

# environmental sciences

## PESTICIDES

### DDT levels decline slowly

Connecticut was one of the first states to realize DDT was entering ecosystems it had not been intended to enter and to enact laws and regulations limiting its use. DDT spraying of woodlands was reduced in 1963 and halted in 1965; agricultural uses were limited even earlier, beginning in the 1950's.

Research—not yet published—by the Connecticut Agricultural Experiment Station in New Haven shows that a 20 percent reduction in DDT and metabolites occurred in yellow perch between 1963 and 1968 as a result of an estimated 85 to 95 percent reduction in total DDT use in the state.

The fact that DDT and metabolites are still at as high a level in the fish as they are—3.78 parts per million the highest found—is because of recycling of the only slowly degradable pesticide and because of DDT contamination on a worldwide scale, says Neely Turner, entomologist and director of the research.

Turner says experimenters were able to identify recycled DDT through analysis of proportions of degradation products.

Levels found in both 1963 and later were apparently not toxic to the perch, says Turner. But he adds that the decline of the osprey, a fish hawk, and failure of lake trout eggs to hatch are probably due to higher levels of DDT in these larger predators.

## ECOLOGICAL HAZARD

### Fish menaced by snowmobiles

Snowmobiles may be a menace to fish life in Wisconsin lakes.

Coon Lake in northern Wisconsin is showing signs of winterkill of fish because of a reduction of dissolved oxygen, reports the Wisconsin Department of Natural Resources.

Heavy snowmobile use on the lake apparently compacts snow and makes ice opaque. This restricts the amount of sunlight that gets to plants that require it for photosynthesis. The plants thus do not produce oxygen, and when they die, they also use available oxygen during decay, explains the Bureau of Sport Fisheries and Wildlife.

The problem is most serious in shallow lakes.

## MIGRATING ANIMALS

### Prawn travels 400 miles

A migrating prawn from New South Wales, Australia, has probably set a world record for the distance it is known to have traveled, says Nick Ruello, New South Wales fisheries biologist.

The prawn was tagged and set free in Newcastle Harbor Jan. 10, 1969, and was recaptured by commercial fishermen a year later off Cape Morton, Queensland. During its 400-mile journey, the prawn grew an inch and a half in length and trebled its weight.

The United States record for prawn movement is 100 miles for a tagged prawn in the Gulf of Mexico, reports Robert Temple, fisheries biologist with the Bureau of

Commercial Fisheries in Galveston, Tex. Although prawns and shrimp will sometimes move seasonally in search of higher temperatures, generally their movement is random, so far as marine biologists can tell, says Temple. Certain shrimp species move into estuaries while young and into the sea when mature, but such movements do not involve great distances.

## RAT CONTROL

### Resistant rodents develop

Rats resistant to ordinary anticoagulant poisons are appearing beyond a cordon established by the British Government in an effort to prevent spreading of the rodents, Dr. E. W. Bentley reports.

So far a team led by Dr. Bentley at the Infestation Laboratory at Tolworth, Surrey, has been unable to find a poison to use against the resistant rats.

A 1,000-square-mile agricultural area was cordoned four years ago in an effort to halt or slow the spread of rats to the industrial towns of the West Midlands. Intensive control, including use of anticoagulant poisons such as warfarin, was attempted. But Dr. Bentley says rodents resistant to the control measures are appearing outside the cordon.

More potent poisons such as zinc phosphide could be used, but Tolworth researchers say these are extremely difficult to handle because of danger to children and animals other than rats.

There are no reports of anticoagulant-resistant rats having developed in the United States, says Edwin J. Heidig, vector control specialist with the Department of Health, Education and Welfare. Speculation among scientists here is that the English rats developed resistant strains because of lower doses of anticoagulants used there, he says.

## ENDANGERED SPECIES

### Hope for masked bobwhite

An endangered species of quail, the masked bobwhite, may make a comeback on its former range in southern Arizona.

The United States Fish and Wildlife Service in March released 160 of the birds on three sites in Arizona. Dr. Ray C. Erickson, assistant chief for endangered wildlife research, says chances are good the bird will re-establish itself.

The masked bobwhite, a beautiful bird with a brick-red breast and black face, became entirely extinct in the United States around the turn of the century—largely because of destruction of its habitat by overgrazing.

Now, however, the Bureau of Land Management and the cattle industry have successfully introduced conservation practices that have restored the range to a point where the masked bobwhite may be able to survive, says Dr. Erickson. The three sites selected were not ordinary range, but areas where there has been no recent grazing at all.

Thirty-six of the birds were captured in Sonora, Mexico, in a small area where they are still extant. The 160 birds were raised from these 36 at the Patuxent Research Center in Laurel, Md.

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