CHEMICAL POISONS FOUND IN WILDLIFE

British Record Highest Level of Compound in Herons

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LONDON, Oct. 3 — Government analysts have recorded the highest concentration of a group of poisonous industrial chemicals ever found in wildlife.

The discovery of these high levels of polychlorinated biphenyls, or PCBs, which have effects similar to those of the persistent pesticides such as DDT, is described in an annual report published this week. The report also contains a description of new analytical methods for measuring minute quantities of other poisonous chemicals that are causing damage in the environment through changes in food production, agricultural practice and industrial processes.

Attention was first directed to polychlorinated biphenyls last autumn, when the substance was found in the carcasses of many of the thousands of seabirds killed in the Irish Sea. It has since been found in seals off the Cornish and East Anglian coasts.

The report said that PCB levels as high as 900 parts to a million had been found in the livers of herons, which are fresh water feeders. This is more than twice the previously recorded levels for sea birds, and analytical techniques available are not believed precise enough to measure all the various forms of the chemical.

Industrial Effluents

Very high levels would be a direct cause of death in wildlife. But the possible effects of an accumulation of much smaller quantities are discussed by the Government Laboratory's Environmental Chemistry Group. Although PCB's are not used as pesticides, they are contained in a large number of effluents from industry. There is evidence that they interfere with the process of calcium metabolism in much the same way as the organochlorine pesticides affect wildlife.

There are at least 210 known forms of polychlorinated biphenyls. Some of them present difficulties in laboratory analysis because they can be easily masked by other chemical substances.

The picture is similar regarding organo-mercury compounds. Traditional methods of analyzing samples of mercury shows only the gross amount present but gives no idea of how much is combined in the complex organic compounds or just in the metallic form.

This has been an important weakness in pollution control because the toxicity of the organo-mercury compounds varies widely. Very little effort was directed to identification of these various poisons and their spread in the environment until three years ago, when Dr. G. Westoo of Sweden devised methods for analyzing methylmercury compounds in fish, meat, liver and eggs. This method has been refined by the Government Laboratory for analyzing potatoes, tomatoes, apples and liver.

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