



Geologically Unique

Jutting out from rugged north shore sea cliffs of the island of Molokai, lies flat Kalaupapa peninsula. One of the most remote locations in Hawai'i, the peninsula and its towering cliffs were created through several episodes of volcanic and geologic activity, over millions of years. The resulting landscape was one of natural isolation, which was used for over a century to quarantine peoples with Hansen's Disease.

An Ever-Changing Island

The Kalaupapa peninsula, circled in red, juts out from Molokai's north shore.



The Hawaiian archipelago is a chain of eight major islands, reefs, and shoals extending more than 1,600 miles in the Pacific Ocean. The seven inhabited islands in the southeast end of the chain, from northwest to southeast, are Ni`ihau, Kaua`i, O`ahu, Molokai, Lana`i, Maui, and Hawai`i. The islands were formed by volcanic action, the major ones being basaltic volcanic domes.

Molokai is the fifth largest island of the Hawaiian chain. During the Tertiary Period, two separate islands, West and East Molokai, rose above sea level. As the two islands grew they gradually merged, with lava from East Molokai

filling in the channel between the two islands to create the current configuration.

Molokai now measures about thirty-eight miles long by a maximum of ten miles wide. The island's highest elevation is the 4,970 foot Kamakou Peak. The main body of the island is referred to by the people at Kalaupapa as "topside" Molokai.

Molokai's north coast faces the ocean with sheer cliffs, the result of a giant landslide. Deep, steep valleys were subsequently cut into the cliffs by stream erosion. Protruding from this rugged coastline is the flat sea-level peninsula of Kalaupapa, cut off from the rest of the island by the massive cliffs.

Towering Sea Cliffs

Molokai's massive sea cliffs, rise to three thousand feet above sea level, making them among the highest in the world. For decades, geologists thought these cliffs were created through wind and water erosion. Now however, it is believed the cliffs formed approximately 1 to 1.5 million years ago, after the northern 1/3 of Molokai island collapsed into the sea. Rubble deposited on the sea floor from the event extends over forty miles north of the island.

As it split, the northern flank broke into large blocks that subsided in different amounts, forming steps in the submarine slope leading up to the remainder of the island. As the rubble settled, several large fragments remained above sea-level, creating three offshore islands - `okala, Mōkapu, and Huelo. Isolated Huelo Island retains original plant species found on Molokai over two thousand years ago, including a rare native loulu palm tree forest.



Wind, waves, and rain continue to shape the cliffs into the dramatic coastline seen today.



Kalaupapa is a relatively flat plain, cut off from the rest of the island by towering cliffs.

A Stunning Landscape Hundreds of thousands of years following the cataclysmic landslide which created the dramatic north-shore cliffs of Molokai, another geologic event occurred. An off-shore volcanic eruption formed the broad flat plain. These two geological events created the stunning and scenic landscape of Kalaupapa - the flat, leaf-shaped peninsula against the towering sea cliffs.

The Peninsula Forms Geologists theorize that between 230,000 and 300,000 years ago, long after the extinction of the volcanoes that created the rest of the island, an off-shore shield volcano erupted from the sea floor. This volcano, named Pu'u'uao, formed a relatively flat triangle of land through continuous flows of extremely hot and fast spreading *pāhoehoe* lava. The peninsula was formed over multiple eruptions which built up land from the sea's floor. The land mass created by the cooled lava eventually connected with the main part of the island, creating the distinctly shaped peninsula known today.

Kalaupapa translated means "the flat plain". Flying over, or looking down from topside Molokai, it becomes clear how the Hawaiian name describes this land. The peninsula is an area of approximately five square miles, being 2 miles from cliffs to the tip, and 2.5 miles in width at the base of the cliffs.

The peninsula's highest point is the Kauhakō Crater, which rises to about 500 feet above sea level. The volcano is now extinct, but the crater, still connected to the ocean by a lava tube, has become one of the worlds deepest lakes, with a depth of more than 800 feet.

Geology of Imprisonment

Surrounded on three sides by rough ocean waters and cut off from the rest of Molokai by towering cliffs, Kalaupapa Peninsula has always been one of the most remote places in Hawai'i. When the Hawaiian Kingdom allocated lands for the express purpose of isolating people with Hansen's Disease, the peninsula of Kalaupapa was deemed the most appropriate place. Its natural isolation by the tall cliffs made entry and escape by land extremely difficult. Turbulent ocean waters limited places for boats to land. Author Robert Louis Stevenson after visiting in 1889, described the Kalaupapa peninsula as "a prison fortified by nature."

On January 3, 1866 the first twelve people were dropped off on the east side of the peninsula. Though they were in advanced stages of the disease, likely having little or no feeling in their limbs and possible blindness, they were expected to create a self sustaining way of life. In the 103 years that followed, more than 8,000 people living with Hansen's Disease would be sent to Kalaupapa. For those who were taken from their families, friends and homes, the rolling ocean and towering sea cliffs must have been a constant reminder of not only their geographic isolation, but also the social isolation imposed on them by a fearful and ignorant world.



The cliffs of Molokai formed a natural barrier which isolated patients from the rest of the world.