then, she and I have spent countless weekends down in the valley working in the *lo'i*, or wetland patches. In ancient Hawaiian history, Waipi'o Valley was an extremely sacred valley where the king resided. Within its beautiful greenery and landscape, Waipi'o is home to several *waialele* (waterfalls), *kahawai* (rivers), and a black sand beach. Besides its breathtaking beauty, Waipi'o was the source of the Hawaiians main starch, *kalo* (taro). The valley was lined with *lo'i* and many farmers made their living this way. It also had cultural significance, having several *heiau* (sacred temple) and a *pu'uhonua* (safe haven). In these times, industrial and western ideologies were not present, keeping the valley ecosystem in pristine condition under the *kapu* system. Within my mother's time, this perfectly balanced ecosystem was disturbed by modern consequences. One of the most prominent changes to this balance is the presence of introduced species. In older days, native species such as *'io* (Hawaiian hawk), *'auku'u* (Black-crowned night heron), *'o'opu* (Hawaiian freshwater goby), and makaloa (*Cyperus laevigatus*) thrived in the valley's environment. In the present, rarely are we able to see these native species. With the introduction of horses, apple snails, and hornworts came in and destroyed this balance. Even within my generation, I am able to see the huge impact that these species have caused to the native plants and production of *kalo*. The apple snails are one of the biggest issues that have stood out to me. When working in the patches, it is necessary to wear footwear in order to avoid stepping on the sharp shells of these invasive snails. Not only do they eat and destroy the *kalo*, but they lay their bright pink eggs on their leaves. When speaking with the established farmers, I was always taught to smash and kill these eggs in order to save the crops. Another issue is the horses. Brought in before our time, they now roam wild all over the valley or used for tourism. The horses seem harmless, but when roaming freely they cause huge damages to the water banks, patches, and *kalo*. Animals such as horses and invasive rats are also carries of harmful diseases, such as Leptospirosis. Even within the *kalo* species, they have been altered since traditional times. Ancient Hawaiians first started out with "original" species of *kalo* such as *lehua*, *pololu*, and *api*. Within my mother and I's time, hybrids and breeding have created entirely new *kalo* species that have furthered farther and farther from the originals. Even within our short generational gap, there are changes that can be seen.

Though there are endless amounts of changes from the older generations, some of the things have not. Unlike many places on our planet today, Waipi'o valley has kept its natural beauty and vast greenery. Though there are houses with modern irrigation and electricity, Waipi'o is still a place of ancient farming traditions and cultural respect. The rivers and waterfalls still flow with no litter and the wind crisp and clear without pollutants. At night, the sky is clear with beautiful stars and the sound of the streams. *Kalo*, though evolved, is still the main crop produced in the valley, and the sense of family and community is ever so present. The most important aspects of the valley are still in tact, and I hope to keep it this way for generations to come.

No matter how precious, Waipi'o Valley will undoubtedly face more changes in the future. Though not all changes are bad, many will be. It is unavoidable that invasive species will continue to dominate the valley and push out the native ones. The *kalo* will continue to evolve until the original breeds will be bred to extinction. Birds such as the *'io* will no longer be seen flying along the valley ridge. To prevent these changes, my mother and I believe that education and protection is an important thing that needs to be done. By educating not only tourists, but locals as well, we can teach everyone

about the rich history and cultural value that Waipi'o Valley holds. Farmers can invite individuals to their *lo'i* for hands on experience and lessons by professionals of the craft. A website or social media platform can also be created to voice the local farmers as well as spread the valleys importance. By understanding the impacts that tourism, westernization, and modern industrialization has caused, people will be more willing to keep Waipi'o as a sacred area. A next crucial step is protection. Waipi'o cannot be the next Waikiki. We need to ensure that tradition, culture, and farming are safe from those who want to start businesses or attraction that will create heavy foot traffic in to the valley. By doing things such as creating a limit of daily cars in and out of the valley, or restricting certain areas are a way to prevent damage to the valley. Waipi'o Valley has always been a sacred place since ancient times, and I hope that it will stay that way for those who come after me.

