

Cartography and Geomatics

GEOMATICS

Remote Sensing
Surveying/GPS

GIS

Cartography

Field Data
Acquisition

Data Analysis

Presentation
and
Distribution

https://www.nsc.ca/learning_programs/programs/plandescr.aspx?prg=GIS&pln=GISCRTGEO

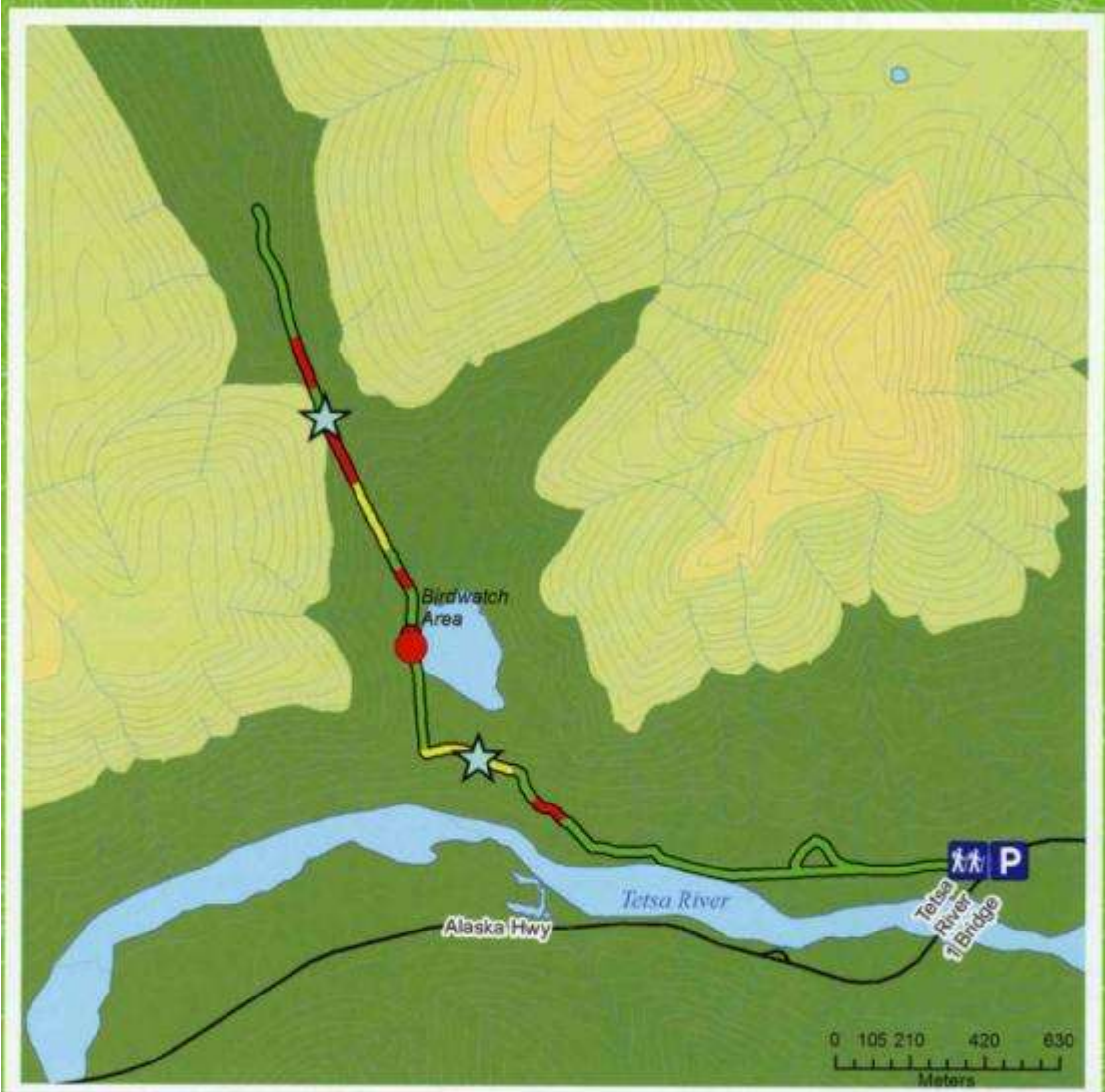
**“Cartography and
Geovisualization”**

In this course, you should have learned:

- General overview of mapping technologies (geomatics)
- Use of (complex) GIS software for map output
- How maps and images are used in projects and the media
- How to generate a map for future projects and courses
- Appreciation of what makes a good display and bad !

Map critique

Tetsa River Park,
near Fort Nelson, BC



Longname	Lat	Long
Parking	58° 40' 2.731" N	124° 26' 31.727" W
Trail Head	58° 40' 2.622" N	124° 26' 36.432" W
Viewpoint	58° 40' 11.309" N	124° 28' 3.184" W
Birdwatch Area	58° 40' 22.115" N	124° 28' 15.957" W
Viewpoint	58° 40' 41.356" N	124° 28' 31.718" W

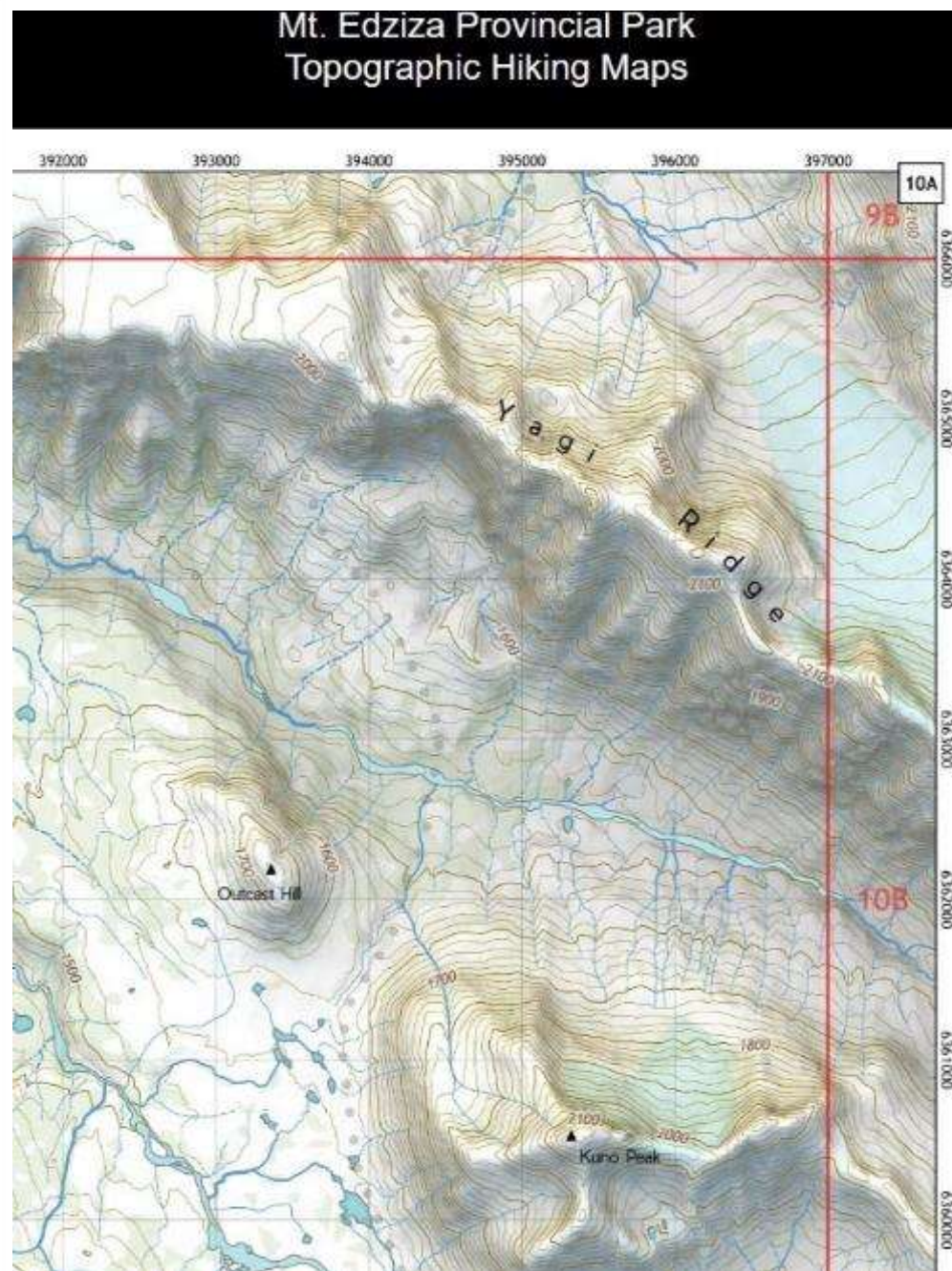
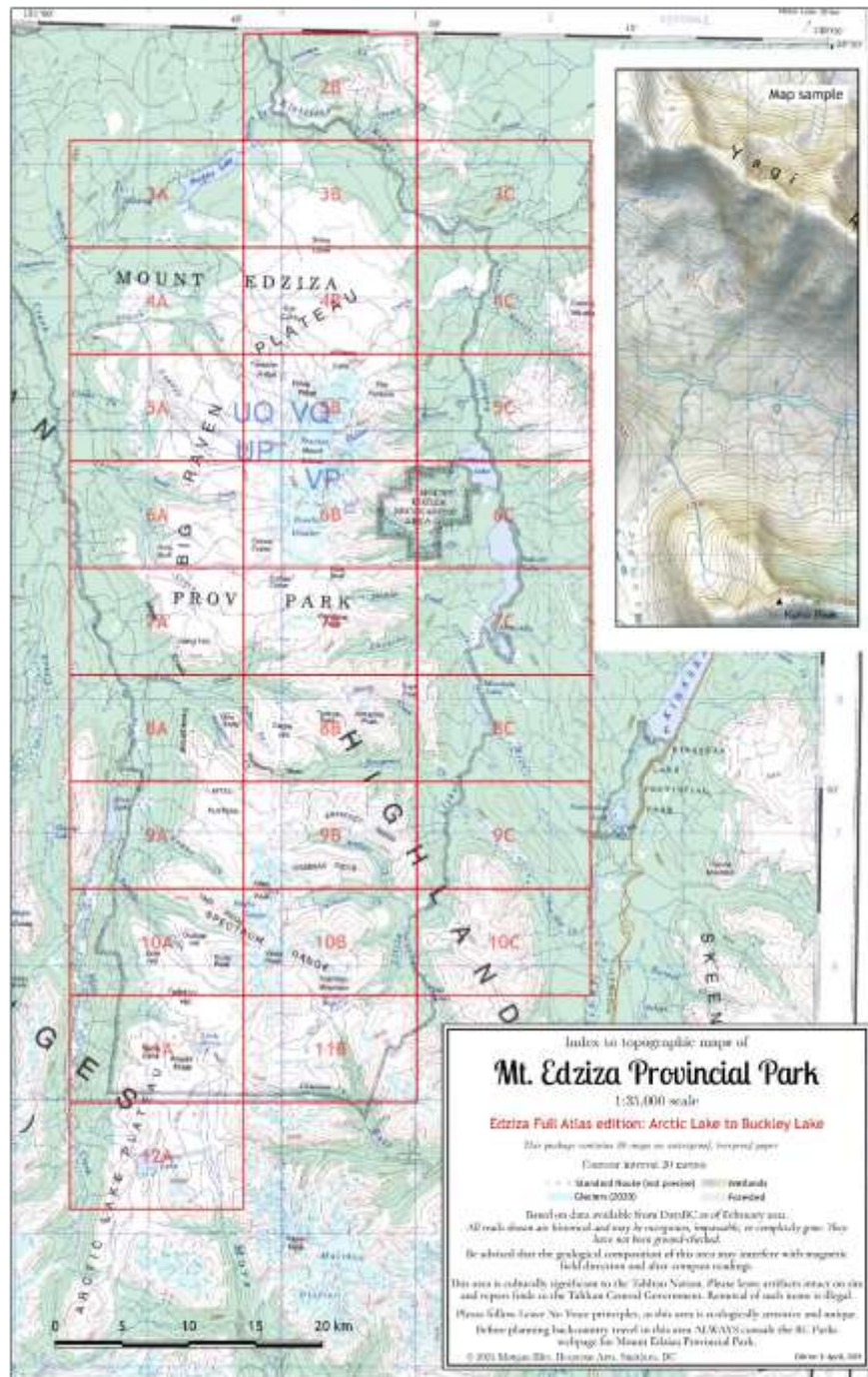
Second exam (10%) - April 6th 10.30-11.20

non-cumulative: Covering lectures since the last midterm

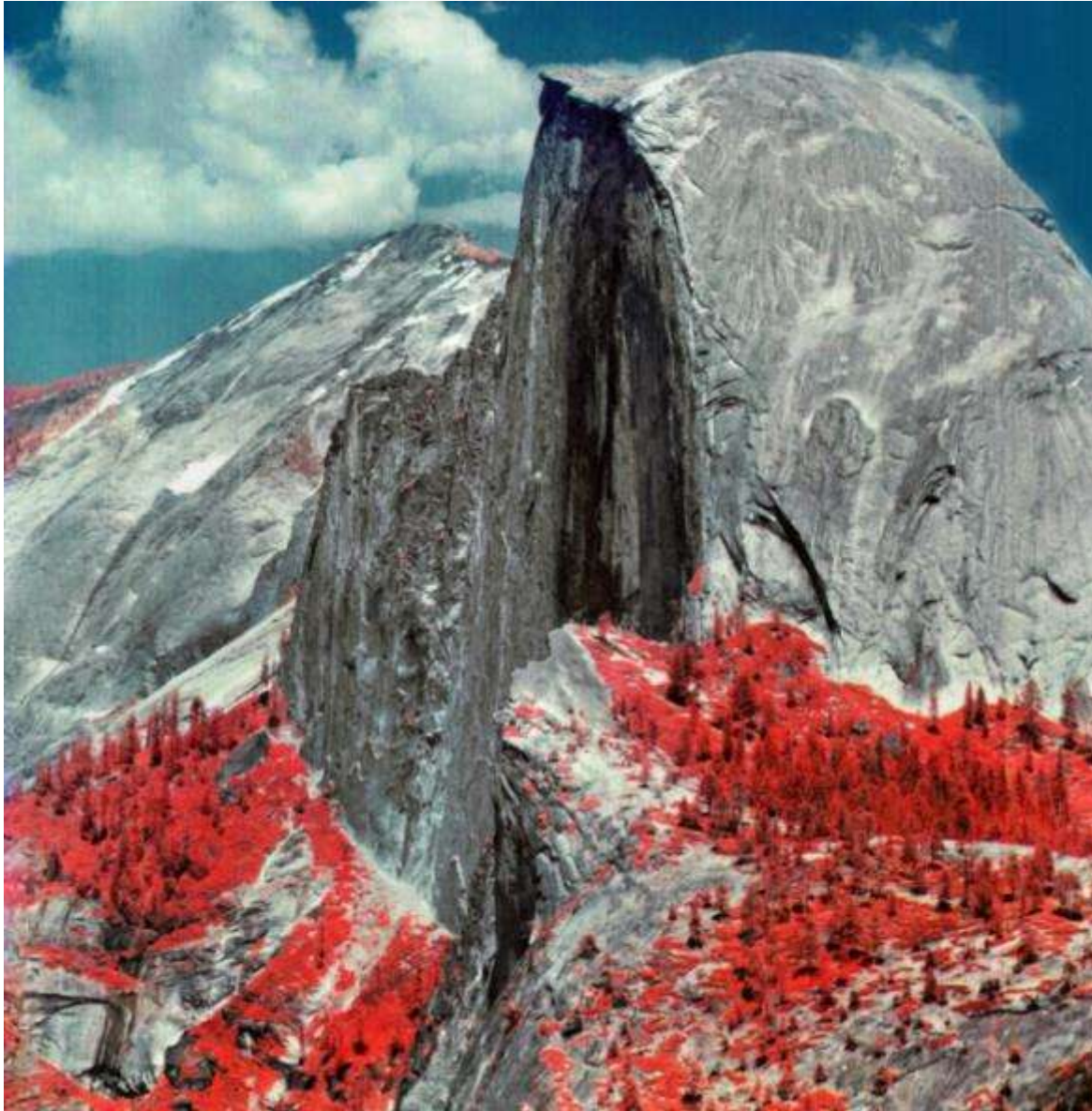
- Mountain cartography; Projects
- Remote sensing / Satellite images
- Map Projections: history and digital
- History of Cartography; digital mapping
- Global Positioning Systems; Summary - this lecture

In class (hard copy) / at home (by email)

Short answers and multiple choice

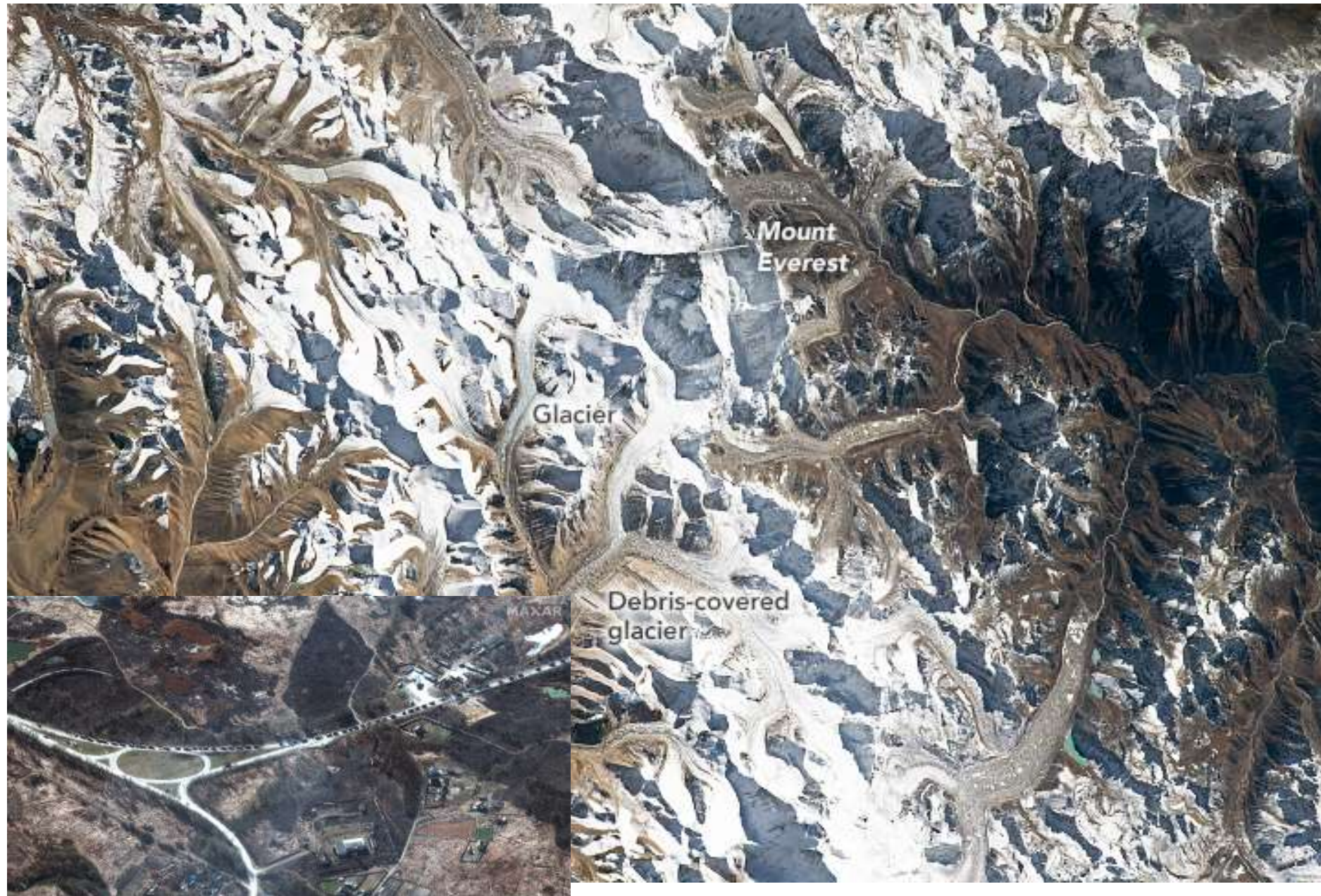


Remote sensing



Yosemite (Infra-Red)

Satellite photo 2021: Everest (International Space Station)



Map projections



Present and fossil teeth suggest migration waves in the past, when reduced sea levels created bridges between now isolated Japanese and Aleutian islands.

Cassini (transverse cylindrical)

World Religions






**A Map of
NEW ENGLAND
AND
NEW YORK**
*Sold by The Publisher in Fleet Street and Richard
Chapman at St Pauls Church Yard*

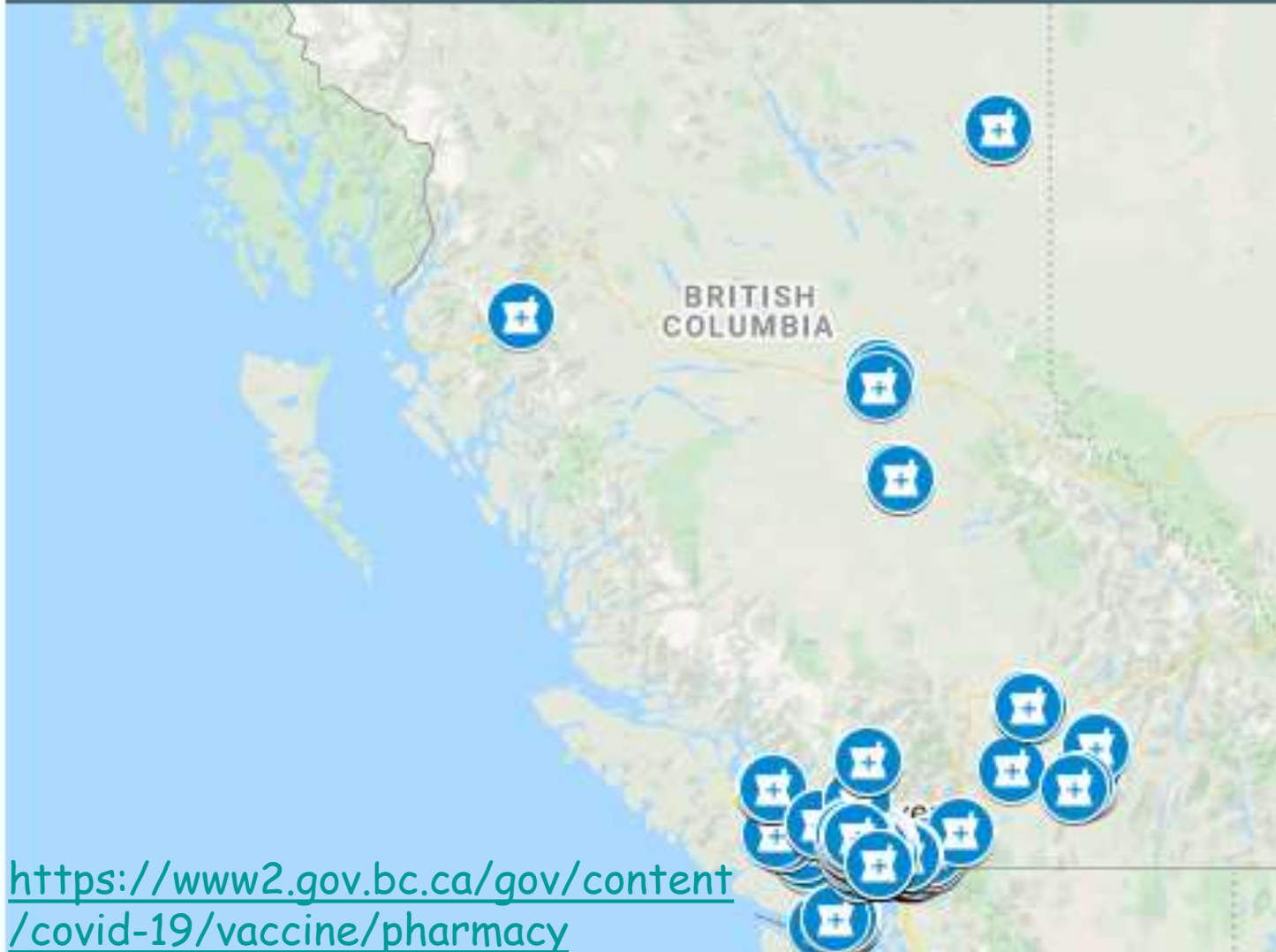
A Scale of English Miles
0 10 20 30 40 50 60 70 80 90 100

Find a pharmacy near you



Initial B.C. Pharmacies offering COVID-19 Vaccinations

 This map was created by a user. [Learn how to create your own.](#)



<https://www2.gov.bc.ca/gov/content/covid-19/vaccine/pharmacy>

Bloomberg: Tracking covid-19

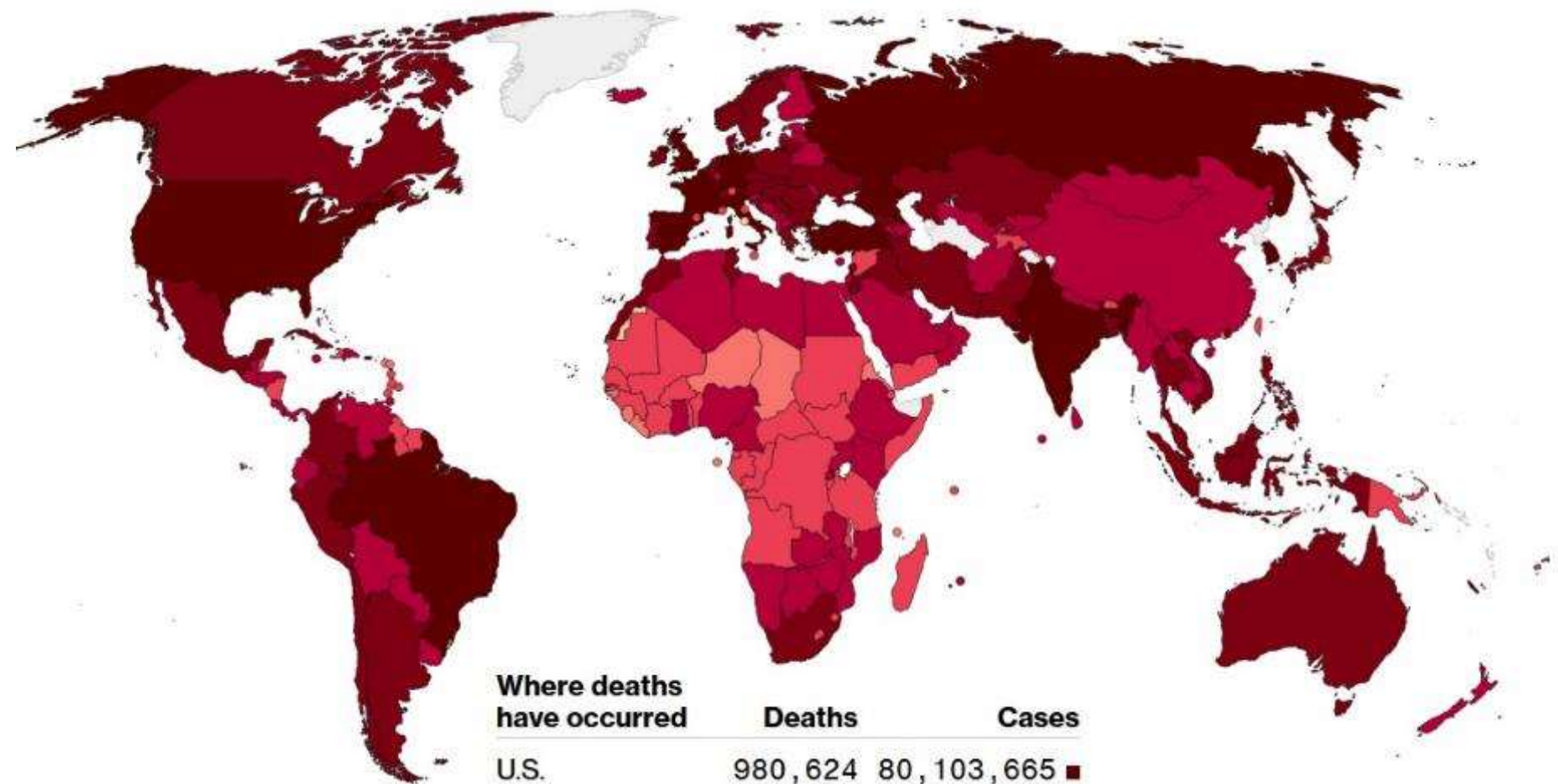
488,398,165 6,142,835

Confirmed cases worldwide

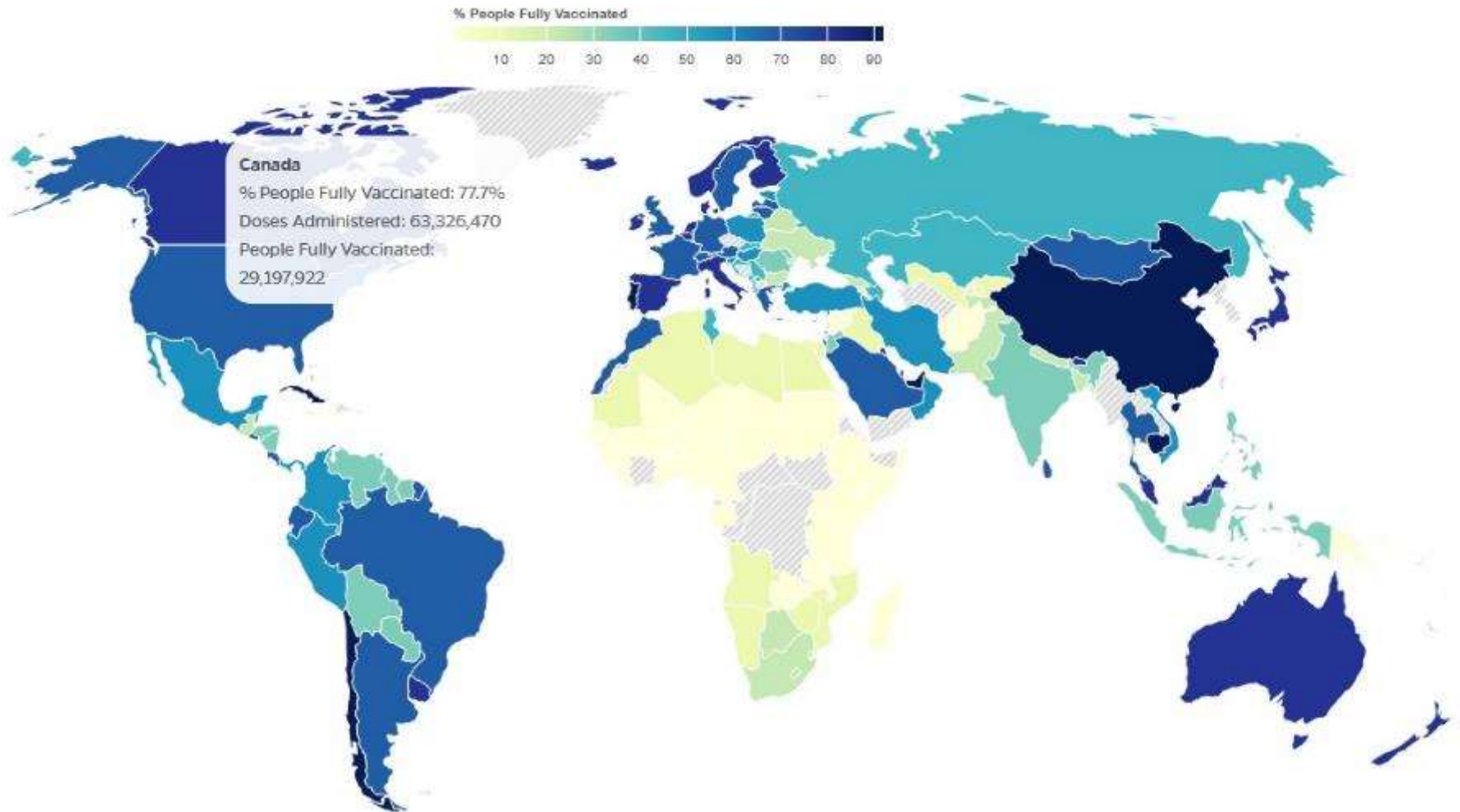
Deaths worldwide

Jurisdictions with cases confirmed as of March 31, 2022, 8:20 PM PDT

1-99 100-999 1,000-9,999 10,000-99,999 100,000-999,999 1,000,000-9,999,999 10 million or more



% population vaccinated

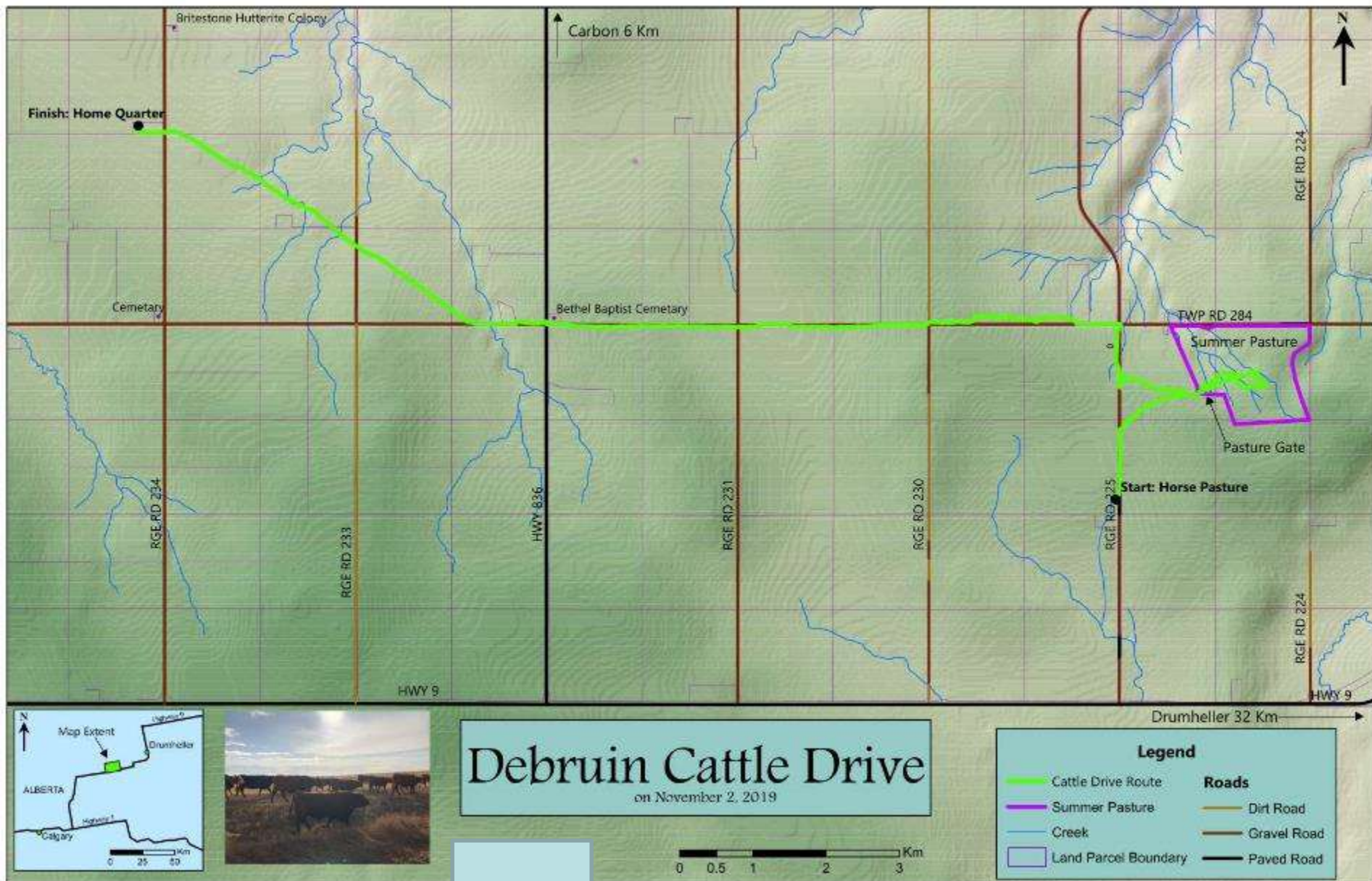


(oops, I lost the date)

Ukrainians attempting to push back Russians



GEOG205 Project map, 2020



Current trends in mapping

- Apps for mobile devices = 'Ubiquitous cartography'
- Increasing use of google maps / online tools
- Animations - moving maps
- 3D perspectives and software applications
- More and more data e.g. LiDAR, UAVs, satellites
- Mapping and GPS for everyone

Further courses in Geomatics, 2022->

GEOG204: Introduction to GIS (fall)

GEOG250: Geospatial analysis (fall) (Python programming)

GEOG300: Intermediate GIS (winter)

GEOG357: Remote Sensing (fall)

GEOG413: Advanced GIS (fall 2022)

GEOG450: Advanced Geospatial Analysis (winter 2024)

GEOG457: Advanced RS (winter 2024)

GEOG499/440: Independent Study/Internship -anytime

Mapping/GIS skills generally in high demand

Most desirable by employers: ability to code / script

UNBC GIS Minor:

5 geomatics courses + two CPSC = 21 credits

= GEOG 204, 205 or 250, 300, 357

+ CPSC 110 or 101

+ two of 250, 413, 457, ENPL303

Can specialise in GIS/mapping diploma e.g. BCIT

Multiple choice (5%)

Q. Who developed the first map projections ?

- a. The Romans
- b. The Greeks
- c. The Vikings
- d. Leonardo Da Vinci
- e. Gerhard Mercator

Sample short question (5%)

Q: Briefly explain the difference between what is meant by Cartography and by Geomatics

Making a meaningful map

1. Do I know what my map's story is ?
2. Am I using the right map projection ?
3. Am I using data at the right level of generalization ?
4. Is my symbology clear ?
5. Do my symbols match my data ?
6. Have I used the right text symbols (lettering) ?
7. Does my map have figure-ground organization ?
8. Does my map have good visual hierarchy ?
9. Do I need to add anything else to my map ?
10. Have I asked for a critique ? (Do you dare?)

<http://www.esri.com/news/arcuser/0911/files/mapchecklist.pdf>

gis.unbc.ca -> geog205 -> labs -> project grading guide

Last slide

Course reviews have faded away but see webpage next week

Happy to take feedback - good or otherwise

Some impressive student work despite covid conditions

Last bits- exam on Wednesday, project by April 11th
- Exam is intended / designed to be closed book

All previous assignments handed in ?

Project: email map (pdf) and report (doc or pdf) to your TA

Back to campus September 2022 ?