

# BOTANICAL EXPLORATION OF VICTORIA ISLAND, NUNAVUT CANADIAN ARCTIC ARCHIPELAGO



Lynn Gillespie



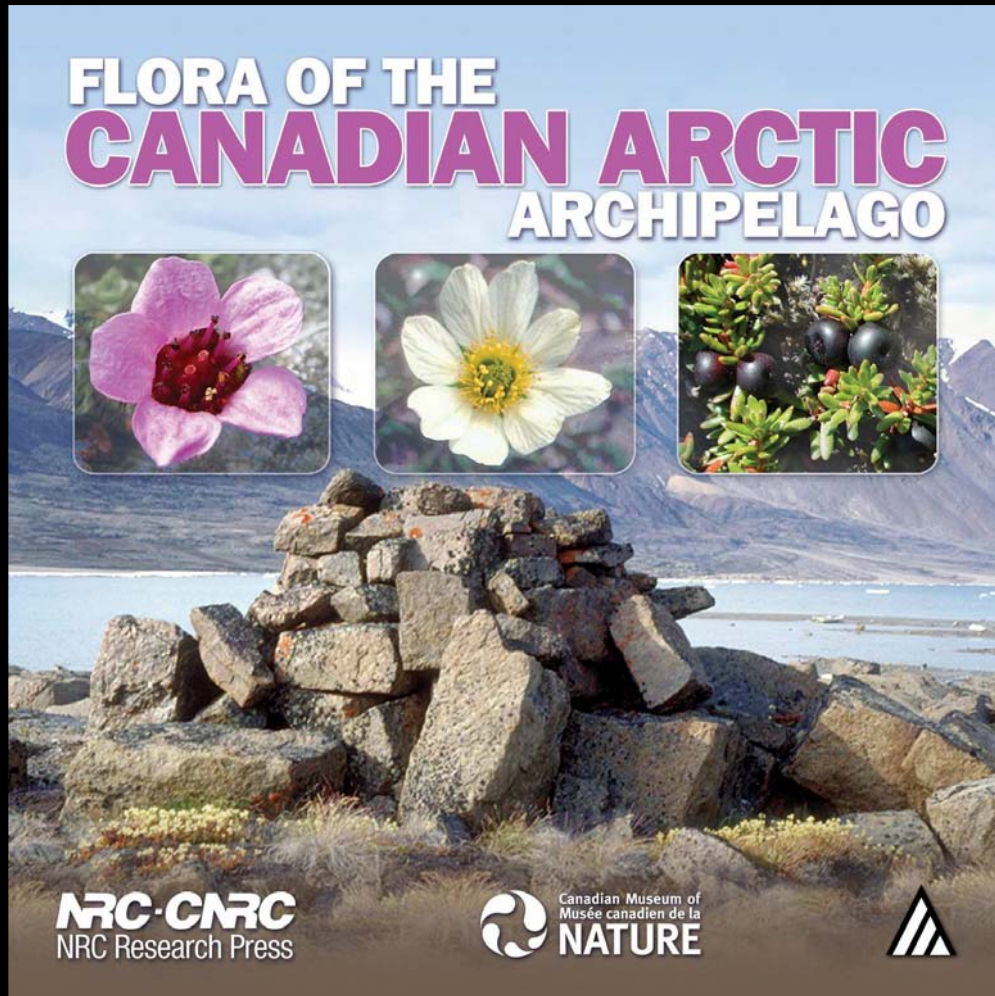
Canadian Museum of  
Musée canadien de la  
**NATURE**

# Flora of the Canadian Arctic

- patterns of species diversity
- 2008 fieldwork on Victoria Island
- fieldwork results and new records
- future research



# Flora of the Canadian Arctic Archipelago (CAA)

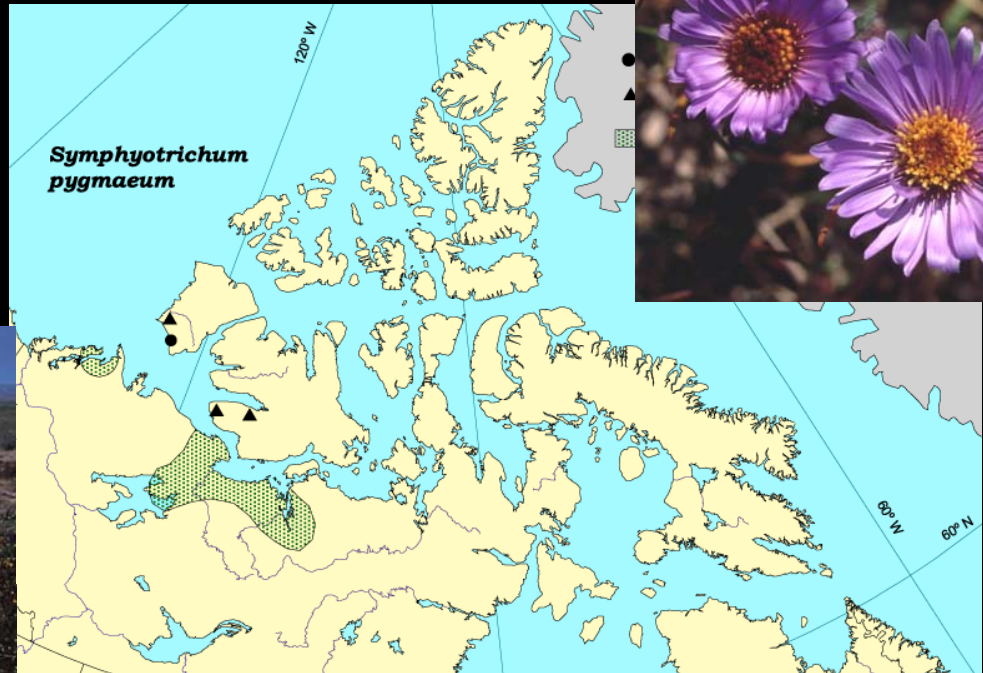


- Aiken et al. 2007
- CD published by NRC Press
- interactive identification guide & descriptions of 349 vascular plants

# Flora of the Canadian Arctic Archipelago


for each species:

description, nomenclature, cytology,  
distribution, habitat, ecology,  
traditional knowledge

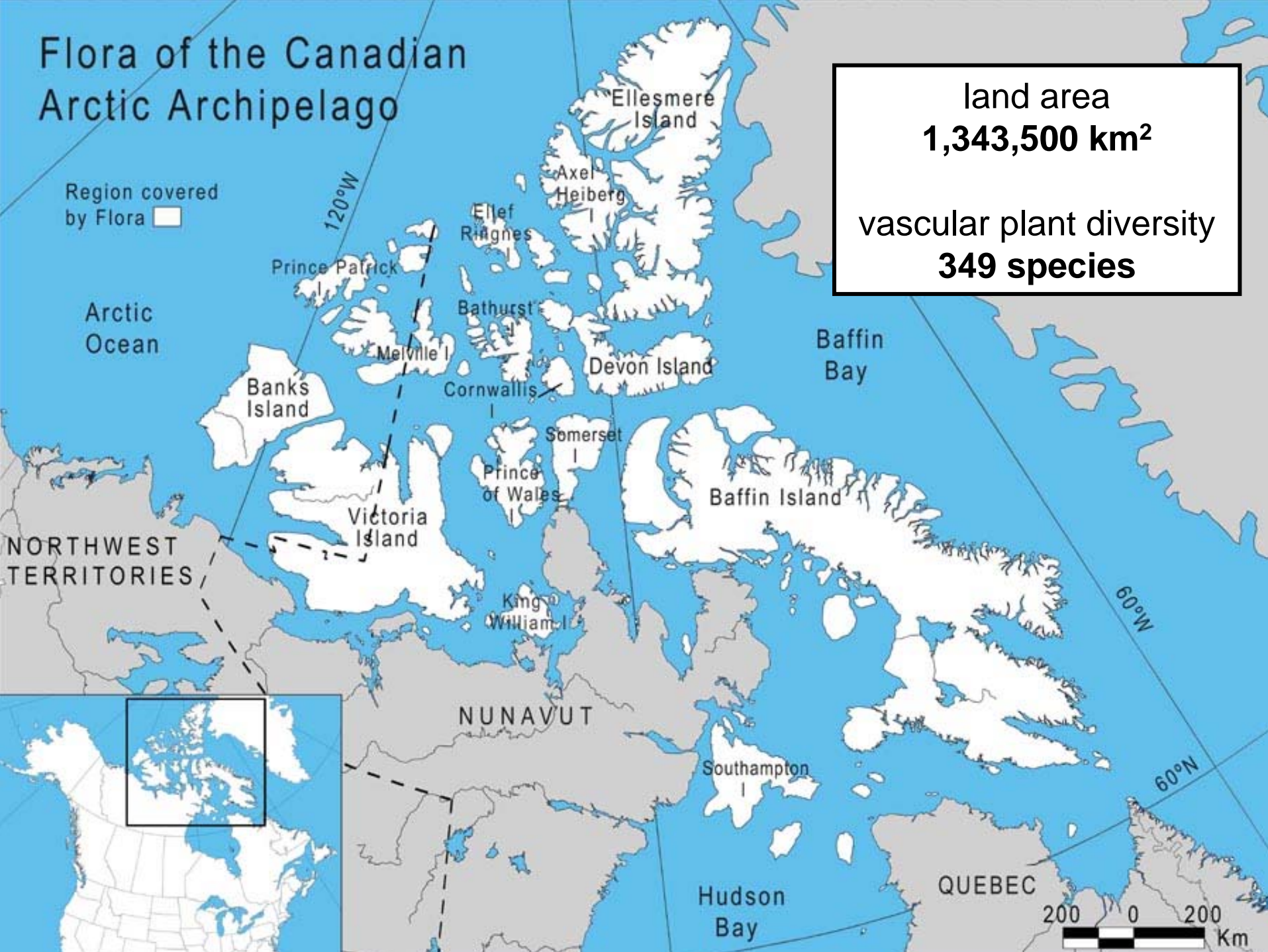


*Symphyotrichum pygmaeum* - Pygmy Aster

# Flora of the Canadian Arctic Archipelago

Region covered by Flora 

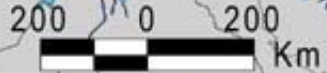
land area  
**1,343,500 km<sup>2</sup>**  
vascular plant diversity  
**349 species**



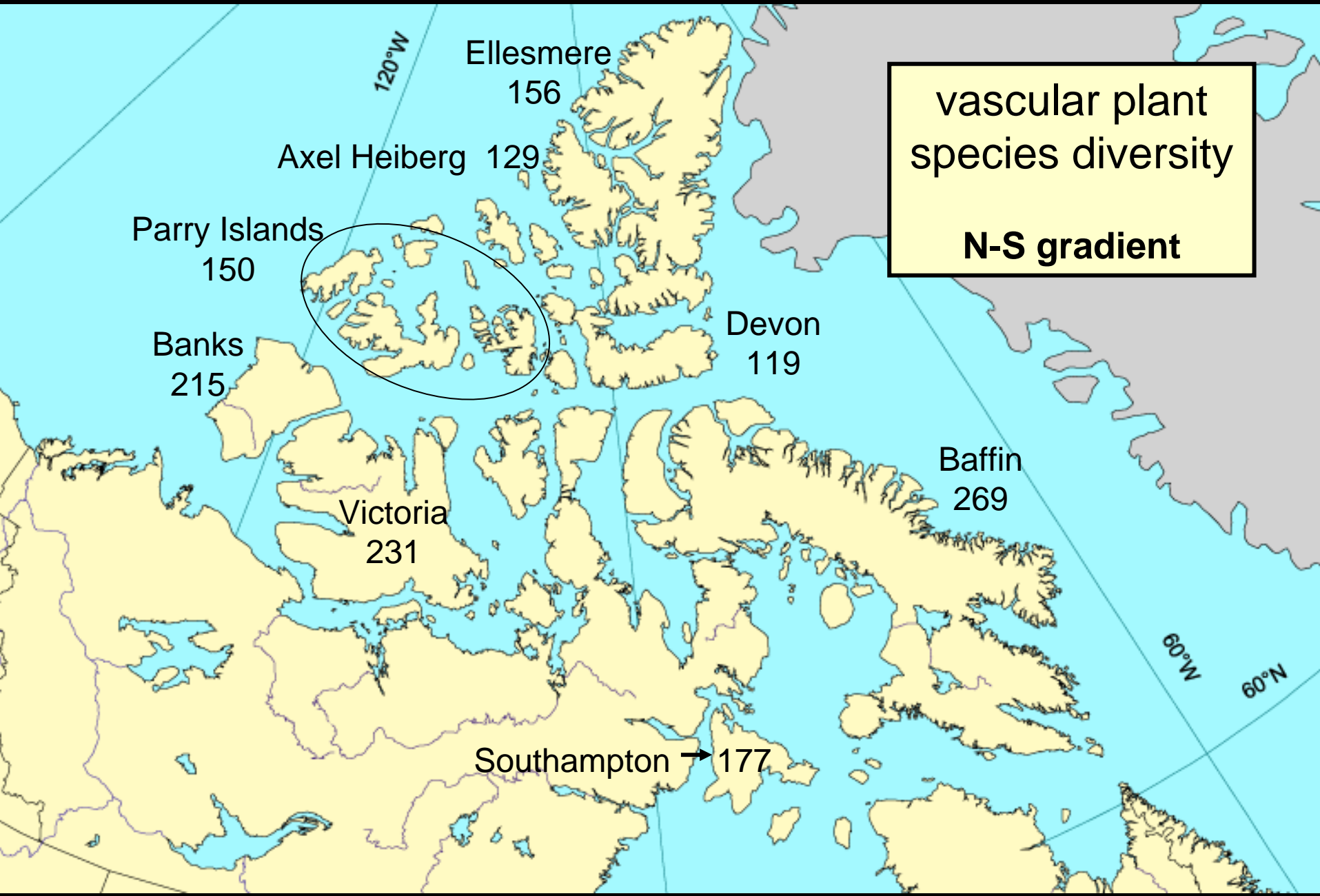
NORTHWEST TERRITORIES

NUNAVUT

QUEBEC

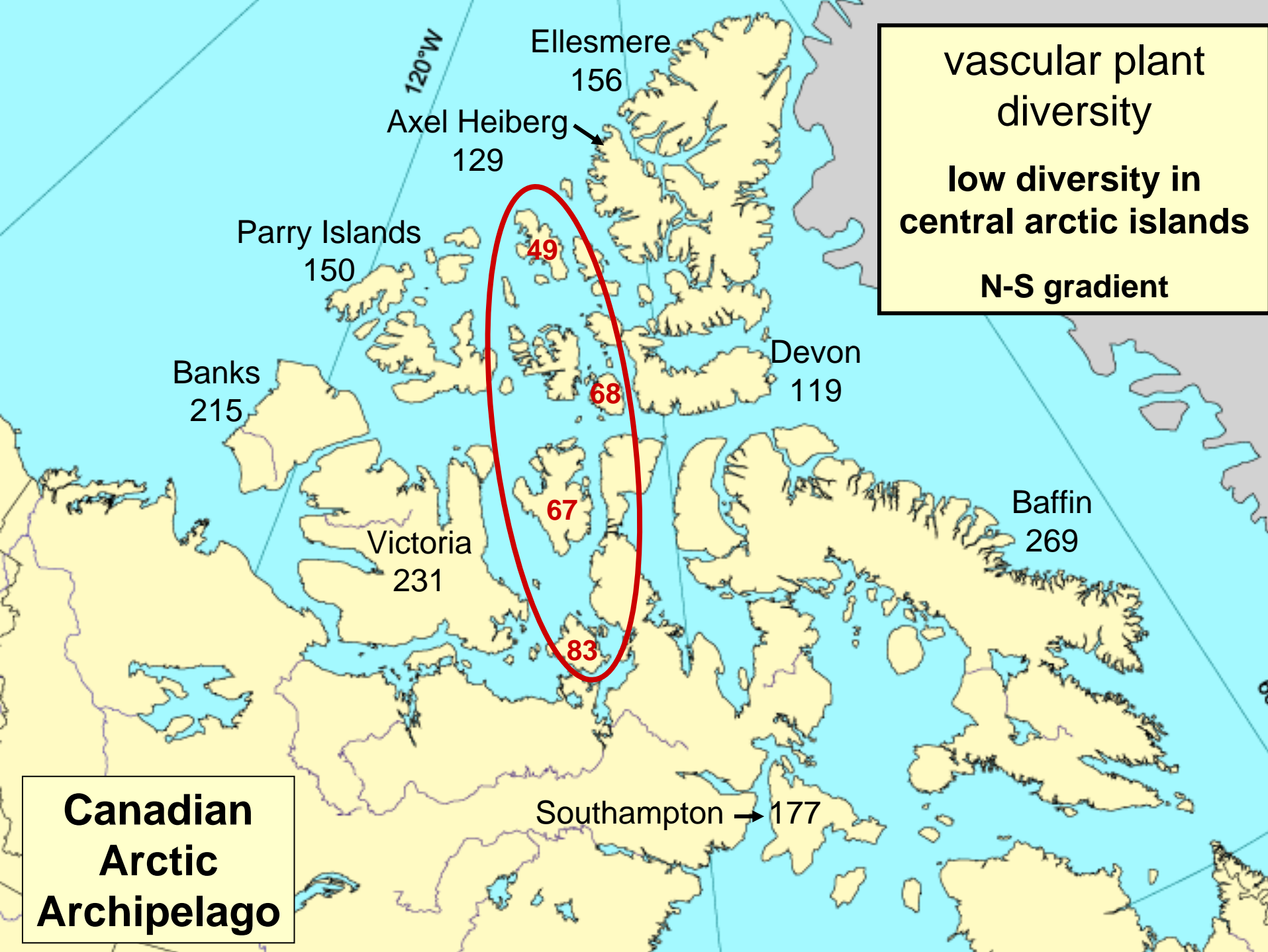


# Canadian Arctic Archipelago



vascular plant  
species diversity

**N-S gradient**



# Flora of the Canadian Arctic Archipelago

	land area km <sup>2</sup>	vascular plant species diversity	
<b>S</b>	Baffin	507,455	269
	Victoria	215,000	231
	Banks	60,100	215
	Southampton	40,200	177
<b>N</b>	Ellesmere	198,120	156
	Parry Islands	c. 88,000	150
	Axel Heiberg	34,770	129
	Devon	53,400	119
<b>C</b>	King William	c. 10,000	83
	Cornwallis	7,300	68
	Prince of Wales	35,160	67
	Ellef Ringnes	10,920	49

**S**  
 ↓  
**N**



# Fieldwork in the Canadian Arctic

## OBJECTIVES

- explore botanically unknown or under-collected areas
  - complete site inventories
  - focused systematic projects
    - grasses, sedges (taxonomy, phylogeny, hybrid origin, biogeography)
  - collections for DNA barcoding
- 

# 2008 Fieldwork on SW Victoria Island





Jeff Saarela

Roger Bull

Laurie Consaul





**Camp 1**  
near Oterkvik Point  
Victoria Island

**50**  
*Years • Ans*  
Polar Continental Shelf Project  
Étude du plateau continental polaire

 Canadian Museum of  
Musée canadien de la  
**NATURE**



Camp 1 near Oterkvik Point, Victoria Island





# Camp 2 – near Johansen Bay







*Vaccinium vitis-idaea*

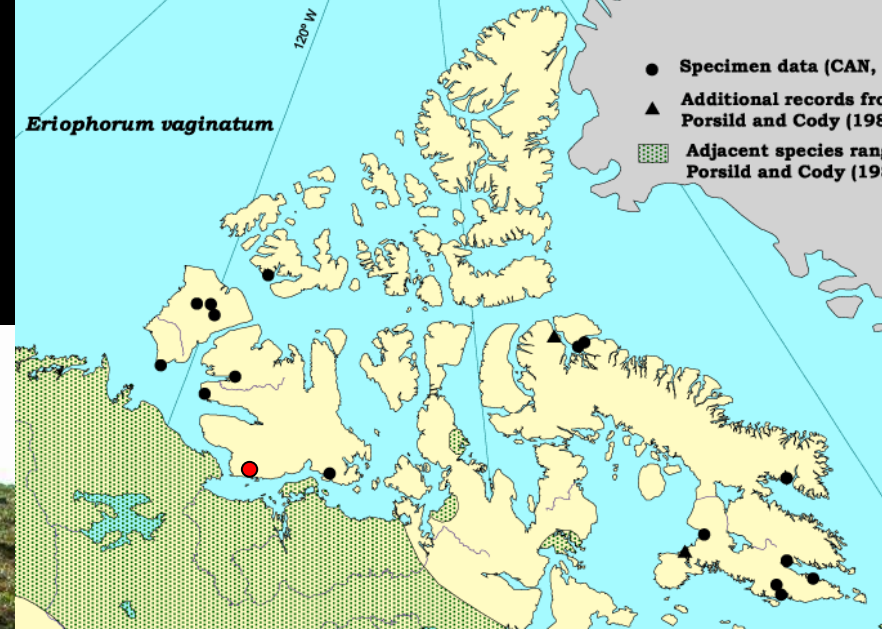
Mountain cranberry



*Ledum palustre* subsp. *decumbens*

Labrador tea

# *Eriophorum vaginatum*



# *Andromeda polifolia*

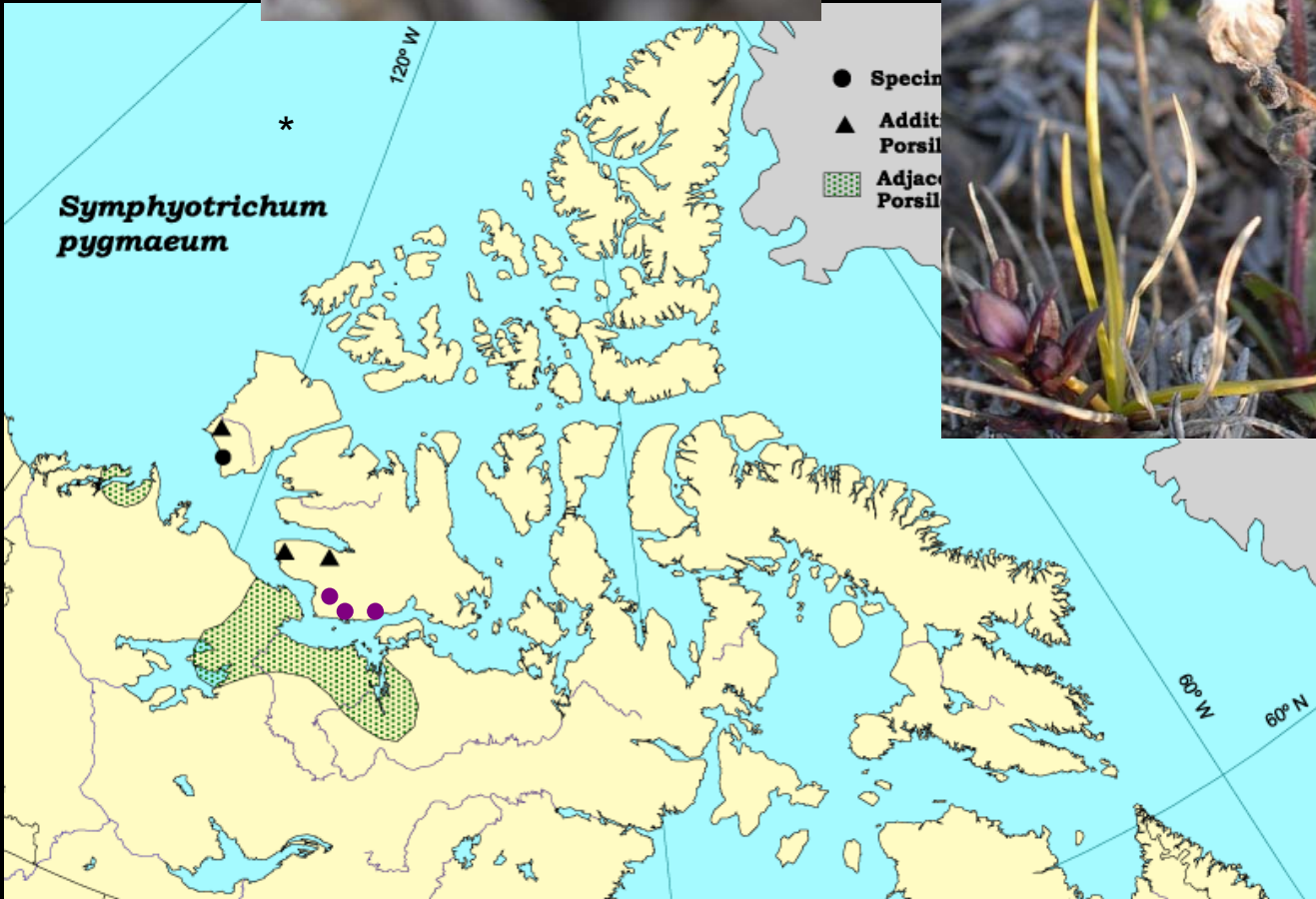
new to the Canadian Arctic Archipelago



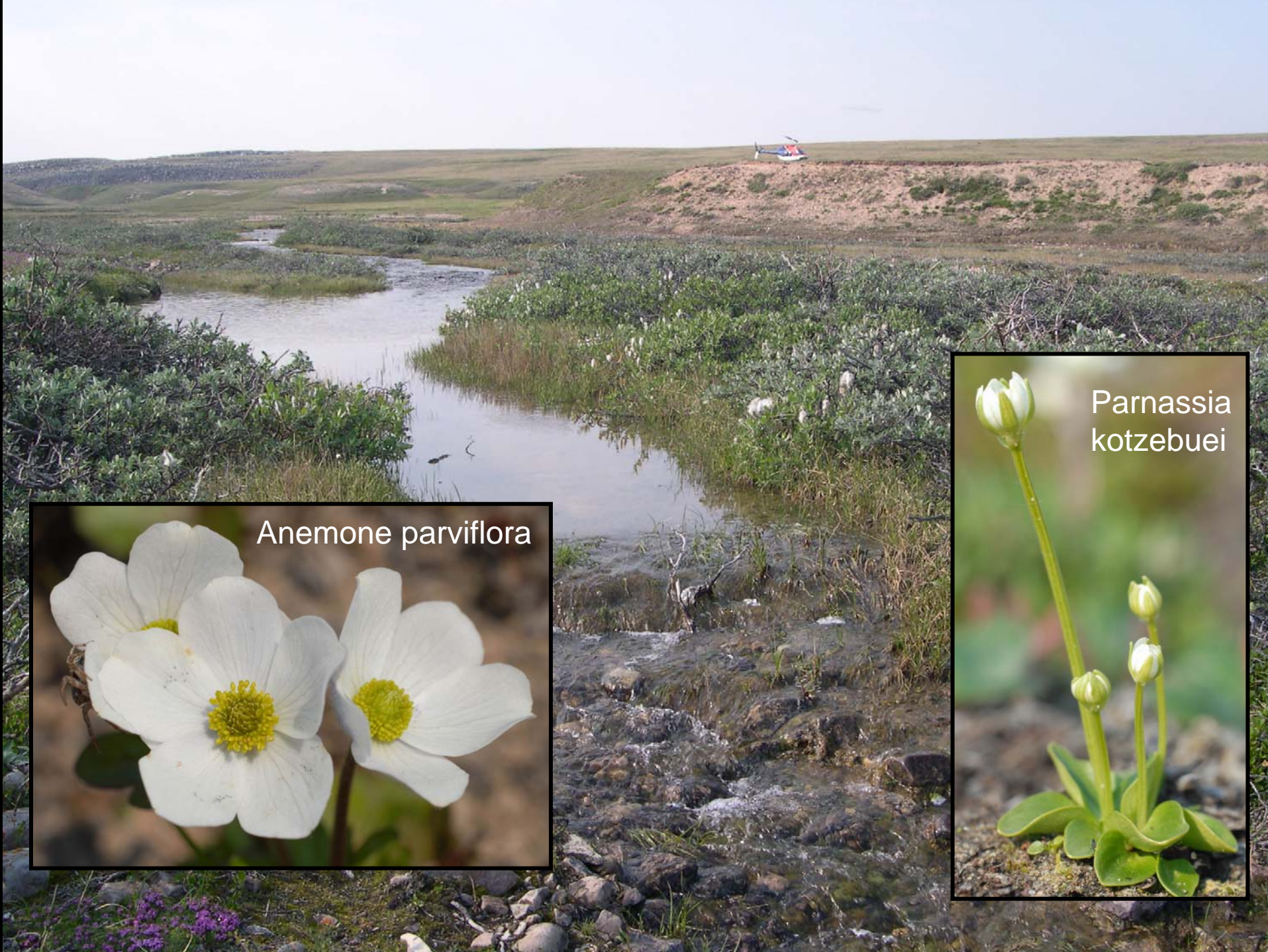
# *Koenigia islandica*

new to the western CAA





new localities for  
rare Pygmy Aster



*Anemone parviflora*



*Parnassia kotzebuei*



Erigeron



Gentianella propinqua



*Corallorhiza*  
*trifida*



1st record of orchid from W Arctic Is.

insectivorous plant  
first record on W Arctic Islands



*Pinguicula vulgaris*

pingo habitat



# Colville Mts



Arctic oxytrope



Mountain avens

# Camp 3 – Sinclair Creek





Camp 3 – Sinclair Creek

*Charaerion latifolium* – Arctic fireweed



*Papaver  
hultenii*

new record for Canada?

E-W vegetation gradient  
strong Beringian element in W





# 2008 Fieldwork on SW Victoria Island

## Preliminary results

204 species  
of vascular plants recorded

- 3 species new to CAA
- 19 spp. new to western CAA
- 30 spp. new to Victoria Island

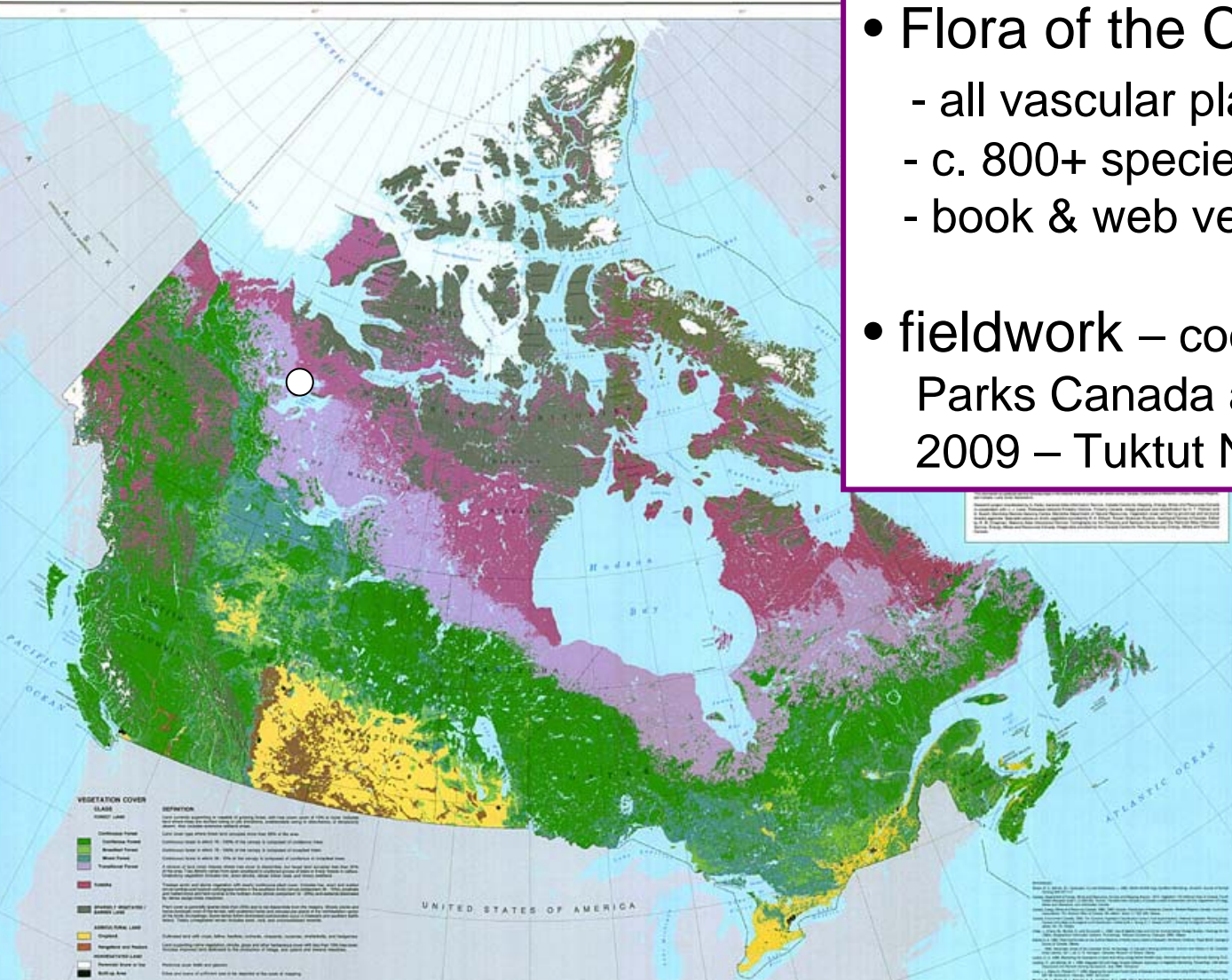
Victoria Island

231



261

# Research plans



- Canadian Arctic collection database (CAN, O, DAO ...)
- Flora of the Canadian Arctic
  - all vascular plants above treeline
  - c. 800+ species
  - book & web versions
- fieldwork – coordination with Parks Canada and GEM 2009 – Tuktut Nogait NP



Thank you!