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Science Report

Pollution: Plastic affects wild life

Another threat to wildlife has come to light recently with the discovery that certain waste products of the plastics and rubber industries have the same alarming effects on wildlife as the pesticide D.D.T.

Like D.D.T., these chemicals, known as polychlorinated biphenyls (P.C.B.s), are highly stable and persistent in the environment and because they are soluble in fat they have the same tendency to become concentrated in animal tissues. With the pesticides, they are thought to be responsible for the decreases in the numbers of fish-eating birds and birds of prey that have been observed in many parts of the world.

For this reason two ecologists from Cornell University, Dr. Jeffrey Linder and Dr. David Peakall, have been studying the effects of P.C.B.s on the cellular metabolism of kestrels. They captured a number of kestrels and fed them on cockerels that had been injected with specific amounts of P.C.B.s. The kestrels were then killed and their livers were examined for the effects of the chemicals.

The liver cells of the contaminated birds were found to contain unusually large quantities of R.N.A., the nucleic acid that acts directly in the mechanism of enzyme synthesis, and that oestradiol, a sex hormone important to reproductive metabolism, was being broken down.

They concluded that P.C.B.s have the same effect as D.D.T., namely, that they induce the production of enzymes in the liver which degrade the sex hormone and upset the reproductive mechanism (and the associated calcium metabolism) of the bird.

P.C.B.s may be an even greater hazard to wildlife than the pesticides. Although they are slightly less toxic than D.D.T., there are signs that they persist longer in the environment and that they will be more difficult to eradicate.

By Nature-Times News Service.

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