

Welcome to ***PolarConnect***

With Keri Rodgers and the Tundra
Plants in a Changing Climate
Team in Barrow, Alaska

Monday, 16 August 2010

3 pm AKDT (4 PM PDT, 5 PM MDT, 6 PM CDT, 7 PM EDT)



WELCOME TO WIMBA



ARCTIC RESEARCH CONSORTIUM OF THE UNITED STATES

Raise your hand to ask a question

List of all participants


Return to the lobby or exit

Slides will be shown here

If using VOIP, press and hold here to talk

Your connection strength

'Chat' with one person or the entire group



TALK

Options

You have entered the lobby.

You have entered 'Arctic Research Consortium of the United States (ARCUS)'.


Your media format is WimbaMedia.

You say, "I'm going to change the slide momentarily- to show the one I need for my new screen shot"

To: Main Room

People (3)

Kristin_Timm	⬇	⬆	⬇
kristina_creek	⬇	⬆	⬇
Kristin_Timm	⬇	⬆	⬇



X

Help

Exit - Lobby - Help

Please note:

- Participant using the telephone can mute/unmute by pressing *6 on the phone.
- Today's event will be recorded and archived.

Roll Call

When called, please state your:

- ✓ Name
- ✓ School / Institution
- ✓ The number of students and adults participating with you in the same location

What is PolarTREC?

PolarTREC is a professional development experience in which K-12 teachers are paired with researchers for 2-6 week research experiences in the polar regions.

From 2010-2013, nearly 50 teachers from around the United States will join scientists in the Arctic and Antarctica to learn about science, the polar regions, and to share what they have learned with their students and communities.



Tundra Plants in a Changing Climate

Las plantas de la tundra en un clima cambiando

Dr. Robert Hollister
Jeremy May
Jennifer Liebig

Keri Rodgers
Robert Slider
Kelsey Kremers

Made possible through the collaboration of:
The Arctic Research Consortium of the United States
PolarTREC
The National Science Foundation
Grand Valley State University
The International Tundra Experiment
Barrow Arctic Science Consortium
The Gateway School of Environmental Research and Technology

Our Research Team

Nuestro equipo de investigación



Rob
Slider



Jenny
Liebig



Jeremy
May



Keri
Rodgers



Kelsey
Kremers



Bob
Hollister

Arctic Tundra

La tundra ártica

- Very short growing season
- Small plants and no trees
- Permafrost



- *Temporada de crecimiento muy corta*
- *Plantas pequeñas y sin árboles*
- *Permahielo*

Permafrost

El permahielo

- Ground that is frozen
- Top active layer thaws in summer
- Active layer refreezes every winter



- *Tierra congelada*
- *Primer estrato se derrite cada verano*
- *Estrato activo se hiela cada año*

The State of the Arctic and of Our World

El estado del Ártico y de nuestro planeta

- Global temperatures have been rising since the last Ice Age
- Temperatures are now rising at an unprecedented rate
- Organisms are affected by their environment



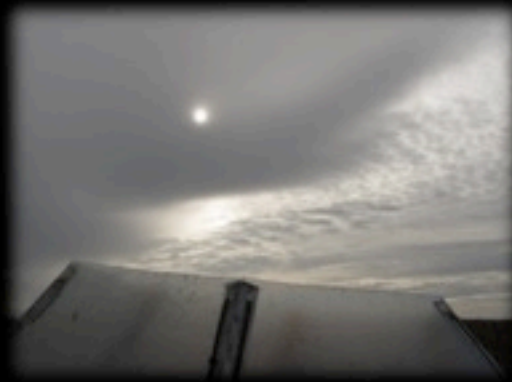
- *Las temperaturas han subido desde la última edad de hielo*
- *La velocidad de esta subida es sin precedentes*
- *Organismos son afectados por el medioambiente*

International Tundra Experiment (ITEX)

El experimento internacional de la tundra (ITEX)

We want to know:

How will an increase of air temperatures of 1 to 3 degrees Celsius affect Arctic plants?



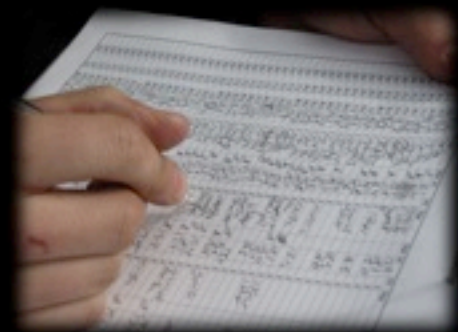
Queremos saber:

¿Cómo serán afectadas las plantas árticas si las temperaturas suben 1 a 3 grados centígrados?

What is ITEX?

¿Qué es ITEX?

- 11 countries with 19 experimental sites since 1993
- Compare common plants throughout the entire Arctic region
- Examine plants' growth rates and life cycles using standard protocol in all sites



- *11 países con 19 sitios experimentales desde 1993*
- *Comparar plantas comunes por toda la región ártica*
- *Examinar el crecimiento y el ciclo de vida usando un protocolo común en todos los sitios*

Why ITEX?

¿Por qué ITEX?

- The Arctic is warming more quickly than other ecosystems
- Changes in the tundra are already visible
- Understanding the tundra we may be able to predict what will happen in other biomes as climate changes

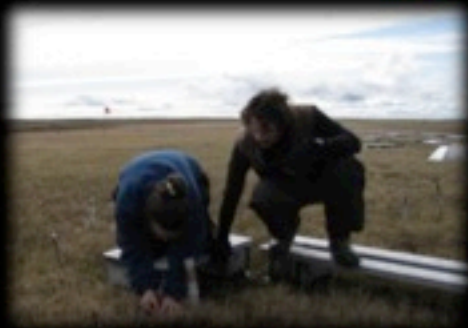


- *El Ártico se está calentando más rápido que otros ecosistemas*
- *Ya se ven cambios en la tundra*
- *Entendiendo lo que pasa en la tundra, podemos predecir lo que pasará en otros biomas en el futuro*

The Experiment

El experimento

- Each site contains 24 control and experimental plots
- Each plot is 1 meter squared
- Open-top chambers act like greenhouses in experimental plots



- *Cada sitio contiene 24 terrenos controlados y experimentales*
- *Cada terreno mide un metro cuadrado*
- *Cámaras abiertas funcionan como invernaderos en los terrenos experimentales*

Where are we? ¿Dónde estamos?



On Top of the World in Barrow

En la cumbre del mundo en Barrow

- 4,000 inhabitants
- Northernmost City in North America
- Built on the shore of the Arctic Ocean



- *4.000 habitantes*
- *La ciudad más al norte de Norteamérica*
- *Construida en la orilla del Océano Ártico*

Atqasuk: The Inland Village

Atqasuk: la aldea del interior

- 217 inhabitants
- 60 miles south of Barrow
- Only reachable by plane



- *217 habitantes*
- *60 millas al sur de Barrow*
- *Solo puede llegar en avión*



Is there any difference between Barrow and Atqasuk?
¿Hay una diferencia entre Barrow y Atqasuk?

Barrow



Atqasuk



What have we learned so far?

¿Qué hemos aprendido?

- Some plants will benefit with in increase of temperature while others are negatively affected
- Some plants die out with an increase in temperature
- Some communities change with an increase of temperature



- *Algunas plantas son afectadas positivamente mientras otras son afectadas negativamente por el aumento de temperatura*
- *Algunas plantas no pueden aguantar el aumento de temperatura y mueren*
- *Algunas comunidades cambian con un aumento de temperatura*

Questions & Answers

Speak slowly, loud, and clear

- ✓ State your name and school
- ✓ Who is your question for
- ✓ State your question

Upcoming Events

Thursday, 19 August 2010 – PolarConnect event with Jim Pottinger in Greenland

Tuesday, 31 August 2010 – Researcher Info Webinar

Thursday, 9 September 2010 – Teacher Info Webinar

Register for all events at www.polarrec.com!

Thank You!

An archive of the event will be available shortly.

<http://www.polar-trec.com/polar-connect/archive>

