

Alien species threaten Great Lakes ecosystem

by Sally Cole-Misch

The small alien invaded with little warning. Comfortable in its new surroundings, it colonized much of the foreign region in only two years. In a square meter area alone, it grew from a population of 3,500 to more than 23,000 in only six months. The region's natives were surprised at the alien's invasion, and could find few options to eliminate or even control the invader.

An excerpt from the latest horror film? No. for the Great Lakes region, the zebra mussel's invasion is a reality.

Introductions of this and other exotic or non-native species have prompted concern among Great Lakes scientists, policymakers and citizens that foreign plant and animal species, introduced largely by shipping commerce, could upset the ecological balance of the lakes' environment. For more prolific species such as the zebra mussel, their expansion into water systems throughout North America is not unlikely. In fact, it is very probable, according to many scientists.

Of the 100 exotic species that entered the Great Lakes over the past century, more than half were carried in the ballast water of ships from around the world. A ship adds ballast water for stability -- particularly if it is carrying a light load and thus is likely to ride too high in the water -- or to aid propulsion. The water is distributed throughout a network of tanks inside the ship's hull to balance the overall load.

Ships have used ballast water since the 1880s, but the amount of ballast water has increased dramatically in recent years as freighters expand in size and are required to travel at faster speeds. today, a vessel taking on one million or more gallons of water in Europe can reach the Great Lakes within days, increasing the survival rate of organisms in ballast water.

A recent study at the University of Oregon found that more than 250 species of plants and animals were discharged along the U.S. Pacific coast in only two years by foreign ships picking

ed into the upper lakes in the 1920s and '30s with the completion of the Welland Canal. The lamprey thrived in the cleaner lakes, where spawning streams were more pristine.

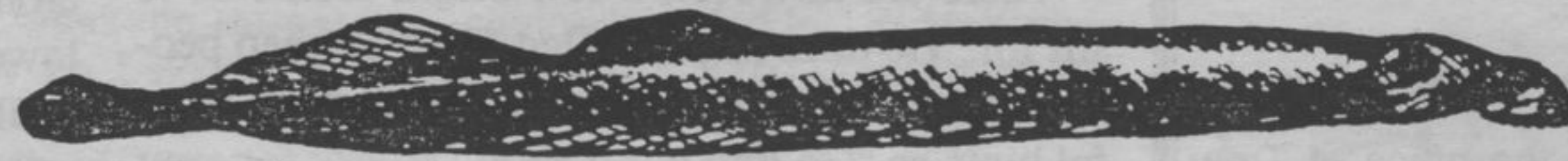
One of the last modern survivors of an ancient family of jawless fishes, the lamprey existed before dinosaurs walked the earth. Its long, eel-like body has a disc shaped mouth at one end, lined with teeth to strike and hold fast to fish. Its rough tongue burrows a large hole in the side of its victim and secretes an anticoagulant to prevent the fish's blood from clotting. Because the

alone, commercial fishing declined from more than 11 million pounds in the early 1940s to less than 200,000 pounds just 15 years later. The invader also impacted the ecological balance in the lakes since the drastic reduction in larger fish contributed to an overabundance of small, forage fish such as rainbow smelt and alewives, the latter of which experienced massive die-offs in the 1960s.

Canada and the United States formed the Great Lakes Fishery Commission (GLFC) in 1955 to stop the invasion of sea lamprey and restore the fishery. After eight years of testing more than 6,000 compounds and various types of mechanical controls, the GLFC found a chemical that is poisonous to lamprey larvae but relatively harmless to other aquatic life.

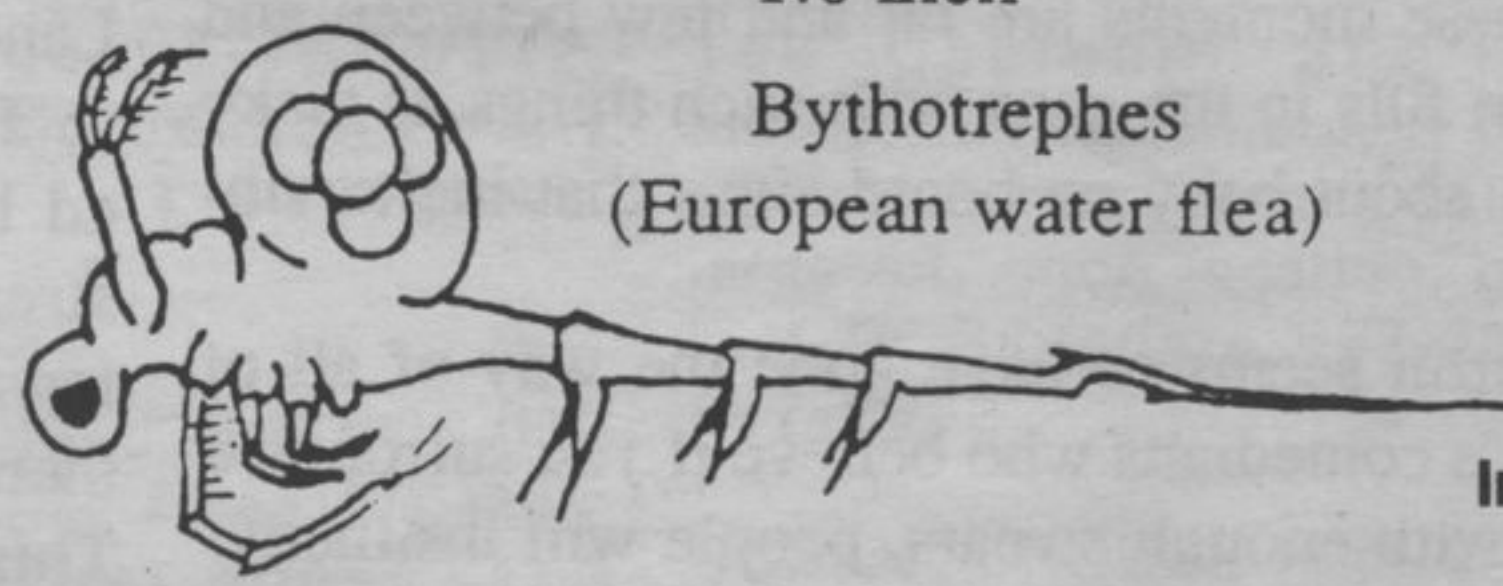
Despite tremendous success in reducing the sea lamprey population in the Great Lakes, serious problems remain. While the total number of lamprey has been significantly reduced, those that survive are larger and may be developing immunities to the lampicide. The chemical is extremely expensive, and costs to continue treatment in established spawning areas are overwhelming the GLFC and other agencies. As pollution is cleaned out of other connecting channels and rivers, new breeding grounds may be created for lamprey larvae.

An adult lamprey leaves an average



Sea Lamprey

1.0 inch



Bythotrephes
(European water flea)

0.4 inch

Illustrations
by Bruce Jamieson
International Joint Commission

up wood products. As the ships add cargo, they discharge ballast water.

Ironically, efforts to clean up the Great Lakes may be creating a more suitable environment for ballast water stowaways to breed and prosper. An earlier invader, the sea lamprey, entered Lake Ontario in the 1800s and expand-

would remain open, the lamprey feeds on the blood and tissue of the fish at leisure, staying attached for days or even weeks.

The lamprey's contribution to the decline of Great Lakes fisheries, particularly the whitefish and trout fisheries, was devastating: in Lake Michigan

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Self government - Ontario's objectives

For the past three columns, I've been explaining how the Nishnawbe-Aski Nation (NAN), along with the Ontario and federal governments, are negotiating aboriginal self-government in northern Ontario. I explained how the parties had already agreed to a Memorandum of Understanding in February of 1986, and an Interim Measures Agreement in November of 1990. The Memorandum of Understanding spells out the comprehensive list of issues that all parties agree will be negotiated. The Interim Measures Agreement promises NAN and the local band councils that their interests in lands and natural resources will be protected, while the negotiations are taking place. I then explained how NAN has laid out five steps to achieve self-government, starting with the creation of their own institutions and ending with legislative and constitutional entrenchment. In the last installment, I outlined the federal government's new approach to aboriginal issues.

But how is the provincial government approaching this? The answer can be found in a statement to the Ontario Legislature by the Minister Responsible for Native Affairs, Bud Wildman, on December 18, 1990. In that statement, Wildman outlined the NDP government's objectives and principles in pursuing self-government negotiations.

Wildman outlined five objectives:

(1) "Make significant progress in establishing First Nation self-government arrangements. This will be done

by negotiating directly with First Nations."

(2) "Negotiate land claim settlements with First Nations, to settle long-standing grievances."

(3) "Improve provincial programs and funding arrangements, with the objective of raising the quality of life in aboriginal communities."

(4) "Work with aboriginal people and their associations to deal with the self-government and program concerns of aboriginal people who live off-reserve."

(5) "The government will negotiate a Statement of Relationship with First Nations...(to) guide the future relationship between the Government of Ontario and all First Nations in the province." He said this Statement was already well developed at the provincial level, through talks with Gordon Peters, head of the Chiefs of Ontario.

At the same time, Wildman also spelled out a "set of fundamental principles to guide our negotiations of aboriginal self-government and land claims":

(1) "We formally recognize the principle that aboriginal people have an inherent right to self-government."

(2) "Aboriginal representatives at the negotiating table must be able to participate in our discussions as equals."

(3) "We will respect the special trust relationship of the federal government with aboriginal people."

(4) "Where possible, we will undertake comprehensive community negotiations - to attempt to resolve both land claims and self-government objectives at the same time."

Since Wildman made this statement in the Legislature, there has been some political name-calling back and forth between Toronto and Ottawa. Premier Bob Rae and Wildman have both boasted about the province's initiatives on aboriginal issues, and accused Ottawa of "dragging its feet". Ottawa has

replied that the NDP government in Toronto should not be so self-righteous - the federal government has decided, quite clearly, that a new approach is needed, and put money behind its words. (For details of Ottawa's position, see the last installment in this series).

But beyond the political posturing, the major weakness in Ontario's approach seems to be its unwillingness to alienate non-native interest groups. While the self-government negotiations are taking place, Wildman has spelled out "interim enforcement guidelines" governing aboriginal use of fish and game resources. These "interim guidelines" accept the principle that aboriginal people clearly have inherent rights, recognized by the Supreme Court of Canada through the Sparrow case last year, to "take fish and game for their own consumption, and for ceremonial

use, as long as preservation of resources is respected." Yet, when this policy has come under attack from non-native interest groups such as the Ontario Federation of Anglers and Hunter (OFAH), Wildman has equivocated.

In a speech to the OFAH convention in Thunder Bay in February, Wildman said, "I recognize before we go any further (with the enforcement guidelines) it will be important for us to consult widely with the First Nations and with groups such as the OFAH." The non-native groups have quite rightly questioned the legitimacy of such consultation, when the principle of special rights for aboriginal people has already been accepted.

As long as the province accepts the principle of special rights for aboriginal people and the non-native groups don't, there will be no end to the bickering. Wildman would be further ahead to cut the debate short by standing firm on his principles, and not hold out the hope of some substantial policy change, through "consultations" with non-native groups. If he stopped equivocating, everyone would know the rules of the game, at least for the term of this government.

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I started this series to commemorate the first anniversary of the death of the Meech lake Accord. I said at the beginning that a new constitutional arrangement for Canada will only take on real meaning by working out practical solutions at the local and regional level.

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**NORTHERN
INSIGHTS**

by Larry Sanders

