

Hamakua CDP Testimony

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Grandson is the 5th generation living in Ninole

1. Support acceptance of the Hamakua CDP
 - a. Guiding principle: “Whats good for the land is good for the people”
 - b. Thanks for the Steering Committee fo 9 years of dedicated volunteer work to develop this planning document

2. Fully support Revised Policy 18, shoreline and building setbacks for environmental, health, safety priorities.
 - a. Handout 1- Photo of cliff slide at Hakalau Point, MM16, and proof of irreversible damage—permanent loss of *opihi* and *wana* habitat
 - b. Handout 2 is March 2018 Hamakua Times, **The Lonely Hamakua Opihi**. Please read if you enjoy opihi as food or as part of our natural resource heritage.

3. Encourage continuation of a working relation with UHH-created Manager Climate Corps (MMC).
 - a. collaboration between managers and academics to develop adaptive capacity resealing climate change impacts.
 - b. praise the recent collaboration between Dr. Peroy, UHH, County Planner Bethany Morrison, guiding Rose Hart, UHH student to document historical and present cliff erosion rates.
 - c. This data driven results provides a “level playing field” to for an environmental perspective, challenging the usual planning decisions based on creating local jobs and tax revenues.
 - d. The MMC is a local job for local agencies.

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The Lonely Life of the Hāmākua ‘*Opihi*

by Robert T. Nishimoto, PhD
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Our Hāmākua, from Waipi‘o Valley to Kaiwiki, is often referred to as Hilo Palikū by elders. The name refers to the geological characteristic of the windward side of the Big Island; high cliffs with very narrow boulder beaches punctuated by large coastal bays (Honoli‘i, Hakalau, Malua, Waipi‘o, etc) identifying large river valleys connecting the *ma uka* forests to the ocean. We can see this cliff profile from the top of the road (looking toward Hilo) when driving to Laupāhoehoe Point.

The landward edge of the coastal strip ends abruptly at the base of the cliff and the seaward edge is alternately exposed and immersed by tides twice daily and, especially during winter, scoured by large waves. This zone, called the intertidal, is the area between the high and low tides. Typical tourists would not enjoy a place like this, but it serves as an ideal habitat for the native ‘*opihī*. This cultural and culinary treasure to local residents, is sometimes called, “*He i‘a make ka ‘opihī*” (Pukui, ‘**Ōlelo No‘eau**), literally translated as fish-of-death. Considering the ‘*opihī*’s treacherous habitat that it occupies, and the high demand by fish markets and locals for luaus, there are more human ocean fatalities connected to this species, then to any other marine animals such as sharks, jellyfishes, etc.

There are 3 species of native ‘*opihī*, and each occupies a different zone by species. The ‘*opihī makaiāuli*, the black-footed limpet, lives the highest, at the high tide mark, where they can tolerate dry conditions with occasional wave splashes. The yellow-foot, or ‘*opihī ‘ālinalina*, live at or below the low tide mark, where it needs constant immersion and cannot tolerate drying out. The largest of the species, ‘*opihī ko‘ele*, growing to about 4 inches long, is always submerged, usually living on large boulders to a depth of 5 feet. This species is only found on Maui Nui and the Big Island.

‘Opihi usually live in clusters on boulders or vertical cliff faces. They graze on algae and are most active when the tides are changing. The *‘opih*i spawn during the winter months, by releasing gametes (eggs, sperm), where the larvae (called veliger) can float for as long as 18 days, but usually seek an appropriate substrate to settle and metamorphose into little shelled *‘opih*i within 2 days. Genetic studies show that larvae can travel inter-island, but each island has its own unique population.

Only the most seasoned locals go for *‘opih*i, considering the challenges of descending/ascending vertical cliffs, traversing unstable cliff-side trails or accessing traditional fishing trails blocked off by private landowners. Notwithstanding, the unpredictable and dangerous ocean conditions. We can seek comfort that the Hāmākua *‘opih*i populations are physically protected from overfishing, the usual culprit in many fish stock declines. However, in recent years, the County of Hawaii Planning Department has been permitting an increasing number of cliff-side homes and development without much consideration of the impact of these developments to our valued coastal ocean resources. Ownership of these properties usually ends at the high tide line, including the cliff face. Unbeknownst to the public, some of these areas had major landslides recently, covering the boulder beaches with trees, shrubs and tons of dirt. See attached photo of a landslide just north of Hakalau Bay, in 2015. Besides, the constant leaching of sediment and pollutants into coastal waters, the habitat for the *‘opih*i and other critters in this intertidal zone are forever destroyed...obliterated. This intertidal habitat is forever changed, not only with the loss of that *‘opih*i population, but the area has become permanently uninhabitable to allow neighboring *‘opih*i larvae to resettle. Imagine how many more of these coastal habitat losses are occurring without us even being aware of it. The threat is ever present. Now is the time to stop the cliff-side subdivision spread up our coastline.

To close, a proverb by Pukui gives us a warning and an unsettling vision for the future; “*Kupihipihi loa kahi koena ‘opih*i” (The remaining limpets have dwindled in size), translated as the “finances have dwindled considerably.” Our culture and traditions are at stake.