PCB-Stricken Birds Early Warning for Man?

By JUDY FISCHER

In the past few years, DDT has become a common household term. But a new and possibly more toxic contaminant is being discovered and its effects will gain increasing prominence.

It's a class of chemicals called PCBs and its effects are being felt by birds in Long Island Sound.

That's an abbreviation for p olychlorinated biphenyls, and i t's used extensively in the manufacture of plastics and paints and in high-voltage equipment.

One of the foremost researchers of PCBs has been Dr. Robert Risebrough, associate specialist at the Institute of Marine Resources, Department of Nutritional Sciences, University of California at Berkeley.

Risebrough's studies for the American Museum of Natural History have revealed that the Great Gull tern, which nests on Great Gull Island in Long Island Sound, is showing the effects of DDE and PCB contamination. Researchers believe the birds are being contaminated by chemicals in the sound which find their way into the fish the birds eat.

The effects on the terns range from crossed bills, extra legs and stunted feathers to deformities similar to "thalidomide babies."

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TO THE RESEARCHERS, the birds represent an early warning for man, since these contaminants could very well find their way into his tissues through the foods he eats.

The effects of PCBs are not limited to Long Island Sound. Researchers all over the world have been finding evidence of PCBs wherever DDT occurs and in similar proportion.

In Berkeley and Los Angeles, mothers' milk was tested for DDT and PCB. The DDT in the Berkeley mothers' milk contained about four times the legal tolerance limit for DDT, according to an article of Risebrough in Environment magazine.

The PCB concentration was about .06 parts per million of whole milk.

In addition, according to the article, Swedish and British scientists have reported finding PCBs in samples of human fat.

Scientists in the Barbados found in setting up wind screens that dust particles blown across the ocean from Africa contained PCBs.

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IN HIGH concentrations, PCBs have been known to affect human skin and liver in a syndrome called chloracne. this is characterized by lesions of the liver, small pimples and darkening pigmentation of the skin and blackheads. Later the victims can be nauseated, vomit, lose weight, become jaundiced and possibly lapse into a coma and die.

Although this is the most severe form of poisoning, Risebrough says scientists do not know what the long-range effects of small amounts of PCBs will be.

The compound behaves similary to DDT in that it stimulates production of enzymes in the liver which break down sex hormones. In birds, this has produced thinner shell, the delayed laying of eggs and chicks that die at hatching.

According to Risebrough, a Monsanto bulletin lists products in which PBCs may be used: plasticizers, flame retardants, and insulating fluids. In addition, he says, the company suggests its use in natural and symthetic rubber, electrical products, floor tile, printer's ink, coatings for paper and fabric, brake linings, automobile body sealants, paints, varnishes, waxes, asphalt, and adhesives and resins.

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HE SAYS PCBs are available in containers ranging in size from 50-pound containers to 600-pound steel drums and also are transported by the tank carload.

The PCBs like DDT are not water soluble. They can enter the air through burning of solid waste. In addition, particles of PCbs can attach themselves to particles of dirt in the air and water and be carried that way.

Risebrough says, however, that the exact routes to the environment are not known becauseMonsanto keeps the environment are not known because Monsanto keeps

For Monsanto's part, it denies PCBs are highly toxic. In a company statement reported in Enviroment, Monsanto says, "Just like other industrial chemicals and home products now in widespread use, PCBs are not hazardous when properly handled and used."

The company also questions the measurements taken by Risebrough and other researchers.

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