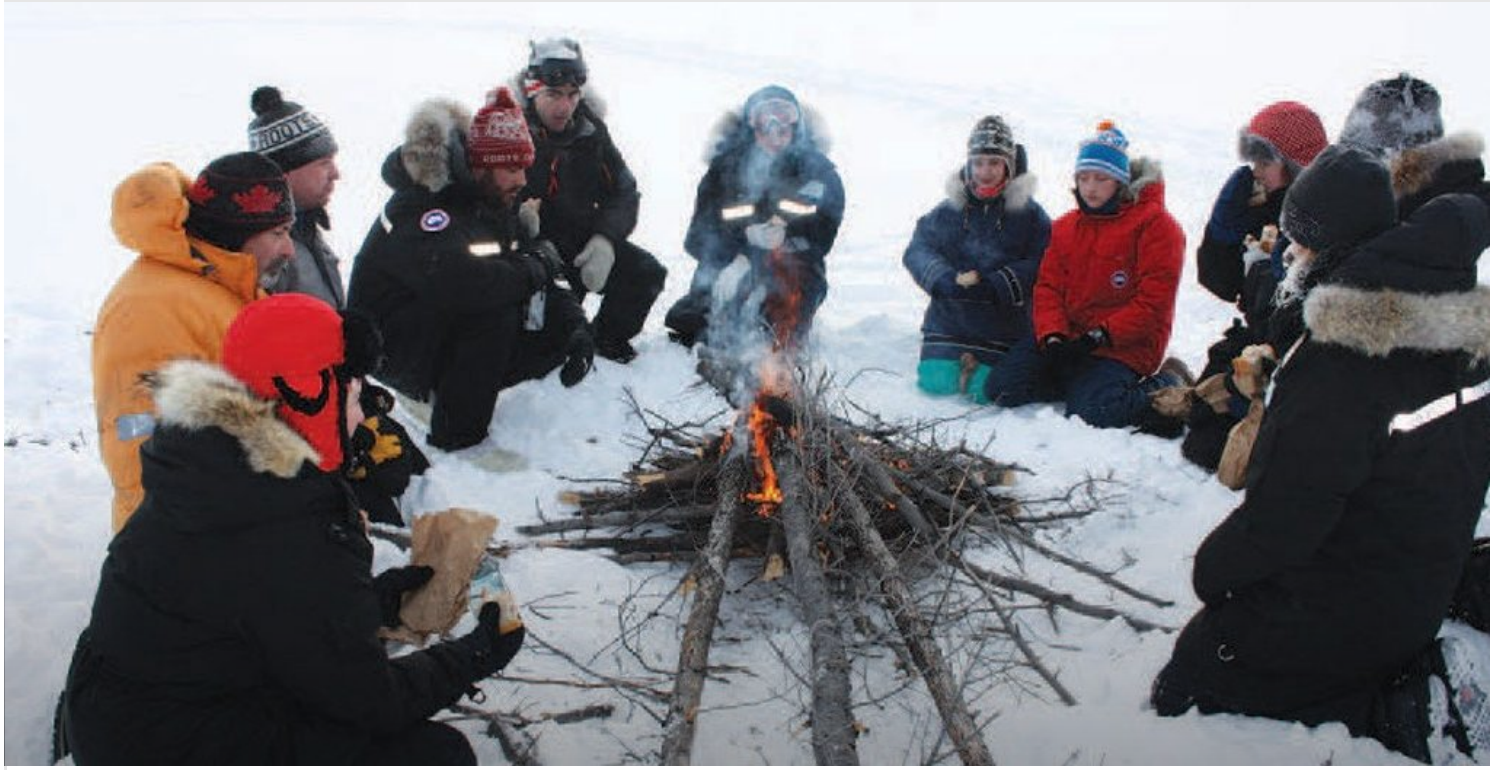


HEALTH & SCIENCE SCIENCE

Hoarfrost River environmental field study

Investigating winter eco-hydrology after forest fires

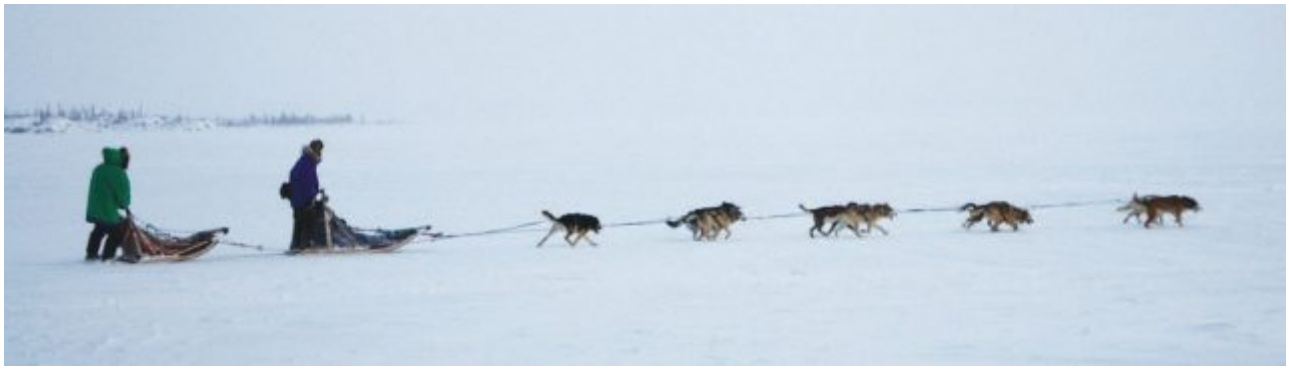
April 30, 2018 22

Students from Ontario's Wilfrid Laurier University and Yellowknife high-school students head to a remote research site in the Northwest Territories for a once in a lifetime experience.

Accessible only by a small, 15-person plane from Yellowknife, Northwest Territories, the Hoarfrost River research site is as remote as it gets.

Eight undergraduate students from the Geography and Environmental Studies program at Wilfrid Laurier University in Waterloo, Ontario, joined three senior high school students from Yellowknife, Northwest Territories, for a week-long field course in February at the Hoarfrost River site, located 260 km northeast of Yellowknife.

"I'll never be able to go somewhere like that again," says Caleb Cober, a fourth-year Laurier student who participated in the course.



dog sledding from the olesen's Homestead out onto Mcleod Bay. © Bill Quinton

Led by Laurier Geography and Environmental Studies faculty members Bill Quinton and Michael English, along with technician Alex McLean, the course provides students a unique opportunity to hear first-hand about topics learned in the classroom like winter eco-hydrology, the impact of a recently devastating forest-fire on the land and to hear from Indigenous elder Herman Catholique and his son about their experiences of the changing landscape.

The Hoarfrost River site is home to Kristen and Dave Olesen. Since 1987, the family has run a large kennel of 33 working sled dogs, operates a commercial aviation service and hosts training courses on wilderness first aid and backcountry survival. The site is located on McLeod Bay off Great Slave Lake with the taiga-tundra transition zone to the north.

"The knowledge that the Olesen's and Herman shared was more than you could ever get from a textbook," says Katrina Greenfield, a fourth-year Laurier student who participated in the week. "Herman was with us for a while and would share so many stories of his experiences. In the field, getting to actually collect data for yourself and using the snow water equipment was also cool."

Students make their way across a frozen lake. the burned forest from the 2014 fires can be seen in the background. the air temperature rose to -39 C on this day. © Aaron Shantz

With no running water, the students helped bring in water from the frozen lake, fished for fresh lake trout for dinner and chopped wood for the fires. Students stayed in large, winter tents with a cast iron stove to keep warm. Some nights went down to -50 C; the only bathroom was an outhouse.

"This is definitely a course for people that love being outside," says Greenfield. "How the Olesen's live is so simple and they have such a strong connection with nature."

“You really felt secluded from the world,” says Cober. “No one has really been there before; you just have no idea what to expect.”

Ella Kokelj, a grade 10 student from Ecole Sir John Franklin High School in Yellowknife, was thrilled to be able to learn about the land from the Laurier faculty members and the Olesen’s.

“I love being outside to learn about the land and the location of the course is very beautiful. It would be crazy to pass up an opportunity to go there,” says Kokelj.

In July 2014, a wildfire devastated the area and destroyed the Olesen’s family home along with other outbuildings. The Olesen’s are rebuilding their home while observing the land in its stages of regrowth and recovery. This site provides an exciting research base for Quinton’s students to learn about changes to winter eco-hydrology after forest fires.

The group passed the time going for outdoor walks, breaking out into research groups to take samples and collect data, and used the equipment and an unmanned aerial vehicle (UAV) to map the landscape and terrain surrounding the Olesen homestead.

Quinton is the director of Laurier’s Cold Regions Research Centre and runs a large research program in the Northwest Territories along with several other faculty members. For more information on Laurier’s northern research program, visit wlu.ca/northernresearch.

BY WILFRID LAURIER UNIVERSITY
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