

Betula nana ssp. exilis vs *Betula glandulosa*:

a comparison of two closely related Birch species



(1)

Betula glandulosa



(2)

Betula nana ssp. exilis



Betulaceae

- Fagales order
- Family Includes Birches and Alders
- Contains six genera and 120-150 species of trees and shrubs
- Monoecious plants
- Flowers are catkins
- Fruit is achene, nutlet or samara

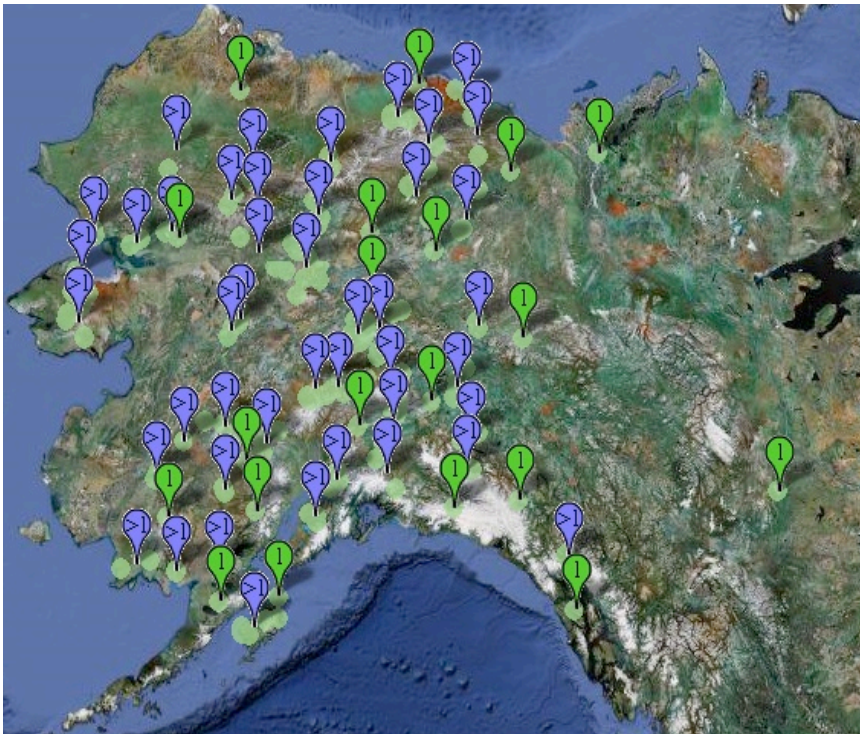


Birch Species of Alaska

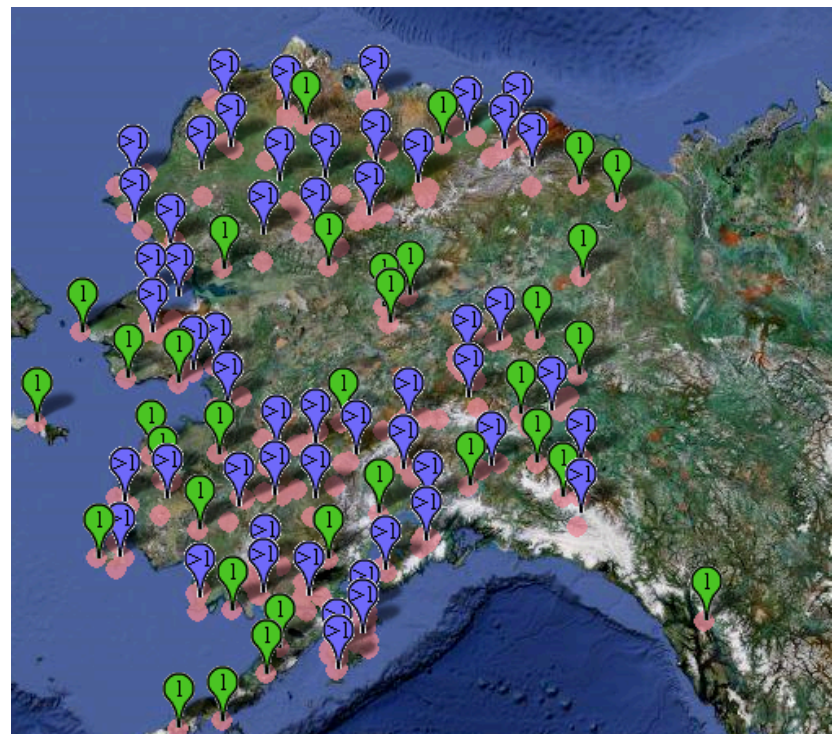
- Three species of tree birches
 - Alaska Paper Birch (*Betula neoalaskana*), Western Paper Birch (*Betula papyrifera*) and Kenai Birch (*Betula kenaica*)
- Two species of Dwarf Birch
 - Resin Birch (*Betula glandulosa*) and Dwarf Arctic Birch (*Betula nana*)
- Dwarf Birches are distinguished from the tree species by
 - shrubby growth habit
 - Darker, less paper-like bark

Overlapping Ranges

Hybridization is common



B. glandulosa



B. nana

Betula glandulosa

- Also known commonly as
 - Resin Birch
 - Shrub Birch
 - Bog Birch



The species epithet comes from the dense glandular bumps that characterize this plant

Betula nana ssp exilis

- Also known commonly as
 - Dwarf Arctic Birch
 - Dwarf Birch
 - Dwarf Alpine Birch



(2)

Telling them apart can be
extremely difficult



B. glandulosa



B. nana

Some Characters to Look for

- Leaf shape
 - Glands on the twigs
 - The shape of leaf base
- Shade of the leaf's underside

Leaf Shape

Blade Longer than
Broad



(5)

B. glandulosa

Blade Broader than
Long



(6)

B. nana

Twig Glands

Dense Glands



B. glandulosa

(3)

Glands present, but sparse



B. nana

(4)

Leaf Base Shape

Wedge shaped base



B. glandulosa

(7)

Cordate base



B. nana

(2)

Shade of Leaf's Underside

**Abaxial side has
yellow tint**



B. glandulosa (1)

**Abaxial Side is More
Pale**



B. nana (2)

Can you tell *B. glandulosa* from *B. nana*?



Both leaves are from the same
plant!



(5)



(5)

Most often plants are intermediate

Museum Specimen

1. V143001

2. V111836

3. 51737

4. V111532

5. V112382

6. V110605

7. V123889

References

- Viereck, L. A. & E. L. Little, 2007. Alaska Trees and Shrubs. 2nd Edition. University of Alaska Press, Fairbanks, Alaska.
- Hultén, Eric. 1968. Flora of Alaska and Neighboring Territories. Stanford University Press, Stanford, California, USA.
- Distribution maps courtesy of Google Maps and Arctos
- Photos taken by Gretchen Garcia
- Some images came from the UAF Arctos Database