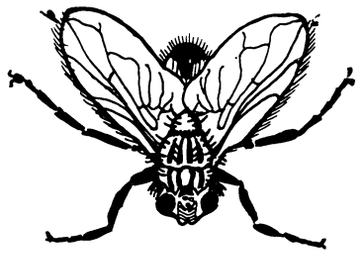
ENTOMOLOGY

NATURE RAMBLINGS
by Horace Loftin



Baits for "Bugs"

➤ ONE of the biggest things about insects is their appetite. The attraction of houseflies, for example, to the odor of foods—fresh or otherwise—is what brings them into unharmonious relations with human beings.

Now scientists are utilizing some insects' love of aromatic dishes to lead them to destruction. Of course, in the war with insects, baits have long been used. What is different today is the scale on which aromatic baits are used in insect control.

When especially prepared chemical "attractants" are combined with one or another of the modern insecticides and spread over wide areas, man at last seems to have a means of keeping back some of the more obnoxious insect pests.

Just this spring, the Mediterranean fruit fly, a dreaded pest of citrus, slipped past our border guards to reestablish itself in Florida.

Immediately, local, state and federal groups joined forces in an all-out war to exterminate this pest completely. Among the chief weapons being used in this war of annihilation are chemical baits or attractants, dosed liberally with dieldrin, a very effective insecticide.

One chemical bait is corn protein hydrolyzate, a by-product from the manufacture of commercial starch from corn. Tests have shown this odorous substance attracts flies from as far as a mile away.

Another chemical bait being used in the Medfly campaign is a yeast protein substance, by-product of beer manufacturing.

To indicate something of the magnitude of the anti-Medfly campaign in Florida, one project alone calls for the aerial spraying of some 205,000 acres of land. This spraying job will require literally thousands and thousands of gallons of bait-poisoned material.

Corn protein hydrolyzate, incidentally, is a substance that has attractions for humans as well as insects. From this by-product of starch manufacture are also produced certain packaged soups and a "soy bean" sauce. Another of the starch by-products is monosodium glutamate, known to housewives as a flavor enhancer.

Science News Letter, July 28, 1956

OCEANOGRAPHY

Two Ocean Instruments

➤ TWO NEW INSTRUMENTS will be used for the first time this summer in studies of the Atlantic Ocean.

One measures the amount of light given off by marine animals in ocean depths, the other allows picking up from the ocean floor undisturbed sediment equivalent to thousands of years in geologic time.

The new deep-sea corer was designed by Dr. Maurice Ewing, director of Columbia University's Lamont Observatory. Although the device will bite down into only a foot of ocean floor, scientists examining the sediment, nearly a foot in diameter, will be looking at 5,000 to 10,000 years of geologic time.

The light-measuring instrument was developed by Drs. George L. Clarke and Gunther K. Wertheim of Harvard University. It can detect light as faint as a million-millionth of one percent of full sunlight at depths of 2,000 feet. The scientists designed it to determine the amount of light present at ocean depths and to study the effect of light on the behavior of aquatic plants and animals.

The device can also be used to study the "deep scattering layers," which interfere with sonic waves and send back false "bottom soundings" to ocean vessels. The layer is believed to be caused by small sea dwelling animals, known as zooplankton, which travel vertically throughout the ocean.

Vast numbers of these tiny animals swim up toward the ocean surface at night and move downward to deeper layers during the day. Although less than one-quarter of an inch long, the marine animals may move as much as 300 feet, or 15,000 times their own length each day.

Dr. Clarke has found the layer tends to remain at the same light intensity throughout the day, explaining its daily motions.

Science News Letter, July 28, 1956