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Professor G.J. Thaler Receives Harry Diamond Award

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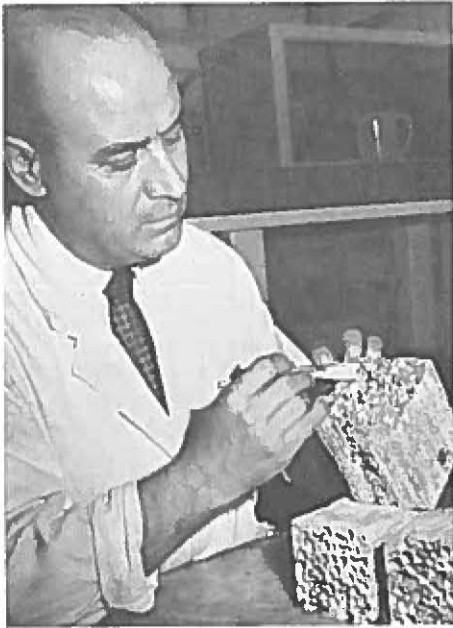
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Professor E. C. Haderlie examines a fir block that had been underwater for six months. The block is bored through by organisms and virtually destroyed. (Navy photo)



This print of an x-ray reveals boring organisms that can destroy ships and pilings. (John Perkins photo)

Professor E. C. Haderlie

For a quarter of a century Professor E. C. Haderlie of the Oceanography Department has been researching marine boring and fouling organisms. Extensive research and study has been conducted on samples from Monterey Bay for the past five years. An ancient problem still unsolved, boring worms and fouling organisms have plagued "mariners even before the sailing

days of Sir Francis Drake," begins Dr. Haderlie.

Fouling organisms such as barnacles and bryozoans attach to a ship's hull hindering its performance on the sea. These are "sometimes attacked and eaten by flatworms," states Dr. Haderlie. "In the future this ability of the flatworms might be used as a method of biological control of fouling."

Boring worms penetrate all woods and are a menace to ship hulls and pier pilings. Their entry into the wood goes undetected from the outside once they complete a life cycle. While they are alive part of the body remains in the water for survival. The boring end drills away making a home for the organism. They never feed on wood, merely bore in for a place to live; by instinct they never use another's tunnel or bore into or across a tunnel already there.

Undetected Destruction

While all this activity is undetected from the exterior, the wood pilings or ships are eaten away, possibly until they collapse. No wood treated with creosote or even the hardest of woods, the redwood, is safe from the boring worm.

Students in Oceanography assist Dr. Haderlie in researching the life cycle and habits of the boring worm. Only after determining their life habits, their season, if any, of greatest activity and studying the effects of temperatures and other variables can recommendations be made for their control.

Some test panels are exposed under Municipal Wharf No. 2 in Monterey Harbor; others are in open water at water depths of 50, 100 and 200 feet. These are checked monthly for short-term and long-term effects. Test results show great variability from year to year, thus requiring extensive study over several years.

A Wyoming native, Dr. Haderlie received his A.B. degree in Zoology at the University of California, Berkeley. Asked about his interests in Oceanography, he credits the U.S. Navy. During World War II he was on loan to the British Royal Navy as a deep sea diver for underwater mine disposal and disassembly. Haderlie

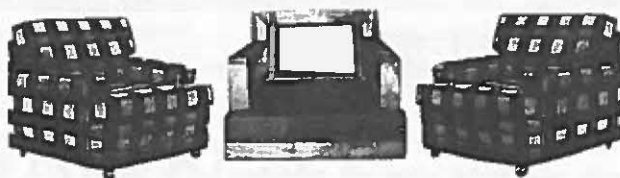
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Out in the deep water of Monterey Bay, Professor Haderlie, in hat, with help raises a buoy marking where experimental wood slabs have been kept underwater. (Howard Boone photo)



At left the wood slabs finally reach the boat. At right Professor Haderlie removes them for further study. (Howard Boone photos)

remembers this duty as a very "ticklish job."

Dr. Haderlie returned to the University of California, Berkeley, to enter graduate school following his discharge from the Navy. He was granted the M.A. and Ph.D. degrees in Zoology. He came to the Monterey area in 1950, first as a member of the staff of Monterey Peninsula College. Since 1965 Dr. Haderlie has been with the faculty of the Postgraduate School.

While on military duty in England he met his British wife. They have two teen-aged daughters; the younger shares

her father's interest in diving and often goes down to take notes when the test panels are routinely checked.

Currently Dr. Haderlie is involved in a study on the polluted waters of Monterey Bay. This recently took him to London for an international meeting where he presented his research on the effects of pollutants on sea and bird life along the coast.

Of particular interest is the possible connection of DDT carried into the ocean by the Salinas River and over 3000 dead birds found along the beaches last year. After tests are conducted under similar

conditions it may be found that following the heavy rains unusually large amounts of DDT are carried into the ocean, assimilated by the fish which, in turn, are eaten by the birds.

These tests are merely the beginning of the research planned for "benthic" (bottom dwelling) sea life and the effects of pesticides on such ecology.

"This has to be a worldwide effort if any progress is to be made," states Dr. Haderlie. "The United States alone cannot prohibit the use of DDT and solve the problem. When other countries across the Pacific continue its use the pesticide will eventually reach our shores. We need an agreement with other nations which will abolish the use of DDT."

—Patsy Rutkiewicz

Coast Guard Wives

The first wives' function of the New Year was an enjoyable afternoon of bowling at Monterey Bowling Lanes. Linda Vence was high average bowler and guest Carolyn Morris had high individual score. Sharon Shepard won the raffle prize (three free games of bowling).

Linda McKaughn was hostess for our first bridge of the month. We welcome our many new bridge players to the group. Our second bridge meeting was held at the home of Sue Wallace.

Cocktails, dinner and theater comprised the couples' evening. The Barbour's hosted a cocktail party at their home before dinner and the stage production of "Cactus Flower" at the Studio Theatre in Carmel.

—Gail Waterman



In another series of experiments, Professor Haderlie tries a new technique for obtaining samples of the Bay's floor. Previous methods tended to remove the very top layer and resulted only in samples from beneath it. Photo on right reveals the joy that is felt when successful results are obtained.