

# Arctic Field Ecology

## BIO 332H (Biology Field Research)

July - August 2024 (dates TBD)

Instructor: Prof. Peter M. Kotanen

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# Professor Kotanen

<https://www.utm.utoronto.ca/~w3pkota/>



- 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 might 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
- 18<sup>th</sup> 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
- Mosquitos, 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 \$1302 (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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For registration questions, contact Diane Mathias  
([d.matias@utoronto.ca](mailto:d.matias@utoronto.ca))

See you there!

