

Long Term Ecological Research Program (LTER)



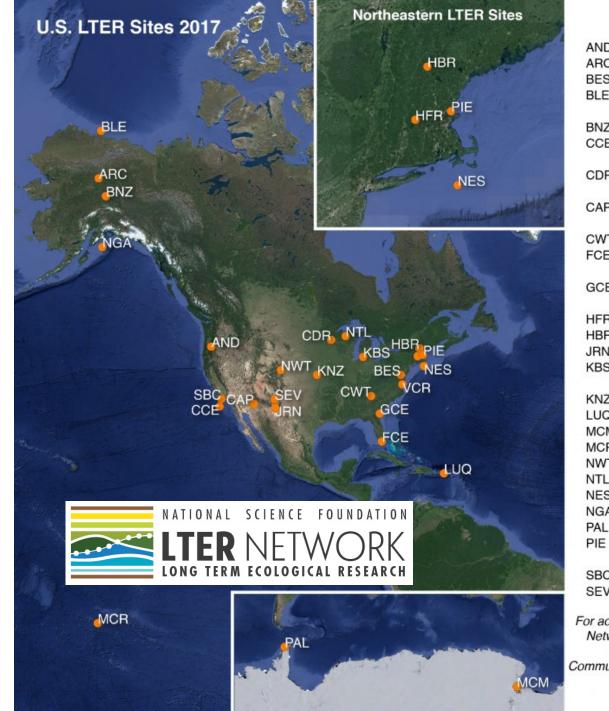
Funded by the **National Science Foundation**Supported by the **United States Antarctic Program**



What is the McMurdo LTER?

Long-Term **Ecological Research**

- Science + Monitoring
- 6-yr grants
- Short and longterm perspectives
- Network → synthesis



Site Codes

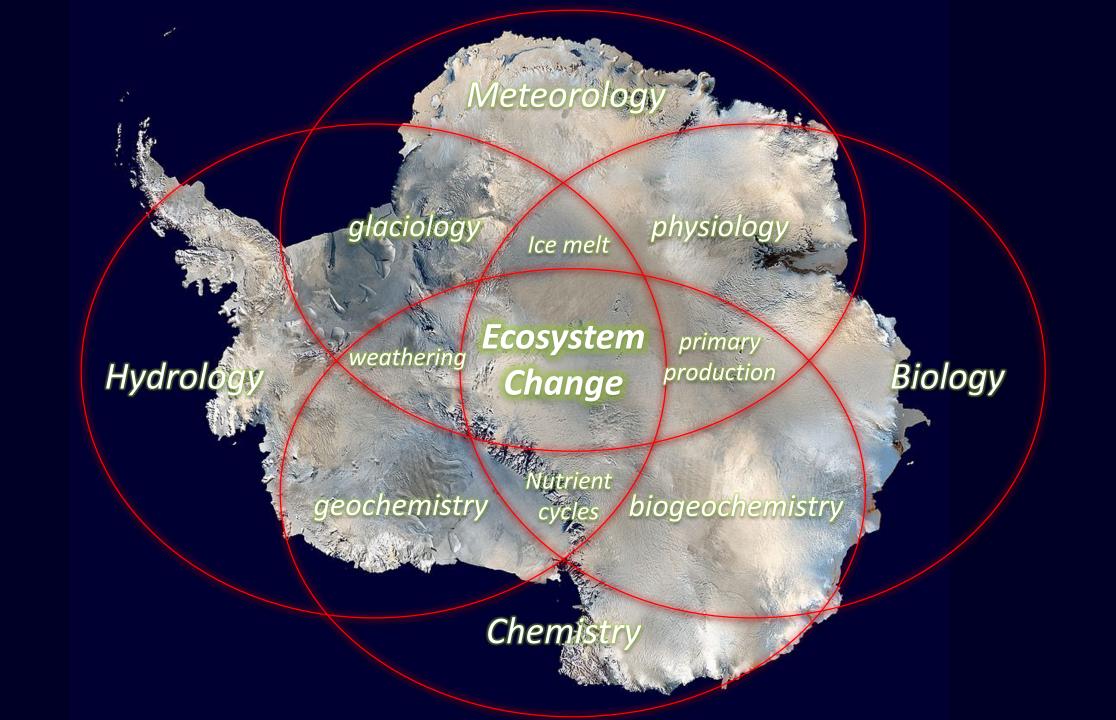
AND Andrews Forest LTER ARC Arctic LTER Baltimore Ecosystem Study Beaufort Lagoon Ecosystems LTER Bonanza Creek LTER California Current Ecosystem LTER CDR Cedar Creek Ecosystem Science Reserve CAP Central Arizona-Phoenix LTER CWT Coweeta LTER FCE Florida Coastal Everglades LTER GCE Georgia Coastal Ecosystems LTER HFR Harvard Forest LTER Hubbard Brook LTER Jornada Basin LTER Kellogg Biological Station LTER KNZ Konza Prairie LTER Luquillo LTER LUQ MCM McMurdo Dry Valleys LTEF Moorea Coral Reef LTER Niwot Ridge LTER North Temperate Lakes LTE Northeast U.S. Shelf LTER Northern Gulf of Alaska LTE Palmer Antarctica LTER Plum Island

Ecosystems LTER

Santa Barbara Coastal LTE

Sevilleta LTER

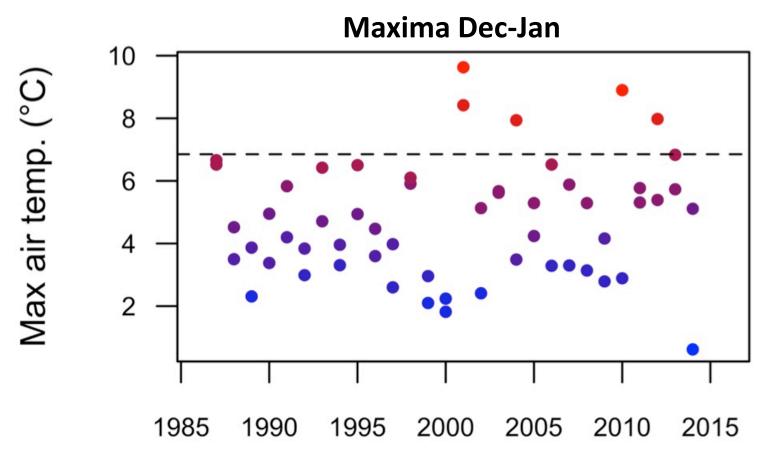
For additional information on the LTI Network, please visit Iternet.edu o contact the LTER Network Communications Office at 805-893-73

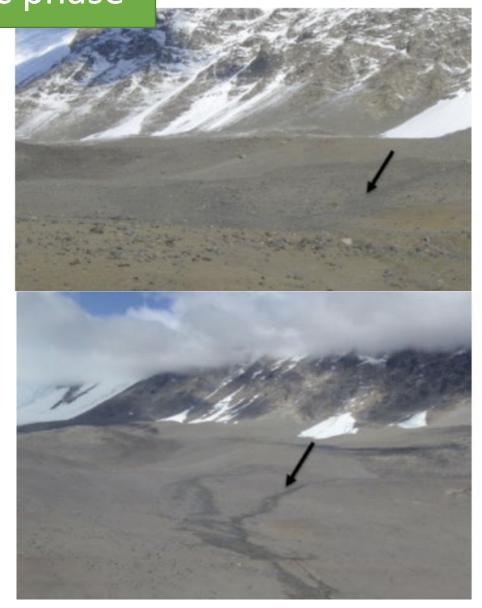




The Dry Valleys have entered a new climatic phase

More frequent "heat waves" and pulses of water availability









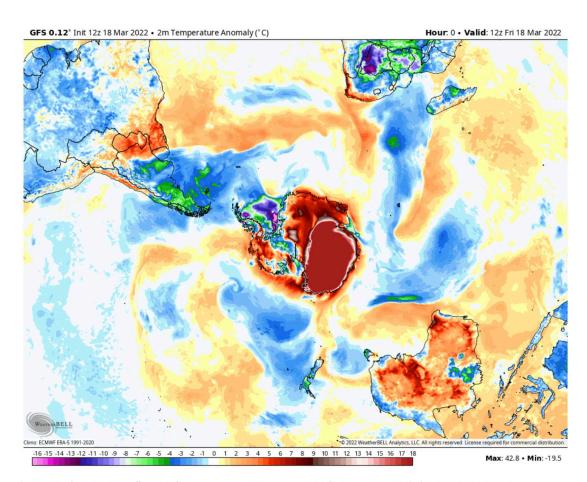
bjadams $\stackrel{\circ}{\scriptscriptstyle \sim}$

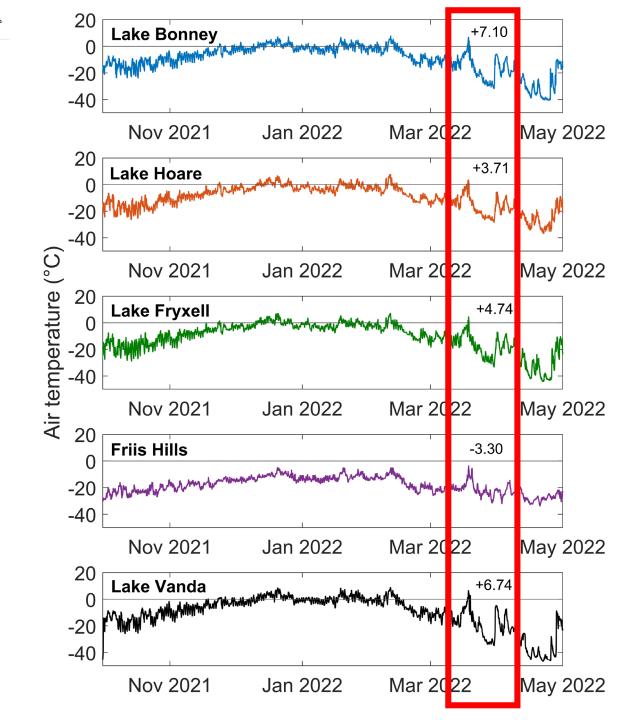
CAPITAL WEATHER GANG

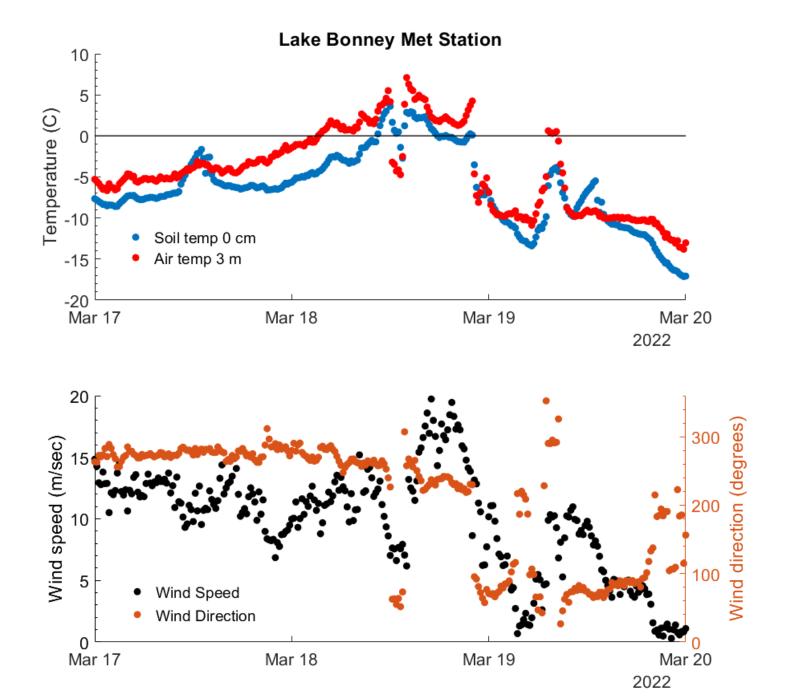
It's 70 degrees warmer than normal in eastern Antarctica. Scientists are flabbergasted.

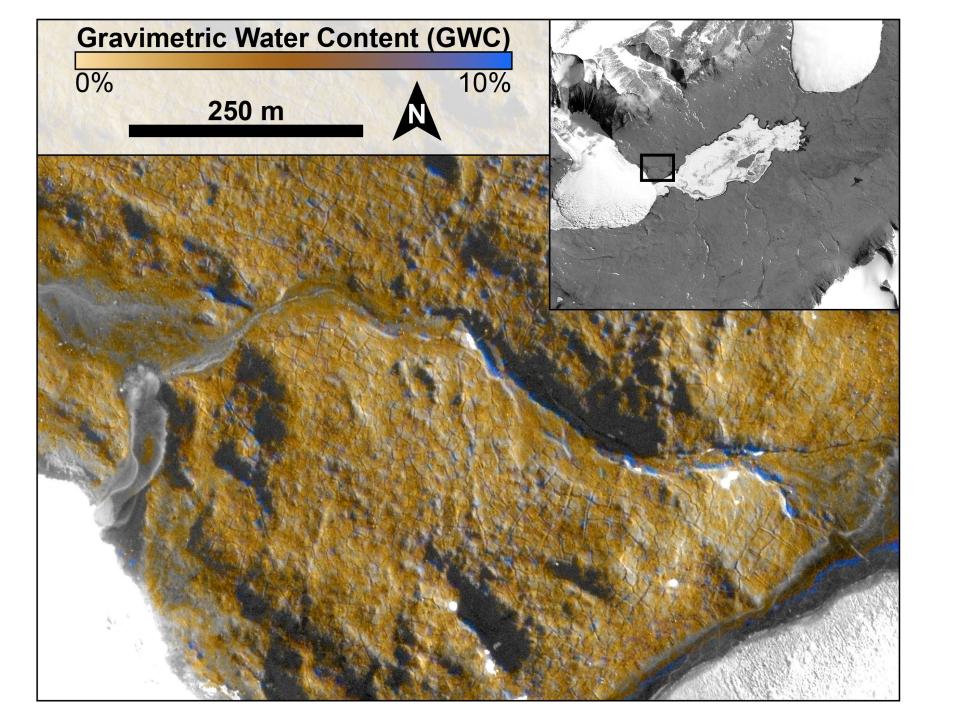
'This event is completely unprecedented and upended our expectations about the Antarctic climate system,' one expert said

By <u>Jason Samenow</u> and <u>Kasha Patel</u> March 18, 2022 at 5:06 p.m. EDT



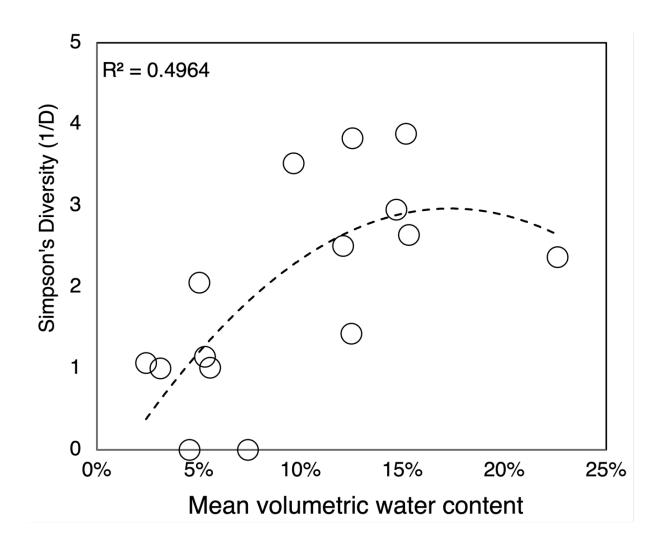






March 20, 2022 WordView-2 DigitalGlobe.

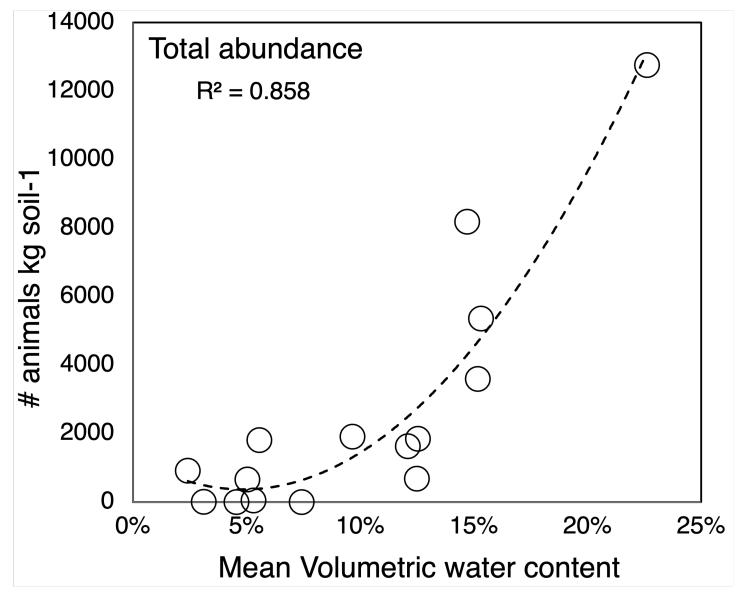




Simpson's Diversity (1/D) for soil and sediment invertebrate communities in the Canada Stream Antarctic Specially Protected Area.

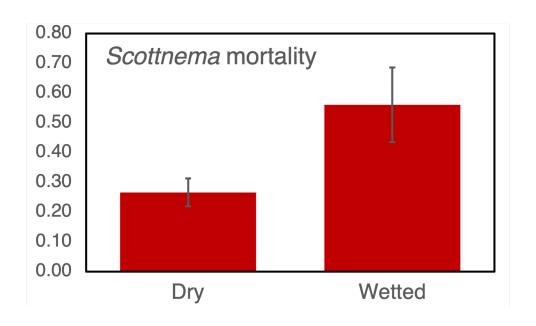
Invertebrates typically revive from anhydrobiosis in soils above 10% soil water content typically, as was observed following the March 18th weather anomaly.



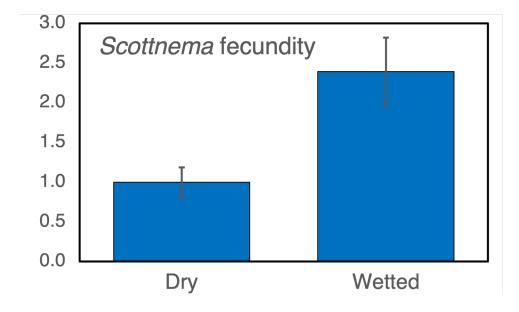


Total invertebrate abundance for soil and sediment invertebrate communities in the Canada Stream Antarctic Specially Protected Area.

Invertebrate abundance increased following the March 18th weather anomaly.



Warming event resulted in significant mortality



.... but also increased fecundity