## In Hawaii's lava tubes, a'a' feels like it sounds

## By Hillary Hauser **News-Press Staff Writer**

Inside one of the dark volcanic tunnels that spread out from the central core of the Kilauea Volcano on the big island of Hawaii, I crawled like a crab, balancing myself with one hand, carrying a flashlight in the other.

There were three of us - a photographer, a National Park Service ranger, and me, inching our way deeper into the cave. It was only three or four feet from floor to ceiling, and my hard hat kept banging on the jagged lava overhead while my hands quickly became sore from the sharp a'a' on the

A'a' is a type of lava pronounced "ah-ah," and it feels like it sounds. The other type of lava is pahoehoe — smooth to the touch and pronounced "pa-hoi-hoi."

The photographer, Chris Newbert, and I were exploring the lava tubes of the big island of Hawaii — both underwater and topside — and the volcanic tunnel we were now in was a new one, the ranger, told us. It had been formed by the Mauna Ulu crater on Kilauea, which is one of the five major volcanoes that make up the island of Hawaii (and which is presently blowing up).

At the back of the cave, a drop of water that had seeped through the ceiling ran down the back of my neck. At the same time, a sharp chunk of a'a' grabbed the seat of my pants and ripped them stem to stern. Newbert captured it all on film and was - tube (and no one knows where). very proud of himself.

Lava tubes are veins through which the blood of home for species of aquatic animals found nowhere the volcano flows, and were it not for these tunnels much of the hot lava spilling from the heart of the volcano would not reach the sea.

When a volcano erupts, the lava flows downward and seaward in molten rivers that move as fast as water. The sides of the rivers are the first to cool, forming ridges on both sides that build up until they meet at the top. Thus, an insulated channel is formed, allowing the lava to flow as long as the volcano continues to spill.

Some of the lava tubes are seven miles long immense subterranean caves that have subsequently developed their own biological, geological and culture systems.

In the hot island sun, ancient Hawaiians discovered that the caverns of the lava tubes were cool refuges from the heat. The entrances to the caves are open to the sky because of the ceilings that collapsed, and warring tribes built up their entrances with additional rock so that only one man could go through a doorway at a time, thereby keeping an entire tribe from stampeding in at one

Some of the lava tubes are burial caves, where the early Hawaiians placed their dead. Often the bodies were laid to rest in canoes — for rapid transit to heaven — and usually there were favorite trinkets to accompany the departed, usually shell leis or favorite clothes. King Kamehameha I is buried in a lava

One lava tube contains a freshwater pond that is

else in the world, the pond itself deep enough to scuba dive in.

In some lava tubes there are insects found nowhere else in the world, such as the big-eyed, oneeved spider — blind adaptations of sighted insect cousins that live outside in the world of light.

There are lava tubes that empty out from cliffs into the sea, and one of these serves as a playground for children who climb into one end of the tube and jump out the other into the ocean below.

The lava tubes that have made it into the sea are subsea caverns where the marine animals of the night hide by day — squirrelfish, soldierfish, octopus and regal slipper lobster.

Underwater and topside, Newbert and I set out to explore as many different kinds of lava tubes as we could in the three weeks I was in Hawaii.

We quickly discovered that scientists are not quick to divulge the locations of lava tubes. They worry about the rare insects being disturbed by careless spelunkers, and burial caves, too, are often disrupted by grave robbers looking for artifacts.

Burial caves are also a subject of superstition. Hawaiians, both ancient and modern, will not tell of such cave locations because anyone who knows the whereabouts of such a cave is a "kahu" - keeper of the cave - and for a kahu to reveal a burial cave location means punishment by the gods, to death.

The first lava tube I got to explore was neither ominous or deathly, because it was underwater. It was about four miles south of Kona, and Newbert found it by land markings - cinder cones near the edge of the sea.

We anchored, took our lights and went over the

Soon we were inside an enormous cave, and as our lights illuminated the far corners of the cracks and ledges I saw bright red squirrelfishes and soldierfishes (menpachis), which hung suspended and looked at us with their big black eyes. I could see where the lava had spilled into the sea, the dried river beds now cracked and caked where they had cooled the instant they hit the water.

As we squeezed through the opening to one cavern. our scuba tanks banged loudly against the ceiling and an octopus took off, muddying up the water. At the back of the cavern was a regal slipper lobster. This cave creature, Newbert said later, is endemic to Hawaii and found mostly in the lava tubes. It had a head that looked like a lobster tail, and in fact. looked like a two-tailed lobster.

Newbert and I decided to try out a burial cave on

Gordon Poire, an amateur archaeologist, took us to our first one. He called it the Cowboy Cave. From the outside, it looked like a sunken pit, full of rock and rubble, but when we got near the entrance I knew we were in for something different.

The doorway had been built up with lava rocks by ancient Hawaiians protecting themselves from warring neighbors, and just inside the door was an enormous cavern, cool and dark, with a ceiling that was nearly 30 or 40 feet high.

Newbert adjusted his cameras, and the three of us set off into that dark.

We proceeded about 100 feet back into the main room, and with lights on, took a left turn down another corridor. Another turn, and we were in a cavern not quite as large as the main hall of the cave. Poire then shined his light on top of a natural rock shelf to his right, showing us a coffin.

I began to feel a little strange, but went with the others to investigate.

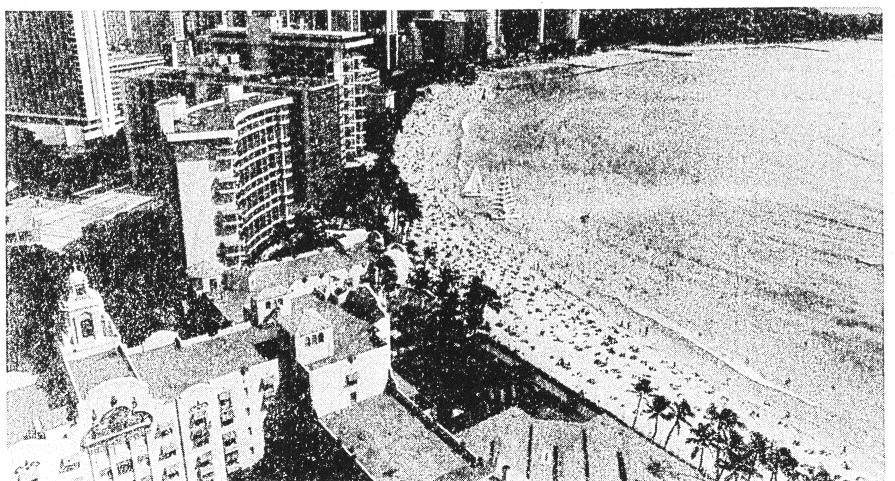
Behind the coffin were four other skeletons — as eerie as anything I'd ever seen in my life. One skeleton, a woman, had a shell lei around its neck, and another had shoes by its feet. The skeleton in the coffin was dressed in cowboy clothes, a recent burial, said Poire, who explained that this burial was the reason for the name, "Cowboy Cave."

Newbert lit a Coleman lantern to get a yellow light on the skeletons for his pictures, and I climbed up on the shelf to take notes of what I was seeing. Behind me was the cowboy and to my side was the woman with the shell lei around her neck. I began to draw a map of where everything was.

It wasn't until several minutes later that I got a perspective on what we were doing. I looked up and saw Newbert kneeling over one skeleton with his camera aimed close to a skull, and inches from where I sat with my notebook was another head, looking up at me with empty eye sockets. We were sitting with the skeletons as if we were at a Sunday picnic, me drawing and Newbert photographing.

I let out a loud laugh and my cave mates jumped sky-high.

That ghostly scene I still love to recall, and as I think of the regal slipper lobster and the ripped pants in the Kilauea Volcano, I am convinced that there is definitely more to sunny Hawaii than meets



n Santa Monica.