

# Pyrolaceae

## *Pyrola chlorantha* vs. *Pyrola grandiflora*



Kirsten Woodard – April 23, 2009

# Pyrolaceae Genera Key

Pyrolaceae Genera key adapted from Cody (2000)

A. Plants with Chlorophyll

B. Leaves on stem

*Chimaphila*

BB. Basal leaves only

C. Single flower

*Moneses*

CC. Multiple flowers on a raceme

D. Flowers arranged on one side of  
stem

*Orthilia*

**DD. Flowers arranged around  
stem**

***Pyrola***

AA. Plants lacking Chlorophyll

*Hypopitys*

# Family & Genus Description

## Pyrolaceae-Wintergreen family

“Perennial herbs or low sub-shrubs, with simple evergreen leaves, or saprophytes lacking chlorophyll,” (Cody, 2000)

- 5 merous (5 petals and 5 sepals)
- 10 stamens
- Basal pores on anthers
- 5 locular capsule

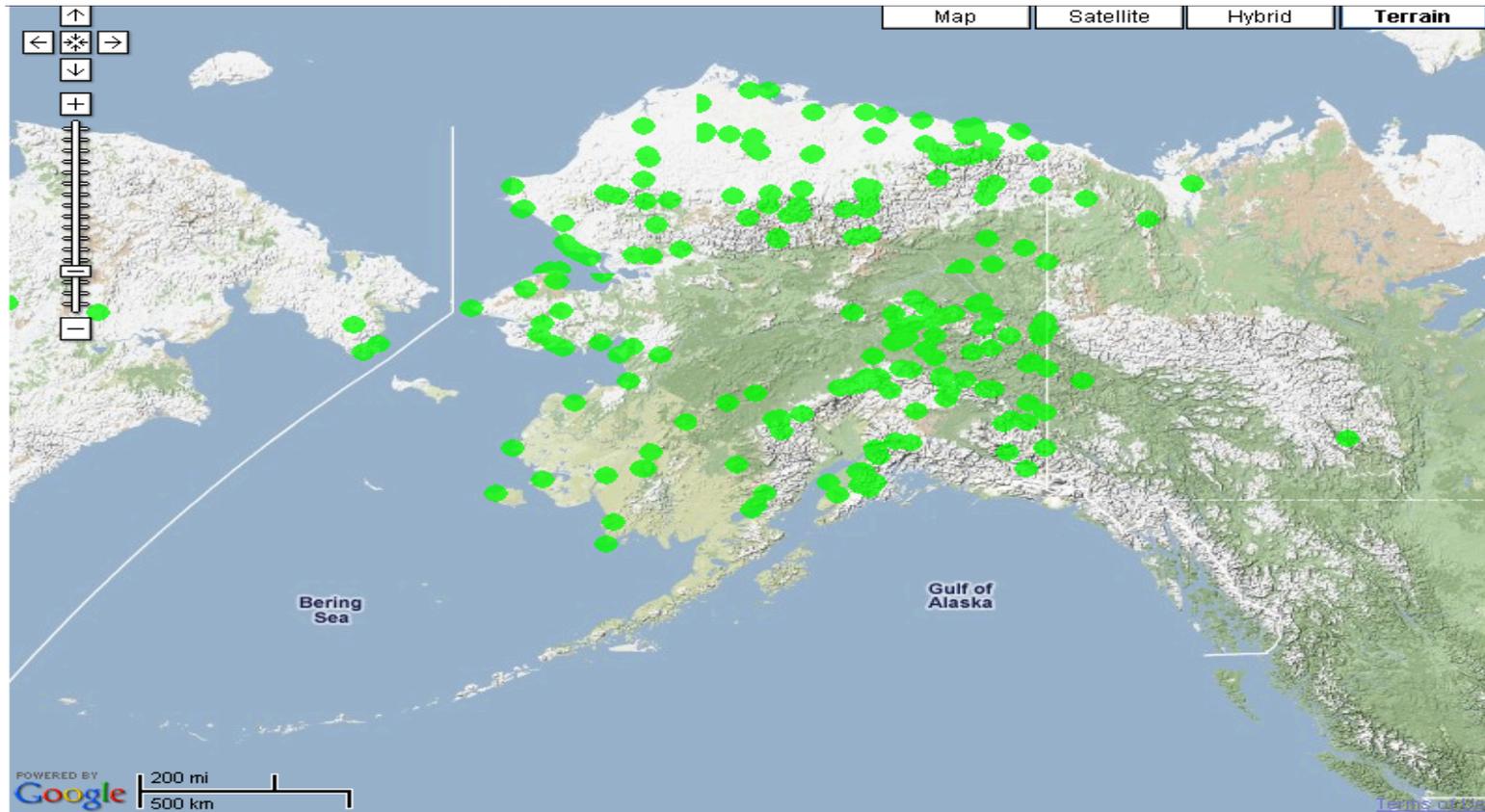
## *Pyrola-*

“Perennial herbs, with creeping rhizomes. Leaves basal, petioled, wintergreen. Flowers racemose....,” (Cody, 2000)

# *P. grandiflora*

## Distribution in Alaska

(UAM Herbarium Specimens)

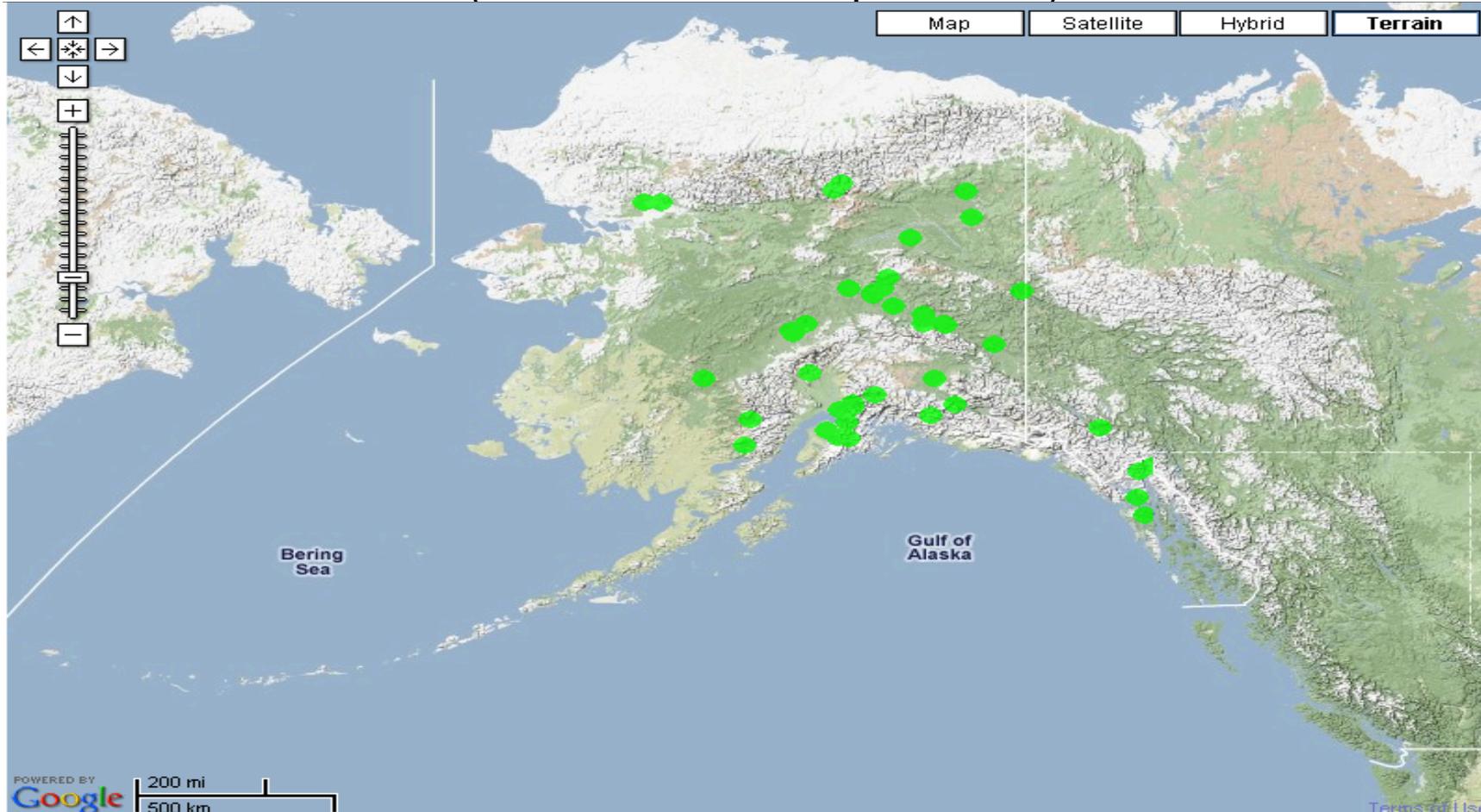


**\*found in tundra and on mountains (Hulten, 1968)**

# *P. chlorantha*

## Distribution in Alaska

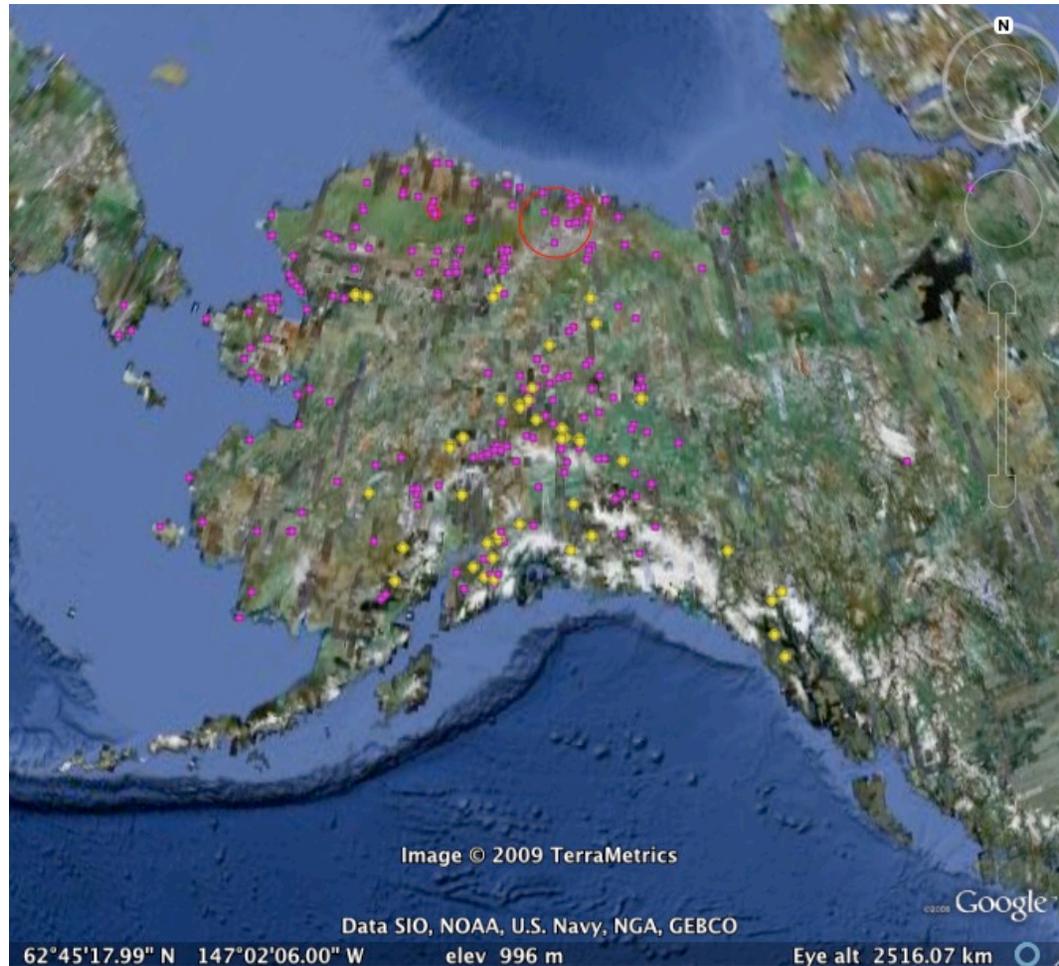
(UAM Herbarium Specimens)



**\*found primarily in wooded areas (Hulten, 1968)**

# Distribution of both specimens in Alaska

- *P. grandiflora*
- *P. chlorantha*



# Easy to Differentiate

Difference in:

- flower size
- Stem length
- Basal leaves
- Leaf size
- Rhizome

*Pyrola grandiflora*



*Pyrola chlorantha*



# Similar Looking Species

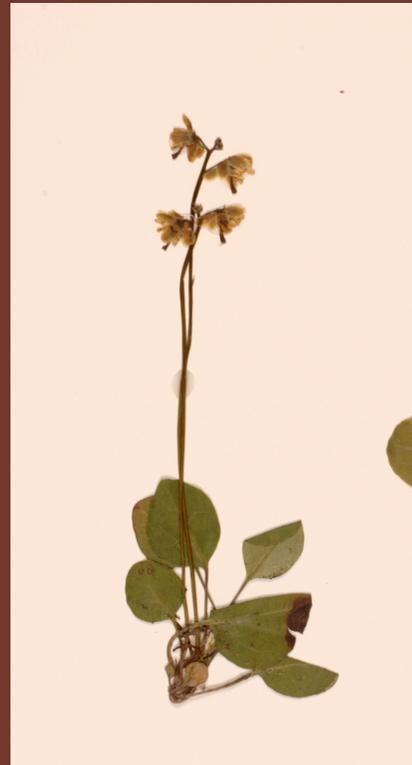
*Pyrola grandiflora*  
Looks similar to *P. chlorantha*



*P. chlorantha*



*Pyrola chlorantha*  
Looks similar to *P. grandiflora*



*P. grandiflora*



# Roots and base

## *Pyrola grandiflora*

- Usually thicker rhizome and denser leaf base
- Obvious papery stipules



## *Pyrola chlorantha*

- Slender rhizome
- Stipules not obvious



# Sepals

*P. chlorantha*

- Broad width
- Obtuse apex



*P. grandiflora*

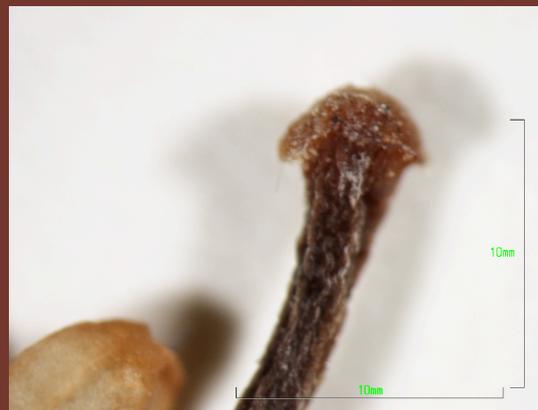
- Narrow width
- Acute apex



# Stigmas

## *P. grandiflora*

- Variation
- Not distinctly flared with lobes
- Often domed or truncate



# Stigmas Continued

## *P. chlorantha*

- Usually flared lobed ring below stigma
- Occasionally with truncated stigmas



# Anthers

- Anthers similar
- Yellow, poricidal
- Welsh (1974) defines *P. grandiflora* as having pores on short tubes and *P. chlorantha* (*P. virens*) as having pores on elongated tubes.

*P. chlorantha*



*P. grandiflora*



# Summary

## *Pyrola chlorantha*

- Sepals broad with obtuse apex
- Thin, barely noticeable rhizome (more root like)
- Stipules on basal leaves not obvious
- Stigma above noticeable 5-lobed ring (Hulten, 1968)

## *Pyrola grandiflora*

- Sepals narrow with acute apex
- Noticeable slender rhizome
- Stipules on basal leaves papery and obvious
- Stigma lacking noticeable lobed ring (usually truncated or domed)