

September 7, 2008

Arctic Ice Hints at Warming, Specialists Say

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Leading ice specialists in Europe and the United States for the first time have agreed that a ring of navigable waters has opened all around the fringes of the cap of sea ice drifting on the warming [Arctic](#) Ocean.

By many expert accounts, this is the first time the Northwest Passage over North America and the Northern Sea Route over Europe and Asia have been open simultaneously in at least half a century, if not longer.

While currents and winds play a role, experts say, the expanding open water in the far north provides the latest evidence that the Arctic Ocean, long a frozen region hostile to all but nuclear submariners and seal hunters, is transforming during the summers into more of an open ocean.

Global warming from the continuing buildup of human-generated greenhouse gases is almost certainly contributing to the ice retreats, many Arctic specialists now agree, although they hold a variety of views on how much of the recent big ice retreats is due to human activity.

Last month, news reports said that satellites showed navigable waters through both fabled Arctic shipping routes.

But those satellite findings were disputed by the United States National Ice Center, run by the Navy and the National Oceanic and Atmospheric Administration. The center said the satellites monitoring the ice were fooled by broad stretches of fresh water pooling atop ice floes, which can resemble open sea lanes.

On Friday, though, citing fresh images using sensors that can more carefully distinguish ice from water, the Ice Center concurred, issuing a statement concluding, "This is the first recorded occurrence of the Northwest Passage and Northern Sea Route both being open at the same time."

For years, polar scientists have been predicting that warming is driving the region into a new, more watery state. With further warming, they say, broad open-water expanses will prevail in the summer followed by the formation of ice in the winter. But such ice will generally be too thin to last through the next summer.

In essence, Arctic waters may be behaving more like those around [Antarctica](#), where a broad fringe of sea ice builds each winter and nearly disappears in the summer. Reflecting the complexity of the global climate, the extent of winter sea ice in Antarctica has been expanding of late.

While shippers have dreamed for centuries of sending cargo along Arctic routes — a huge shortcut compared with other long-distance sea routes — Pablo Clemente-Colón, the chief scientist at the National Ice Center, said the open water in the passages over Russia, particularly, remains clotted with thick, dangerous floes and can also close up in a matter of hours.

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