

The temperature at Prospect Creek AK plunged to 79.8 degrees below zero, the coldest reading of record for the United States.

(David Ludlum)

An unofficial reading of -82°F was reported at the aptly named hamlet of Coldfoot, Alaska.

(Ref. [Extreme Weather](#) p. 50, by Christopher C. Burt)

A thermometer left at an elevation of 15,000 feet on Mt. McKinley for 19 years recorded a low temperature of -100°F at some time during its exposure, according to the US Army Natick Laboratories in 1969.

([Extreme Weather](#) p. 50, by Christopher C. Burt)

What's It Like at -80°F?

Two of the weather observers, Wilf Blezard and Gordon Toole, made the following observation:

We threw a dish of water high into the air, just to see what would happen. Before it hit the ground, it made a hissing noise, froze, and fell as tiny round pellets of ice the size of wheat kernels. Spit also froze before hitting the ground. Ice became so hard the ax rebounded from it. At such temperatures, metal snapped like ice; wood became petrified; and rubber was just like cement. The dogs' leather harness couldn't bend or it would break...It was unique to see a vapor trail several yards long pursuing one as he moved about outside. Becoming lost was of no concern. As an observer walked along the runway each breath remained as a tiny motionless mist behind him at head level. These patches of human breath fog remained in the still air for three or four minutes before fading away. One observer even found such a trail still marking his path when he returned along the same path 15 minutes later.

David Phillips writes in his book [Blame it on the Weather](#), an account of the event:

There were other cold-weather experiences mentioned by the observers at Snag. For days, a small fog or steam patch would appear over the sled dogs at a height of about 20 feet. It would disappear only in the warm part of the day when the temperature warmed up to -60°F. A chunk of ice was so cold that when brought into a warm room, it took five full minutes before there was a trace of moisture, even when held in the hand.

([Extreme Weather](#) p. 59, by Christopher C. Burt)

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Posted by [John M. Markle](#) on February 3, 2017 at 12:24am

Alaska Science Forum

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The coldest place in North America

Article *by Ned Rozell*

This column is provided as a public service by the Geophysical Institute, University of Alaska Fairbanks, in cooperation with the UAF research community. [Ned Rozell](#) is a science writer at the institute.



A frosty Jim Brader pictured at the Snag airstrip in Canada.

Photo by Ned Rozell.

A FEW YEARS AGO, 82-YEAR-OLD WILFRED "WILF" BLEZARD REMEMBERED THE COLDEST DAY RECORDED IN NORTH AMERICA'S HISTORY. BLEZARD WAS ONE OF FOUR WEATHERMEN STATIONED AT THE SNAG AIRPORT IN YUKON, CANADA, ON FEB. 3, 1947. ON THAT DAY, THE TEMPERATURE DROPPED TO MINUS 81 DEGREES FAHRENHEIT.

"WE HAD SIX DOGS THAT STAYED OUTSIDE THE BARRACKS," BLEZARD SAID OVER THE TELEPHONE FROM HIS HOME IN GRANDE PRAIRIE, ALBERTA. "THEIR BREATH CREATED QUITE A FOG ABOVE THEM."

BLEZARD REMEMBERED TOSSING WATER INTO THE AIR AND WATCHING IT FREEZE INTO PELLETS BEFORE HITTING THE GROUND, AND LISTENING TO THE MAGNIFICATION OF LOCAL SOUNDS CREATED BY THE SEVERE TEMPERATURE INVERSION.

"WHEN A PLANE FLEW OVER AT 10,000 FEET, IT SOUNDED LIKE IT WAS IN YOUR BEDROOM," HE SAID.

ON THAT DAY, BLEZARD AND HIS COWORKERS FOR THE WEATHER SERVICE OF CANADA FILED A NOTCH INTO THE GLASS CASING OF AN ALCOHOL THERMOMETER BECAUSE THE INDICATOR WITHIN FELL BELOW THE LOWEST NUMBER, 80 BELOW ZERO. WHEN THEY LATER SENT THE THERMOMETER TO TORONTO, OFFICIALS THERE DETERMINED THE TEMPERATURE AT SNAG HAD DROPPED TO MINUS 81.4 DEGREES FAHRENHEIT—THE LOWEST OFFICIAL TEMPERATURE EVER RECORDED IN NORTH AMERICA.

I ONCE VISITED SNAG IN MID-JANUARY WITH JIM BRADER, A METEOROLOGIST WITH THE NATIONAL WEATHER SERVICE IN FAIRBANKS. WE FOUND A GHOST TOWN. THE AIRFIELD THAT PROVIDED A HOME IN 1947 TO BLEZARD AND THREE OTHER METEOROLOGISTS, SEVERAL AIRCRAFT MECHANICS, AND A FEW RADIO OPERATORS NOW FEATURES ONE SHELL OF A LOG-SIDED BUILDING AND AN AIRSTRIP OVERGROWN WITH BALSAM POPLAR TREES.

CANADIAN AND AMERICAN CONSTRUCTION CREWS COMPLETED THE SNAG AIRSTRIP IN 1942 AS PART OF A MISSION TO CREATE A SERIES OF SAFE LANDING PLACES AND WEATHER STATIONS BETWEEN EDMONTON AND FAIRBANKS. MUCH OF THE AIR TRAFFIC AT SNAG WAS FROM AMERICAN PILOTS WHO FERRIED PLANES NORTHWARD AS PART OF THE LEND/LEASE PROGRAM TO THE SOVIET UNION.

THE SNAG AIRSTRIP, LOCATED ABOUT 15 MILES EAST OF THE BORDER TOWN OF BEAVER CREEK, YUKON, DOES NOT LOOK LIKE THE COLDEST PLACE IN NORTH AMERICA. IT SITS ON A PLATEAU ABOVE THE WHITE RIVER, 1,925 FEET ABOVE SEA LEVEL. SINCE COLD AIR ACTS LIKE WATER AND FLOWS DOWNHILL, ONE MIGHT EXPECT A LOWER TEMPERATURE IN A PLACE LIKE FAIRBANKS, WHICH IS ABOUT 450 FEET ABOVE SEA LEVEL. DESPITE ITS RELATIVE HEIGHT, SNAG IS THE ALL-TIME COLD CHAMPION BECAUSE OF THE TERRAIN THAT SURROUNDS IT, BRADER SAID.

"SNAG IS AN ELEVATED VALLEY BUT A RELATIVE LOW SPOT COMPARED TO THE SURROUNDING AREA," HE SAID.

COLD AIR THAT FORMS IN THE HIGH PEAKS OF THE WRANGELL AND ST. ELIAS MOUNTAINS DRAINS DOWNHILL AND INTO THE NARROW WHITE RIVER BASIN, WHERE THE SNAG AIRSTRIP IS LOCATED. THE HIGH MOUNTAINS ALSO BLOCK THE FLOW OF WARM, MOIST AIR FROM THE OCEAN. THAT LIMITS THE FORMATION OF HEAT-TRAPPING CLOUDS OVER THE WHITE RIVER BASIN, BRADER SAID.

ON FEB. 3, 1947, THERE PROBABLY WERE COLDER SPOTS THAN THE SNAG AIRFIELD, BRADER SAID. ONE SITE MAY HAVE BEEN THE NATIVE VILLAGE OF SNAG, ABOUT THREE MILES NORTH OF THE AIRFIELD AT THE LOW JUNCTION OF SNAG CREEK AND THE WHITE RIVER. THE VILLAGE, WHICH WAS HOME TO ABOUT 10 PEOPLE AT THE TIME, DID NOT HAVE AN OFFICIAL THERMOMETER.

"THERE PROBABLY WERE COLDER SPOTS, BUT WE DON'T HAVE A LOT OF OBSERVING SITES COMPARED TO THE AMOUNT OF AREA WE HAVE," BRADER SAID. "AS FAR AS SITES WHERE OBSERVATIONS WERE DONE, SNAG WAS THE COLDEST, BUT, UNDOUBTEDLY, THERE WERE

COLDER SITES."

FOR THE RECORD, ALASKA'S COLDEST OFFICIAL TEMPERATURES ON FEB. 3, 1947 REFLECTED THE COLD DOME OF AIR THAT HUNG OVER SNAG. TANACROSS REGISTERED MINUS 75 DEGREES THAT DAY, NORTHWAY WAS SHIVERING AT MINUS 70 DEGREES, AND FORT YUKON FELL TO MINUS 68 DEGREES ONE DAY LATER.

SINCE THAT FEBRUARY MORNING WHEN THE 26-YEAR-OLD BLEZARD WITNESSED THE COLDEST OFFICIAL THERMOMETER READING IN NORTH AMERICA'S WRITTEN HISTORY, ALASKA HAS COME AWFULLY CLOSE TO BEATING THE RECORD. ON JAN. 23, 1971, WEATHER OBSERVERS AT PROSPECT CREEK, A PIPELINE CAMP 25 MILES SOUTHEAST OF BETTLES, RECORDED ALASKA'S ALL-TIME LOW OF MINUS 80 DEGREES FAHRENHEIT. ON THAT DAY, THE TEMPERATURE AT SNAG WAS UNAVAILABLE; CANADIANS HAD ABANDONED THE AIRSTRIP IN 1967.