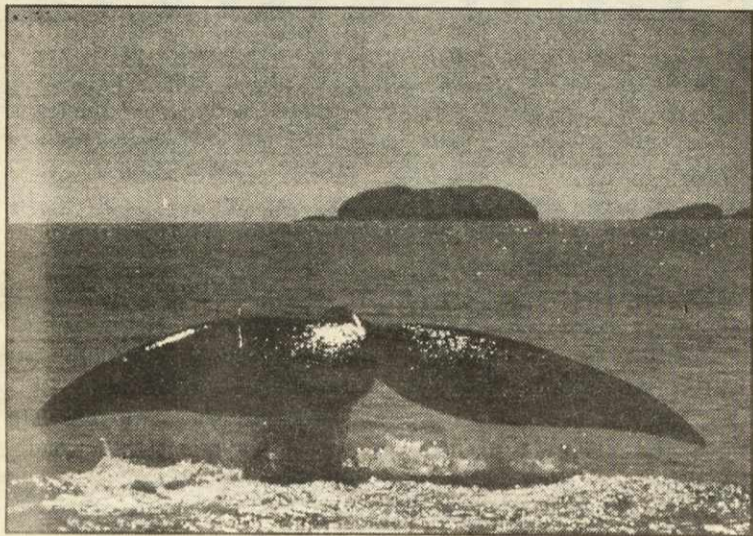


# SCIENCE & ENVIRONMENT



## Plight of the whale

BY REHAM ABDELAZIZ

There are fewer than 300 North Atlantic right whales left in the world, making their preservation of utmost importance.

This summer has been very unfortunate for the right whale. Five North Atlantic right whales have been found entangled in fishing gear. Another was found dead in August, floating in a shipping lane. Scientists determined that the whale had been struck twice by a ship.

On September 12, another whale was discovered with nylon fishing gear entangled in its mouth. The whale was found in the Bay of Fundy — 16 kilometres off the coast near Digby — by a group of international scientists. The scientists attached a radio transmitter and a float to the net, allowing them to track the whale's movements by satellite signals.

Rescuers in inflatable boats managed to remove 143 meters of the gear from the whale, a seven

year-old male, which they nicknamed Orphan Andy. The whale was not friendly to the rescuers and later headed out at high speed towards the open ocean, making rescue attempts too difficult. There has not been a signal from the whale's transmitter in 2 days.

East Coast Ecosystems, a group based in Freeport, Digby County, reported that a yet another threatened North Atlantic right whale has been found. This time the whale's flippers were entangled in fishing gear. As before, a radio-transmitter was attached to the gear and scientists expect signals will help locate the whale.

Like boats, North Atlantic right whales prefer to travel in deep water-ways. As a result, accidental collisions are made more likely. Thirty-five per cent of right whale deaths have been attributed to ship collisions. With a population as low as the right whale's, it is important to take serious measures to save the species from extinction.

## The fate of the Gully

BY ERIN SPERLING

Nova Scotia is in the conservation hot-seat. A submarine canyon located 200 kilometres east of the mainland is in danger of development. The canyon is the home to a variety of species of marine mammals, birds and fish. It is an extremely productive area, biologically.

The canyon, known as the Gully, is up to 2000 meters deep and is especially important because it is home to an endangered population of non-migratory northern bottlenose whales.

At present, the fate of the Gully

is dangling between marine protected area and active oil field. Mobil and the Sable Offshore Energy Project intend to drill into the sea floor and connect the mainland to the rich Sable oil fields through a series of pipelines.

In and of itself this action has certain negative effects on the marine environment of the Sable Island area.

More specifically, the northern bottlenose whales inhabiting the Gully will be greatly affected by the installation of the pipelines, according to leading whale researcher Dr. Hal Whitehead.

Dr. Whitehead is a Biology

professor at Dalhousie. He has been studying whales since 1974, when he came from England to work on his Ph.D. at Memorial University in Newfoundland. He and his wife Dr. Linda Weilgart, a whale acoustics specialist, have been leading researchers in the sperm whale's behaviour and social systems.

Dr. Whitehead has been published in major scientific journals as well as by the National Geographic Society. At present he is a primary source for information about the whale populations of the Gully.

Dr. Whitehead feels that the activities that have gone on, and those that will be involved in the future of the oil project, are not beneficial to the well being of the marine mammal population. The drilling that occurs becomes hazardous, as the noises interfere with the sonar communication of the animals. This keeps them hundreds of kilometres away from the area and what may be their main source of food.

"Mobil says that their activity will have little effect, but the toxic drilling that they plan to dump on the sea bed may be passed into the Gully," said Whitehead.

Initially, Dr. Whitehead chose to study the bottlenose whale population of the Gully because of the evolutionary and ecological significance. He also thought that the relative proximity of the area to the mainland would give his students a chance to be more involved with the study of whales and their environment.

"Scientifically, we know a lot about [the whales] and their use of the area."

But there is always more to understand and discover.

"Former Dalhousie students have been pushing the Department of Fisheries and Oceans the most [toward the creation of a marine protected area around the Gully]. This is a worthwhile cause."

This is also a good example of the public making a difference. The postcards of school children and the efforts of the World Wildlife Fund and the Ecology Action Centre have pushed the government far enough to create a panel which is still reviewing the fate of the Gully.

At present there is already a pipeline in place 130 kilometres from the Gully, but it remains to be seen whether Mobil will be allowed to extract petroleum from the field — only thirty-five kilometres from the home of the whales. The next regulatory meeting of the review panel will occur in October.

"If a marine protected area is established, it will be a big step forward [for conservation efforts] in Canada", said Dr. Whitehead.

At present, very little has been done along these lines on either coast.

## Ozone laws tighten

BY NATALIE MACLELLAN

Canadian leadership has once again led to tighter international restrictions on ozone depleting substances. The primary target of the restrictions is the chemical methyl bromide.

Representatives from over 100 countries met last week in Montreal for the ninth Meeting of Parties (MOP) to the Montreal Protocol on Substances that Deplete the Ozone Layer. The MOP marked the tenth anniversary of the Montreal Protocol which was signed in Montreal on 16 September, 1987.

Industrialized countries now have until 2005 to phase out methyl bromide use. This is five years earlier than was agreed upon ten years ago, but four years later than the date set forth at the MOP by Canada. Industrialized countries are responsible for more than 80 per cent of global methyl bromide use.

Developing countries have agreed to phase out methyl bromide by 2015, a major leap considering they were previously only bound to a freeze in 2002. This date is, however, also four years later than Canada had hoped for.

"The spirit of compromise has been a key point in the Protocol," said Keith Keddy, Atmospheric Issues Specialist for Environment Canada. "Canada was pushing for more stringent measures in some respects than what we got, but its not all that surprising."

Minister of the Environment, Christine Stewart, is pleased with the agreement.

"The agreement is a step in the right direction. Canada showed leadership by pushing for the early phase out of methyl bromide use in both developed and developing countries. We did not get everything we wanted, but the international community did respond, and this agreement is real progress."

Methyl bromide is a toxic fumigant used for pesticide purposes in crops such as strawberries and tomatoes. It is said to be up to 50 times more efficient

at depleting the ozone than CFCs. Until now, it has been considered the most destructive ozone depleting substance that was not being phased out by developing countries.

A fund of \$25-million is being made available in 1998 and 1999 to aid in the phasing-out process in developing countries. This is in addition to a fund of \$10-million made available last year for testing methyl bromide alternatives. Canada will be working directly with many countries to promote these alternatives.

### Also of interest at the MOP

— All countries have agreed on stronger measures to control CFC smuggling. This will be accomplished by establishing new licensing systems and reviewing compliance procedures.

— Developed countries have been asked to consider banning the sale of their stockpiles of virgin CFCs anywhere in the world (except where the would be meeting the "basic domestic needs" of a developing country, or other essential issues).

— Countries have agreed to develop transition strategies from CFC to non-CFC metered dose inhalers by 1999.

— A proposal to phase out HCFCs (an alternative to CFCs but still ozone-depleting) by the European Community and Switzerland was not accepted (HCFCs are used in most North American refrigerators).

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