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SCIENCE



ENVIRONMENTAL THREAT

A family of commercial chemicals called PCB's (polychlorinated biphenyls) has been accumulating in the environment in much the same way DDT accumulates, says a feature story in Environmental Science and Technology. PCB's are chronically toxic to birds, animals, and man, but it may be possible to head off this threat before massive damage is done, according to the author, Dr. Carl G. Gustafson, chairman of the department of chemistry at King's College.

The PCB's are depleting populations of certain wild fowl by causing the formation of thin-shelled eggs, it is reported. PCB's are concentrated by fish, shrimp, and oysters; and white-tailed eagles (fish-eating birds) have been found to contain as high as 1.4 percent PCB in their tissues. PCB's are readily stored in liver and fatty tissues of human beings, and if nothing is done to control the situation, they could accumulate in the environment in greater amounts than DDT.

The Monsanto Company, only U.S. manufacturer of PCB's declared its intention to stop selling them, effective August 30, to customers who cannot control the disposal of the end product, the article states. This intention was indicated in a letter to Congressman William F. Ryan of New York. Specifically, customers who use PCB's as softening agents in making pliable plastics are singled out, since such products end up as solid waste to be burned in city dumps or incinerators.

If Monsanto's former customers look for less harmful substitutes, rather than buying PCB's from manufacturers in Europe and Japan, the quantity of PCB getting into the environment could be substantially reduced, the article points out.

PCB's are used as coolant-insulation fluids in transformers and fluorescent lights and as softeners in plastics and coatings. The properties that make them useful are the same properties that make them persist in the environment, Dr. Gustafson comments. They do not burn, but are vaporized and carried into the atmosphere where they collect on particulate matter and are subsequently returned to the surface of the earth and into rivers, lakes, and oceans.

"Another source is probably land runoff from industrial wastes and dumps," the