

Special water conditions

Eleven Canadian oceanographers from the Bedford Institute of Oceanography (BIO) in Dartmouth, Nova Scotia and 13 American scientists from various U.S. oceanographic institutions boarded the *CSS Hudson* last month for a 51-day expedition to the western Norwegian and Greenland Sea in search of "winter water".

The study is being sponsored as part of the Deep Water Project of the International Council for the Exploration of the Sea (ICES) and will provide information for a future model of global climate and contribute to a better understanding of atmospheric carbon dioxide in the marine environment.

Allyn Clarke of the BIO's Atlantic Oceanographic Laboratory will act as chief scientist during the trip which will end in Glasgow, Scotland on April 6.

Important and urgent study

The oceanographic study of winter water processes in the north is considered both important and urgent. Climatologists believe that the processes involved in these areas are an essential part of the heat transfer between the ocean and the atmosphere above it. Changes in this transfer may be linked with major changes in climate over the century.

The Norwegian-Greenland Sea location was selected for study because it is one of two areas in the North Atlantic where a particular phenomenon occurs. Cold dry Arctic winds transform the surface seawater into a denser, colder "deep water". This deep water spreads throughout the North Atlantic and is found moving southward below the Gulf Stream into the South Atlantic and from there, to the other oceans. This process is thought to have distinct effects on climate.

"On land," said Dr. Clarke, "a colder winter results in a slower spring, but in the marine environment where deep water formation occurs, it results in a quicker spring. Warm water imported at the surface to replace newly-formed deep water can moderate the short-term climate cycle which is linked to our fisheries and agriculture."

While the location for this mid-winter cruise is new to BIO oceanographers, the season and accompanying harsh conditions are not. For many years, they have been studying deep water formations in the Labrador Sea.

On this expedition the scientists will

study and compare the process of deep water convection where the colder, denser water sinks and is replaced by warmer surface water which provides heat to the atmosphere.

Carbon dioxide to be studied

Major research efforts on carbon dioxide also will be undertaken during the trip. The studies will contribute to a long-term estimate of atmospheric carbon dioxide (CO₂) in the ocean. CO₂ has increased globally due to the burning of fossil fuels and industrial activity. Some of this gas is lost in the ocean, especially in deep water because it is more soluble in cold, deep water. The specialists on this cruise will aim at determining how much is being absorbed in the area under study.

New agent general in Paris



Adrienne Clarkson, a journalist and broadcaster for the Canadian Broadcasting Corporation (CBC), will take over as Ontario's Agent General in Paris in May. Ms. Clarkson has been with the CBC's Fifth Estate program since 1975 and has won a number of awards including an International Emmy with producer John Kastner in 1978 for a critically-acclaimed study of breast cancer. She received a Master's degree in English language and literature from the University of Toronto and has also studied at the Sorbonne in Paris. She is the author of several books, as well as short stories and articles appearing in leading Canadian magazines.

Skate-a-thon raises funds

The first annual World Skate-A-Thon for Help the Aged was held last month on the Rideau Canal in Ottawa.

Approximately 400 enthusiastic youngsters skated 30 kilometres for the organization and are expected to raise between \$10 000 and \$12 000 including funds raised by the media.

Aid for elderly around world

Help the Aged aids the elderly around the world and participants were given an opportunity to skate for one of eight geographical groups. The groups — Canada, the Caribbean, India, Central America, South America, East Africa, West Africa and the Far East — covered 23 countries.

While many of the skaters registered for the Canadian group, the seven other groups also had a number of participants skating for them. One young skater who registered for the West African group, thought it would be nice to help older people in less fortunate places.

"It's a great opportunity for young people to become conscious of old people. I'm impressed with their enthusiasm," said Ambassador Max Vellasques of the Honduras.

"Usually we just rely on contributions from our own people, but this is a good example of international collaboration," said Ambassador Mario Silva of Chile.

Researchers win awards

Governor General Edward Schreyer recently presented four Canadian researchers with the 1982-83 E.W.R. Steacie Memorial Fellowships.

The fellowships were presented to: Dr. James Arthur, professor of mathematics, University of Toronto; Dr. Michèle Heath, professor of botany, University of Toronto; Dr. Kelvin Ogilvie, professor of chemistry, McGill University; and Dr. Stephen Tobe, associate professor of zoology, University of Toronto.

The E.W.R. Steacie Memorial Fellowships are presented annually by the Natural Sciences and Engineering Research Council and permit researchers to devote their time entirely to research for up to two years. The amount of the award is equal to the winner's normal salary. The fellowships were created in memory of Dr. E.W.R. Steacie, president of the National Research Council of Canada from 1962 to 1962.