

The forgotten storm

More than 4,000 reported to have died off Newfoundland in 1775

By DEANA STOKES SULLIVAN

THE TELEGRAM

Alan Ruffman, a Nova Scotia geoscientist, has been watching recent stories about the devastating effects of hurricane Igor in Newfoundland with interest.

“In some respects, I suspect Newfoundland has not had a hurricane or post-tropical storm as serious as Igor, since 1775,” Ruffman said this week in a phone interview.

The semi-retired geoscientist still spends a lot of time doing research as honorary research associate with Dalhousie University’s earth sciences department and as president of Geomarine Associates.

In 1996, he wrote an extensive article for *The Northern Mariner* on what was dubbed “The Independence Hurricane of 1775” because it first struck North Carolina in the U.S. as opening manoeuvres of the War of Independence were in progress.

Ruffman said some newspapers estimated that as many as 4,000 people died when high winds and seas hit the Avalon Peninsula, including sailors and fishermen jigging squid. The islands of St-Pierre-Miquelon lost about 400 men at sea.

In his research, Ruffman refers to the *Annual Register* for 1775 that said the winds began to rise on Sept. 11.

“At St. John’s, and other places in Newfoundland, there arose a tempest of a most particular kind — the sea rose on a sudden 30 feet; above 700 boats, with all the people belonging thereto, were lost, as also 11 ships with most of their crews,” the register reported.

“Even on shore they severely felt its effect, by the destruction of numbers of people and, for some days after, in drawing the nets ashore, they often found 20 or 30 dead bodies in them; a most shocking spectacle! At Harbour Grace, no fewer than 300 boats were lost.”

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'A most terrible gale of wind'

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Rev. Lewis Anspach, in his 1819 "History of the Island of Newfoundland" also referred to "a most terrible gale of wind" that hit Harbour Grace and Carbonear, driving all vessels in the harbours from their anchors and causing inhabitants of the north shore to suffer with "still greater severity."

Anspach said upwards of 200 fishing boats and their crews were lost.

Ruffman, who has also done a lot of research on the 1929 tsunami in Newfoundland, said there was some confusion about the September 1775 storm, which came to his attention because of work done by Michael Staveley of Memorial University's geography department. He said Staveley looked at what was believed to be a tsunami and was the first researcher to point out that it, in fact, was a bad storm, not a tsunami.

"And with that very large storm came a very large storm surge," Ruffman said. "That storm surge most certainly overwhelmed Placentia Bay in 1775."

And, from recent news reports, Ruffman said there seems to be common characteristics between the 1775 hurricane and last week's Igor.

Referencing Staveley's research, Ruffman quotes a dispatch by Rear Admiral Robert Duff, Governor of Newfoundland, to the Earl of Dartmouth informing him the fisheries and trade in Newfoundland "received a very severe stroke from the violence of a storm of wind."

Duff said two of His Majesty's armed schooners, one stationed on the "banks" and the other on the northeast coast of the province, were wrecked, but fortunately only two people belonging to the crews of these vessels were lost. He estimated the damages "cannot be less than 30,000 pounds."

Ruffman said the 1775 storm had what's called a "trapped fetch," with two types of wind — the circular velocity of the storm itself and then the forward velocity of the storm moving across the surface of the Earth.

"When you're on the right-hand side of the storm, the circular velocity and the forward velocity add together and that's what gives you the very serious winds and the very large storm surge," Ruffman said.

"If you're looking down the track, the right-hand side has the two winds adding together, the left-hand side of the track has the two winds working in opposite, but it tends to have more rain."

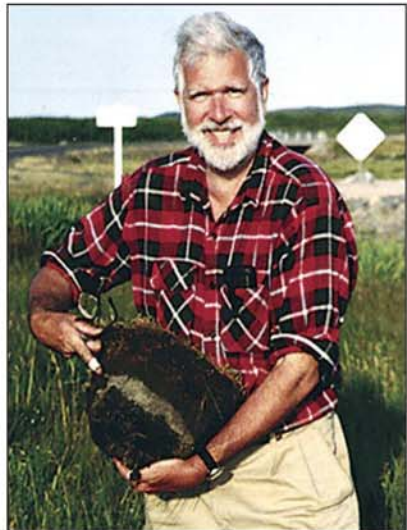
A BBC Weather Centre website says a "great number" of the 4,000 people killed off Newfoundland in September 1775 were seamen from Britain and Ireland.

"The most haunting account we get from this storm is when it struck Conception Bay. Vast numbers of fishing boats were in the bay as the squid catch was late that summer, but the men were oblivious to the growing winds and the sudden approach of the storm. The sea is said to have risen 20 feet higher than usual, putting the vast quantities of boats in the bay at great risk. The boats really had little chance against this severity of weather at sea, and all but one are said to have met their deaths — a total of 300 men," the account on the BBC site reads.

"After this appalling weather system had moved on and died down,



A white cross and simple wooden fence mark a burial site near Northern Bay Sands Provincial Park. It's not known for certain if this site is connected to the 1775 hurricane, but residents in the area say many of the victims of the storm were buried in a mass gravesite overlooking the beach. — Photo by Terry Roberts/The Compass



Alan Ruffman points to a thick bed of beach sand on peat dug out of an area near the beach at the head of Taylor's Bay on Newfoundland's south coast, where a tsunami hit in November 1929, caused by an earthquake off the Grand Banks. The sand deposit from the tsunami is covered today by six to eight centimetres of peat that has grown since 1929.

— Photo courtesy of Dalhousie University

the beaches were littered with the corpses of the dead sailors, and it has been said that for many years afterwards bones were still being washed ashore."

Author, storyteller and Telegram columnist Dale Jarvis references this in his book, "Haunted Shores."

Jarvis said "scores of boats were hurled to their doom on Northern Bay Sands" and when the winds and rains abated, "the beach was found to be littered, full of dead bodies."

Local settlers were said to have buried the water-logged corpses of the ill-fated men in a mass grave on a bluff overlooking the beach. But, for many years afterwards, Jarvis said the bones of drowned men continued to wash ashore at Northern Bay Sands as a gruesome reminder of the Independence Hurricane.

Many residents claimed they

"And with that very large storm came a very large storm surge. That storm surge most certainly overwhelmed Placentia Bay in 1775."

Alan Ruffman

could hear the cries of the drowning men, which became known as "the hollies."

The word "holly" has even made its way into the Dictionary of Newfoundland English, denoting the cries of dead fishermen heard on stormy nights.

Ruffman said there are also stories in Newfoundland folklore about the only survivor at sea in the 1775 storm being a young boy who sailors tied to a mast of a ship, who was adopted by an Irishman in Northern Bay.

Newfoundland is used to winter storms and the tail end of hurricanes in the fall, but Ruffman said, "I think what happened in 1775 was obviously very, very exceptional and still is not fully understood."

While people today have the benefit of weather forecasts and storm warnings, Ruffman said the victims of the 1775 hurricane seemed to be completely caught off guard.

Ruffman said his research hasn't been able to answer some questions about the 1775 storm, such as whether it came on the east or west side of Bermuda before arriving completely unannounced in Placentia Bay, St-Pierre-Miquelon and up through Conception Bay. He said it's sad that no one has continued this historic research.

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Common characteristics

Hurricane expert compares Igor to 1775 storm

By DEANA STOKES SULLIVAN

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Hurricane Igor and a deadly hurricane that hit Newfoundland in 1775 share several similar characteristics, says the deputy director of the National Hurricane Center in the United States.

But this time the centre of the storm was further east and likely not quite as severe as the one 235 years ago.

Ed Rappaport, who has more than 30 years' experience in meteorology, is also known for his research work on what was dubbed "The Independence Hurricane," because it first struck North Carolina during opening manoeuvres of the War of Independence.

Rappaport said Thursday he couldn't confirm whether Igor is the

second strongest hurricane to reach Newfoundland, given how many years have passed since the 1775 storm.

"We just don't have the records that go back far enough with enough details to say that," Rappaport said.

But, in terms of loss of life, the 1775 hurricane was one of the deadliest on record for the Atlantic basin, with 4,000 or more fatalities.

Rappaport said there are some similarities among all the hurricanes that make their way from the U.S. to Newfoundland.

As they move toward higher latitude, he said, their maximum wind speeds normally diminish and they weaken fairly rapidly. But the structure of these hurricane systems also change in a couple of ways as they move toward the province.

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Ed Rappaport



A mound near Northern Bay Sands beach is thought to be a rock that was placed over one of the mass graves from the 1775 hurricane, which is now grown over with vegetation. — Photo by Terry Roberts/The Compass

No advance warning system was available in 1775

GEOLOGICAL DISASTERS

Newfoundland and Labrador has had its share of natural disasters, including 130 reports of flooding, 85 landslides, 59 avalanches, 36 rockfalls and 16 other events, including earthquakes and sinkholes. Here's a sample:

Floods

► On Aug. 22, 1892, heavy rain and flooding at Clode Sound, Bonavista Bay, washed out part of the Hall's Bay railway line, including a bridge support. The Gazette reported that a train arriving at full speed was unable to stop and the crew had to jump off. A 24-year-old man fell 25 feet to his death.

► On Nov. 18, 1929, a tsunami on the Burin Peninsula triggered by an earthquake off the Grand Banks killed 28 people.

► On Feb. 15, 2003, Badger was evacuated after ice jams in the Exploits, Red Indian and Badger rivers caused flooding. There was also flooding in 1917, 1943, 1977, 1983 and 1985.

Avalanches

► On March 12, 1907, nine people were injured in an avalanche in Foote's Cove on the Burin Peninsula.

► On March 11, 1912, an avalanche in Tilt Cove on the Baie Verte Peninsula

killed five people and injured five.

• On Feb. 16, 1959, a storm with high winds and heavy snow hit St. John's. An avalanche struck two homes in The Battery, sweeping them down into two other houses. Five died and at least nine were injured.

Landslides

► On April 19, 1892, at the Beaches in Humber Arm, a landslide buried a home and killed a child; the rest of the family barely escaped.

► On Feb. 23, 1936, after heavy rain fell on snow-covered ground, a man on Southside Road in St. John's was digging a channel to divert water from his home when gravel and rock behind the house smashed through it. A child inside was carried down through a hole in the floor and killed. Her brother was half-buried head first in gravel and rock, but survived.

► On Sept. 15, 1948, a landslide on Southside Road during high winds and heavy rain claimed the life of a three-year-old.

► On Aug. 1, 1973, four children were killed in a landslide in Harbour Breton, following several weeks of heavy rain.

Source: Department of Natural Resources website (www.nr.gov.nl.ca/mines&en/geosurvey/disasters)

geo to a high of 238 millimetres in St. Lawrence. Winds were estimated to be as high as 120 and 140 kms

an hour.

While Igor's centre passed near the southeastern most areas of the

province and Cape Race region, Rappaport said the eye of the 1775 hurricane was likely about 100 to 200 kms further to the west.

"The reason we know that is there was a report from the earlier storm that the sea rose to extreme heights along the shoreline," Rappaport said.

There were reports that the water rose 20 to 30 feet, he said, describing this as "an extraordinary height and about as high as we ever get even down in the United States with an intense hurricane."

Rappaport said this phenomena is caused by a combination of a storm surge and waves. The increase in the sea's height would have required an onshore flow of wind, pushing in from the shore to the land to the right, or east of where the centre of the storm made landfall.

Many of the deaths in 1775 were

fishermen and sailors in Conception Bay.

Rappaport said people 235 years ago wouldn't have had any warning about the pending storm. "That's something that we can take some pride in that we've all advanced far enough along, knowing the science and communication and understanding what the risks are and the capabilities of the vessels and those that captain them as well," he said.

While willing to comment on his knowledge about hurricanes, especially the 1775 storm, Rappaport noted that Environment Canada also has a hurricane centre in Halifax. The National Hurricane Centre in the U.S. provides guidance and collaborates with other countries like Canada, he said, "but nothing I should say should be considered to override what they have to offer."

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Rappaport said the size of the storm in terms of the extent of its wind field usually grows, particularly to the right of the track or right of the centre as the storm approaches higher latitudes.

"While the winds aren't as strong in the centre, or overall, it's often a bigger and sometimes much bigger storm by the time it arrives in your area, so larger expanses of land and people can be impacted," Rappaport explained.

Another relevant feature that occurred with Igor, he said, is that while the wind field expanded mainly on the right side, the rainfall tended to rotate around on the left side, ahead and to the left of the centre of the storm.

Rappaport said another common feature among most of these storms is that they pick up speed as they move to higher latitudes, in terms of how fast the centre moves along. As an example, he said where a typical motion might be 10 miles an hour in Florida, it can move much more quickly in the order of 40 miles an hour when the upturn occurs.

One of the distinctive features of the 1775 hurricane was that it must have been very intense, Rappaport said, likely considerably stronger than Igor and its centre likely passed somewhat to the west of the eye of Igor.

An Environment Canada summary of hurricane Igor says the centre of the storm didn't actually cross land, so the hurricane technically didn't make landfall, but areas of highest rainfall and wind were directly over the eastern peninsulas of the island.

Environment Canada says Igor was still at hurricane status as it tracked just offshore of the Avalon and as the centre passed to the northeast of St. John's last Tuesday afternoon, it was classified post-tropical.

Rainfall from Igor was reported to range from 41 millimetres in Bur-