

A Hike up the Observatory Trail to Mauna Loa's Moku'aweoweo Caldera

By Shawn Quinn



Moku'aweoweo and Mauna Loa's Summit

I look to the west and wonder about the processes at work creating the varied layers of the summit wall towering 600 feet above caldera floor of Moku'aweoweo. Measured from its oceanic base, the mountain is over 56,000 feet tall making it the tallest and largest volcano on the planet. By human terms, it is old. Geologists believe it is between 1 million and 700,000 years old. This mountain first breathed the fresh air of the central Pacific before modern humans moved out of Africa over 100,000 years ago. So, here I am, standing on the edge of a large caldera wishing this moment could last longer. I'm only here for a little less than 24 hours; far too short to fully explore the rugged beauty surrounding the highest levels of this volcano. Steam rising through a few of the fissures in the caldera floor reminds me of the awesome power that is building this mountain. Last erupting 1984, the mountain recently resumed expansion. GPS receivers located between the walls of the caldera are moving apart suggesting that the chamber located not far below where I am standing is once again filling with magma. Liquid rock, molten since the formation of the earth, is poised to once again erupt. In an odd and deliberate way, I wish the eruption would occur now, for me to witness first hand the addition of the newest layers of rock to this place known by ancient Hawaiians as the long mountain. That was not to be the case during this adventure. As we prepare for the hike back down

the Observatory Trail, I'm certain I will be back. Perhaps next time, I'll bring my wife and children to share the experience together. The kids will be a couple of years older then – and ready for the hike of their life.

Before the Hike

As an avid amateur astronomer and geologist, a hike up Mauna Loa has long been at the top of my adventuring list. I convinced my father-in-law to join me on a hike up the



Mauna Loa Road

Observatory Trail in Hawai'i Volcanoes National Park in May/June 2006. At 65, Bob brought with him his own hiking experiences from high in the Himalayas to the deserts of Patagonia in South America. The day before our hike, we phoned in our back country permit request for our stay at the Mauna Loa Cabin near the eastern edge of the caldera wall. We were assisted by Norrie from the National Park Service, who reviewed a number of precautions and a long list of essential items to bring on this remote hike.

Acclimatizing

The adventure began with a 2 hour drive from our condominium on the Kohala coast up the long and windy saddle road to an unmarked turn-off for the final 17 miles to the Mauna Loa Observatory. The reasonably well maintained single lane road was marked by a white line, obviously hand painted, down the center to aid those driving to the observatory during periods of low visibility.

Living at sea level most of the year, we decided to spend the first night acclimatizing to the high altitude by sleeping in the car at the observatory trail head parking lot (elevation 11,200 feet). We hoped to avoid altitude sickness common on the hike.

Astronomy

The magnificently clear, dark skies provided spectacular views of our home galaxy rising over the volcanic slopes of Mauna Loa. Off to the northwest, we could see the summit of the 8,200 foot Hualalai volcano and the lights of Kailua-Kona glowing beneath a low cloud deck. I found it difficult to sleep with such beautiful views of Eta Carinae and Corona Australis; stars and constellations not visible from my

home in Florida. Later in the evening, we were treated to an awesome display of global climate research in action performed at the Mauna Loa Weather Observatory. A powerful green laser pierced the night skies for hours. The temperature dropped to 41°F by 4:00 AM – certainly much cooler than one expects to experience on a trip to the tropics.



Center of Our Galaxy over Weather Observatory



Climate Research in Action



Lights of Kailua-Kona below a low cloud deck

The Hike Up

The first hints of dawn actually began to appear with the reddening of the eastern horizon shortly before 5:00 AM. After a breakfast consisting of dehydrated milk and granola, we topped off our water bottles, applied generous



The Hike Begins

amounts of sunscreen to exposed areas of skin and began our hike at 7:00 AM on the Observatory Trail. Guided by an occasional ahu, we made slow progress up prehistoric pahoehoe and `a`a lava flows passing collapsed lava tubes and spatter cones. Uneven, steep and jagged, it was unlike any trail I had ever hiked before. Although the ahu clearly marked the trail, every step required my attention.



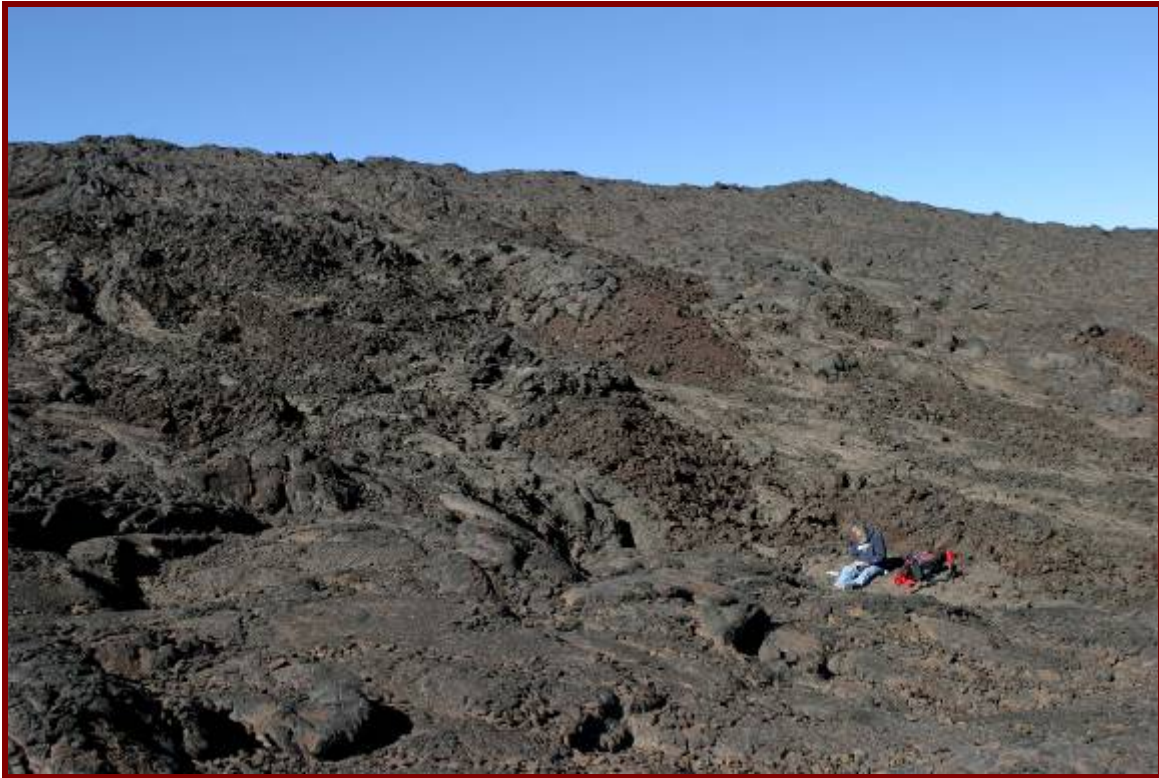
Ahu Marking the Trail

A light arid wind was with us all morning allowing the constant sweat to evaporate quickly. Stopping often, about every 30 minutes or so for rest and water, we looked to the north across the saddle of the Big Island to Mauna Kea. We could easily see some of the world's greatest observatories near the summit. To the northwest we could see the cinder cones distributed over Hualalai's eastern flank.



Hualalai – One of the Big Island's Five Volcanoes

Around 10:00 AM as we were walking along one of the 1950's jeep trails that make up a couple of short sections of the Observatory Trail, we encountered the only other hikers that day. It turns out it was Ranger Jim with whom I actually spoke on the phone two days prior. He gave me the excellent tip about phoning in the back country permit. The tip saved us the five hour round trip from Kohala to the National Park Back Country Office at park head quarters in the small town of Volcano. Jim also confirmed the presence of ample of water in the catchment tank at the Mauna Loa cabin.



About an Hour up the Observatory Trail

By noon, we were over 12,800 feet hiking on loose cinder. The trail began to level out making for a much easier traverse adjacent to a long narrow fissure. The volcanic rocks nearby seemed surreal. Some were filled with green olivine crystals while others had blue, golden and brown hues that appeared iridescent in the bright, high-altitude sun light.



Volcanic Rocks at 12,800 Feet

The mix of cinder and rugged lava reminded me more of recent images taken of the Martian landscape by NASA's Spirit and Opportunity Rovers than a stereotypical scene from Hawai'i. We paused for an extended rest to drink plenty of water and load up on a few more calories consisting of a Power Bar or two and trail mix.



Cinders and Lava near the Caldera

Soon we were hiking on pahoehoe again; much younger, still shiny almost silvery in the reflected light. The surface of the lava cracked beneath each step. By 12:00 PM we were at 13,000 feet finally standing at the edge of caldera's North Pit. The skies were still perfectly clear and the air pleasantly cool at about 65°F. Looking south across Moku'aweoweo, we could see snow still clinging to side of a north facing wall.



Near the edge of the North Pit, we explored Jagger's cave marked by a large ahu. It's really a depression in the lava, perhaps a portion of a collapsed lava tube, and is surrounded by a low wall constructed by hikers over the years for shelter from the wind.

Near the Edge of the North Pit

The effects of the morning's hike were obvious. Bob and I were exhausted and the muscles in our legs were sore and weak. Fortunately, neither of us was experiencing any signs of altitude sickness. The overnight stay at the Observatory parking lot and the aspirin taken every 4 hours paid off (I only wish I would have shed about 25 pounds before making the hike).



Looking south across the North Pit – Note snow on the walls

Once we made it to the junction of the Summit, Cabin and Observatory Trails, we were still slightly more than two miles from our destination, the Mauna Loa Cabin to southeast. Off to the west, the Summit Trail leads to the highest point on Mauna Loa at 13,677 feet above sea level.



Junction between Observatory and Cabin Trails at 13,000 Feet

We followed the Cabin Trail past the junction of the Mauna Loa Trail down the wall of the North Pit onto the actual floor of the Caldera. Covered in cracked slabs of pahoehoe from the 1984 eruption, the short trek across the floor along the rim of Lua Poholo pit was the easiest section of the hike. Once we made it to the eastern edge of Moku`aweoweo, we began the final uphill portion of the hike. This, however, was the most difficult section of the trail – largely due to our state of exhaustion. Looking back through the digital images, I noticed I did not take a single image between the edge of the North Pit and the Mauna Loa Cabin. We slowly made the final 250 foot ascent to find mostly level terrain covered with reddish brown basaltic rubble blasted from the volcano by prior steam explosions.

Moku`aweoweo

Bob and I made it the cabin at 3:00 PM – about eight hours after we started. The final mile seemed like five as I was sure the GPS was malfunctioning. We found the cabin clean and in very good condition. We had our choice of the 12 bunks as we were the only hikers registered to stay at the cabin. After quickly unloading our sleeping bags from our packs, we fixed a high calorie dinner consisting of Spaghetti and chocolate energy bars for desert.



Luxury Accommodations at 13,250 Feet

After dinner, we marveled at the expanse and wonder of Mauna Loa as we stood near the edge of Moku'aweoweo. With no trees or other man made objects, it was difficult to estimate the vertical drop from where we were standing to the black lava covered caldera

floor. It turns it's about 400 feet straight down. Directly across the caldera from the cabin is Mauna Loa's true summit; 600 feet above the crater floor at 13,677 feet above sea level. The summit is over 4.5 miles one way from the cabin via the cabin and summit trails. Although inviting, the hike to the summit was going to have wait for our next visit to the park.



Dinner

The floor of Moku'aweoweo was many shades of black and contrasted sharply with the blue sky above. To the west, we could

see steam rising through fissures and to the southwest and the brownish 1940 and 1949 spatter cones. The size of this caldera was amazing. At over three miles long, the southern wall of the south pit actually disappears over the horizon.



Moku'aweoweo – South Pit on the Horizon

As Bob and I rested in the warm sun of the afternoon, we reflected on the splendor and – pain – of the day's hike. Other than Ranger Jim, his hiking companion, and one lost bee, Bob noted that the place was devoid of life. We did not see any living creatures or plants the entire hike between the Weather Observatory and the Cabin – not even lichens. The place reminded me of how Apollo astronaut Buzz Aldrin described the surface of the moon: "*magnificent desolation.*"

More Astronomy

With the sun dropping over the western edge caldera, the encore for the previous night's astronomical show began. Once again, the 'seeing' was extraordinary. We were treated to perfectly clear, dark skies. The



Southern Cross rising over Mauna Loa Cabin

Milky Way literally stretched from horizon to horizon. A slight breeze added to the chill as I captured the image of the Southern Cross gleaming over the cabin illuminated by a single candle with my camera. I set my alarm for a few hours later to catch a few more constellations rising very early the next morning.

The Hike Down

We awoke early the next morning to catch the sun delivering the first light to the east facing wall of the caldera. I was quickly reminded of the previous day's hike; the first steps out of the bunk were very slow. Temperatures were in the upper 30's. To warm us up, we cooked oatmeal and fixed hot tea. The cabin is equipped with a rain catchment system that collects water from the roof and stores it in a large tank located behind the cabin. After treating the water, we refilled our water bottles and reloaded our backpacks. We left a short note in the cabin's log book and a couple of extra candles for the cabin's next visitors.



Breakfast at 13,250 Feet

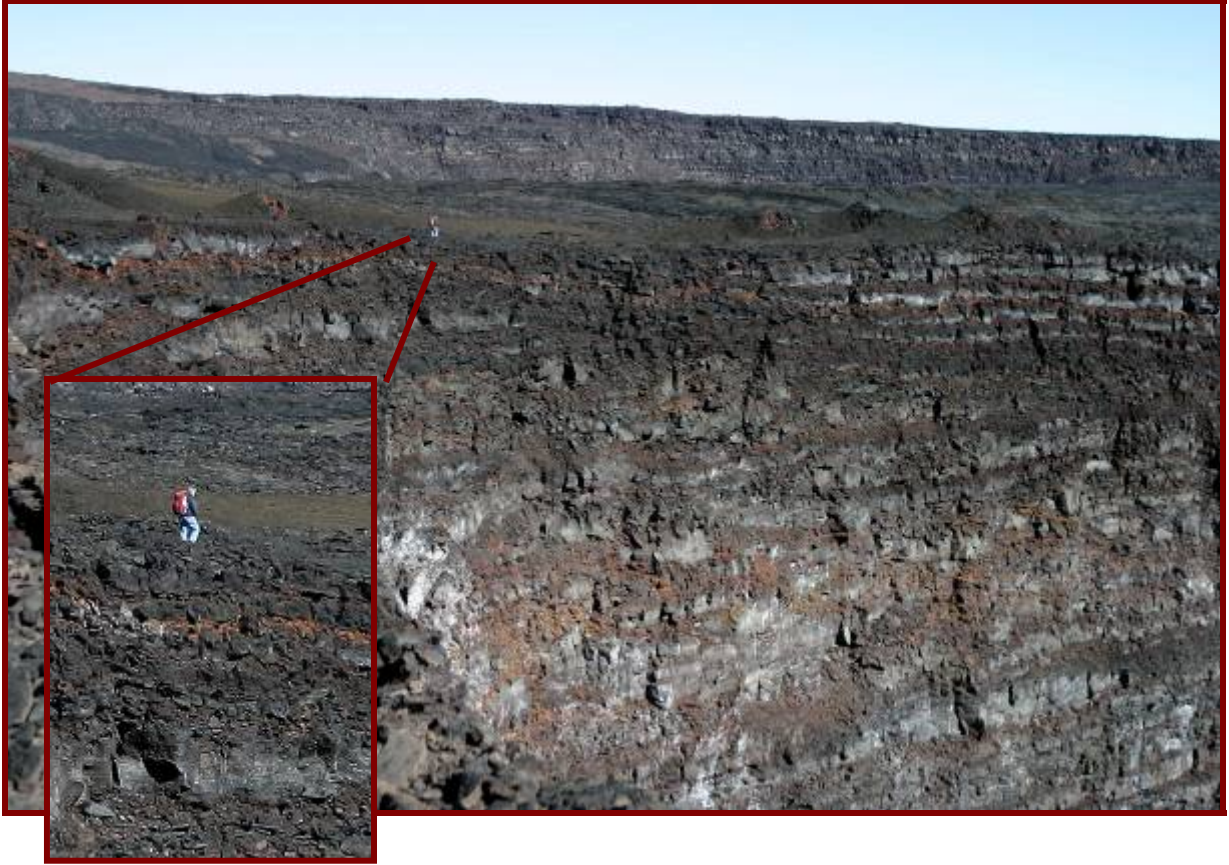


Basaltic rubble on the edge of the caldera at sunrise

The descent back down the Observatory trail began at 7:30 AM and in about hour later, we made to the edge of the Lua Poholo, a collapsed lava pit. Mindful of the danger of the severely cracked rim, I carefully approached the edge of the pit to view the hundreds of wrinkled layers of lava exposed by the shear walls dropping 200 feet straight down. Off in the distance, Bob continued along the trail providing a good reference to illustrate the size of this maw as I captured the scene with my DSLR.



Lua Poholo – a large collapsed lava pit



Bob hiking near Lua Poholo on the Observatory Trail

Not surprising, the hike down was going much faster than up. Soon we were walking back across the cinders. As usual, Bob was leading the hike and as he neared a rise in the trail, he looked to nearly walk off the earth into the low cloud deck hanging over the western coast of the island with Maui off in the distance.



Loose cinders on the Observatory Trail – Maui is off in the distance

A short time later, we encountered a couple from Germany on a day hike up to the rim of the North Pit to get a glimpse the caldera. Mauna Kea stood high to the north all morning and by late morning; the white and silver domes of the Mauna Loa Observatory came into view.



Day hikers on the way up

We were almost back to the car. At noon we reached the final ahu and bid a fond farewell to an awesome trail.

Back at the car, Bob surprised me with a cold, locally-brewed beer that he slipped into the car before the long drive up. We sat in the car for several minutes resting trying to decide who was in the most pain. Soon, however, we were planning our next hike up the mountain. We saw only a fraction of some of the most interesting volcanic terrain on the planet. Perhaps we would take the 17 mile Mauna Loa Trail or even the less traveled Ainapo Trail pioneered by prehistoric Hawaiians. There's so much more to see and explore. It was truly an amazing adventure that will be remembered for a lifetime.



Looking down the Observatory Trail – Mauna Kea rises to the North



The author at the trail head completing the hike

Some Notes for Future Hikers

Proper preparation for this hike can not be over emphasized. I packed over 80 items for this short hike including emergency blankets, medical supplies, rain gear, sunscreen, winter hat, extra food, etc. Most of these items were there for a bad day – injuries on the trail, bad weather, and an unplanned extra day on the mountain, etc. Though the weather is perfect most of the time, you must be prepared for the worst. You're in the tropics. However, you're also at 13,000 Feet and in an alpine climate. Listen closely to the National Park personnel as they review an important list of things to bring before issuing the required back country permit. The trail is remote and it is very possible you will not encounter anyone the entire hike. Cell phones did not work anywhere on the trail. The lava will easily rip the soles off vulnerable boots. Make sure your boots are broken-in and in good condition. Sun glasses, a wide brimmed hat, and sun screen are essential for protection against the strong UV light present at these altitudes. With all that said, I highly recommend it! It will be unlike any hike you've ever been on.

Shawn Quinn
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