

UH Scientist Prepares for Busy Year with Ocean Explorations Worldwide

By Helen Altonn
Star-Bulletin Writer

Before the year is out, David M. Karl expects his job to take him on at least two ships and two minisubmarines, not to mention airplanes in between.

He is one of about a dozen marine microbiologists in the nation and the only one at the University of Hawaii. He is involved in many research projects and committees planning global ocean explorations.

He returned last month from an international science meeting in England and will go to another one next month in Turkey. Then he has three field trips lined up — to the northern Pacific, the waters off Florida's west coast and the Antarctic.

Karl, 36, was named "Scientist of the Year" last week by the Hawaii Chapter of ARCS Inc. (Achievement Rewards for College Scientists).

This is the latest of several national and local honors bestowed on the UH oceanography professor, the son of a New York mailman and a librarian.

BUT HE SAID in a recent interview that he is the "least successful" of three siblings. His brother is a cardiac surgeon in San Francisco specializing in newborn babies, and his sister is vice president for personnel at the Washington Post Co.

Karl said he paid his way through college working in a pizza parlor and at a cemetery and doing other "odd jobs," such as unloading freight cars.

After getting a master's degree at Florida State University, he drove across country to Scripps Institution of Oceanography at La Jolla, Calif., and "knocked on doors."

He said he was rejected four times before he was accepted for work there on a doctorate degree. So he is especially proud of a Scripps award for "dissertation of the year."



David M. Karl
Scientist of the Year

Karl said he joined the UH in 1978 because of the opportunity to teach and develop a research program in marine microbiology. He now has a laboratory with about 10 people, including students, technicians and secretaries.

HE HAS ABOUT \$350,000 in annual funding from five grants, four from the National Science Foundation (NSF) and one from the National Oceanic and Atmospheric Administration's Sea Grant Program.

Karl, who is single, spends about 70 hours a week in his profession. "But I don't consider it work," he said, explaining that he has been interested in oceanography since he was in high school.

At that time he wanted to be a tuna fisherman. His interests now focus on the ocean environment and ecology and marine organisms.

His research includes:

✓ An experiment being conducted about halfway between here and Monterey, Calif., to determine how carbon and other pollutants are transported in the deep sea. He will leave in October to join a ship from Moss Landing, Calif., for the project.

He is one of 10 scientists from around the world who have received a total of \$5 million for the program known as VERTEX, Vertical Transport and Exchange Processes. The three-year effort, ending in 1989, is a forerunner of a \$50 million to \$100 million research program on carbon cycling planned by the NSF in the 1990s, he said.

✓ Two research dives early in November on the submersible Alvin to study "a whole new ecosystem" off the coast of Tampa, Fla. The ecosystem is similar to hydrothermal vents found in the Pacific with the same tube-worms, crabs, big clamshells and bacteria, but no hot water is coming from the earth there, Karl said. "It's a totally different mechanism."

✓ The first research dive on the Pisces, a new deep-diving submersible acquired by the Hawaii Undersea Research Laboratory (HURL). HURL Director Alexander Malahoff, Gary McMurtry, the laboratory's science director, and Karl will explore Loihi with the Pisces in late November. Loihi is an active submarine volcano off the Big Island's Ka'u District that some day will be a new Hawaiian island.

✓ A polar science project from Dec. 9 to March 31, next year, involving American, Canadian and German scientists. They will look at the ocean system and the food chain involved in production of krill, an Antarctic crustacean that is similar to shrimp.