

ries on good old Harry Smith going back to the Arctic for another summer of watching the bugs and the beetles.

But the North is much more sophisticated in the late nineteen-eighties than formerly, and most of the subscribers do not know Harry Smith and are not all that interested in bugs and beetles any more. Rather do they care to view the broader scene. For instance, how is political devolution getting along in the NWT? What is the future of the mineral industry? Is the anti-fur-harvesting lobby having an effect? What is the view of northerners on the DEW-Line rebuilding? What is the fundamental basis for subdivision of the Northwest Territories? Is the proposal to build a class-eight icebreaker solely a question of Canadian sovereignty or is it tied into the so-called 'Star Wars' scenario? What is the next boom-and-bust cycle going to be based upon? Will the languages of the majority (the native peoples) and the government of the majority in the north of Canada lead to a nation of the majority?

Information North is aware of these and other large questions, and has taken steps to change its editorial format to address them. Without adopting any sort of advocacy stance, *Information North* feels a responsibility to present essay treatments of such topics. Thus, entire issues are devoted to single topics, apart from retaining a few 'departmental' items such as up-coming northern conferences. For example, *Information North* invited members of the Dene Nation* to write much of the material in the anti-fur-harvesting issue which came out in the winter of 1985. The summer issue of 1986 dealt with native languages, and was constructed around a report generated by a task-force that is busily studying the future of native languages in the NWT.

* Consisting of native inhabitants of northern Canada speaking any of the Dene languages (Loucheux, North Slavey, South Slavey, Dogrib, and Chipewyan).

The next issue of *Information North* will deal with militarization of the North and will comprise a number of short essays written from a variety of points of view, both Canadian and international. The issue following that will deal with arts and culture in the North, while subsequent topics will include employment and communications in the North. On some occasions, extra copies of the newsletter are printed and made available for wider distribution in northern regions.

Arctic is the academic journal of the venerable Arctic Institute of North America, now of the University of Calgary. It is currently in its 39th volume and just recently adopted a more contemporary look, with cosmetic upgrading. Moreover the academic quality and central focus is shifting to include more contributions in the field of social studies, though history, anthropology, and archaeology, remain as mainstays along with physical and life sciences and engineering. Meanwhile politics and economics as well as social planning are becoming increasingly important in the North, and these are giving rise to more submissions on those topics.

Attention is being given to the potential of electronic management in journal and newsletter publishing. So also, in the broader field of information distribution, consideration is being given to the possibility of establishing electronic bulletin boards, and electronic mailing and teleconferencing for northern communities.

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The Council of Europe and Environmental Protection

Following his election as President of the Parliamentary Assembly of the Council of Europe, Louis Jung, of France, declared that the role of the Council of Europe in environmental protection was vitally important: 'The tasks of conserving our natural heritage and bequeathing a hospitable environment to future generations are of fundamental concern to us as we stand on the threshold of the 21st century. Environmental problems should be regulated at European level, with the close cooperation of local and regional authorities and the populations of the various different countries.'

The newly-elected President went on to say that 'The Council of Europe is a driving-force proposing specific effective remedies—such as multilateral treaties, recommendations, and publicity campaigns—which are instruments for encouraging and promoting environmental protection in Europe. The Parliamentary Assembly plays a specific role in this field, helping to forge a common awareness throughout Europe, and to establish a network of close cooperation—not merely between member states, but also with Eastern bloc and African countries for instance. If we defend the environment, we are defending the human race and the lives of Europeans.'

Successful Cloning of Flotation Gene with Possible Applications

A French-American team has identified and cloned a 'flotation gene' that they believe could confer buoyancy on microbes or cellular organisms which normally sink in liquid culture media. They believe that inserting this gene into industrially useful microbes or cellular organisms could improve product-yields by increasing aeration, reducing stirring-needs, and improving organism survival.*

The flotation gene was found and cloned by a team which included Dr Donald Bryant, assistant professor of Molecular and Cell Biology at Pennsylvania State University, and three molecular biologists from the Pasteur Institute in Paris, France. The French scientists are Nicole Tandeau de Marsac, Didier Mazel, and Jean Houmard.

The Penn State-Pasteur Institute team is continuing its collaboration under grants from the US National Science Foundation and the French National Centre for Scientific Research. The idea and method for cloning the flotation gene were patented recently in France by the Pasteur Insti-

* and, we would think, quite likely having ultimate environmental implications—hence our interest in publishing this note.—Ed.

tute and the French National Centre for Scientific Research.

Except for pharmaceuticals, industrial-scale use of microbes today is largely confined to the manufacture of bread, cheese, wine, and beer. However, the range of things which microbes could produce includes fuels, dyes, vitamins, and the chemical precursors of a host of products ranging from plastics to pesticides. Technical problems, such as keeping large vats of microbes stirred and aerated without damaging them, often prevents a microbe-based manufacturing process from being economically feasible. The Penn State-Pasteur Institute team believes that making the organisms float could improve the economic picture.

According to Dr Bryant, work on the flotation gene began at Penn State in 1984 when Dr Marsac visited him. The two scientists are specialists in the study of Blue-green Algae (Cyanophyta or Cyanobacteria). These 'have internal structures called gas vesicles that are simply spaces within the cell filled with gas,' Dr Bryant explained. 'These "gas balloons" give the cell buoyancy. By balancing the production and destruction of these gas vesicles, cells can

position themselves in the ponds where they normally live, to obtain just the right amount of sunlight to make food *via* photosynthesis.' 'We reasoned that if one could clone the genes for the gas vesicles into other industrially important organisms, one could make them float when wanted. Flotation would make it easier to grow and collect the cells. Ultimately, we want to be able to make mammalian cells float. Mammalian cells are notoriously difficult to process in large quantities because they are so fragile. They are heavy and difficult to stir. If one could make them float, they would be much easier to process.'

In addition to Dr Bryant, the Penn State group includes Dr S. Edward Stevens, associate professor of Microbiology, and Dr Ronald Porter, associate professor of Microbiology and Molecular Genetics.

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Environmental Damage Liability: Need for Legal Instruments

European Justice Ministers, at a meeting in Oslo during 17-19 June 1986, stressed the need for adequate measures to protect the environment, and underscored the international nature of environmental pollution to which the Norwegian Prime Minister, Mrs Gro Harlem Brundtland, also referred in her opening address to the Ministers. She commented further: 'Our peoples have recently been shaken by the catastrophe in Chernobyl—[which] underlines the fact that we are all dependent upon one another for our security in a wide sense, indeed for our future'.

Recognizing that damage to the environment will never be entirely prevented in all cases, the Ministers said it was essential that adequate compensation be given for damage suffered. They noted the need for a civil liability regime

based on presumption of fault or strict liability, and for a collective compensation system based on insurance or a fund.

Other measures advocated by the European Justice Ministers include compulsory restoration or cleaning up of the damaged environment, especially where the general interest is affected. They also called on the Council of Europe to give high priority to the problem of compensation for damage to the environment, with a view to preparing an appropriate legal instrument.

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Simulating a Major Disaster in Europe: Studying the Lessons of Chernobyl

The Ministers of southern Europe* who are responsible for preventive action and protection against major disasters, met for the third time in Ravello (Italy) on 24 and 25 May 1986, at the invitation of the President of the European University Centre for the Cultural Heritage in Ravello, Professor Jacques Soustelle, and with support from the Council of Europe. Studying the lessons of recent major disasters, in particular Chernobyl, they hope that each of the countries concerned will set up an information unit responsible for:

- Collecting data in the competent departments;
- Making these data available to nongovernmental users;
- Carrying out the necessary syntheses for information of governments; and
- Ensuring that government announcements are expressed in a coherent and consistent fashion.

The activity of these national units must be coordinated at European level with a view to standardizing information

procedures in the event of major disasters.

A joint *disaster simulation exercise* will be carried out early in 1987 to contribute to the preparation of a homogeneous doctrine by the various countries concerned, and to test the machinery for information and cooperation to be used in organizing assistance between the countries of southern Europe.

The exercise-to-be is defined as follows:

- Pilot country: Italy;
- Type of disaster simulated: destruction of industrial installations by a major earthquake releasing highly toxic chemical materials over the ground and into the sea and air in a coastal tourist region;
- Preparation of the exercise: cooperation between Italy and France to decide on the location and details of the exercise; and
- Information: to all the countries of southern Europe taking part in the exercise, particularly regarding cooperation in organizing assistance.

Approval was also given for the establishment in the Republic of San Marino of a European Centre for Medical Care in Disasters. The centre will be responsible for preparing information programmes, and for training and

* Portugal, Spain, France, Italy, San Marino, Greece, Malta, Cyprus, and Turkey.