



WORLD BOOK ENCYCLOPEDIA SCIENCE SERVICE, INC.

516 TRAVIS STREET • HOUSTON, TEXAS 77002 • CA 4-6971

Slug: DIVERS

Release: Sunday, March 17, 1968
(650 words; 6 illustrations)

DIVERS DISCOVER NATURE OF MYSTERY MOUNDS

By William J. Cromie

©1968, World Book Science Service

Underwater detective work is gradually solving the mystery of strange mounds on the floor of the Gulf of Mexico.

Rising abruptly 200-250 feet from a flat bottom, these hills come within 60 feet of the surface off the coasts of Texas and Louisiana. Divers who explore them find an underwater paradise, and at the same time experience the satisfaction of contributing both to science and the country's defense.

For years, oceanographers tried to dredge samples off the tops of the mounds, but without success. Much of their equipment is still lying on the sea floor.

Then geologists from Woods Hole Oceanographic Institution in Woods Hole, Mass., and Scripps Institute of Oceanography in La Jolla, Calif., managed to bring up dead coral from the edges of the banks. This resulted in the idea that they are fossils of the Ice Age.

Scientists had theorized that they built up between 11,000 and 70,000 years ago when the level of the Gulf was about 200 feet lower than today. The tiny jellyfish-like coral animals secrete hard, limey apartments around themselves and on the tops of older, dead coral, building a reef upward at the rate of about an inch a year. According to the theory, when the ice melted, sea level rose and the cold water killed the reef-builders.

Dr. Tom Pulley, director of the Houston Museum of Natural History, didn't go along with the theory and decided to send divers down with cameras and sample bags.

(more)

After a few unsuccessful expeditions on his own, Pulley teamed up with the Navy. Borrowing a destroyer from the Eighth Naval District, headquartered at New Orleans, Pulley pinpointed the shallowest part of Flower Garden Bank and anchored over the top of it. Located 120 miles southeast of Galveston, Tex., the bank was named by snapper fishermen for the colorful flower-like formations that came up entangled in their nets.

Dodging barracuda and sharks, and working without pay, divers brought up more than 1,000 pounds of living coral, sponges and shellfish. This was a startling discovery--a living coral reef in deep water, 500 miles farther north than any similar reefs.

The tops of these reefs are too hard and rugged for dredges to pick up samples. They became jammed in the many pockets and crevices and the dredge lines snapped. The dead coral brought up previously had broken off the living part of the reef and fallen down on the sides.

Thus, Flower Garden Bank is the northernmost of the living coral reefs yet found in the Gulf of Mexico and Caribbean. To determine if there are others--perhaps even farther north--the Museum, the Navy and the American Society for Oceanography have been systematically exploring the mounds. On a recent cruise aboard the USS Haynsworth they found an on-again off-again reef 15 miles east of Flower Garden Bank at a depth of 150 feet.

When the water is clear, currents light and temperatures above 68 degrees, living corals flourish. Such conditions may last for years, then they become adverse and the corals die off.

"Each of the live animals on the reefs is a recording thermometer," says Dr. Pulley. "Every species prefers a certain range of temperatures. Therefore, when we find this kind of coral or that kind of snail we know how cold it gets in winter and how warm it is in summer."

(more)

Water temperatures are of more than an academic interest. The Navy detects submarines with sound waves, and the speed of the sound changes with water temperature. To know exactly where a sub is, sonarmen have to know exactly how fast their probing waves travel.

According to Lt. Cmdr. Donald L. Edwards, executive officer of the Haynsworth, "It is possible to get much valuable information quickly by collecting animals in an area. If we wanted to rapidly survey an enemy shore, say in Southeast Asia, or quickly check out a new base site, there might not be time available to do detailed temperature measurements at different depths and seasons. Therefore, the experience we obtain in the Gulf of Mexico has a world-wide application."

(end)