

Acid rain: a burning issue

by Jenn MacLeod

Acid rain will increasingly threaten disaster to the North American environment unless an informed public initiates action through local governments, says Ecology Action Centre spokesperson Susan Holtz.

ACID PRECIPITATION AND ATLANTIC CANADA, the recent two-day conference held in Moncton, provided a forum for discussion and public education, says Holtz. Delegates from Canada and the U.S. discussed the sources of acid rain, the technological options available and the existing obstacles to effective action.

- Control Standards Lacking -
Acid rain is caused by emissions of sulphur and nitrogen oxides that react in the atmosphere to form sulphuric and nitric acid.

At present, Canada lacks the necessary regulation of industrial pollution controls. The U.S. requires the best control technology on all new coal plants, but does not impose the same requirements on its many more current plants, says Holtz. In the Atlantic region according to EAC records, no coal burning plant is equipped with "scrubbers", the devices that sift sulphur emissions from exhaust.

The conference clarified the progress of the U.S. in dealing with the problem, says Holtz. At present, a Clean Air Act that would demand the best pollution controls of all plants awaits budgetary approval from Congress.

Some encouragement was offered in August, says Holtz, when the U.S. and Canada signed a Letter of Intent to negotiate on the issue, starting next June.

The major sources of the sulphur emissions are smelters and power plants that burn coal and other sulphurous minerals. Because of their large single point sources, says Holtz, sulphur emissions have generally been paid the most attention. Technology to combat these pollutants has improved substantially in the past four years alone. In the past, higher exhaust stacks were built to alleviate the local

effects. This technique simply aggravated the problem by spreading toxins further and transformed the issue into an international one. Now, the installation of "scrubbers" as well as de-sulphurization of fuels prior to combustion can significantly decrease the amount of toxins released.

Nevertheless, says Holtz, more emphasis must be placed on the equally severe impact of nitrogen emissions from automobiles. These pollutants cause 40% of the total acid rain problem. The increasing reliance of coal in power plants as well as the growing use of automobiles have intensified the acid rain problem in the past 20 to 30 years. In that time, it has spread significantly to include the Maritime region.

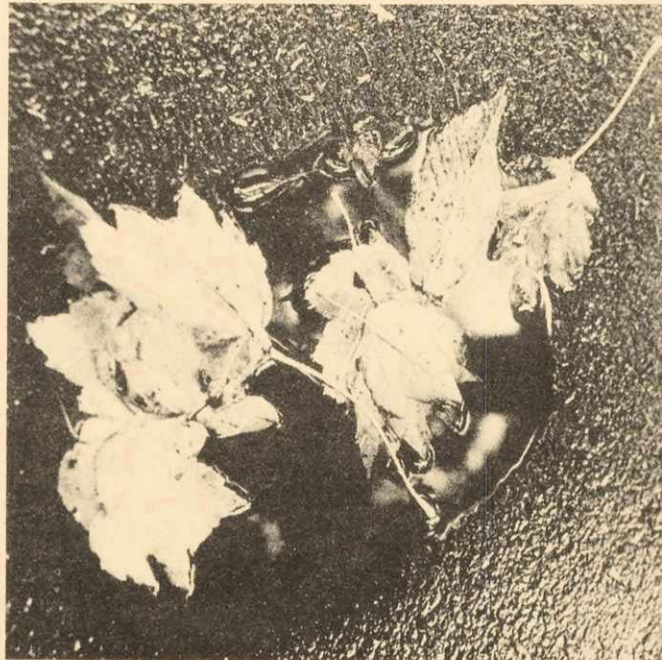
- Effects of Acid Rain -
Ontario is the largest producer of acid rain in Canada, with INCO's Sudbury plant the largest single source of sulphur emissions in North America. Still, most of Canada's problem is the result of toxins carried by wind from the U.S.

Atlantic Canada sits downwind of the large industrially populated areas on the U.S. eastern seaboard and the St. Lawrence-Great Lake region. Moreover, according to EAC information, an estimated 30% of acid pollution from Nova Scotia plants will fall out in the province.

Acid rain disrupts the acid-alkaline balance of lakes and rivers, rendering them lethal to most marine life and contaminating drinking water. In the Maritimes, the most severely affected region is the Nova Scotia south shore where salmon are particularly susceptible to high acidity.

Acid precipitation has an equally damaging effect on the fertility of soils and forests. Nova Scotia is especially sensitive because its buffering capacity (the capacity of the soil to absorb or neutralize acidity) is very low due to its hard rock bed terrain, says Holtz.

- Price of Survival -
The ultimate goal must undoubtedly be to convert to renewable sources of energy, says Holtz, but in the mean-



WALSH/DAL PHOTO

time, technological controls must be enforced to protect the ecology. The federal government has persuasive power, she says, but the provinces have the real power to require controls. The obstacle Holtz says, is political fearfulness among government officials, and reluctance to impose costly control measures in power plants that would cause an unwanted rise in electricity prices.

However, the more aware the public is of the severity of

the threat imposed by acid rain on the environment, the more willing it is to pay the extra costs, insists Holtz. Recent surveys confirm this point, she says. Politicians on all levels of government, Holtz concludes, have to be convinced that people are willing now to pay the necessary costs of survival.

Acid Facts

In North America, approximately 31 million tons of sulphur dioxide are released per year, 5 million of those in Can-

ada. Approximately 24 million tons of nitrogen dioxide are released, 2 million in Canada.

Over 140 Ontario lakes are considered dead and 48,000 more are seriously threatened; half of those are expected to be dead in the next decade.

Precipitation is not considered "acid" until its PH level falls below 5.6. Environment Canada has recorded monthly averages in eastern Canada as low as PH 4, with individual storms falling to PH 3.5 and less.

INCO's Sudbury plant accounts for about 1% of the total amount of sulphur emissions from all sources throughout the world.

George Lake, Ont. recorded a relatively normal PH level of 6.5 in 1961. By 1971, the acidity of the lake was almost 80 times that or 4.7. Lumsden Lake in the same area recorded a PH of 6.8 in 1961 and approximately 100 times that or 4.4 in 1971.

"The daily North American emissions of (sulphur and nitrogen) oxides would be the equivalent, by weight, of 4, 144 fully loaded railroad freight cars of potentially caustic material being levitated into the air every 24 hours".
Harrowsmith: April, 1980

U of T puts down Cults

TORONTO (CUP)—The University of Toronto students' association has drawn criticism for warning students about the dangers of religious "cults".

Kathleen Kerr, a member of the Church of Scientology, said the council pamphlet on "cults" is suppressing religion and spreading terrorism among students who should be able to make their own choice.

The council information campaign pinpointed the Church of Scientology and the Unification Church (commonly known as the Moonies) as groups which use "psychological coercion" to recruit members.

The campaign was co-sponsored by the Committee on Mind Abuse (COMA) who said the groups play on people who are "bright and open-minded". They use tactics such as fear and isolation to bring in members.

Alan Wilding of the Unification Church found the actions of COMA and U of T's students' council to be "deplorable". He was particularly critical of the council for letting "a small pressure group" such as COMA influence them.

Similar accusations of psychological coercion were levelled by an ex-moonie in an address to students at Concordia University. Mike Kropveld told his audience moonies point to a person's char-

acter to recruit them into the Unification Church.

Kropveld said he was attracted to the group because the people in it were "so friendly". He said they were taken on retreats where each recruit was constantly watched and allowed no time

Sodas wins Debating Championship

Sodas, the Dalhousie Debating Club, has become the first Maritime University in several years to win a major Central Canadian University Debating Championship.

The Dalhousie Society won top honors in both team and individual standings at the Hart House Tournament, University of Toronto, held the Oct. 18 weekend.

Sodas members Scott Gray and John Robinson defeated members of the McGill University team to capture the first place team trophy.

Robinson placed first on the Speakers List during the six rounds of debate and also won the Impromptu Public Speaking contest. Brian Casey, also from Dalhousie, was one of the top six speakers in the tournament.

Other members of the Dalhousie contingent were Sharon Davis, Sheila Douglas and Charles Raheh.

John Robinson said he was "delighted with the team's

to oneself. After a while, Kropveld said he felt "physically and mentally broken down"—losing the ability to critically analyze what was happening.

Only an ex-church member was able to snap him out of his condition.

and individual member's performance during the tournament." He added that this was the first year to his knowledge that a Maritime University had been recorded in the prestigious Hart House Debate Record Book which dates back to 1923.

Robinson also said that Canadian teams dominated their American counterparts in the tournament. The top three teams were Dalhousie, McGill and University of Ottawa, while the top six speakers were all Canadian.

Sodas will be hosting the University National Debating Tournament on the weekend of Oct. 30-Nov. 3. The society is expecting 30-40 teams to participate.

Sodas Debating Society meets every Thursday at 7:30 in room 113 of the Law School. Everyone is welcome to attend. They particularly encourage novice debaters to come to the meetings.

Dal Student Union

is now accepting applications for

Board of Governors Rep

and

Senate Rep

Forms may be picked up in
Student Council offices, Rm 222
Applications must be submitted
by Wednesday, November 5/80
5:00 p.m.