



Glaciologist Martin Sharp holds one of the ice cores the University of Alberta currently has—a sample much smaller than the ones currently enroute.

# The largest collection of Canadian Arctic ice cores is coming to Edmonton

By: Alex Boyd Metro Published on Fri Jan 13 2017

Sitting inside a shipping container pulled by a truck idling in Ottawa traffic Thursday were some of Canada's oldest climate records—finally on their way to their new home in Edmonton.

After almost two years of planning, the world's biggest collection of ice cores from the Canadian Arctic is on its way to the University of Alberta.

"At last they're off, it's been awhile," said glaciologist Martin Sharp, one of the researchers at the University of Alberta who's pushed to have the ice cores preserved and moved from their old Ottawa location to two new custom-built freezers on the U of A campus.

If laid end to end, the 12 cores in the collection would be longer than 1.5 kilometres.

The oldest samples date back into the last Ice Age and, by trapping ancient samples of things like air bubbles and microbes, they offer some of the best clues we have to the prehistoric Arctic environment.

They're also increasingly rare: Sharp said that because of the recent warming of the Arctic much of the ice is degrading, meaning scientists can no longer take samples in some areas.

Some of the ice cores in the collection are from sheets of ice that have now almost totally melted away, taking their secrets with them.

Technology is also improving, meaning even well-studied cores remain a source of new information.

"You can see now what's happening in the environment at a much higher resolution," Sharp said. "So whereas before you could maybe tell the difference between winter and summer, now you can sometimes tell individual weather events."

But while researchers are keen to get their hands on the samples, there is still a five-day journey ahead of them.

To make sure the ancient samples stay frozen in their truck, kept at at least -18 degrees, Jeff Kavanaugh, an associate professor in earth and atmospheric sciences, built a monitoring system, complete with a GPS and cellular uplink. It sends texts every hour with the location of the truck and the temperature inside the container.

It also tweets periodically, so you can follow the truck's 3,400km trip to Edmonton at @IceCoreTracker1

Sharp said he's just looking forward to the samples finally arriving, safely.

"It will be nice when we start actually getting to do the science, rather than the planning for it, because that's what we want to do."

Source: **Metro News**

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