

BERGS

GOING BUST

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PHOTOGRAPHERS MAY 2007

Few icebergs have been spotted off Newfoundland's craggy coastline in the past few years.... Is the North Atlantic now safe for the Titanic?

by Jan Matthews

When a sliver of glacier calves and slides noisily into the sea off the coast of Greenland, it becomes an iceberg that can travel as far south as the Gulf Stream before melting into oblivion. Along the way the southbound Labrador Current may carry it past the coast of Labrador and then Newfoundland, close enough to be spotted from shore.

Some years more than 1,000 icebergs have been spotted from the coast; other years remarkably fewer. In the past two years, for example, the iceberg count south of 48°N, near St. John's, has been so low—11 in 2005, 0 in 2006—that the International Ice Patrol, which monitors conditions in the North Atlantic shipping lanes, sent reports to ships weekly instead of daily.

Icebergs aren't critical to life for Newfoundlanders, and their dearth has had little direct impact on them. In fact, some people consider them a nuisance, although perhaps a necessary nuisance: Bergs are a tourism asset, especially true since the movie *Titanic* was released. The larger impact, though, may be on how people think. The possibility of a berg decline

has raised awareness of an ever-changing environment, and people must adapt if communities are to survive.

A bit of background: 10,000 to 15,000 icebergs slip into the sea from glaciers in Greenland each year. A berg can take several years to travel far enough south to be spotted from St. John's, generally in May, June and July. How many are still intact depends on what happens during the 2,900-kilometre journey: they can be grounded in narrow fjords or slowed by grinding along the sea bottom, the larger ones carving a trench as they go. Icebergs disintegrate—accompanied by lots of cracking and roaring—by melting in warmer water and through erosion caused by waves.

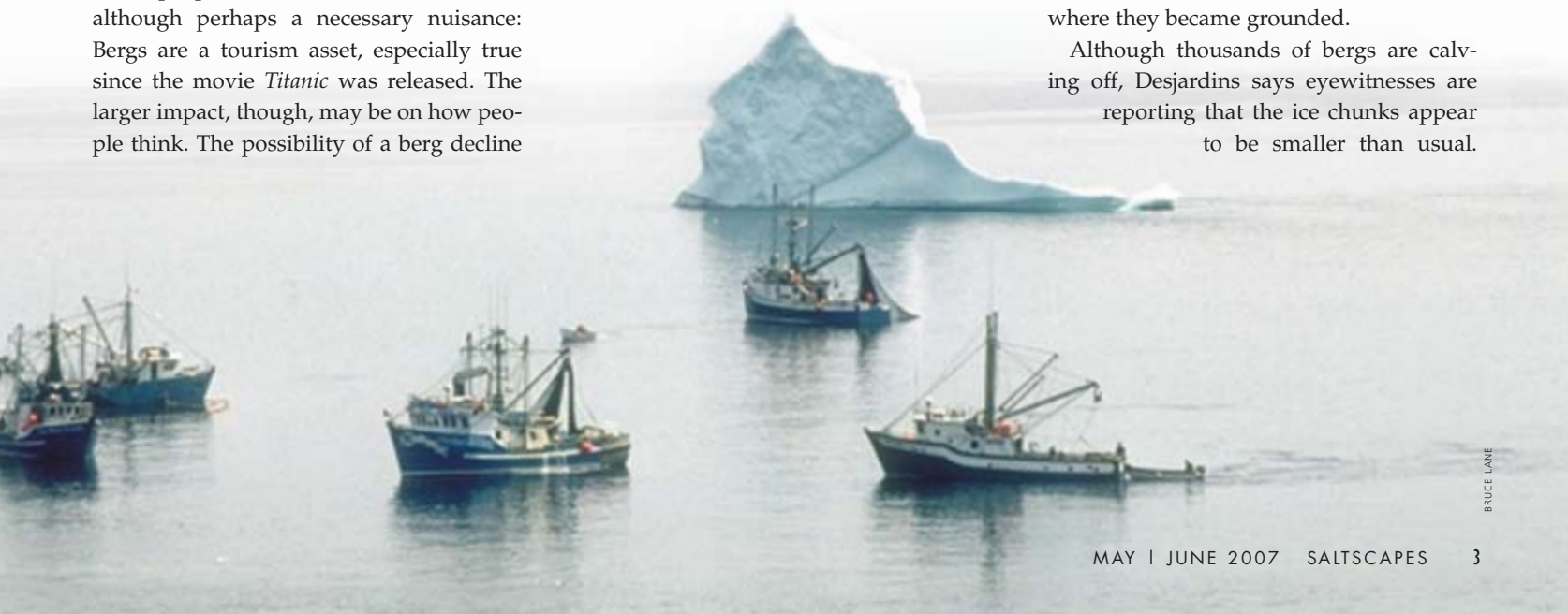
Barry Budgell, economic development officer with the town of St. Anthony, at the northern tip of Newfoundland—where icebergs are typically seen—says there are

usually plenty of bergs off the Labrador coast. Since there haven't been as many off St. Anthony, it's thought that wind and current have pushed them away: far enough, in fact, that tourists have to be taken 16 to 19 kilometres offshore in boats to see them, as opposed to the usual six to eight kilometres.

People living in Change Islands, halfway down the east coast, didn't see any bergs last year. By the time the bergs reached the Bonavista area, roughly three-quarters down, they were too far away for tourists to see from small boats. Residents only knew the bergs were there because fishermen spotted them out at the 200-mile limit.

"Over the past two seasons, from mid-February to mid-March, storms have pumped in easterly winds along the mid and south Labrador coast," says Canadian Ice Service forecaster Luc Desjardins. These winds may have shoved bergs toward the continental shelf into shallower water, where they became grounded.

Although thousands of bergs are calving off, Desjardins says eyewitnesses are reporting that the ice chunks appear to be smaller than usual.



berg bearings



Whether or not global warming is a factor in the recent dearth of iceberg sightings off the coast of Newfoundland, historically bergs have had a sporadic, unpredictable nature. Below is a random sampling of the number of bergs seen throughout the years.

1902 48	1984 2,202
1929 1,329	1991 1,974
1940 1	1999 22
1948 523	2005 11
1966 0	2006 0
1972 1,588	<i>Source: International Ice Patrol</i>
1977 22	

tales on ice

- When the schooner *Caledonia* went down off Cape Fogo, NL, in June 1875, the crew was able to climb onto an iceberg. All 82 were rescued.
- On June 24, 1905, during the festival of St. John the Baptist in St. John's, an iceberg appeared off the Narrows bearing what the locals interpreted to be a statue of the Blessed Virgin. Religious spirit was no doubt running high that day, as it marked the investiture of St. John's first archbishop, the Most Reverend Michael Francis Howley.
- The first scientific evidence that a berg can actually be towed came from a 1971 experiment off the coast of Newfoundland. A vessel paid out a line as it maneuvered around the berg, tied it off like a lasso, then gently applied force so as to not roll the berg or pull the line over it. The practice is still used today, primarily by the offshore oil industry, but icebergs can't be moved so much as nudged ever so slightly.

Source: Stephen Bruneau, Icebergs of Newfoundland and Labrador

Sea surface temperatures and wind patterns can fluctuate year to year, changing an iceberg's route and size. "If the ocean is warming, that will play a negative role, since it will help them melt faster. It takes a very precise set of circumstances to bring the bergs down the coast."

Not everyone who makes a living from icebergs has been feeling the pinch. David Hood, vice-president of St. John's-based Iceberg Vodka, which is made with water from bergy bits, says they haven't been affected because the ice can be harvested farther north, where there are still bergs. Tour boat operators south of St. Anthony

might lament the dearth of icebergs, that's not the case with some residents. "Icebergs are nice to look at, but they're a nuisance," says St. Anthony's Budgell. "They're dangerous. They break up unannounced with a huge explosion and then they flounder." Some years a large berg in the harbour blocks marine traffic for several days.

The sentiment is not dissimilar in other places. Bonavista town clerk David Hiscock says that while tourists want to see icebergs, they're such a hazard that fishermen don't want to see them in their fishing grounds. Tineke Gow, who runs the Artisan Inn and Campbell House Bed and Breakfast in



Bergs are said to be accompanied by fog and cold weather—perhaps not ideal for laundry on the line—and can be a hazard in fishing grounds, but they draw tourists. Page 45: fishing for capelin in Conception Bay. Page 44: hauling in bergy bits to use to make Iceberg Vodka; bottled water is also made from the freshwater source.

have had no bergs to show tourists, but there have been plenty of whales. Cruise ships may be able to take advantage of the change, if it continues, since they can travel farther out than smaller crafts. And photographers can still find icebergs if they go far enough out.

Two years of few bergs is one thing. But if the trend continues, "it would be a big concern for all of us," says Stan Cook, former president of Hospitality Newfoundland and Labrador, and current chair of the organization's sustainable tourism committee. "It will be an indicator of a lot of problems, and it will affect business."

Although tourists—and tour operators—

Trinity, says fog and cold weather accompany them. In contrast, last spring and summer were outstanding: "Twenty-five degrees! Really pleasant." Gardens were still in full bloom the first of November.

Talk of warmer weather seems to accompany any discussion of the berg decline. In Change Islands, people can't skate on the tickle (the stretch of water between the north and south islands) in the winter any longer, and they can't build ice roads. But with less ice blockage, there have been fewer delays in winter ferry service, and warmer winters are reducing home heating costs.

The dearth of icebergs, along with these other changes, is leading some to wonder



Tip of the iceberg: The glacier chunks come in a number of shapes, typically defined as tabular, blocky, wedge, drydock and pinnacle—and some are more stable than others, shifting in orientation or rolling over without apparent provocation, says Stephen Bruneau. As much as seven-eighths of an iceberg's mass may be below water.

about climate change. “We hear about global warming,” says Betty Fitzgerald, mayor of Bonavista. “Is this why we’re not getting icebergs?” When Climate Action Network Canada asked people in Newfoundland last fall how they were experiencing climate change, they said—among other things—that there were fewer icebergs.

Those who study climate change say the berg decline could be consistent with the phenomenon, but it’s impossible to deduce that with certainty—and only two years of fewer bergs may not be enough to indicate a long-term trend. There’s no doubt the climate in the Maritime Provinces is warming: Environment Canada has detected an increase of 0.5 to 0.6°C during the past 100 years, “but how the climate has behaved... is different from region to region,” says Gary Lines, Environment Canada’s manager of the climate change division for the Atlantic region. Temperatures in northeastern Newfoundland and parts of Labrador have remained the same in the past 50 years, while cooling has even been detected in some areas. “There are complex changes that we’re trying to get our heads around.”

Whether the absence of icebergs is directly attributable to climate change or not, it may very well have increased awareness of how climate change affects specific regions. All four Atlantic Provinces acknowledge that climate change is real and are considering how to mitigate its effects, says Lines. In Newfoundland the rising sea level is one

factor threatening coastal towns such as Bonavista. Sea fencing of heavy timber is going up to protect homes and roads, says Fitzgerald, but it’s expensive, and a portion wasn’t finished last year when the sea came in and iced families into their homes. “We were a couple of days getting people out.”

While, as Memorial University geography professor Norm Catto says, Newfoundland contributes a minuscule amount of greenhouse gas emissions, people are encouraged to do their bit. The city of St. John’s is running an anti-idling program for its staff; taxi drivers are encouraged to turn their engines off rather than idle them. And new, fuel-efficient vessels will soon replace the current ferries, some of which burn 50 million litres of diesel fuel every year, says Terry McNeil, executive director of Conservation Corps of Newfoundland & Labrador.

Some communities are more concerned about their survival than about responding to any foreseeable changes in their environment. That’s the case in Change Islands, which researchers have studied as part of a project comparing capacity to adapt to uncertain futures. The population, which was 524 in 1991, dropped to 300 in last year’s census. People left to find work when the fishery collapsed, and they’re still leaving, most recently for Alberta. The focus for those who remain is on rebuilding, and that, for the most part, means tourism.

Part-time resident Herb Bown, one of the founders of the local heritage build-

ing foundation, says people are repairing and restoring heritage buildings, even out-houses. The Newfoundland Pony Refuge is a big draw; there’s a new museum, an inn, restaurant and café, and locals are making and selling crafts. “People are feeling a little better than they did three or four years ago.”

Participants in the study acknowledge that the climate has changed, particularly in the past 10 years. But since they believe there is little they can do about it, their only option is to adapt, says Maureen Woodrow, a Carleton University sociologist involved in the study, who also has a house in Change Islands. Residents believe that tourism and agriculture can benefit from climate change, an idea others have voiced as well. Bonavista has extended its tourist season because of warmer weather, and Tineke Gow, in Trinity, is convinced that more people are visiting Newfoundland because the weather has been good there, while very hot elsewhere.

Although the warmer weather is not likely to disappear anytime soon, icebergs may return this summer. Stephen Bruneau, an engineering professor at Memorial University who has written a book on bergs, says he was in Greenland in 2005 and saw thousands of new ones. “Perhaps many of these will show up this year or in the years to come.” And if they don’t, well, Newfoundlanders will adapt. They always do. 🐻