Arctic Field Ecology
BIO 332H (Biology Field Research)
20 July - 3 August 2023

Instructor: Prof. Peter M. Kotanen
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Professor Kotanen
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- I study invasions, plant-herbivore interactions
- I’ve worked in Churchill periodically since 1984
- Also western Hudson Bay (Kivalliq Region), Akimiski Island, Bylot Island, Southampton Island (53°N – 73°N)
Location

- Churchill Northern Studies Centre (CNSC)
  https://churchillscience.ca/
Town of Churchill
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- CNSC is 25 km east of Churchill, Manitoba
- Around 900 residents
- Local town and airport
- Hudson Bay Company post starting in 1717
- Grain port
- Does have grocery store, hardware store, liquor store, souvenir shop, restaurants, hospital
Getting There

- No road access
- Can fly to Winnipeg on several carriers
- Fly from Winnipeg to Churchill on Calm Air International (not on Travelocity etc.; go to http://www.calmair.com/)
- Flights most days
- Some flights may go through Rankin Inlet, Nunavut
- Or take a passenger train from Winnipeg (multi-day trip)
Environment

- At the edge of the tundra
- Permafrost is present
- Good tundra, treeline, and boreal forest areas are accessible from the CNSC
- Coastal habitats (Hudson Bay and the Churchill Estuary)
- Lots of wetlands, many lakes
Plants

- Black spruce, white spruce, tamarack forest
- Heath and lichen dominated tundra
- Peatlands, sedge fens
Wildlife

- Diverse bird community
- Breeding area for arctic and subarctic birds like Snow Geese, Ptarmigan, Parasitic Jaeger, shorebirds, songbirds
- Arctic mammals including Beluga Whales, Caribou, Arctic Fox, Polar Bears (especially in August)
History and Culture

- For hundreds of years, contact point between Cree, Dene, Inuit, and Europeans
- Local museums document native peoples, Inuit art
- 18th century Hudson Bay Company’s Prince of Wales Fort
Course Content

- Not much spare time!
- Local trips (usually in the morning, afternoon)
- Lectures (usually in the evening)
- Mini-project
- Evaluation: quizzes, presentations, project report (due after the course)
Conditions

- Usually nice in July/August
- Daily mean temperatures ~12C
- But can be close to 0C – or 30C
- Expect some rain
- Also coastal fog
- Mosquitoes, blackflies, deerflies can be abundant
A few words about safety...
Other Opportunities

- We’ll spend at least a day in Churchill
- Can pay for local tours (visiting the fort, kayaking in the river, whale tours, etc.)
Costs

- Course costs last year were $1246 (room and board) plus the regular course fee
- A deposit will need to be paid in advance
- You also will be responsible for airfare (last year about $550 to Winnipeg and $1770 to Churchill) and/or train fare

- There will be bursaries from the Experiential Learning office for eligible U of T students (see http://uoft.me/ELbursaries)
- Up to $500 for all students who are able to demonstrate financial need on the University of Toronto Undergraduate Grant application
- Will consider higher awards in cases of significant financial need
A few travel tips...

- Can often get relatively cheap flights to Winnipeg
- Expensive part of the trip is Winnipeg-Churchill (~$1700)
- Can use Air Canada frequent flier miles and Air Miles on Calm Air
- There are student fares if you’re under 24
- When you book flights, make sure your ticket is as flexible as possible
- Also make sure there is LOTS of time (at least 3-4 hours) in Winnipeg for a connection, especially on the way back
- Can save about $1000 by taking the train (Via) between Winnipeg and Churchill
- But it’s a major time commitment (44 hr over 3 days)
- Can get an overnight berth, but costs a lot more!
Enrolment will be in the spring semester
Prerequisites: 6.0 credits and current registration in a Biology, Ecology, Environment/Geography or Earth Science program and permission of the instructor.
Recommended Preparation: STA215H5 or equivalent 200-level STA course
(or similar courses for non-U of Toronto students)
Admission is not directly through Acorn. Instead, to apply, must submit CV, unofficial transcript, and a short paragraph explaining why you want to take the course to a web portal we will establish
Contacts

Contact Prof. Kotanen for further details on this course:

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http://www.utm.utoronto.ca/~w3pkota/

For registration questions, contact Diane Mathias
(d.matias@utoronto.ca)
See you there!
Rocket launch building
Cottongrass
Ladies'-tresses
Snow Geese
Red Fox
Pacific Loon
Willow Ptarmigan
Beluga Whales
Coastal Tundra
Taiga
Hudsonian Godwit

Hudsonian Godwit
Polar Bears