

War on Pollution

► SCIENCE is mustering some of its newest tools and methods in an escalating war against an insidious enemy—water pollution.

One weapon under study, reported by two University of Toronto scientists at the Ninth Conference on Great Lakes Research, is a quick method of checking on the volume and concentrations of chemicals, sewage and other pollutants as they roll into large fresh water bodies.

The scientists have been releasing alkyl benzene sulfonate, an anionic detergent, into lake waters and tracing its journey by means of a recording spectrophotometer installed on the ship Port Dauphine, a survey vessel from the Canadian Department of Transport. Although this technique is not specific at the moment, said Drs. Philip H. Jones and G. W. Heinke, it might be developed into a general and rapid system of locating areas, streams and pools of pollution which require fast and close analysis.

Some of the more advanced tools and methods include trace detection of the polluting chemicals and bacteria, and their identification by gas chromatography and new kinds of spectro-

graphic analysis, said Dr. R. S. Brauman of the IIT Research Institute, which co-sponsored the conference, with the University of Michigan.

Over 120 scientific papers were presented by 500 scientists on the physical, chemical and biological properties of the Great Lakes system.

Lake Erie, smallest in volume of the five lakes, is now so polluted by cast-off minerals, bacteria and algae that drastic measures must be taken to prevent it from "dying" completely.

Lakes are alive, in that they are born, develop, grow old and eventually die. Without man, this process can take eons. But man pollutes the water with the wastes from his farms, cities and industries. These wastes travel down streams and rivers and accumulate in lakes or other large bodies of water. It is this man-made pollution that accelerates the aging of a lake.

Slowly the chemicals build up. The increased numbers of algae and bacteria use up the oxygen of the water, killing the fish and filling the area with terrible smells and sights.

Now scientists, turning to vigorous control of the contaminants, either at their source or by decontaminating the water, hope to stem the tide of pollution and preserve the lakes.

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METEOROLOGY

Smog Predicted to Be Fatal in Urban Areas

► THE TIME is ripe for some large city to be trapped underneath the deadly blanket of dirty, acid-laden air known as smog, Dr. Walter Orr Roberts, director of the National Center for Atmospheric Research, Boulder Colo., said in Washington, D.C.

Dr. Roberts predicted some 10,000 persons who are already weakened by other diseases, particularly such respiratory ailments as asthma and bronchitis, may in the near future die prematurely from the effects of smog in such cities as New York, Los Angeles, London, Santiago or Hamburg.

One implication of his prediction is that such a catastrophe may be the only way to alert the people in the world's industrialized countries to the increasing menace from pouring uncounted tons of debris into the atmosphere. If it did happen, there might well be a demand from the public to halt the needless, thoughtless contamination.

Heavy and long-lasting smogs have already occurred. Donora, Pa., was smothered with fumes and smoke for several days in 1948. London was similarly blanketed in 1952, an "incident" that took at least 4,000 lives.

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