ENTOMOLOGY

Pest Control Handicapped

➤ THE FIGHT against the insects that menace food and health has an added handicap this coming year because nature and wildlife lovers are being urged to conduct an anti-insecticide campaign.

National Wildlife Week beginning March 17 is being themed on the dangers of chemical poisons. While this emphasis was selected before the publication of Rachael Carson's book "Silent Spring," this publication is being made the bible of opposition to pesticides. Enthusiasts for nature are being urged to spend evenings discussing it and then bring public and political pressure to bear on checking what are called "potent pesticide poisons."

Known for its colorful stamps glorifying animals and plants, the National Wildlife Federation does not favor outlawing insecticides, but it distributes literature that calls "highly toxic" chemical pesticides as an "unobtrusive, insidiously dangerous hazard to man and his resources."

The National Audubon Society was urged by its president, Carl W. Buchheister of New York City to try to shift the emphasis in the U.S. Department of Agriculture to research in biological controls that would minimize, but not necessarily eliminate the use of chemicals. Other actions recommended are increased funds for research on the effects of pesticides on wildlife, giving the advisory Federal Pest Control Review Board real authority, labeling pesticides as dangerous to wildlife and as a water pollutant and creating in each state a pesticide control board.

The spring will not be silent because of the warnings of those aroused by the dangers they see to man's environment from chemicals. The public concern over the baby-deforming effects of the sedative thalidomide and action to protect against dangerous drugs by new national legislation has made the anti-pesticide campaign more plausible.

The hunters who shoot birds to the limit that the law allows are on the side of the protectors of wildlife in this fight up until the time the hunting season opens.

In the meanwhile the broad program of Federal and state departments of agriculture fighting pests and devising new control methods continues.

• Science News Letter, 82:335 November 24, 1962

ENTOMOLOGY

Insect Chemical Warfare

➤ SOME INSECTS and other small creatures are chemical warfare factories. They have their own internal reactive chambers for manufacturing poisons and repellents, according to Cornell University scientists.

Cells within these tiny animals send harmless chemicals into mixing chambers where the combination becomes toxic. The poison does not harm the creature because of the impermeable nature of the chamber walls.

These processes have been found by researchers in the entomology department, New York State College of Agriculture, and the Cornell chemistry and engineering physics departments. They were uncovered through a study of insects, millipedes, daddy longlegs and other forms capable of repelling natural enemies with various sprays.

Some of these insects and millipedes can spray as far as three feet. They can aim accurately. The repellents are carried out from the internal chambers through ducts with impermeable walls.

Some spray concentrated vinegar; others secrete hydrogen cyanide, and there is even an ant that produces citronellal, the ingredient of citronella candles. Some even use blood with a repellent in it. They can give up a surprising amount of blood, virtually covering an enemy such as an ant.

A tiny beetle can drive out of their home an entire colony of ants. Armadillos and other fairly large animals will run from insects because of noxious repellents. The sprays do not kill the enemies unless used in strongly concentrated doses. But they are good instant repellents.

The investigating scientists working under a U.S. Public Health Service grant are Drs. Thomas Eisner, entomologist; Jerrold Meinwald, chemist; Jeffrey Hurst, chemist and post-doctoral fellow from England; and Miriam M. Salpeter, research associate in engineering physics.

Their studies are concerned with the nature of the poisons, the means by which cells manufacture the chemicals, and the effect of the poisons on cells of enemies.

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AGRICULTURE

Fall Plowing Opposed to Conserve Soil and Water

➤ FARMERS really do not have to do their plowing in the fall.

Prof. A. E. Peterson, a University of Wisconsin soils conservationist, reports that while it eases the spring work load to plow in the fall, it is also important that some vegetation be left on the soil.

Every inch of rainfall causes 113 tons of water to hit each acre of a farm at the speed of 20 miles an hour. Vegetation will shield the soil from this impact and help protect it against erosion.

Raindrop impact on the bare soil compacts it, and the water does not seep in but runs off at a faster rate, Prof. Peterson explained. Because of this, there is less ground storage of water and more erosion of soil due to the runoff.

Fall plowing was necessary a few years ago in order to get all the farm work done, but the powerful tractors now in use plow much faster and can do the job quickly in the spring.

If fall plowing must be done, Prof. Peterson said, the field should be left as irregular as possible and undisked, so that the furrows act as diversions for holding snow and water. Contour plowing is the most effective.

A rough field also permits more infiltration of water. The water that accumulates between the furrows acts as a "shock absorber," protecting the soil from raindrop impact.

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New York University

APHRODITE—Shown is the upper portion of the maternal Aphrodite uncovered by Dr. Kenan T. Erim. Complete except for headdress, face and arms, the statue shows Aphrodite wearing a long tunic or apron.

ARCHAEOLOGY

Portly Aphrodite Not Symbol of Sensual Love

➤ A PORTLY, maternal Aphrodite in a long, ankle-length apron or tunic, instead of the usual nude or semi-nude goddess of sensual love, has been unearthed in Aphrodisias, ancient city site in Turkey 100 miles from the Aegean Sea in the Maeander River valley.

Nine feet high in marble, the Greek statue weighs more than one and a half tons. Dating from the end of the first or the beginning of the second century A.D., the statue with the rise of Christianity was broken in half and used for a building foundation.

The statue was uncovered by New York University archaeologist, Dr. Kenan T. Erim, during the past second year of exploration at the site. Last summer's expedition also brought to light frescoes of the Byzantine period, a Roman street, and a council chamber decorated with marble statues.

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