Earth and Environment Notes

ECOLOGY

DDT Residues in Wildlife

Concentrations of DDT in birds and fish found along the south shore of Long Island are very nearly sufficient to kill them, and may be limiting the population of many species.

A report on the problem by George Woodwell, Charles Wurster Jr., and Peter Isaacson of Brookhaven National Laboratory was published in the May 12 SCIENCE.

"Concentrations of DDT . . . reported here are not unique . . .," they note. "Observations from widely scattered fish and bird populations in North America show concentrations approximating those reported here."

This suggests, they write, that DDT is having ". . . far reaching and little-known effects on ecological systems."

Plankton samples collected showed .04 parts per million of DDT. A ring-billed gull was found to have 75 ppm. Concentrations in birds were generally 10 to 100 times those in fish.

GEOLOGY

Sea Floor Spreading

Seismological evidence that the sea floor is, indeed, spreading (SN: 4/29), is reported in the JOURNAL OF GEOPHYSICAL RESEARCH (Vol. 72, No. 8) by Lynn R. Sykes of the Lamont Geological Observatory.

The study is based on seismograph records of unprecedented sensitivity and coverage in the World-Wide Standardized Seismograph Network of the Coast and Geodetic Survey, the Canadian network and 20 other stations, Sykes reports.

Analysis of first motions of 17 earthquakes gave results that ". . . support the hypothesis of ocean floor growth at the crest of the mid-oceanic ridge."

"The sense of displacement indicated . . . is opposite to that expected for a simple offset of the ridge crest," Sykes says.

". . . the inferred sense of displacement is in agreement with that predicted for transform faults," he adds.

Transform faults, in which material wells up from below in such a way that the resulting fault looks much like a simple displacement fault, were first proposed by Prof. J. Tuzo Wilson of the University of Toronto.

Sykes concluded, "results . . . seem to be indicative of a system of compressional tectonics in island arcs and of extensional tectonics (including transform faults) along the mid-oceanic ridges."

DESALINATION

Australian Solar Still

The world's largest solar still for converting brackish water to fresh is being installed at Coober Pedy according to engineers who designed the still for the Australian Council for Scientific Research.

The still produces 3,500 gallons of fresh water a day from its 38,000-square-foot first stage alone. It will later be enlarged to a maximum of 100,000 square feet of surface.

Opal miners who live and work in Coober Pedy in South Australia once paid 10 dollars for 1,000 gallons of water trucked in. Distilled water now costs 75 cents for the same amount.

The still consists of long, shallow pans covered with peaked glass panes. Brackish water flows slowly through the pans where part vaporizes and then condenses on the glass and runs off into collecting troughs on either side of the pans.

The still was designed by the mechanical engineering division of the Council.

POLLUTION

Sponges Eat Pollution Bacteria

A common, orange-colored sponge along the eastern seaboard eats bacteria that pollute water, scientists at the Republic Aviation Division of the Fairchild Hiller Corp. report.

The sponge, Microcionia prolifera, proved to have an enormous appetite for the organisms of Escherichia coli, usually considered an indicator of the degree of fecal pollution in water.

In laboratory tests, the sponges killed more than 30 times the number of E. coli that normally died in seawater, according to Peter Madri, the microbiologist in charge of the study at the Farmingdale, Long Island, laboratory.

Redbeard sponges, as they are commonly known were collected for the experiment from the pilings of a bridge in Great South Bay on the southern shore of Long Island.

LIMNOLOGY

Research Sub in Lake Michigan

Scientists at the University of Michigan soon will get their first close look at the bottom of Lake Michigan down to 700 feet—through the portholes of the Star II research submarine.

The limnologists plan studies of rock formations, life patterns of fish and bottom-dwelling organisms and the depths at which rooted plants can grow.

Of particular concern to the Michigan scientists is the question of how sediment in the lakes settles and collects in the lake bottom.

Star II, leased from the Electric Boat Division of the General Dynamics Corp., will afford them their first chance at direct observation. The two-week diving program is thought to be the first use of a research sub in the Great Lakes.

The studies will be directed by Dr. David C. Chandler, director of the Great Lakes Research Division of the University's Institute of Science and Technology, Ann Arbor, Mich.

OCEANOGRAPHY

Mexican Marine Center

An analysis of Mexico's marine resources will be the first task of the newly-inaugurated National Marine Science and Technology Center in Veracruz.

The Center will offer courses in such fields as marine biology, food technology and biochemistry. It will also train fishing technicians in an effort to develop Mexico's largely unexploited fish resources.