British prof decries water pollution

Mersey River study shows environmental regulations effective in reducing toxins

BY WAYNE GROSZKO

Last Thursday, September 14, Dr. Andrew Gize, a professor at Manchester University in England, spoke at Dalhousie University on "The Fate of Organic Pollutants: River Mersey, England.'

The river Mersey passes through agricultural, urban, and industrial areas, and has a reputation as one of the most polluted rivers in western Europe. In 1720, before large-scale industrialization, sturgeon, salmon, lobsters, and oysters lived in the Mersey and were fished by the local community. In the 1820s, people could still fish salmon in Manchester. By 1948, a complete absence of fish was reported.

Over the past two decades. concern over the condition of the river has been rising, and pressure to clean it up has been growing.

The work of Dr. Gize and his research group has focused on measuring the levels of various organic pollutants in the river and determining their sources. He spoke about some of the highlights of this work.

Atrazine is sprayed on land to kill plants. Analysis of river wa-

ter in various locations always revealed atrazine in easily measurable quantities. It was thought that most of the atrazine was coming from agricultural spraying, but over a period of several years the amount of atrazine in the water began to decrease dramatically, which puzzled the researchers. It turned out that British Railways had been spraying atrazine along railway tracks. When the rail company decided to stop spraying atrazine, the levels dropped.

Another compound in the water had the researchers stumped until they found out it was commonly used to harden rubber in automobile tires. This compound was wearing off onto the many highways in the area and washing into the river.

A big surprise to research workers was the presence of the infamous compound DDT in samples of river water. DDT was banned from use in the UK twenty-five years ago, and is supposed to have a half-life of only two years. Because of this, the researchers had thought that levels of DDT would now be too low to be detected.

Pentachlorophenol (PCP) is a

compound with many possible sources. It is used as a treatment and preservative for materials such as cloth and paper. For example, it is sprayed on wool and textiles to prevent moths from eating these products.

Average levels of PCP in the Mersey were high enough to cause damage to river life, as determined by a Dutch study of the effects of PCP on aquatic organisms, but nevertheless were lower than British environmental limits.

The concentration of PCP in the Mersey began to fall in 1989, and fell dramatically in 1991. According to Dr. Gize, this drop in PCP concentration was attributable to a single factor, which was that the National Rivers Association was given the power to prosecute industrial polluters in

The National Rivers Association is soon to become the United Kingdom equivalent of the Canadian Department of the Environment, or the United States Environmental Protection Agency.

Research on water pollution is being conducted in various places around the world, including the universities and the Bedford Institute of Oceanography here in Halifax. Hopefully, the information will be useful in resolving local problems such as the pollution of Halifax Harbour.



For more information, contact Sam or Jen at 494 2507

Elections!

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