

Live from IPY!



with Rob Wilder

Live from Barrow, Alaska!



22 June 2007



Raise your hand to ask a question

List of all participants

Return to the Lobby or Exit

Slides will be shown here

'Chat' with one person or the entire group

Connecting to server...
You have connected successfully!
You have entered the lobby.
You have entered 'Arctic Research Consortium of the United States (ARCUS)'.
Your media format is Third-party Conference Call.

Name	✓X	Hand
Helen_Wiggins		

Exit Lobby - Help

✓(0) X(0) Hand(0)



What is PolarTREC?

PolarTREC is a professional development experience in which K-12 teachers are paired with researchers in authentic polar research experiences.

In the next three years 36 teachers from around the United States will join scientists in the Arctic and Antarctic in celebration of the International Polar Year!

[*www.polartrec.com*](http://www.polartrec.com)



The PolarTREC Team



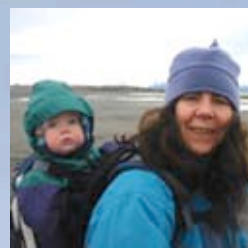
Wendy Warnick

PolarTREC PI
Executive Director



Helen Wiggins

Program Coordinator



Janet Warburton

PolarTREC
Project Manager



Katie Breen

PolarTREC
Project Manager



Kristin Fischer

PolarTREC
Project Assistant



Ronnie Owens

Web Developer



Ben Wade

Web Developer



Tina Buxbaum

Electronic Media
Project Manager



Zeb Polly

Systems Administrator



Joed Polly

Video Production

...with help from
the entire staff
at ARCUS





International Polar Year (IPY) 2007-2009

The International Polar Year (2007-2009) is an exciting scientific campaign focusing on the world's polar regions!

IPY is a time for discovery, science, learning, and awareness about the polar regions with activities for youth, scientists, and the public.

[***www.ipy.org***](http://www.ipy.org)



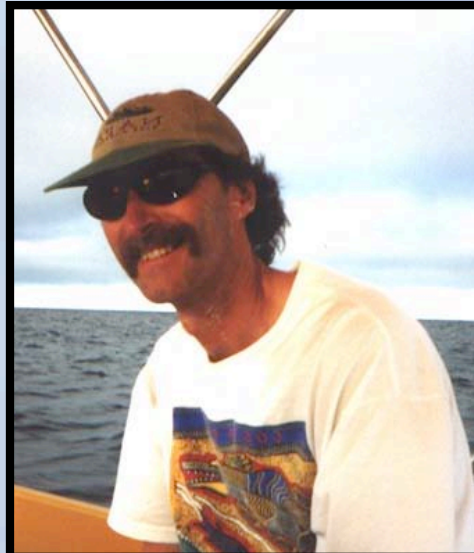
Who are we talking with today?



Teacher

Rob Wilder

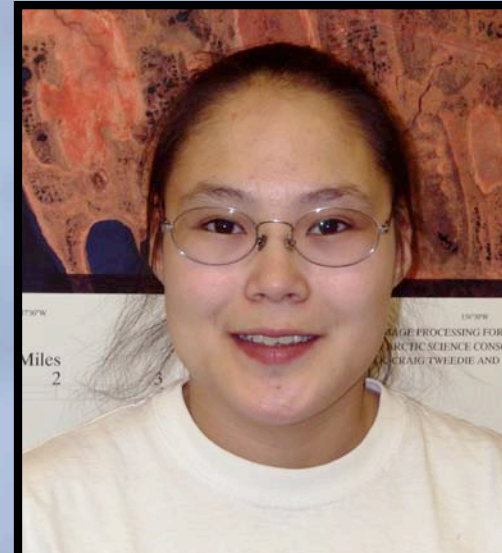
Spartanburg High School
South Carolina



Researcher

Steve Oberbauer

University of Florida
Florida



**BASC Assistant Logistics
Coordinator & Barrow
Resident**

Alice Drake

Barrow Arctic Science Consortium
Alaska



Climate Change and Tundra Ecosystems in Barrow, Alaska



Goal of the project:

Conduct various measurements of the soil and air to understand how changes in a warming and drying arctic environment may affect the balance and stability of the arctic soil carbon.

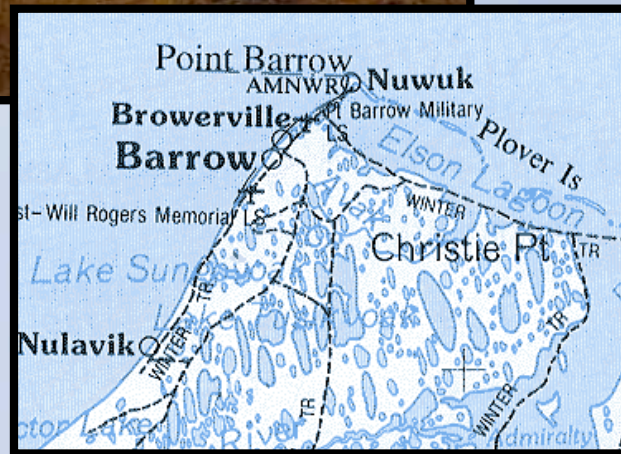
Dates:

31 May - 7 July 2007

Location:

Barrow, Alaska USA

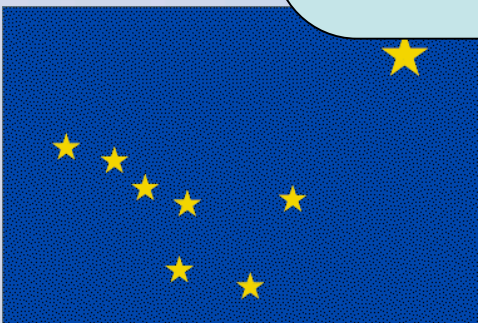
Elevation: about 31 feet above sea level



Rob's Trip to Alaska



Greenville, SC
Detroit, MI
Minneapolis, MN
Anchorage, AK
Prudhoe Bay, AK
Barrow, AK



Where is Barrow?

- Northernmost city in the USA
- 340 miles North of the Arctic Circle
- Home to over 4000 people
- The sun does not set between May 10th and August 2nd!







*Life in
Barrow*





Barrow Elementary School



Barrow High School





SCIENTISTS bldg

DORMITORY
STYLE
852-7800

Spring on the Tundra

May 31, 2007



Present



Less than a month later...



Permafrost

Permanently frozen ground.





Steve Oberbauer
Primary Investigator

Paulo Olivas
*Field Coordinator &
Graduate Student*



The Science



Handwritten field notes on a piece of paper held by a hand. The notes are organized into columns and rows, with a header row and several data rows. The header row includes 'Plot 1/D', 'Big', 'Rp', 'P61', 'P62', 'P53', and 'Soil T'. The data rows contain numerical values and temperature readings in degrees Fahrenheit.

Plot 1/D	Big	Rp	P61	P62	P53	Soil T
25c L	1	1	-6358	-6913	-4743	32°F
25c D	2	1	-3375	-2764	-2868	32°F
34c L	3	1	-2778	-0263	-1514	38°F
34c D	4	1	-1131	-3399	-2418	38°F
270c L	5	1	-3631	-2206	-2256	34°F
270c D	6	1	-1312	-2265	-1193	34°F
28c L	7	1	-0991	-1994	-0029	32°F
28c D	8	1	-0971	-0531	-1281	32°F
19c L	9	1	-3121	-2245	-2802	34°F
19c D	10	1	-2228	-2823	-2440	34°F
15c L	11	1	-5735	-3327	-3263	33°F
15c D	12	1	-3904	-2844	-3872	33°F
10c L	13	1	-1470	-0390	-0484	45°F
10c D	14	1	-2993	-3062	-2760	45°F
17c L		1				37°F
17c D		1				37°F
1c L		1				37°F

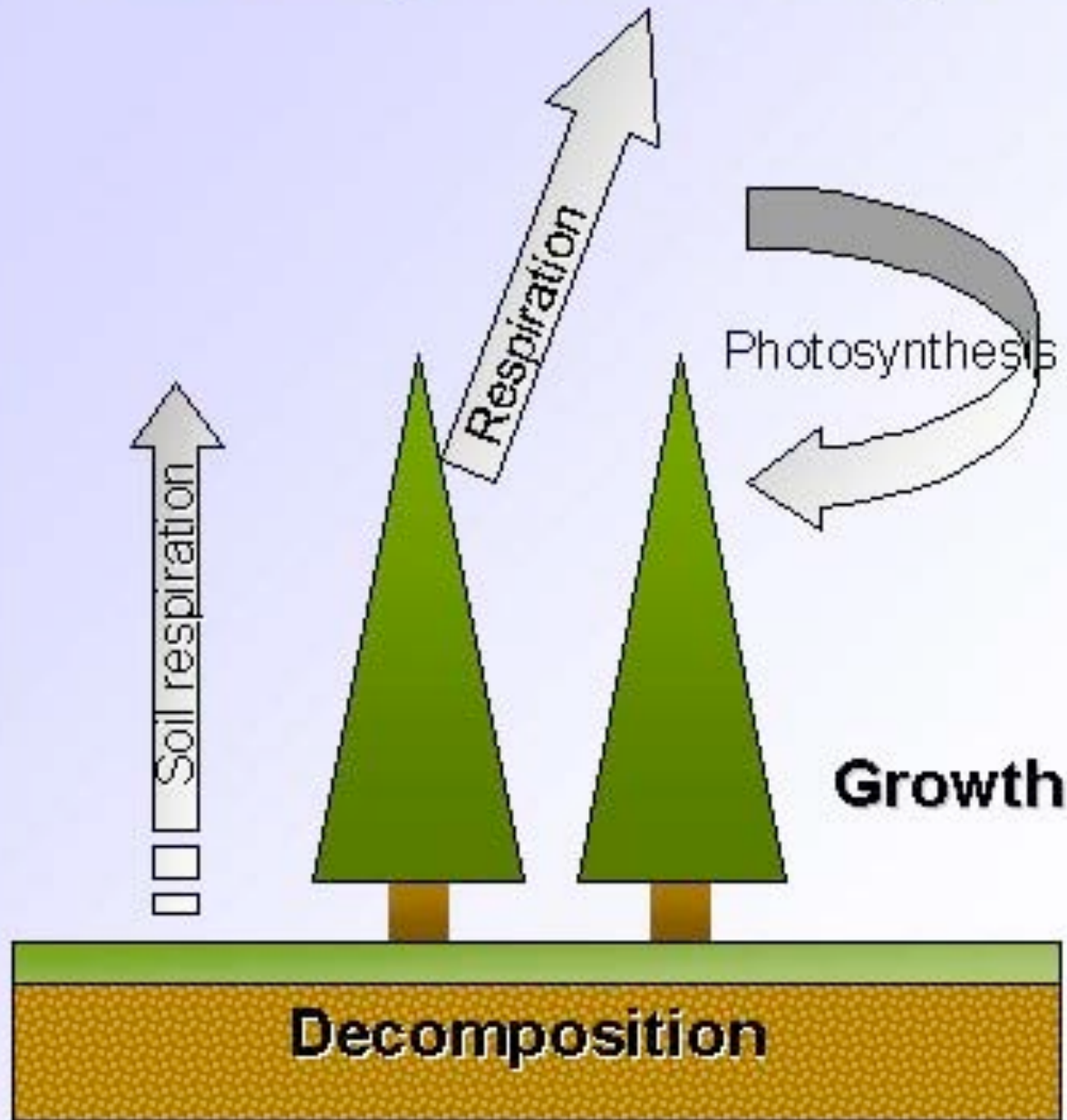


$$NEE = ER + GPP$$



Net Ecosystem Exchange = Ecosystem Respiration + Gross Primary Productivity

Net ecosystem Exchange



Birds & Wildlife



Golden Plover



Dunlin



Long-billed Dowitcher



Long-Tailed Duck



Birds of the Tundra

Snowy Owl



Snow Buntings

Red Phalarope



Lemmings







Polar Bears



Bowhead Whale

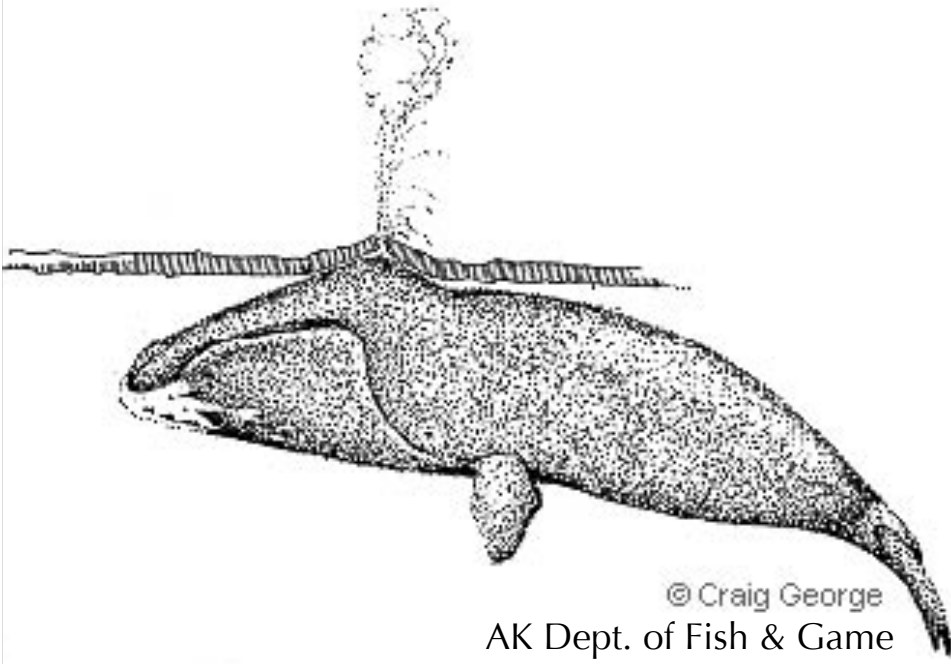


Larry Dueck

Beluga Whale



National Geographic



© Craig George
AK Dept. of Fish & Game

Arctic Fox



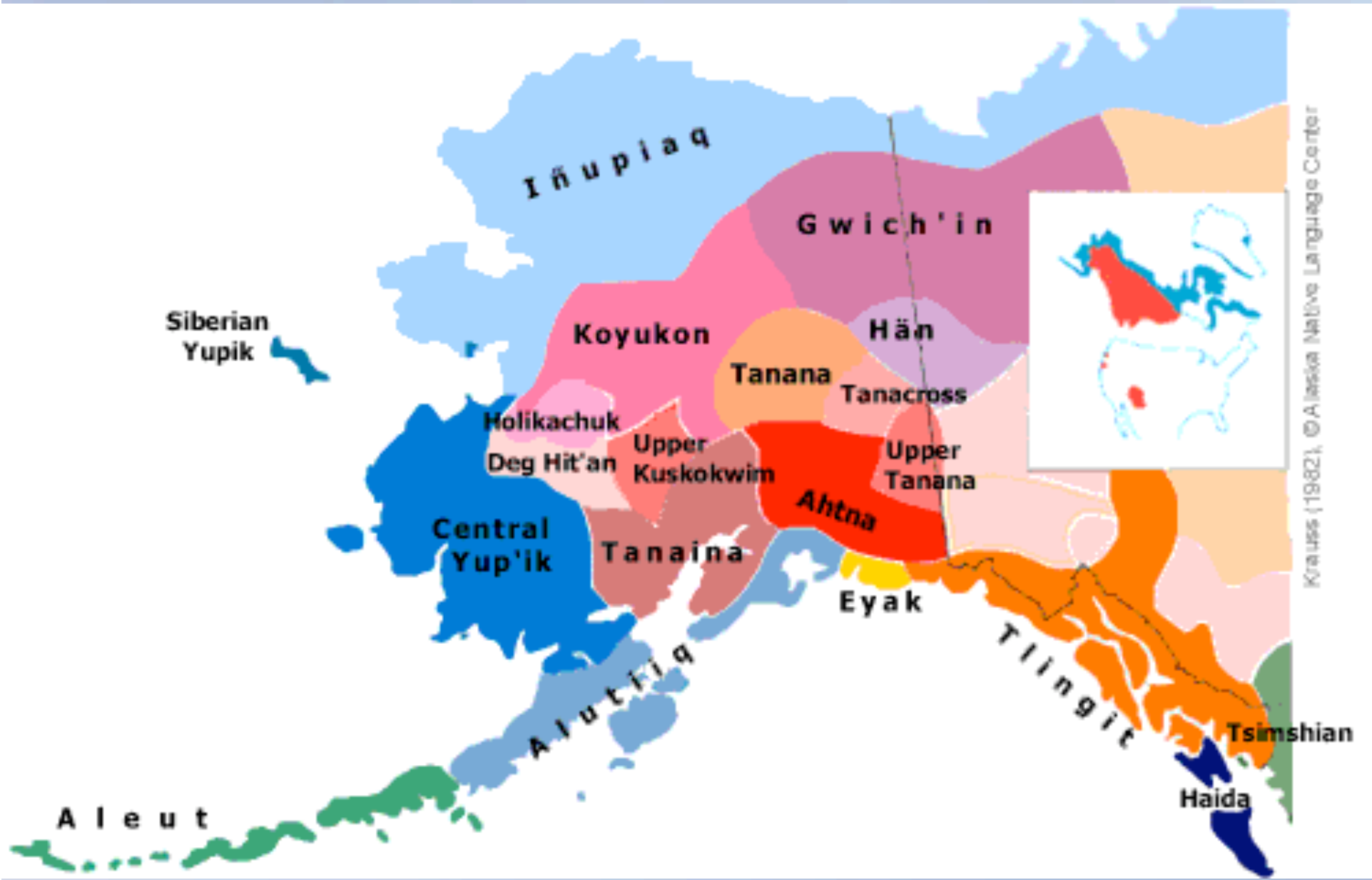
Winter



Summer

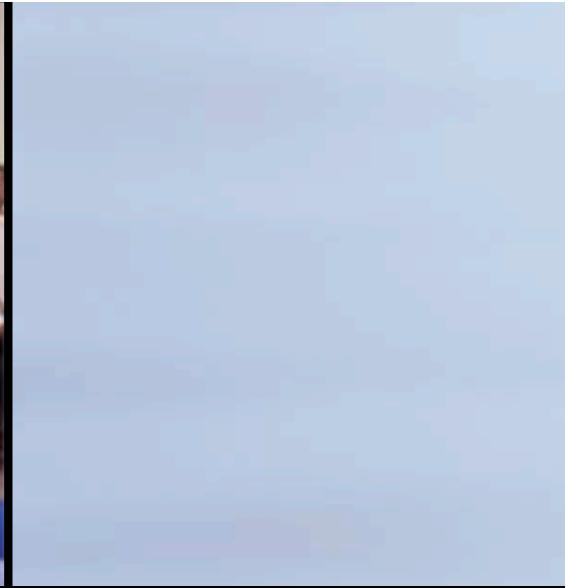
Alaska Native Culture





Krauss (1982), © Alaska Native Language Center





***Inupiat Cultural
Center***



Apugauti
(ah-poo-ah-ti)





Nalukatuk
“blanket toss”





Lewis Brower

Whale Meat Muktuk & Mikigauq



Archaeology



Questions?

"Midnight Sun"



Check out and register for upcoming events!



www.polarartrec.com

*Thank
You!*



*If you have further questions,
please contact us at
info@polartrec.com or call
1-907-474-1600*

