

# How are your berries? 2015

Jerry Hupp

U.S. Geological Survey

Kira Wilkinson

Alaska Native Science and Engineering Program, UAA

Mike Brubaker and Jeni Williamson

Alaska Native Tribal Health Consortium

# Are Berries Indicators of Climate Change?

Timing of snow melt

Winter snow cover

Spring precipitation

Coastal flooding

Spring temperatures

Invasive species

Permafrost loss

Summer precipitation

Wind during  
pollination

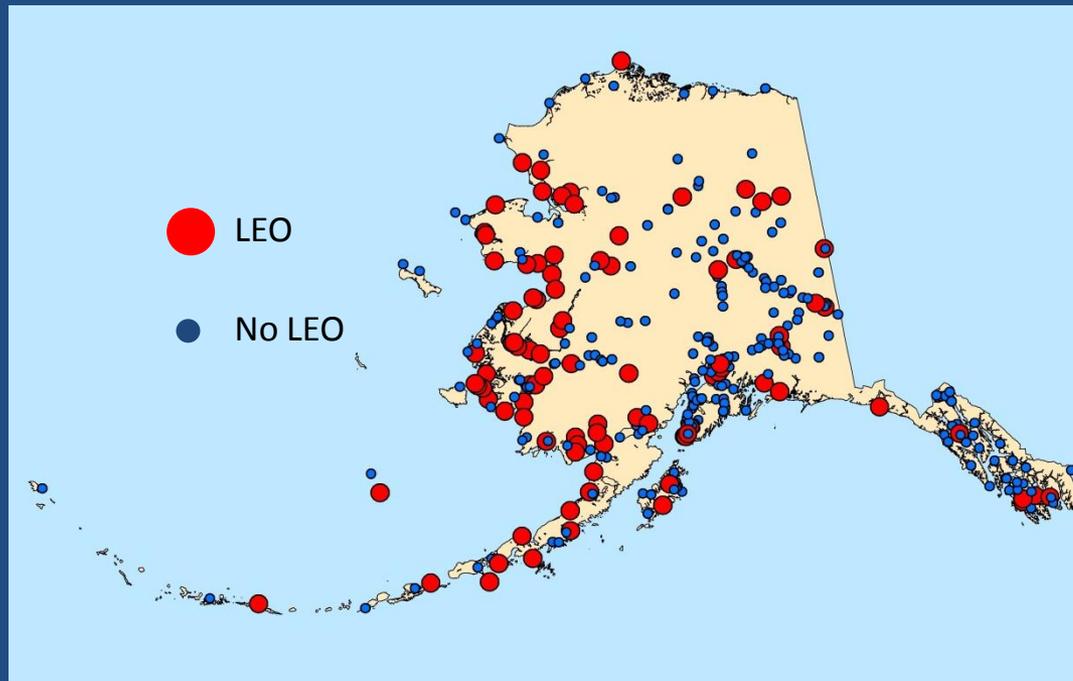
Summer temperatures



# How are your berries?

## 2013

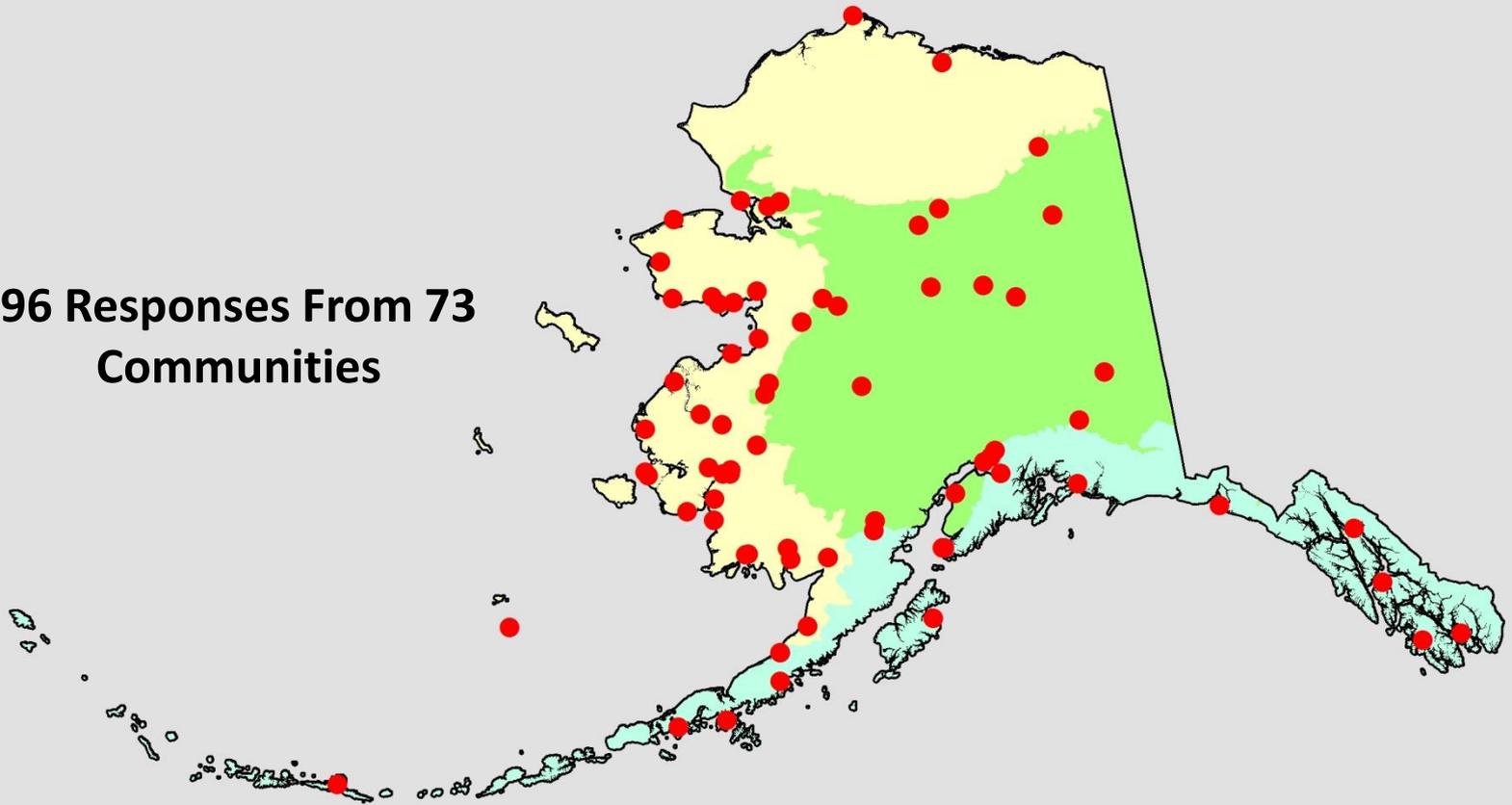
We sent a survey to the LEO community and distributed surveys at ATCEM and AFE



- Which of 16 species of berries did people pick?
- Have you seen changes in berry harvests in the past decade?

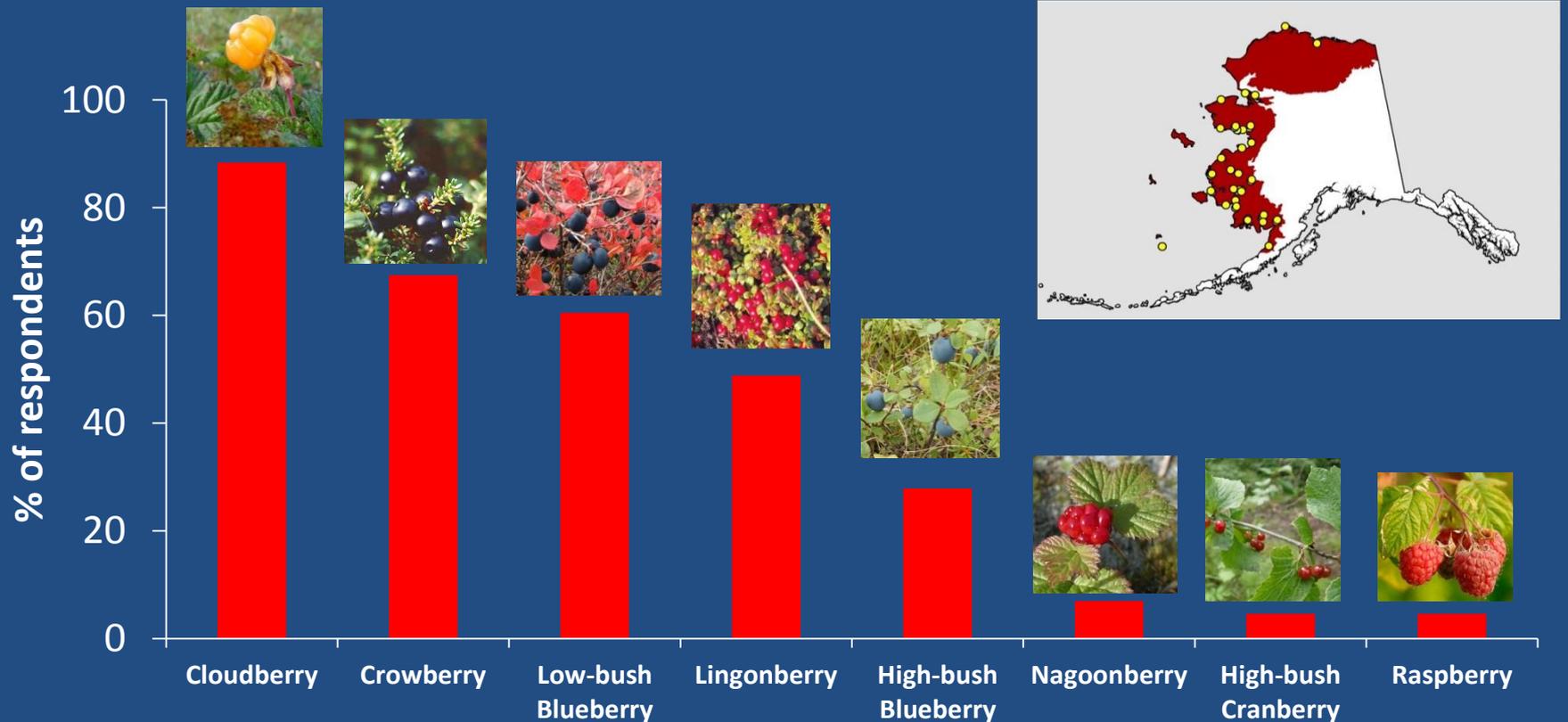
## Communities That Completed Surveys

96 Responses From 73  
Communities

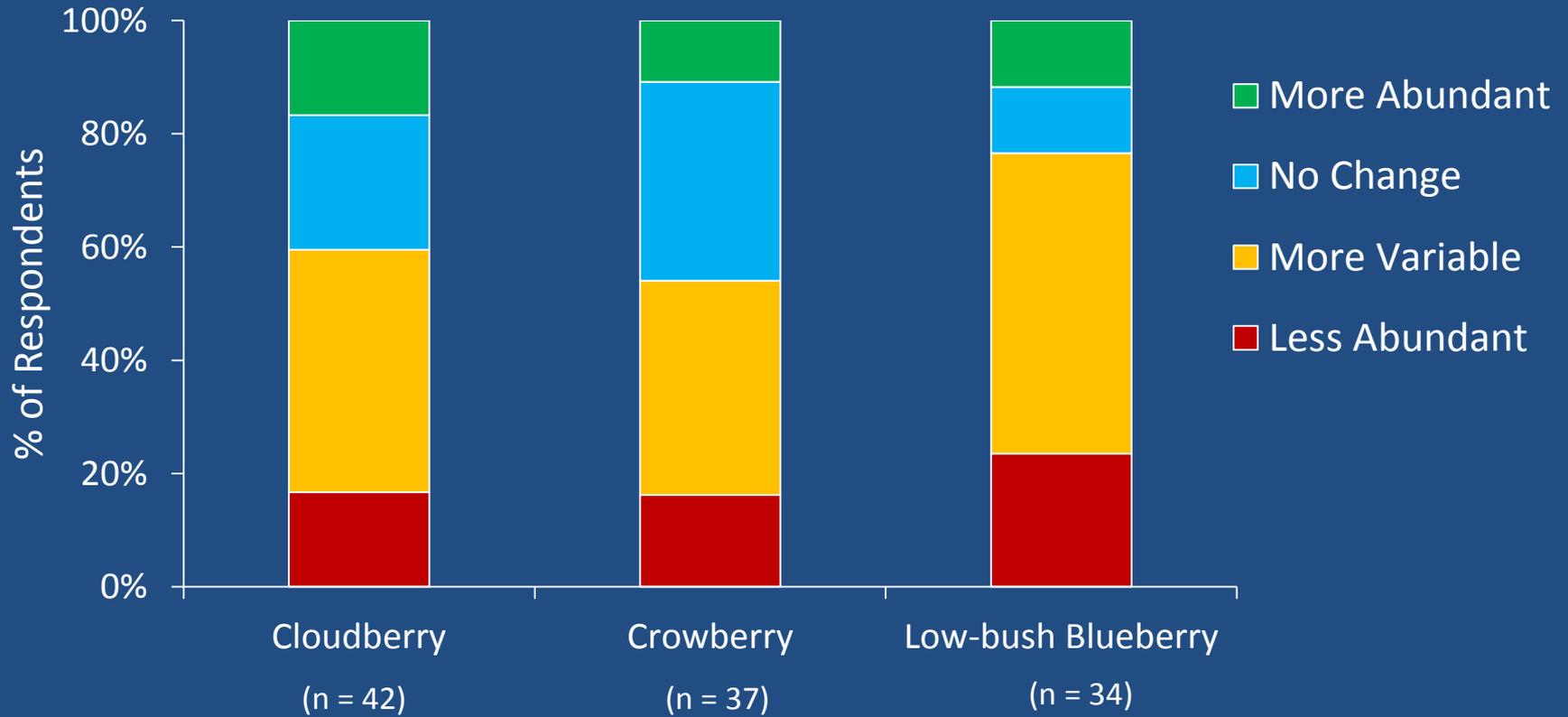


# Berries Identified as Very Important to Communities in the Polar Ecoregion

43 Responses from 34 communities



# Polar Ecoregion





ORIGINAL RESEARCH ARTICLE

## How are your berries? Perspectives of Alaska's environmental managers on trends in wild berry abundance

Jerry Hupp<sup>1\*</sup>, Michael Brubaker<sup>2</sup>, Kira Wilkinson<sup>3</sup> and Jennifer Williamson<sup>2</sup>

<sup>1</sup>U.S. Geological Survey, Alaska Science Center, Anchorage, AK, USA; <sup>2</sup>Alaska Native Tribal Health Consortium, Anchorage, AK, USA; <sup>3</sup>Alaska Native Science and Engineering Program, University of Alaska Anchorage, Anchorage, AK, USA

- Different berries are important in different regions of Alaska
- 67% of people reported that at least one berry that was very important to their community had either declined in abundance, or become more variable in the past decade.
- For 7 of 12 berries on the survey, the number of people that reported abundance had declined or become more variable was greater than the number that reported no change or increased abundance.

# Observations from LEOs and Others

Cloudberry  
(Salmonberry)



If it is hot and dry in June there are less berries. (Andreafsky)

With a long hot and dry July, they are smaller (Eek)

If not a lot of snow and a dry spring they will not have a good year  
(Galena)

When the weather is dry there will hardly be any (Lower Kalskag)



## What's Next?



## How are your berries 2015 survey

- Upcoming online survey.
- Ask about your harvest of seven berries in 2015 and conditions that affected harvest.

# Cloudberry

**Other names:** Salmonberry, Naunraq (Yup'ik), Aqpik (Inupiaq)

**How does this berry grow:** It is close to the ground, usually in tundra and bog. There is a single berry on the plant. Its color can vary from orange to red.

**Scientific name:** *Rubus chamaemorus*



\*Did you pick this berry in 2015?

- Yes
- No
- We tried to, but there weren't enough to pick

# Cloudberry



\*How was your harvest of this berry in 2015?

- It was very good. It was one of the best years that I can remember
- Better than average, but not as good as some years
- It was about average
- We had some berries, but fewer than average
- There were hardly any berries. It was one of the worst years that I can remember

Do you have any other observations for this berry that you would like to share?

## Low-bush Cranberry

**Other names:** Lingonberry, Red Berries, Tumalqliq (Yup'ik), Netl' kwntsan (Athabascan), Kipminaq (Inupiaq), Kiikax^ (Unangax)

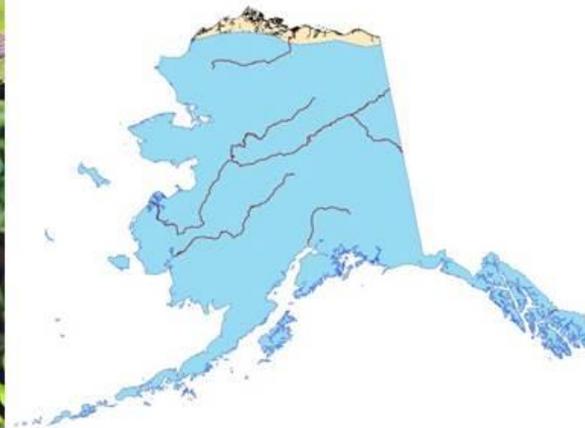


## Low-bush Blueberry (knee-high or shorter)

**Other names:** Bog Blueberry, Dwarf Blueberry, Sur'aq (Yup'ik), Tujija (Athabaskan), Ux^iidgix^ (Unangax), Subaq (Inupiaq)



Low-bush (Bog) Blueberry  
Distribution (in blue)



We will ask you about High-bush Blueberry later in the survey. High-bush Blueberry is a taller shrub that mainly grows in southern Alaska.

## High-bush Blueberry (waist-high or taller)

**Other names:** Huckleberry, Ts'éekáxk'w (Tlingit), Sur'avak (Yup'ik), Tl'asts'eni (Athabaskan)



High-bush (Alaska) Blueberry  
Distribution (in blue)



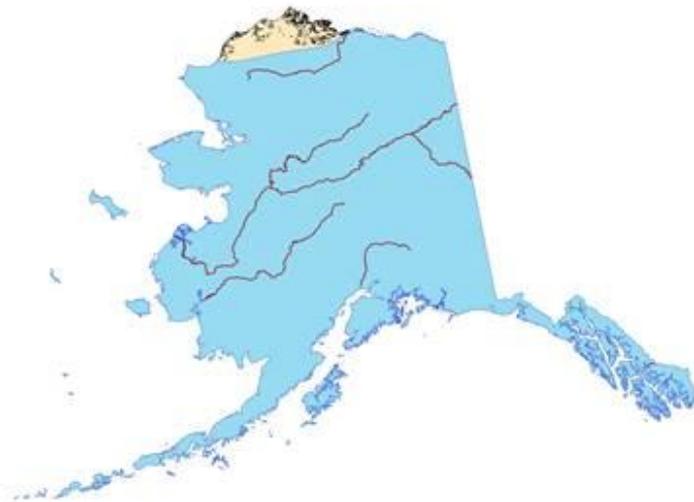
High-bush blueberry is taller than the Low-bush blueberry that we asked you about earlier in the survey. High-bush blueberry is mainly in southern Alaska and in some areas of western Alaska. It mainly grows in coastal forests and meadows.

## Crowberry

**Other names:** Blackberry, Mossberry, Paunbaq (Inupiaq), Tan'gerpak (Yup'ik), Dzilnolt'ars / Naht'aezi (Athabaskan), Aangsux^ (Unangax), Xéel'I (Tlingit)



Crowberry (Blackberry)  
Distribution (in blue)

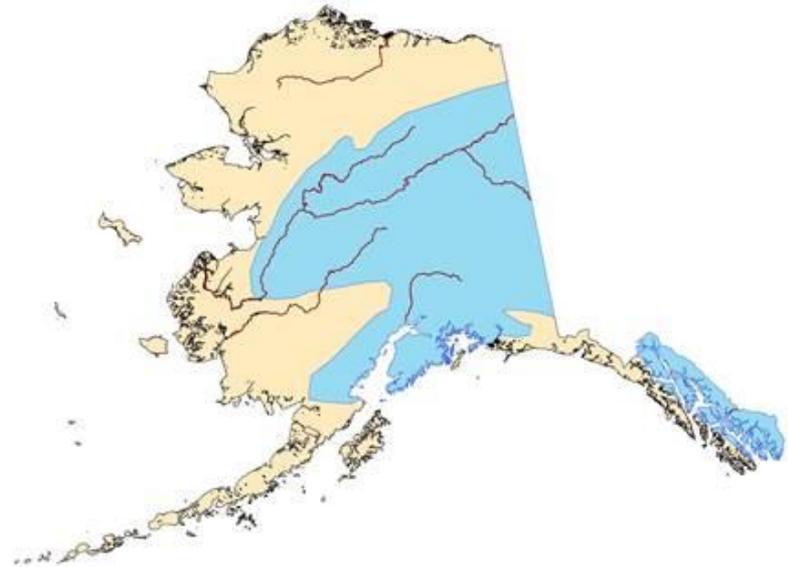


# Raspberry

**Other names:** Red Raspberry, Dwhnikotl' (Athabascan), Neeldaggay (Koyukon), Tléñw yádi (Tlingit), Puyuraarpak (Yup'ik)



Raspberry  
Distribution (in blue)



# Salmonberry

**Other names:** Was'x'aan tléicu (Tlingit), Aahmaadan (Unangax), I'tim u'lgux (Aleut), Nkaal (Athabascan)

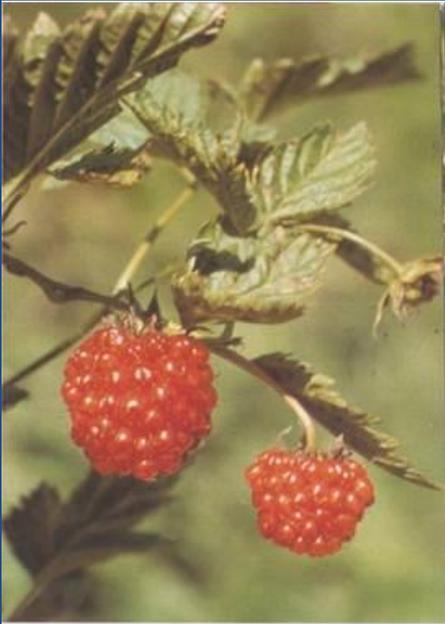
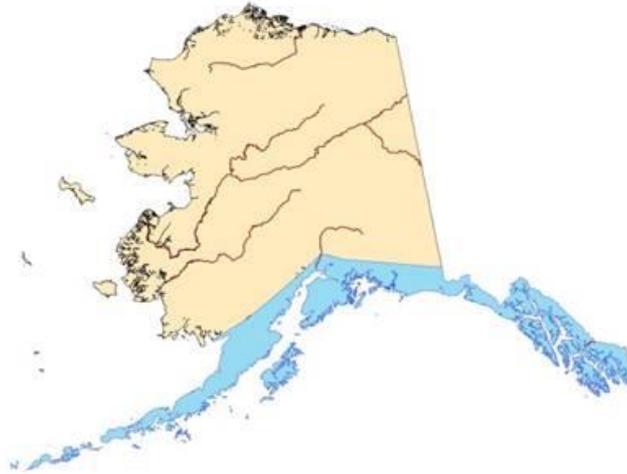


Photo by V. Pratt

## Salmonberry Distribution (in blue)



Although they are both called Salmonberry by many people, this berry is different from the one that we called Cloudberry earlier in the survey. This Salmonberry only grows in southern Alaska and grows on tall canes that can be up to seven feet tall.



# What's Next?



## How are your berries 2015 survey

- Look for patterns common to regions or berries.
- Raise awareness of the importance of wild foods to rural Alaska.
- Plan for food security.
- Guide future research.

Thanks!



ALASKA NATIVE  
TRIBAL HEALTH  
CONSORTIUM



The eyes,  
ears, and voice  
of our changing  
environment.



ALASKA NATIVE  
TRIBAL HEALTH  
CONSORTIUM