



It took six weeks of bulldozing to de-clam California's Delta-Mendota Canal.

The case of the Chinese clams: What to do?

They were first spotted in Oregon in 1938, after having gone undetected for possibly as much as half a century. Two years later they were found in San Francisco. Slowly they began moving eastward—it was 1956 before they were reported in Colorado—but then picked up speed. The following year they showed up in Ohio and moved down the Mississippi to Louisiana by 1962, thence spreading east to Florida by 1965, westward to Texas by 1968 and up the East Coast to Georgia by 1971.

Now they're up to the Delaware River, between Philadelphia and Trenton. *Corbicula manilensis* is here to stay.

C. manilensis is the Chinese clam, or perhaps more properly the oriental clam, since it exists throughout Asia and, in fact, was first found in the Philippines. Its foothold in the United States, however, is, to put it mildly, secure.

"It doesn't seem to have any natural enemies in this country," says Samuel L. H. Fuller, an invertebrate zoologist at the Academy of Natural Sciences of Philadelphia, who also found the creature last year in the Pee Dee River in South Carolina. Thus it is capable of getting a firm foothold in areas where the native species that must compete with it are developing more slowly.

In 1952, communities of the clams were found living on the bottom of California's Delta-Mendota Canal, which had been open little more than a year. They seemed to pose little if any reason for concern until the canal was partially drained in 1969. Engineers found the prolific creatures lining the canal in layers three feet thick, with as many as 5,000 clams nestled into a single cubic foot. It took a month and a half of shoving with bulldozers to clear out the 50,000 cubic yards of



U.S. Bureau of Reclamation

Chinese clams: Tiny but unstoppable.

clams that had infested the canal bottom.

Nonetheless, both Fuller and R. Tucker Abbott, a conchologist with the Delaware Museum of Natural History, agree that more study is needed before the clam is branded a major ecological hazard. Even then, Abbott believes, preventive or even curative approaches are unlikely to have much effect. "There's no sense in spending a nickel trying to prevent it from spreading," he says. "I don't think it can be stopped. It's like trying to bail out Boston Harbor with a teacup."

How the clams have spread across the country is unknown. Fishermen using them as bait may help inadvertently by dumping buckets of excess clams in previously unexposed rivers. Bottom material dumped from one river into another by construction engineers could be another factor, as could shell collectors or scientists disposing of excess samples.

An important experiment that ought to be done in the near future, Abbott maintains, would be to feed the clams to ducks to see if they come out alive in the ducks' feces. The shells may well be sufficient to protect *Corbicula* from digestive juices and high temperatures, he says, and the ducks would then suggest an efficient potential long-dis-

tance transportation system.

The clams still have places to go. New York and at least parts of New England are apparently not too far north, since the creatures are known in Oregon's Columbia River, and Abbott foresees them as far south as Panama.

Fortunately, they're at least edible. In Florida on a shell-collecting trip last month, Abbott says, "I made a great New England clam chowder. But they needed a little salt." □

Psychologists and the Administration

Not everyone in Washington is totally preoccupied with Watergate. The Eastern Psychological Association met in Washington last week and a major topic of conversation was the Administration's handling of mental health priorities. The recent and continuing evaporation of training and research funds has hit psychologists especially hard. Many, on their way to the job placement center, were heard bemoaning their personal plight. But some were able to view the situation in a more philosophical light.

Neal Miller of Rockefeller University, for instance, discussed the values of basic research. In the fight against polio, he explained, some people wanted to put all the available money into iron lungs, crutches and wheelchairs. The battle was finally won, however, by fitting together bits and pieces of basic research from a variety of fields. Science is like a jigsaw puzzle, said Miller, and the current trend toward targeted research will not work. Hitler tried to work this way, said Miller, and managed to drive all the intellectuals out of Germany or he might have had the atomic bomb. "Brains are one of our greatest natural resources," said Miller, "if we fail to develop them by funding research we will go into decline."

Further evidence of the Administration's deemphasis on mental health came during the psychologists' meeting. Health, Education and Welfare Secretary Caspar W. Weinberger announced a major reorganization of the nation's health agencies. The Health Services and Mental Health Administration is to be split into three separate agencies—the new Health Resources Administration, the Health Services Administration and the Center for Disease Control. The National Institute of Mental Health, in what is regarded as a downgrading, is to be transferred to the National Institutes of Health and will lose the independent status it has held within HSMHA.

The restructuring is expected to cut 7,000 jobs from the Federal payroll. Weinberger says it will increase the