

Welcome to *PolarConnect*



Fire and Carbon in Siberian Forests

With PolarTREC Teacher Amanda Ruland
& Team Researchers Jennie DeMarco & Jill Young

8 July 2019

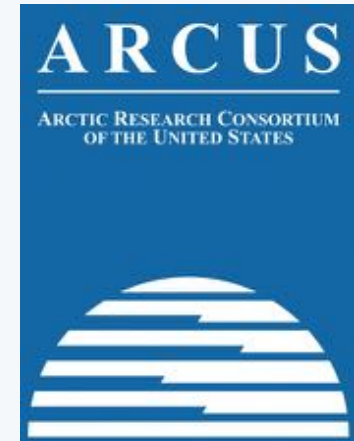
Participant Introductions

**In the Chat box, please introduce yourself
by typing in your:**

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

What is PolarTREC?

- Since 2004, the Arctic Research Consortium of the United States (ARCUS), a non-profit organization, has been administering the PolarTREC Program.
- PolarTREC is professional development for U.S. middle and high school teachers and informal STEM educators. They are paired with researchers for 3-6 week research experiences in the polar regions.
- Over 150 educators from around the United States have joined 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.



25 Years of Connecting Arctic Research
www.arcus.org

Questions

During the Presentation:

- Type your question into the text chat box and we will insert your question when the right opportunity arises.
- Don't worry! If we haven't been able to ask your question during the presentation, we will save it for the end.
- At the end of the presentation, we often open the webinar up to family and friends who want to say "Hello" or have any last minute questions for the presenters.

The logo for POLAR TREK features the words "POLAR" and "TREK" in a bold, white, sans-serif font. The text is set against a blue circular graphic that resembles a stylized globe or a compass rose. The background of the entire image is a blue-toned photograph of a snowy, mountainous landscape.

**POLAR
TREK**

www.polar trek.com

**Teachers and Researchers Exploring
and Collaborating**

2019 PolarTREC Teacher Cohort



Expedition Map





**POLAR
TREC**

www.polartrac.com

<https://www.polartrac.com/expeditions>



Fire and Carbon in the Siberian Arctic

Antarctic VS Arctic

Continent surrounded by ocean



VS

Ocean surrounded by continents



Icebergs year round, & may measure in excess of 25 cubic miles.

Ice

Icebergs are seasonal & are measured in cubic yards.



Average Annual Temperature

Ice sheet increased 1% every decade since 1979.

Ice sheet decreased 4.2% every decade since 1979.

Plants & Animals

No tundra or tree lines.

Tundra is developed & marked by a tree shrub-line.

No terrestrial mammals

Many terrestrial mammals

Marine mammals include whales, porpoises, & seals.



People & Population

No groups of native people.

There are native people with a long cultural record.

The population south of 60°S is sparse & occurs at scattered scientific stations.

Human population north of 60°N is in excess of 2 million with modern settlements.

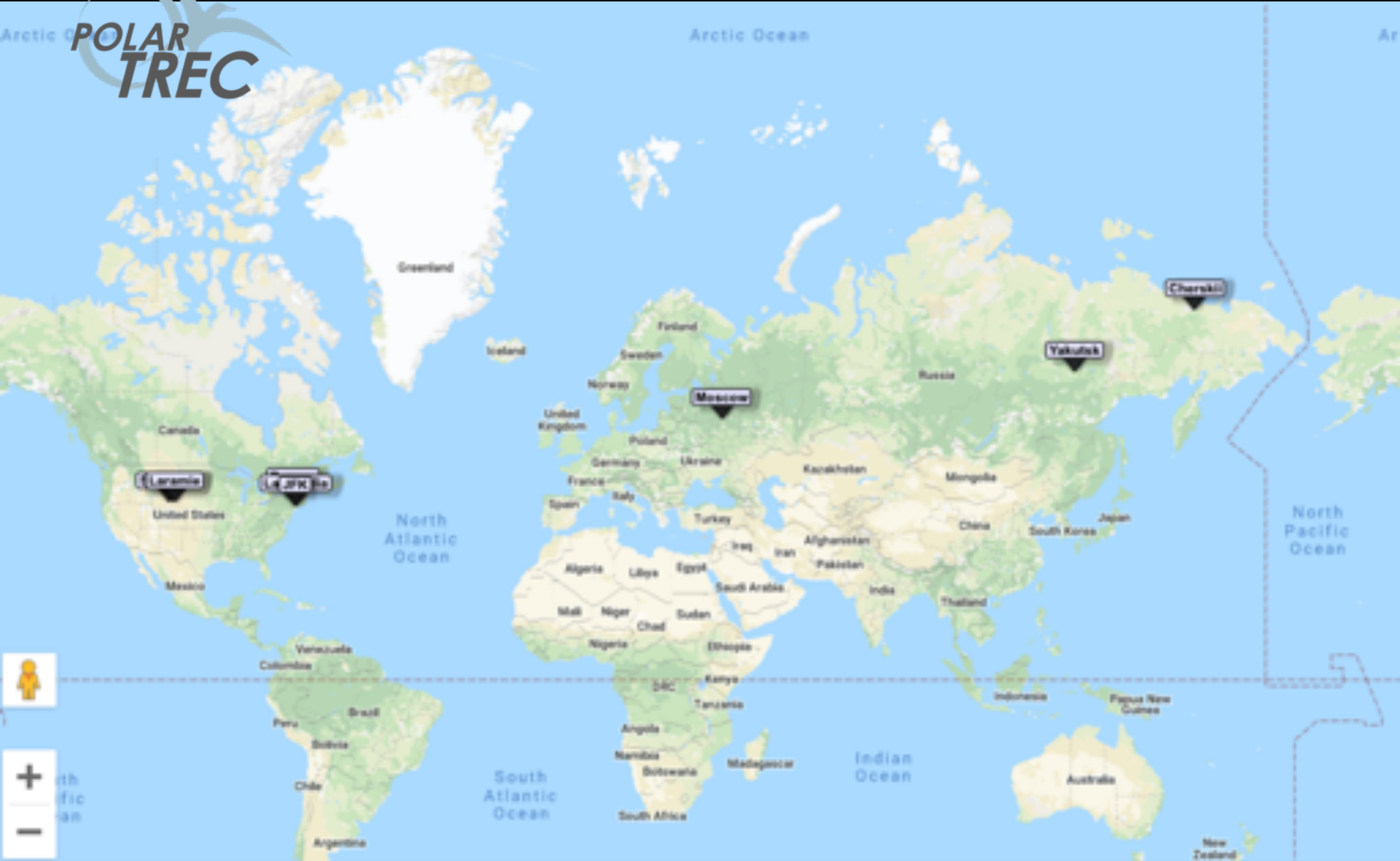


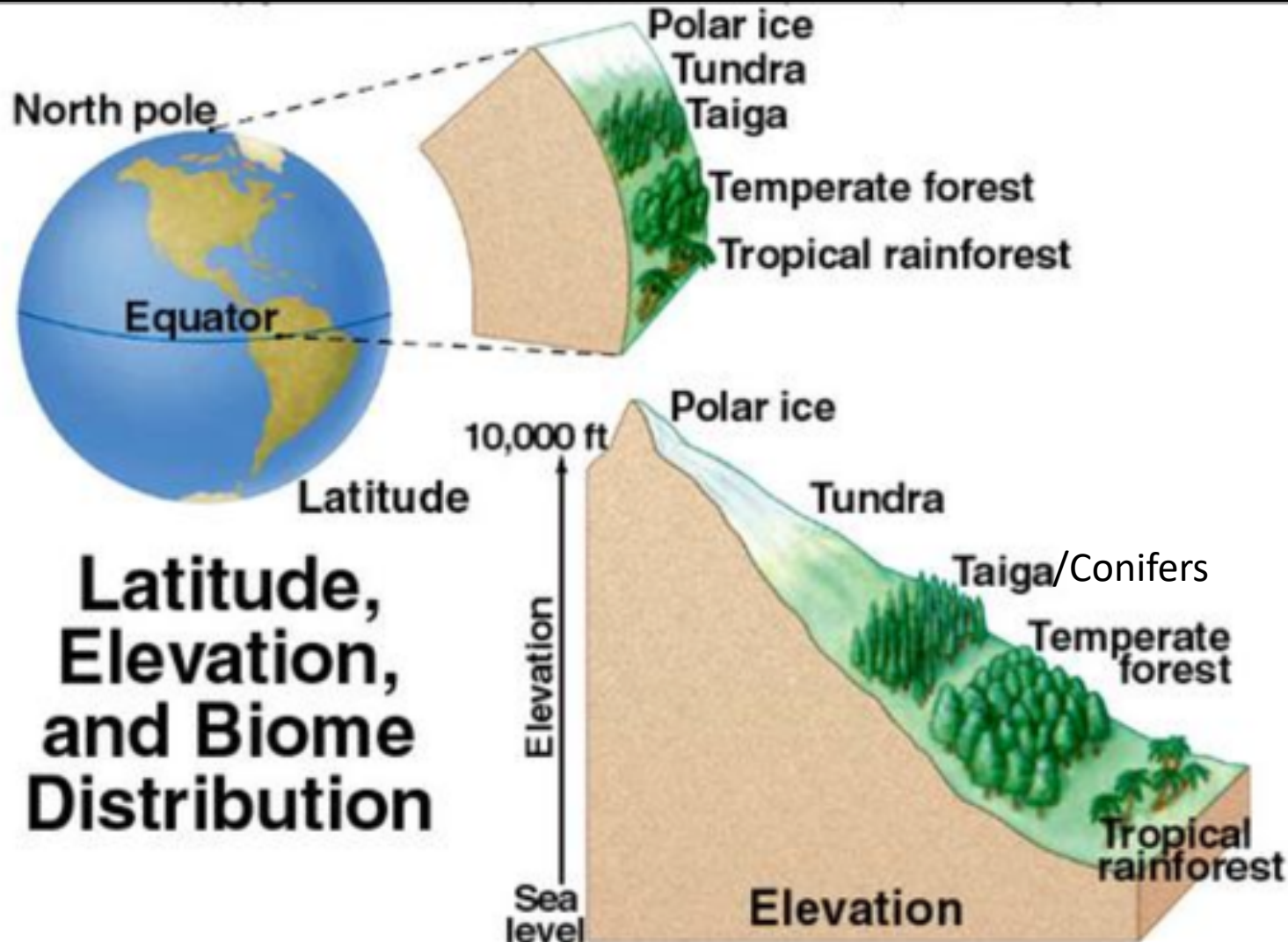
Bug Shirt















**POLAR
TREC**



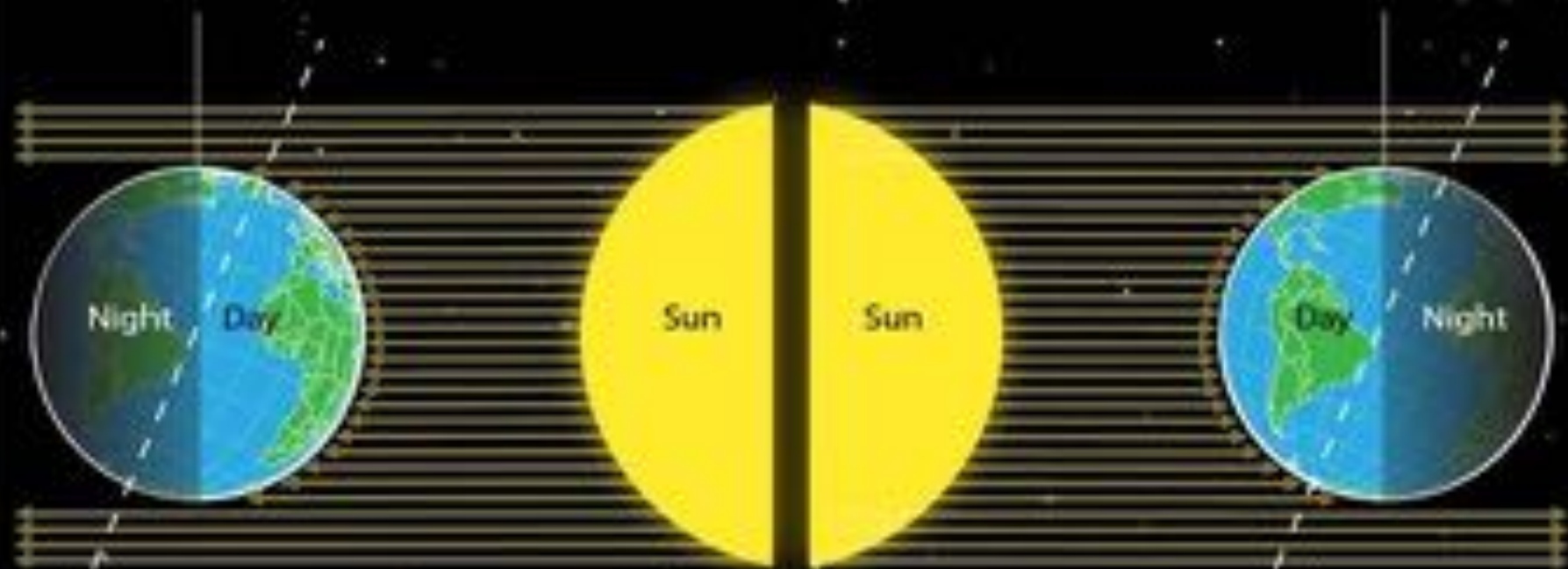




Seasons

Summer in Northern Hemisphere
Winter in Southern Hemisphere

Winter in Northern Hemisphere
Summer in Southern Hemisphere



(not to scale)







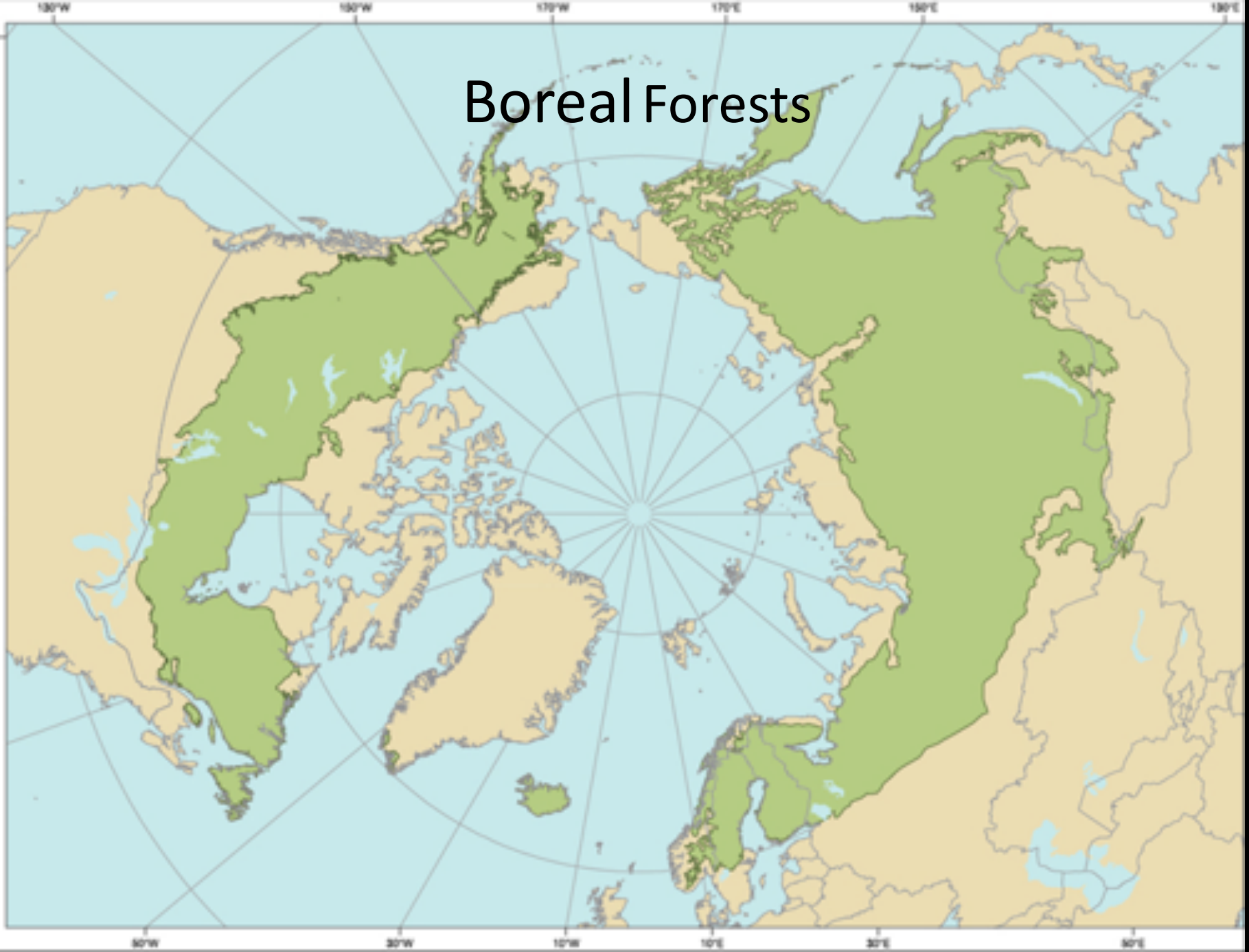






June 2019 Arctic Circle, Siberia						Check
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						72°
2 ☀️ 80°	3 ☀️ 78°	4 ☀️ 76°	5 ☁️ 56°	6 ☀️ 62°	7 ☁️ 66°	8 ☀️ 62°
9 ☀️ 72°	10 ☀️ 86°	11 ☀️ 85°	12 ☀️ 78°	13 ☀️ 64°	14 ☁️ 62°	15 ☀️ 66°
16 ☀️ 70°	17 ☀️ 64°	18 ☁️ 65°	19 ☀️ 74°	20 ☀️ 82°	21 ☀️ 77°	22 ☁️ 70°
23 ☁️ 70°	24 ☀️ 80°	25 ☀️ 78°	26 ☀️ 78°	27 ☀️ 68°	28 ☁️ 68°	29 ☀️ 70°
30 ☁️ 58°			PARTLY CLOUDY THU THU	SUNNY THU THU THU	CLOUDY FRI	RAINY SAT

Boreal Forests



**POLAR
TREC**





Larch are Deciduous Conifers



























6/25/19 BP 1985 T1 Plot 25

	deers	open	micro	AKP Plot
0	2	closed	hummock	27
5	7	closed	hummock	23
10	5	closed	depression	16
15	7	closed	hummock	20
20	8	closed	hummock	24

	card diam. decay
I	(0) 8.56 4
II	(2) 8.8 3
III	
IV	
V	

NE	epupra 15	vacant 2	emp — 30
	plapp 25	chaga 2	vacant 15
	grass 4	card 4	clapp 3
NW	chagra 15	epupra 6	vacant 30
	slapp 2	aulpa 8	grass 15
	plapp 20	card 4	
SE	clau 8	vacant 8	chagra 29
	emp — 6	grass 10	aulpa 10
	plapp 15	card 10	clapp 4
SW	plapp 47	vacant 15	chagra 20
	grass 5	card 6	epupra 4
	clapp 2	squac 1	













Join PolarTREC!

www.polartrac.com/about/join

Everyone can participate in different ways:

- **Follow Expeditions**
- **Participate in PolarConnect Events**
- **Join the Polar Education Email List**
- **Check out the great resources**
- **Become a PolarTREC Teacher or Researcher**
- **Become a member of ARCUS**

Thank You!

An archive of the event will be available shortly.

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



25 Years of Connecting Arctic Research
www.arcus.org