

downward trends during the century were confirmed by these tests.

The disparities in the test results illustrate the great confusion regarding mercury, says Kevorkian. Until there are clearly standardized tests, as well as a correlation of levels shown in these tests with not-now-available knowledge of sub-acute or even acute toxic levels of mercury, then much of the work of regulating mercury in foodstuffs is going to be a kind of shooting in the dark, he claims.

**Another serious problem** is the identification of mercury compounds in the environment, in living organisms or in tissue samples. It is known, for instance, that methyl mercury compounds are far more toxic than metallic mercury or inorganic mercury compounds. There are still few laboratories in the United States that can do more than gross analyses of mercury. The Saratoga researchers, however, sent some of their samples to be checked for methyl mercury levels; some showed significant levels of these highly toxic compounds. But there was nothing in the clinical records of the patients involved to indicate any toxic effects of mercury.

"The whole field is ignorance," says Kevorkian, adding that some recent research has turned up the possibility that mercury is a trace element essential to life. In view of the imprecise knowledge of toxic levels and the apparent imprecision of analytic techniques Kevorkian is critical of recent Food and Drug Administration actions to remove swordfish and other mercury-containing foodstuffs from the market when it exceeds the Federal guideline of 0.5 ppm.

On the other hand, he agrees that his findings do not justify any abatement of efforts to stop mercury pollution; toxic contamination could still occur in local situations.

There seems little doubt of the honesty of Kevorkian's work and the apparent validity of his findings, despite some allegations to the contrary in Detroit newspapers which charged his study was funded by self-interested industrialists. "We did the study entirely on our own, without any outside contributions," he says.

But it can be argued that exactly because so little is known of mercury, FDA is doing the right thing in taking no chances on foodstuffs. Kevorkian counters this argument by pointing to the essential meaninglessness of the 0.5 ppm limit in view of the imprecision of testing techniques. And the price is high, he says: the possible destruction of the swordfish and tuna industries, small enterprises without the political clout of, say, the tobacco industry the detrimental effects of which on health are well documented. □

## Ocean-floor record links dinosaurs, plankton, climate

The Glomar Challenger has recently returned from its latest voyage—Leg 19 of the Deep Sea Drilling Project—this time with evidence supporting a new theory that helps explain the extinction of the dinosaurs. The expedition, led by David W. Scholl of the U.S. Geological Survey and Joe S. Creager of the University of Washington, drilled at 11 sites in the Bering Sea and North Pacific.

During the Mesozoic (230 million to 65 million years ago), extensive volcanic activity added large amounts of carbon dioxide to the atmosphere. This excess carbon dioxide created a warm, cloudy climate that encouraged the development of the huge land reptiles. About 160 million years ago, ocean plankton learned how to extract carbon dioxide from the atmosphere to manufacture their limestone shells. This constant drain of carbon dioxide, proposes Thomas R. Worsley of the University of Washington, a member of the expedition, caused the earth's climate to become more severe, making life difficult for the dinosaurs. Limestone deposits composed of plankton skeletons from this period have been found many places on land. What the Deep Sea Drilling Project, particularly Leg 19, has demonstrated is that the limestone, and therefore the climatic change, was worldwide. The amounts of limestone found, says Scholl, indicate that vast quantities of carbon dioxide must have been removed from the atmosphere. The earth's climate could have been "cooled off just enough to absolutely raise hell with the big reptiles."

**Leg 19 cores** also contain evidence that about 65 million years ago the plankton ate themselves out of carbon dioxide and died, interrupting the food cycle and causing thousands of extinctions. Leg 19 sediments, says Scholl, "contain a record that the earth went through a process during the Mesozoic of fooling around with the carbon dioxide budget." This record, he adds, serves as a gentle warning to man, who is presently doing the same thing.

The voyage also produced evidence that the northwestward motion of the Pacific Ocean floor has probably not exceeded 600 to 900 miles in the past 50 million years. This contradicts some previous studies that have suggested much greater movement—on the order of 2,000 miles. The scientists drilled into a sand deposit in the Gulf of Alaska that originated on the continent between 47 million and 25 million years ago. The distance of the sand—in time and miles—gave the rate of movement.

# barefeet and bikinis.

Casinos,  
hotel rooms,  
and fur coats  
are not  
our bag.

Bikinis,  
tee shirts,  
and barefeet.  
That's us.

You'll poke  
around Bequia.  
And Antigua.  
And St. Maarten.

Sail to the  
twin peaks of  
St. Lucia or  
the waterfalls  
of Martinique.

To black, pink  
and white  
sand beaches.

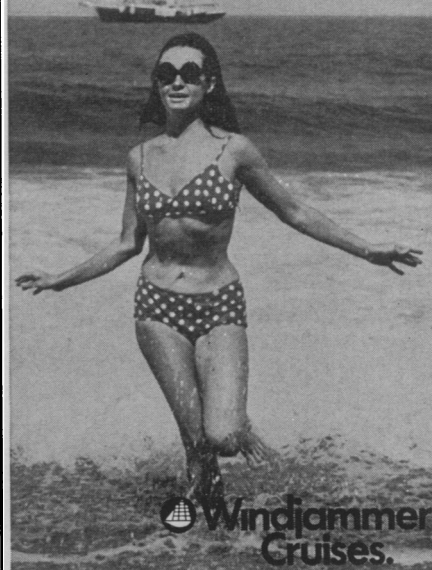
You'll swim  
in crystal clear  
waters and  
prowl uninhabited  
beaches.

You'll calypso  
and goombay  
on deck. Eat  
great grub  
and drink  
rum grog.

Then watch the  
Caribbean moon  
give birth  
to a star  
filled sky.

Your share for  
10 days  
from \$245.

But, think  
about it. You  
may never  
want to  
come home.



Write for adventure brochure.  
Cap'n Mike, P.O. Box 120, Dept. 743  
Miami Beach, Florida 33139