

UH Teachers Get Science Award

Regents Honor Volcanologist, Oceanographer

By Helen Altonn
Star-Bulletin Writer

Volcanologist George Walker spends a few hours before dark every evening exploring the core of the Koolau volcano in Windward Oahu.

Biological oceanographer David Karl commutes between the University of Hawaii's Manoa campus and various research vessels to study small organisms in the sea and their environment.

Those are only a few of many activities for which the two scientists received "Excellence in Research" awards yesterday by the University of Hawaii Board of Regents.

Regents' chairman Julia Frohlich presented the scientists with engraved medals during commencement exercises. They also will receive \$1,000 each. The checks will be presented during the UH Foundation's annual luncheon meeting June 21 at the Halekulani Hotel.

In past years, the regents have given one "Excellence in Research" award. A second award was created this year for a junior level faculty member.



Karl

Walker

Walker and Karl, selected for the awards by the UH Research Council, are "outstanding individuals," said Charles Helsley, director of the Hawaii Institute of Geophysics.

WALKER WAS knighted by the president of Iceland in 1980 in recognition for his detailed structural and mineralogical studies of eastern Iceland.

He is the Macdonald professor of volcanology at the institute. The late Gordon A. Macdonald was an accomplished geologist and volcanologist and longtime faculty member at the institute.

Walker is "a perfect replacement" for Macdonald, said Frank Peterson, chairman of the geology and geophysics department. He said Walker is one of the world's leading volcanologists and "the foremost expert in explosive volcanism in the world

today. He is quiet, unassuming, a fabulous teacher."

KARL, 34, is recognized nationally for his studies of small marine organisms and chemical changes that occur as particles sink in the ocean. He has developed techniques that have "revolutionized" research in the field of marine microbiology. Manoa Chancellor Richard Kosaki said.

Karl is a prolific researcher and writer, publishing 46 articles in scientific journals since 1975.

Among other honors, Karl was selected last year as a Presidential Young Investigator in oceanography and he has been appointed to the National Science Foundation Advisory Committee for Ocean Sciences.

WALKER discussed some of his research interests in an interview last week. However, Karl was at sea on the Cayuse, a research vessel belonging to the Moss Landing Marine Laboratory in Monterey, Ca. He rushed back here over the weekend to accept his award.

Walker has worked the past five years in New Zealand, Indonesia and Japan to study great volcanic eruptions. But he said that project is coming to an end and he is doing two "jobs" now in Hawaii.

One is a study of the long lava flows of the Big Island's Mauna Loa Volcano. When it erupted last year, Walker said, "We really didn't have much basis on

which to predict whether the lava would come into Hilo or not. In 1881, it did come right down to Hilo.

"So we're tackling the problem of what makes lava flows flow, what keeps them going and why they travel so fast sometimes."

He said he has students working on that problem on the Big Island while he's "scraping around road cuts" in Windward Oahu to study the internal structure of Hawaiian volcanoes.

He said there are about 30,000 dikes, or layers of solid rock, created by the movement of lava in the Koolau range.

"THE KOOLAU RANGE once was a great volcano, just like Kilauea is today," he said. "On Kilauea, you can walk over the rift zone and see the cracks, but its left to your imagination to work out what's happening underneath the surface."

"At the Koolau volcano, the whole core of the volcano is laid bare by erosion, so you can see what it is like right in the heart."

While Walker is looking into the depths of volcanoes, Karl is trying to determine what goes on beneath the ocean's surface. His many projects include studies of chemical interactions in Antarctic waters out of McMurdo Sound and the microbiology of a vent system in the Guaymas Basin in the Sea of Cortez between Baja California and mainland Mexico.