



## 2007 Position Papers

### SOLVING THE PROBLEM OF OCEAN-GOING VESSELS INTRODUCING NON-INDIGENOUS SPECIES TO THE LAKES



*Ocean-going vessels like the one pictured above have introduced many non-indigenous species to the Great Lakes, such as the zebra mussel (below left) and the round goby (below right). Vessel photo courtesy of Scott C. Schrandt.*



*Photo courtesy David Jude, Center for Great Lakes and Aquatic Sciences, University of Michigan.*



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*Ocean-going vessels have introduced many non-indigenous species to the Great Lakes. Efforts to pass Federal legislation have been unsuccessful, prompting some States to consider and even pass legislation of their own. Yet all the while, more exotics are entering the Lakes. U.S.-Flag Lakers have never introduced an invasive species, but LCA has had to develop measures that lessen the potential of their ballast spreading exotics brought in by ocean-going vessels. Strong Federal legislation must be passed as soon as possible, or these invasions will never end.*

Non-indigenous species introduced via the ballast water on ocean-going vessels are, without a doubt, the most pressing environmental issue facing the Great Lakes. Ocean-going vessels (also known as salties) have introduced a number of aquatics, including the zebra mussel, the ruffe, and the round goby. Some have blamed ballast water discharged by salties for the introduction of the Viral Hemorrhagic Septicemia (VHS) that has killed fish in Lake St. Clair and points east.

Discovery of the ruffe in the "Twin Ports" of Duluth, Minnesota/Superior, Wisconsin, in the late 1980s was a defining moment for Lake Carriers' Association. Although the fish had been introduced by a saltie, LCA took the lead and developed voluntary ballast water management practices for all vessels calling on western Lake Superior ports in the hope that the ruffe could be contained to its current habitat. The plan (which remains in effect) required vessels that had taken on ballast in affected areas exchange that ballast in deep waters. The ruffe only thrives in shallow waters, so once released into the deep, it cannot sustain itself.

The plan, the first of its kind in North America, was hailed by U.S. Fish and Wildlife Service as "the cutting edge of technology." Most important, the plan worked. Even though Duluth/Superior typically handles more than 1,000 vessel calls a year, the ruffe has been found in only two other locations outside Lake Superior.

Despite the success of the ruffe initiative, nothing can stop the fish's natural migration along the southern shore of Lake Superior. Once it reaches the St. Marys River, the door to the rest of the Lakes is wide open. It's an uninviting prospect, but also the undeniable truth.

The same likely holds true for other exotics introduced by ocean-going vessels. The Great Lakes are interconnected, so unless there is a predator or some circumstance that limits or prohibits reproduction, any non-indigenous species will, over time, spread throughout the enclosed aquatic ecosystem.

In addition to the ruffe effort, LCA's members have instituted other measures to lessen the potential for their ballast to spread exotics introduced by salties. These steps include inspecting ballast tanks and removing sediment that could sustain life, screening ballast intakes, and pumping in ballast, rather than allowing gravity flow, as fish will be killed by the pumps. A virus such as VHS poses new challenges, but as this report is being written, LCA is again exploring means to help slow the spread of that threat.

However, the bottom line remains unchanged. Once a non-indigenous species takes root in the Lakes, it is a permanent fixture. Therefore, the only real plan of action that holds promise is stopping future introductions by ocean-going vessels. LCA lacks the expertise to make specific recommendations. The answer may lie in filtration followed by a secondary treatment, such as ultraviolet irradiation, or some other system currently in development. The Federal Government must enact regulations to address this problem, and soon. Every ocean-going vessel that enters the Lakes potentially carries another non-indigenous species. A State-by-State approach, while understandable given the lack of progress at the Federal level, will create a hodge-podge of regimes that could in fact be counterproductive. Keeping the Great Lakes closed to exotics, but open to commercial navigation, is a Federal responsibility.