ESS 203 - Glaciers and Global Change

Friday January 29, 2021

Outline for today

- Volunteer for today's highlights on Monday _____
- Highlights of last Wednesday's class – *Madelyn Ulvin*

- If you have not yet reported Highlights from a class, ***Please*** sign up to be the Reporter for a future class.
- The sign-up page is linked from our Canvas home page.

Today - Matt Parsons

- Literature-search questions and comments
- Library questions

HW 10

Hi Folks -
It turns out that we cross-wired some links in Canvas when we defined how your Library Group reports are submitted. To be certain that we get all of your group reports successfully, please have one member of your Library Group email your Group report (or a link to your report if that is an option) directly to Jessica and me.

We are also extending the due data until any time tomorrow. Sorry about the mix-up!
Thanks.

cheers,
Ed and Jessica

HW 11 – Due on Monday

Lucas Zeppetello is a UW graduate student in Atmospheric Sciences.
https://vargaszeppetello.weebly.com/
He recently published a commentary in *Eos*, which is a news journal published by American Geophysical Union (AGU).
Don't @ Me: What Happened When Climate Skeptics Misused My Work

https://eos.org/opinions/dont-at-me-what-happened-when-climate-skeptics-misused-my-work

A peer-reviewed paper that Lucas had written about climate was mis-quoted and mis-used by climate-change skeptics.
In about 1 page (max), summarize Lucas' message about lessons that he learned, and his recommendations on how to counter efforts to distort his climate science.

Mid-term #1 Wednesday (February 3).

- 5 study questions are posted; 3 of these will form the actual test.
- I expect you are working through the 5 posted questions and talking about them with your classmates.
- Quizzes > Practice Quizzes > Midterm #1 Study Q

https://canvas.uw.edu/courses/1434502/quizzes/1383875/take

Or, if you would like to see the study questions in a PDF document:

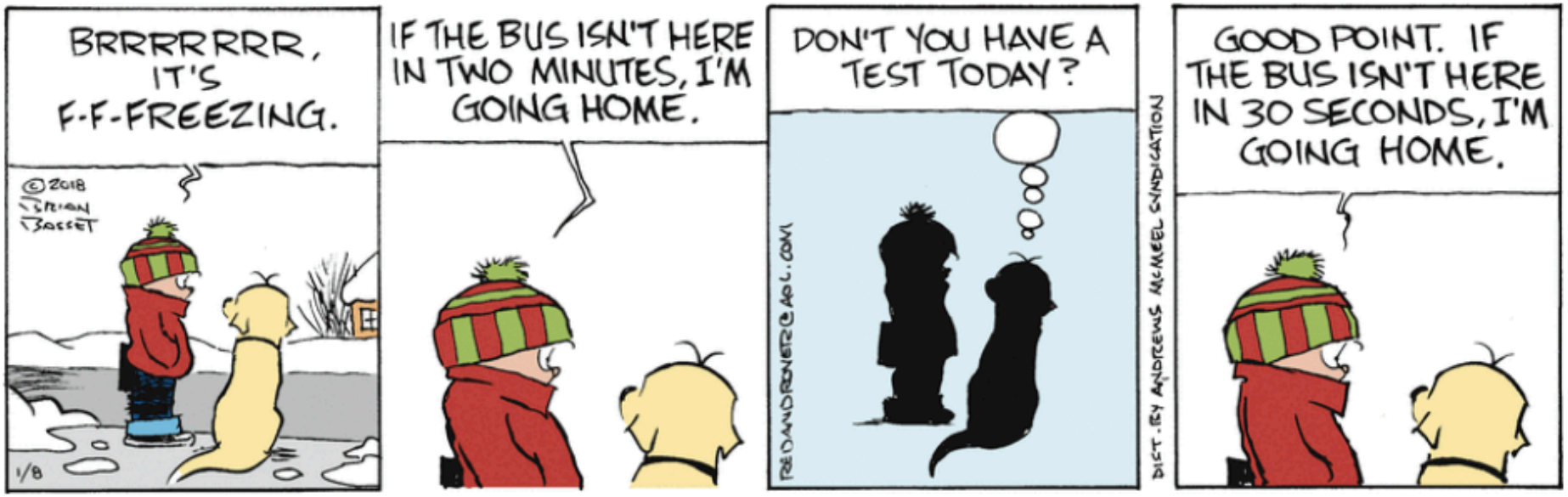
https://canvas.uw.edu/courses/1434502/files/folder/Tests?preview=72745058

- Be sure to read the notes on "Writing a test"

https://courses.washington.edu/ess203/TESTS/ESS203_writing_a_test.pdf

- Study Sessions?

Midterm Quiz on Wednesday – Feb 5



Red may not be the best role model …

Group Study/Discussion sessions ?

Another Potential Topic for Term Projects

ECOLOGY

Iceberg unveils secret ecosystem

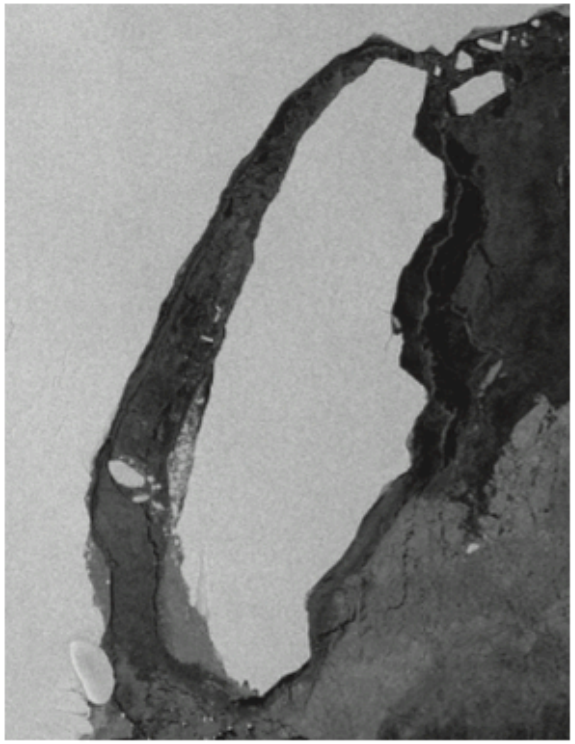
Biologists rush to study life exposed under Antarctica's Larsen C ice shelf before it changes.

BY JO MARCHANT

Biologists are racing to secure a visit to a newly revealed region of the Southern Ocean as soon as it is safe to sail there. One of the largest icebergs ever recorded broke free from the Larsen C ice shelf on the Antarctic Peninsula in July. As it moves away into the Weddell Sea, it will expose 5,800 square kilometres of sea floor that have been shielded by ice for up to 120,000 years. If researchers can get to the area quickly enough, they'll have the chance to study the ecosystem beneath before the loss of the ice causes it to change.

"I cannot imagine a more dramatic shift in environmental conditions in any ecosystem on Earth," says Julian Gutt, a marine ecologist at the Alfred Wegener Institute for Polar and Marine Research in Bremerhaven, Germany.

It is difficult for Antarctic scientists to respond quickly to sudden events, because polar-research vessels are usually booked



COPERNICUS SENTINEL-1 VIA BAS

The calved iceberg is about the size of Delaware.

before the ocean cleared of sea ice and biologists could safely visit the area. Gutt was first in with a detailed survey, leading a team of about 50 scientists on the German research vessel *Polarstern* in 2007. The group sampled hundreds of species in areas exposed by the break-ups at Larsen A and B, and saw signs of a unique ecosystem with more deep-sea species than elsewhere on the Antarctic continental shelf (J. Gutt *et al. Deep-Sea Res. II* **58,** 74–83; 2011). But other species were already moving in, including fast-growing sea squirts, krill and minke whales. "By then, a lot had happened," says Linse.

Video footage taken by geophysicists on a US Antarctic Program cruise at the Larsen B site in March 2005 had unexpectedly showed most of the sea floor covered with a white mat, which the team interpreted as a layer of sulfur-eating microbes, as well as large clams, which were also chemotrophic — that is, living on energy sources other than the Sun. It was the first report of a chemotrophic ecosystem in the Antarctic.

Nature, Vol. 549, p. 443, 28 Sept 2017.

Discussions with Matt

Welcome Matt!
Shared google doc with our questions:
Let's scroll through, and discuss Matt's answers and comments.

https://docs.google.com/document/d/1bF0JNxu9FkIa3G3OcQZAsDLrwuICOiX-yxr8pfODW-I/edit#heading=h.5spg5w2dqiai

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