



TEACHERS AND RESEARCHERS
EXPLORING AND COLLABORATING

Welcome to a Special Live Event! Antarctica Day Celebration

with Alex Eilers and the Weddell Seal Team
at
McMurdo Station, Antarctica

2 December 2014 (US)

Blackboard collaborate

Slides will be shown here

Exit the presentation

Click to Talk,
Unclick to finish talking

Raise your hand to ask a question

Share with emoticons

List of all participants

Chat with one person or the entire group

The screenshot shows the Blackboard Collaborate interface. On the right, a presentation slide is displayed with the text "Welcome to Blackboard Collaborate" and the ARCUS logo (Arctic Research Consortium of the United States). On the left, a control panel is visible with various icons and a list of participants. Blue arrows point from text labels on the left to specific icons in the control panel: "Slides will be shown here" points to the top-left icon; "Exit the presentation" points to the top-right icon; "Click to Talk, Unclick to finish talking" points to the microphone icon; "Raise your hand to ask a question" points to the hand icon; "Share with emoticons" points to the emoticon icon; "List of all participants" points to the list icon; and "Chat with one person or the entire group" points to the chat icon.

Please Note:

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

Participant Introductions

Please type in the chat box:

- ✓ Name
- ✓ Affiliation (School, Institution, Etc.)
- ✓ The number of students and adults participating with you in the same location



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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 2010-2015, nearly 70 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.

Questions

During the Presentation:

- Type your question in the text chat box

At the End of the Presentation:

- Raise your hand with the “hand button”.
- PolarTREC staff will call on you.
- Speak loud and clear and directly into the phone to ask your question.

Click on the Talk button to speak.

Unclick when you are done.

Celebrating Antarctica Day and the Weddell seals - 2014



Antarctica



Where are we?



Antarctica Ross Island McMurdo Station

The team



Dr. Jennifer Burns, UAA
Principal Investigator



Greg Frankfurter
Veterinarian



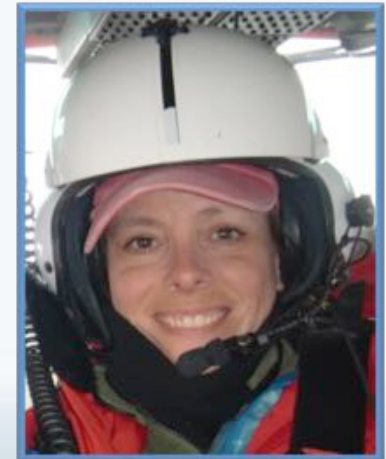
Michelle Shero
UAA, Graduate Student



Roxanne Beltran
UAA, Graduate Student



Amy Kirkham
UAA, Graduate Student



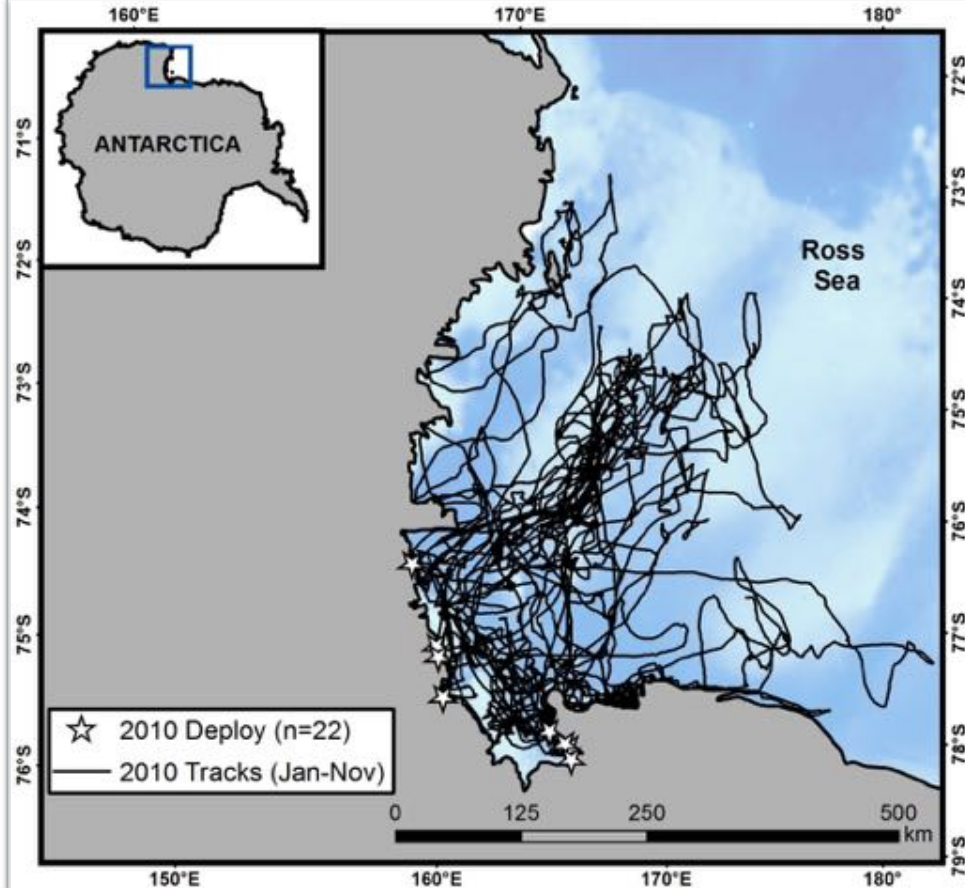
Alex Eilers - Educator

Our project

The Cost of a new Fur Coat



2012 project



2012 project sparked the question for our current project.

Molted



Molt Status

Partial



Not Molted



Molted



Within Season Links

Partial

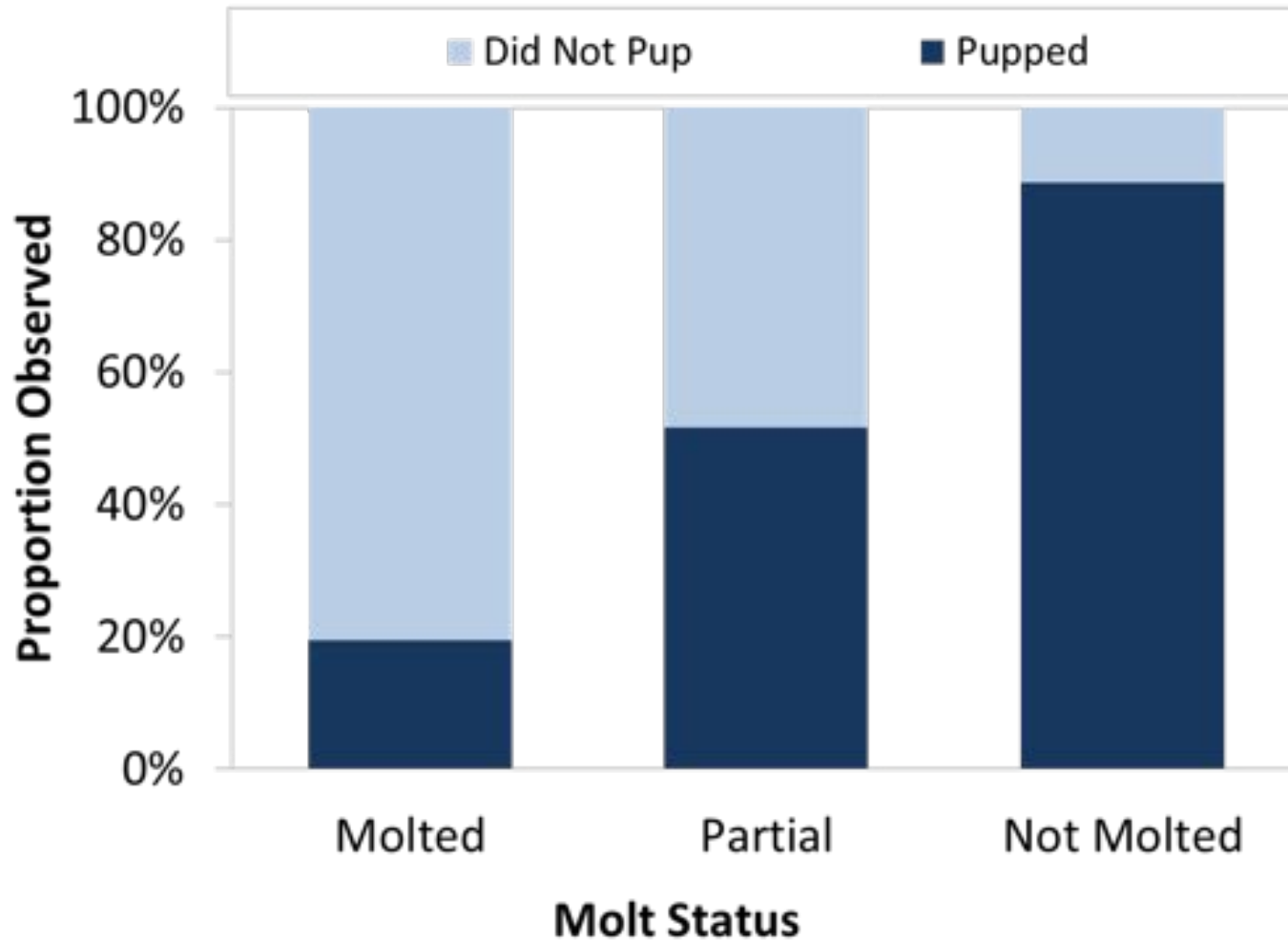


Not Molted



Pup Yr1 → Molt Yr1 → Pup Yr2

Within Season Links



Pup Yr1 → Molt Yr1 → Pup Yr2

Across Season Links

Moms

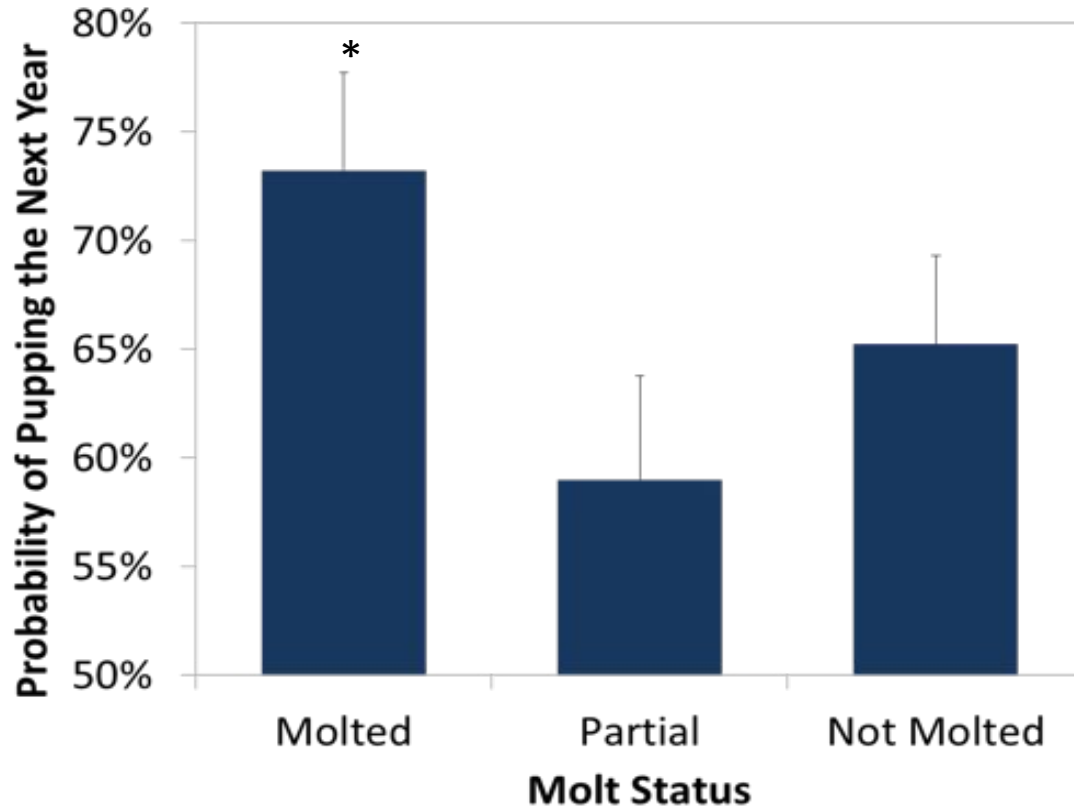


Skips



Pup Yr1 → Molt Yr1 → Pup Yr2

Across Season Links



Skips

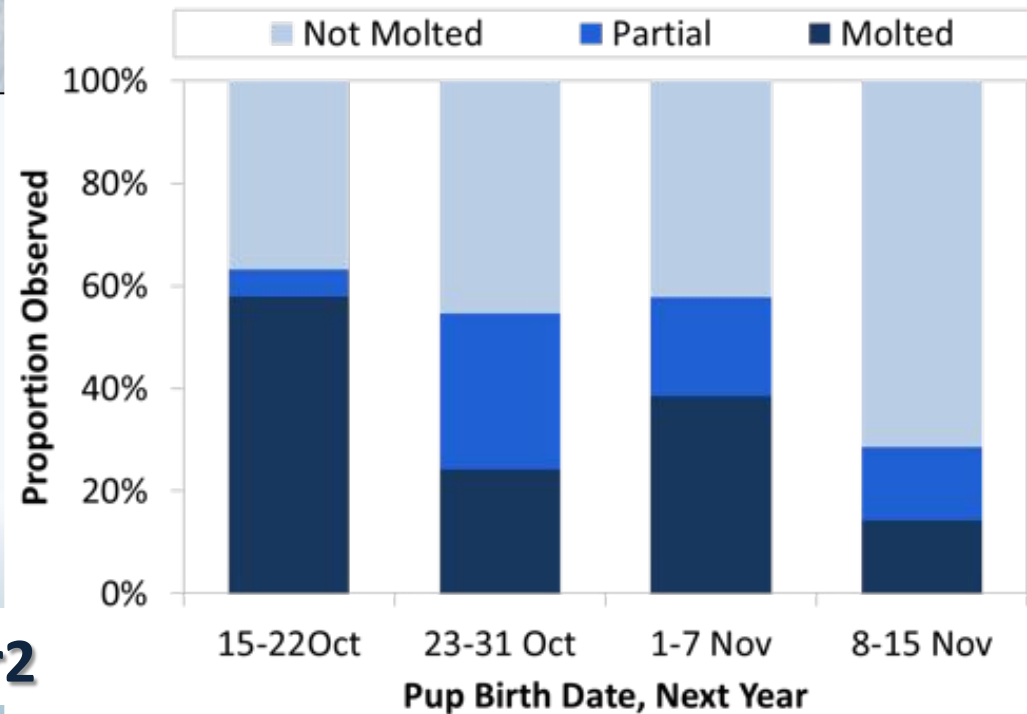
Pup Yr1 → Molt Yr1 → Pup Yr2

Timing of Pupping in Year 2



Pup Yr1 → Molt Yr1 → Pup Yr2

Timing of Pupping in Year 2



Pup Yr1 → Molt Yr1 → Pup Yr2

Links between Reproduction and Molt

Hormones?



Condition?

Research Questions



- How do mass, condition, hormone levels, and activity budgets change seasonally in reproductive and 'skip' females?

Research Questions



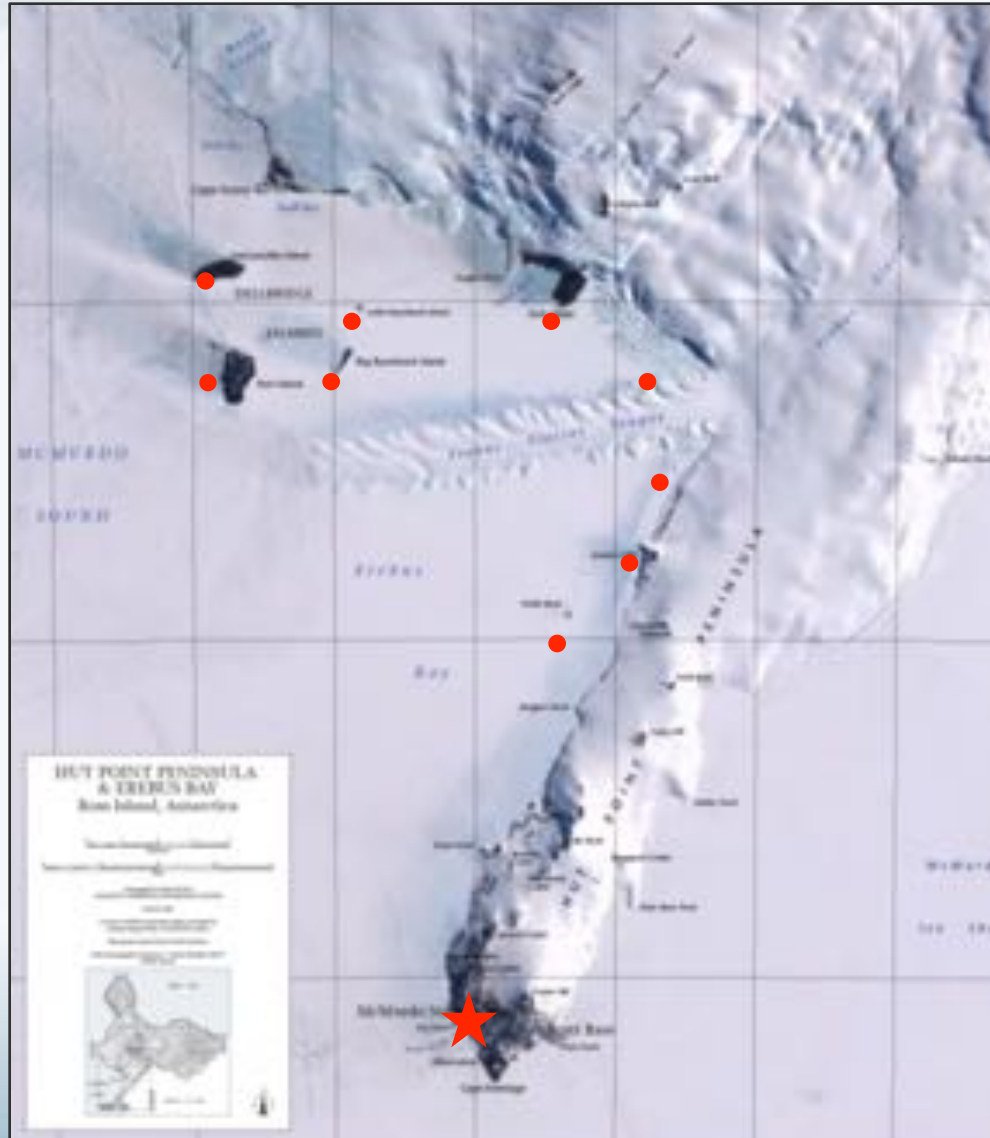
- When does active gestation start, and what factors influence pregnancy success?

Field work!

Daily Snowmobile trips



Study Population



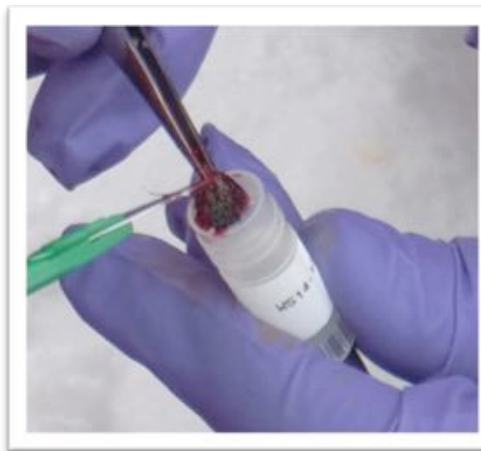
Capturing and calming the seal!



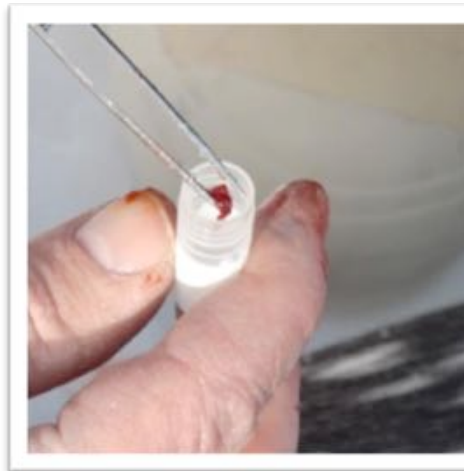
Weighing and measuring the seal



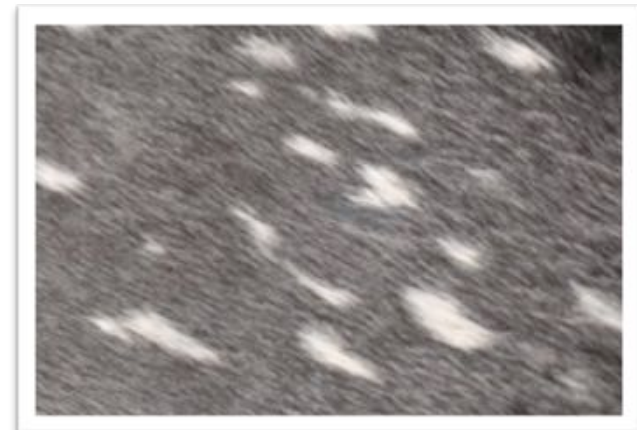
**Collecting
samples...
Skin, Blood,**



**Muscle,
Blubber,**



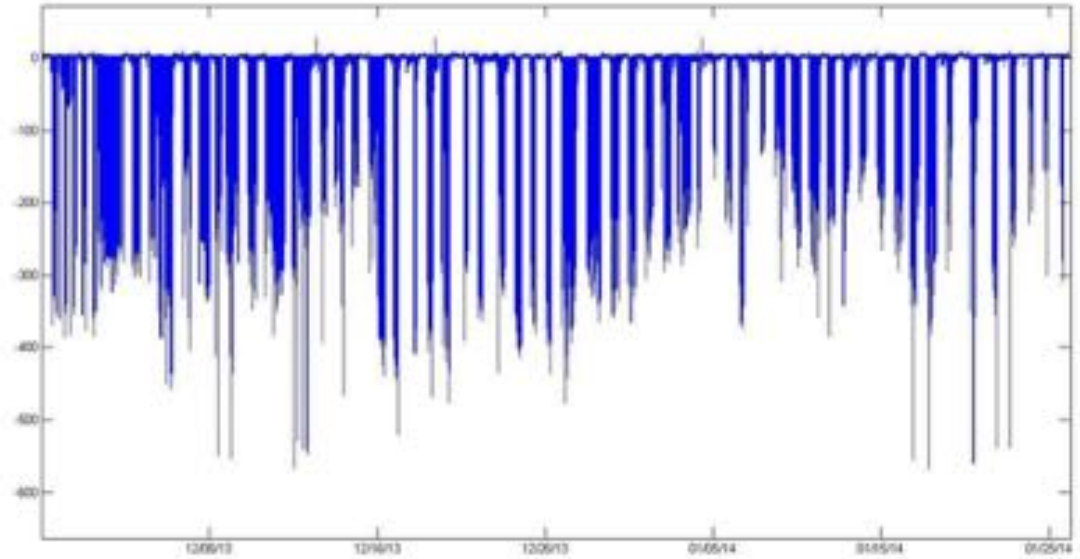
**Whisker and
Fur**



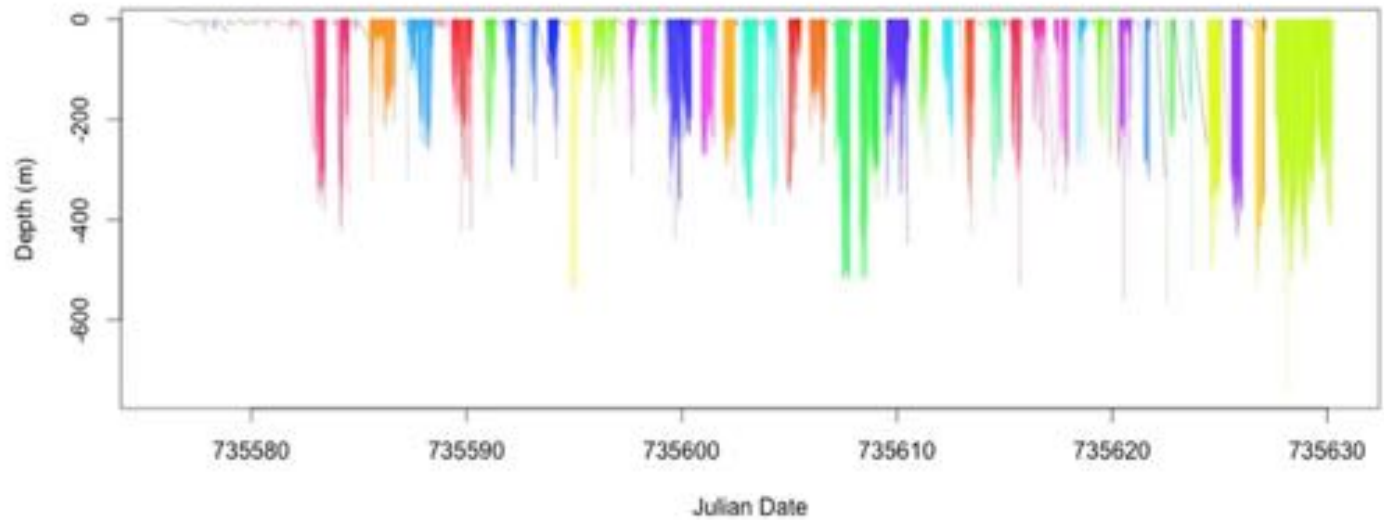
Tagging



Dive Bouts



Dive Bouts 1541



Looking for pregnancy



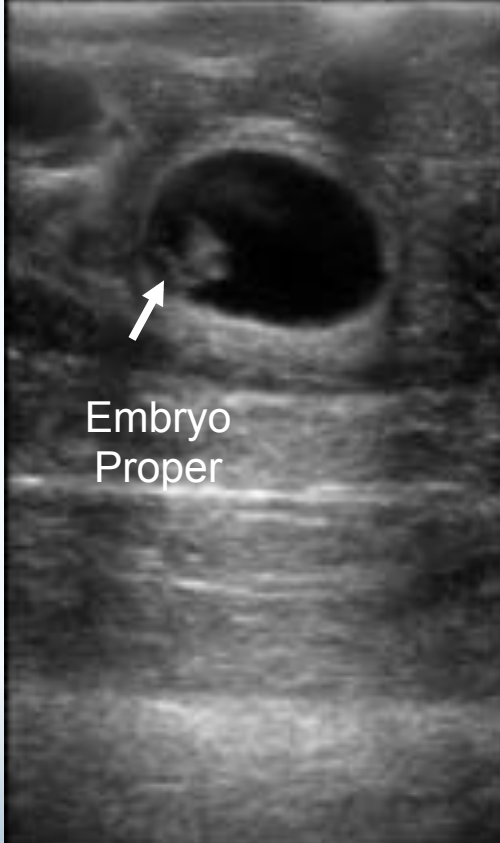
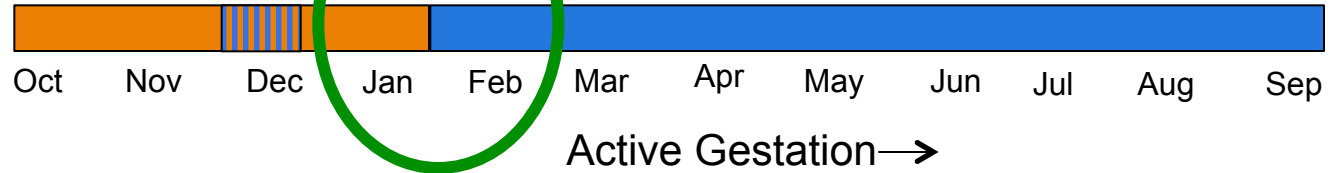
**With an
ultrasound**



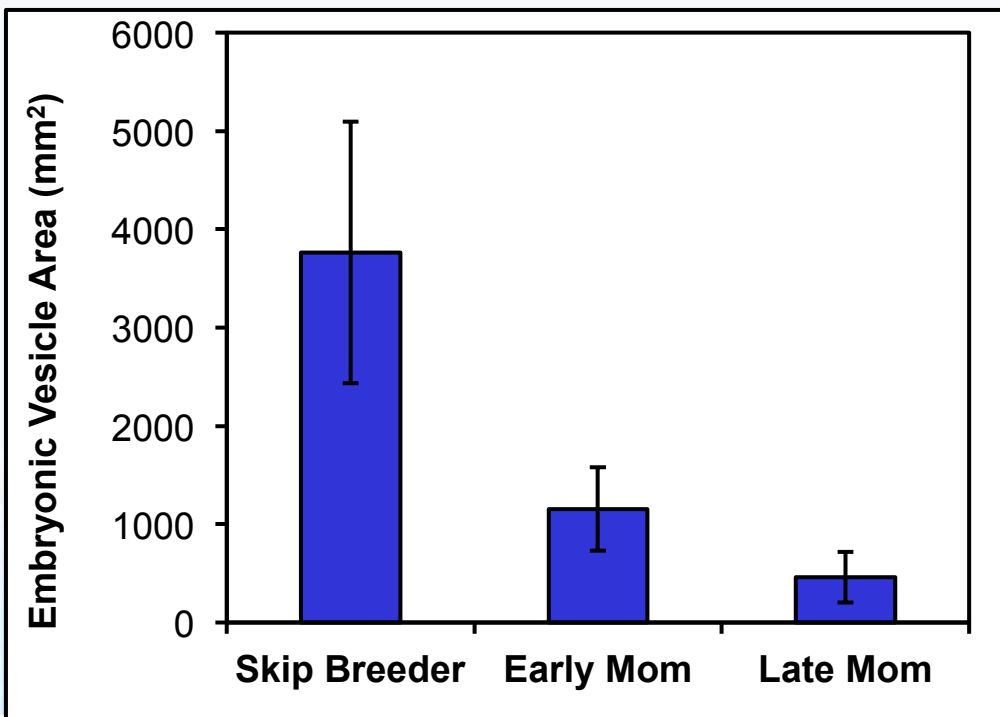
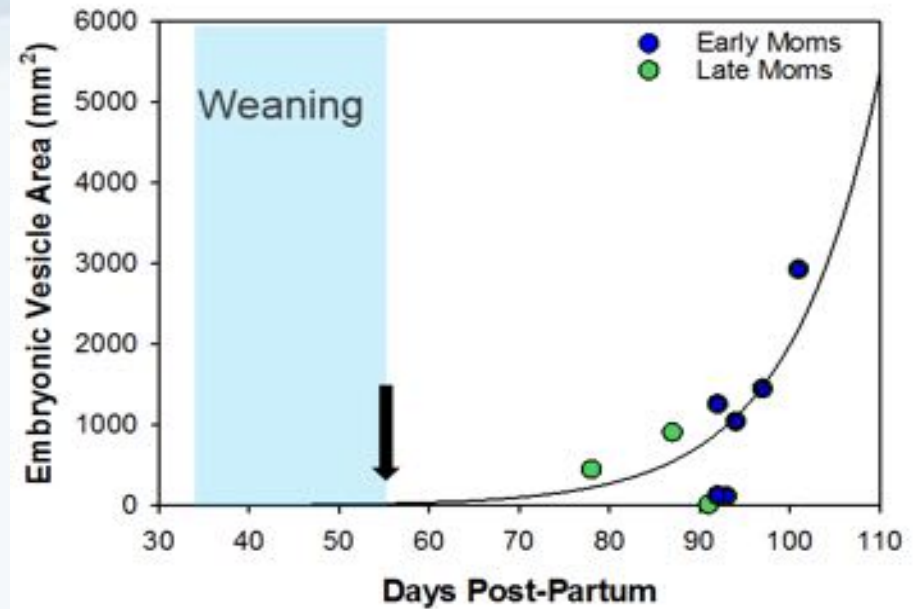
Embryo attachment?

- Actively Foraging
- Hauled-out on Ice

Pupping Breeding Molt



Preliminary data



What it shows

Questions

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Teachers: Join PolarTREC!

www.polartrec.com/about/join

Every teacher can participate in different ways:

- **Following Expeditions**
- **Participate in PolarConnect Events**
- **Join the Polar Education Email List**
- **Become a PolarTREC Teacher!**



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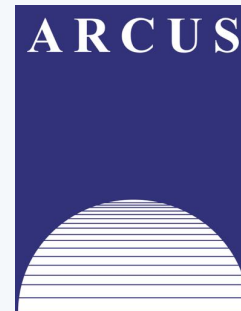
Upcoming Events

Watch for and register for upcoming events at [www.polartrec.com!](http://www.polartrec.com)

Thank You!

An archive of the event will be available shortly.

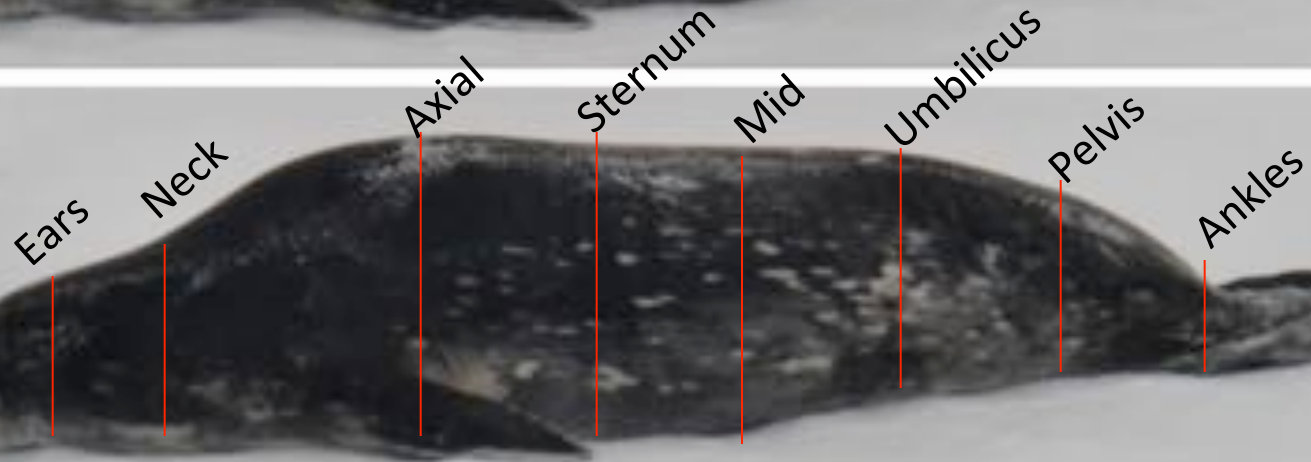
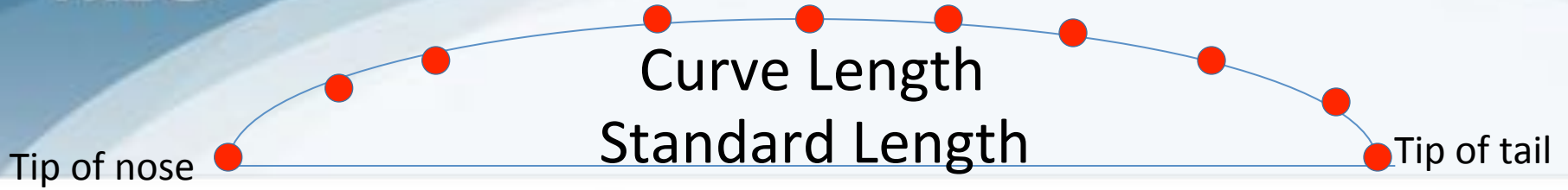
<http://www.polartrac.com/polar-connect/archive>



Extra slides

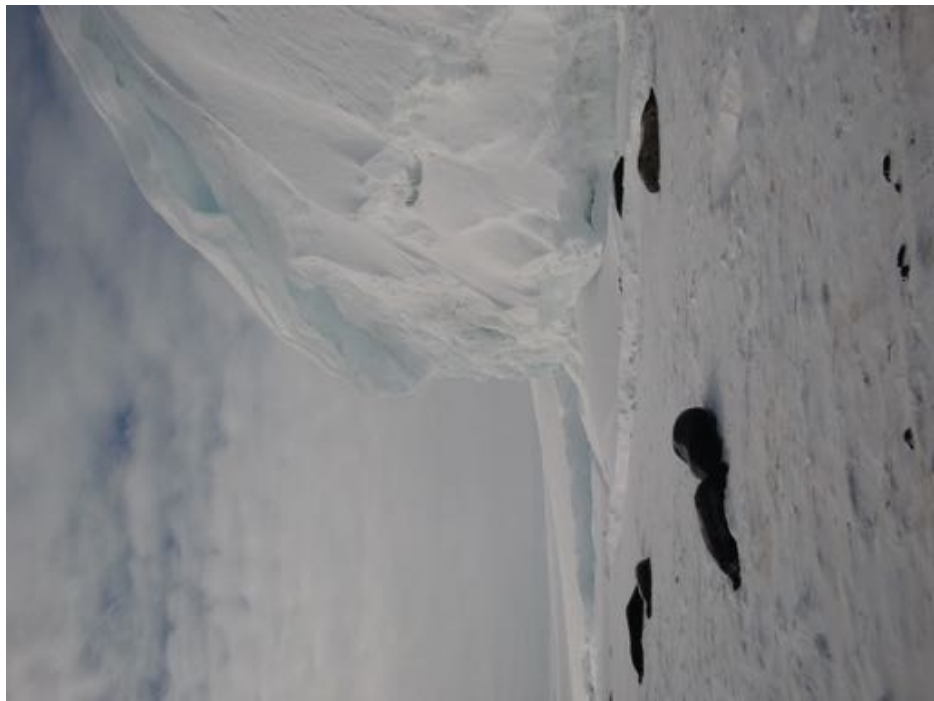
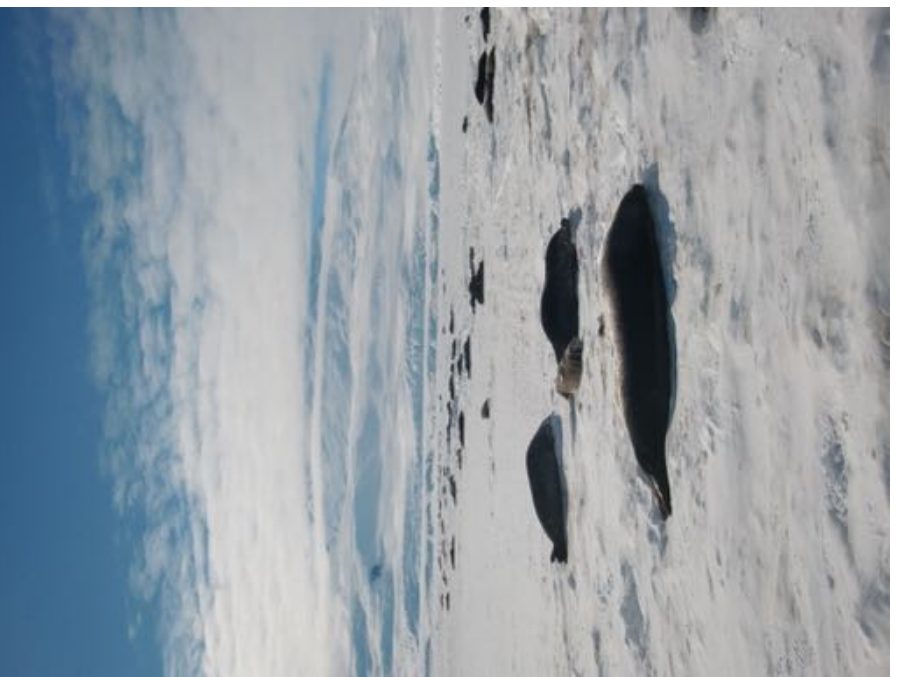


Measurement



Blood and tissue samples!







Capturing and calming the seal!





UNIVERSITY
of ALASKA
ANCHORAGE



P!NK PALACE
Fam!ly of Museums
L!VELY LEARNING FOR ALL!



**Field work
begins!**

**Looking for
our seals**

**Early moms
Skip females
Late moms**





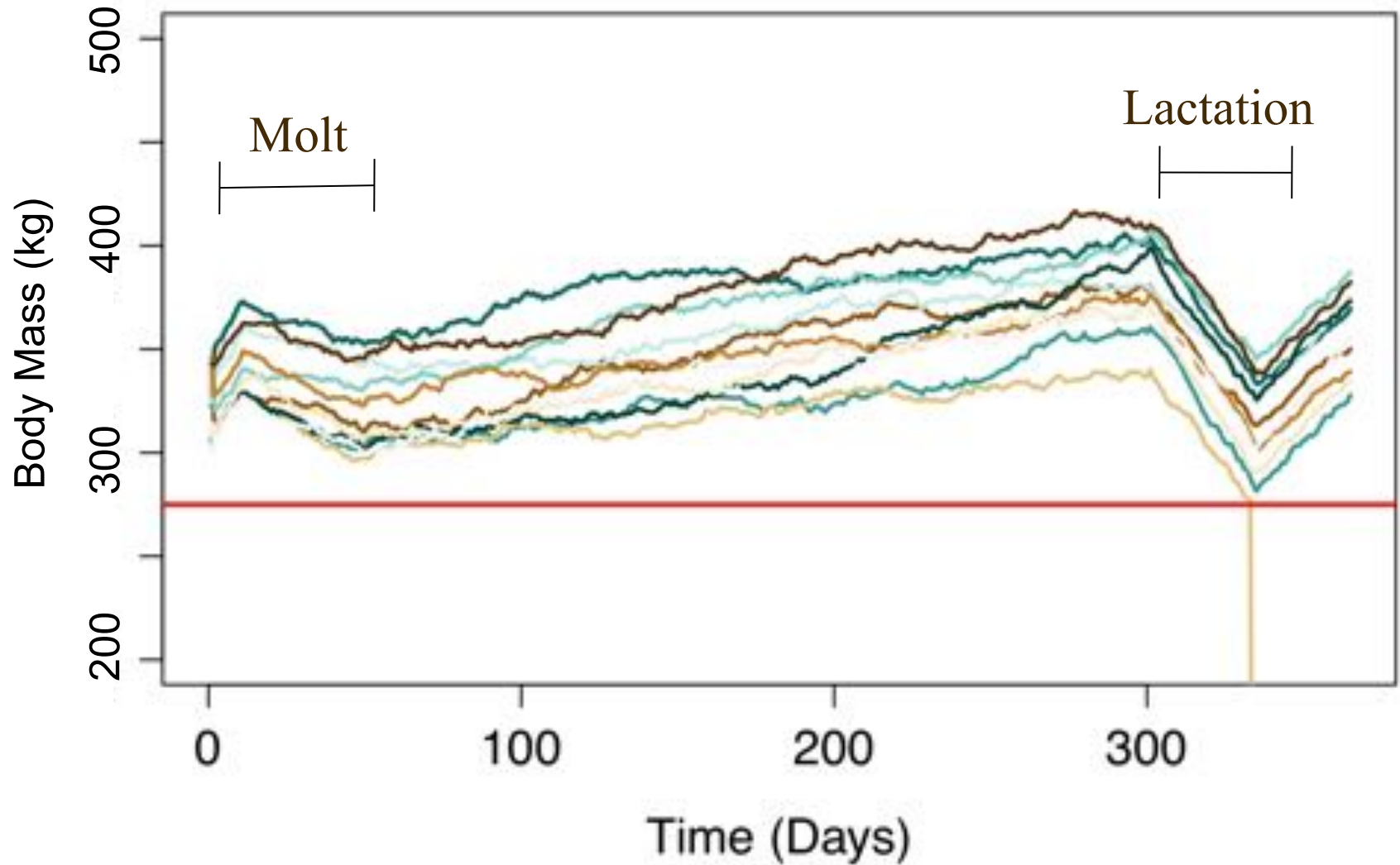








Energetics Model



Dressing the part!

