

Hedysarum Boreale
and *Alpinum*:
A Taxonomic Key

By Katie Moeller

Hedysarum alpinum



Hedysarum boreale



A Note About *Hedysarum boreale*:

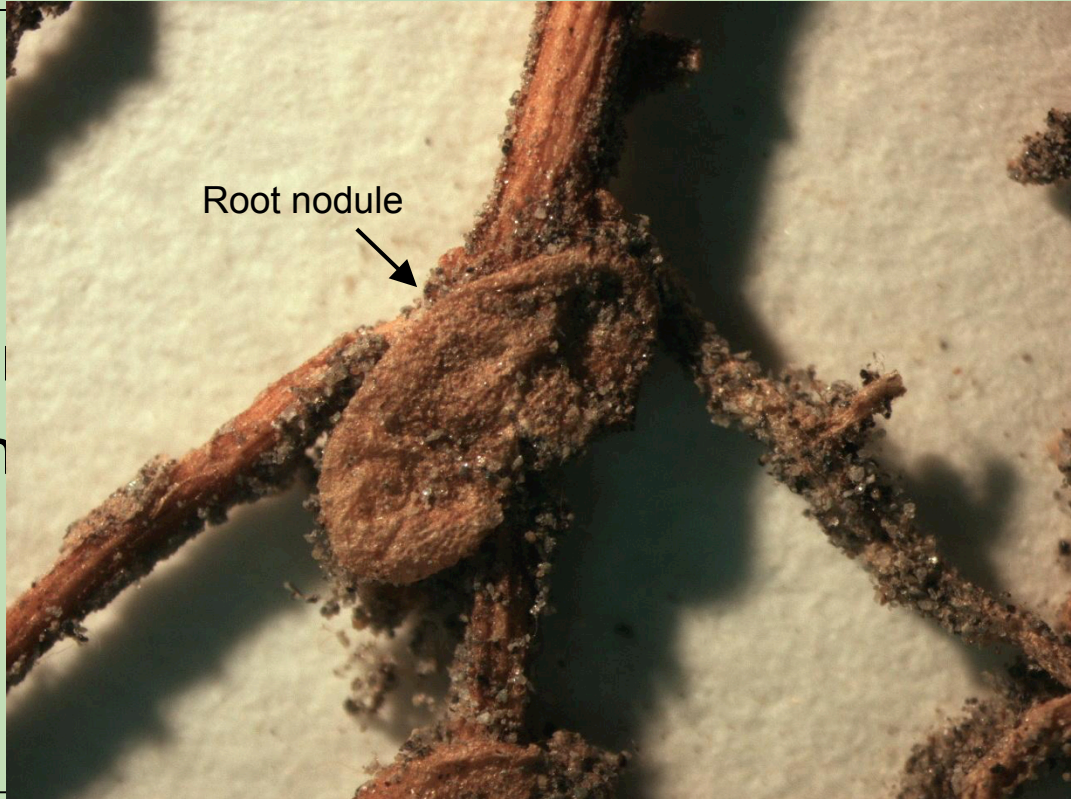
For the purposes of this key we will follow the treatment given by Cody (2000) of *Hedysarum boreale*.

The herbarium specimens for this key were listed as *Hedysarum mackenzii*.

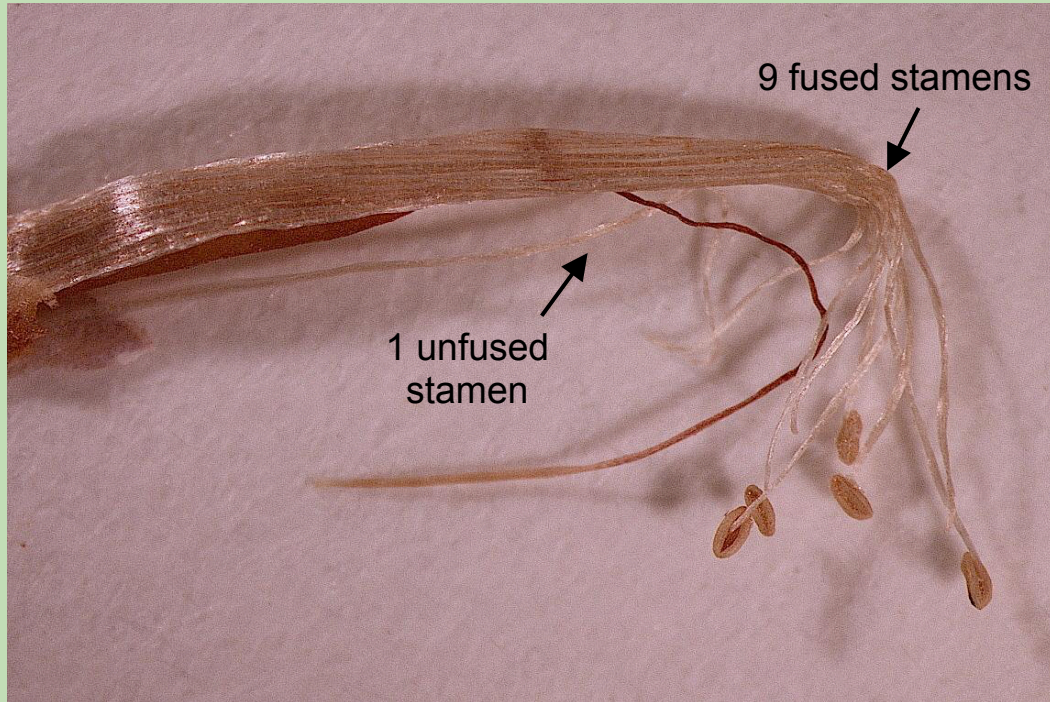
However, these are the same species.

As members of Fabaceae:

Plants form symbiotic relationship with nitrogen fixing bacteria located in root nodules



As members of Fabaceae:



Diadelphous stamens:
9 fused stamens + 1
unfused stamen

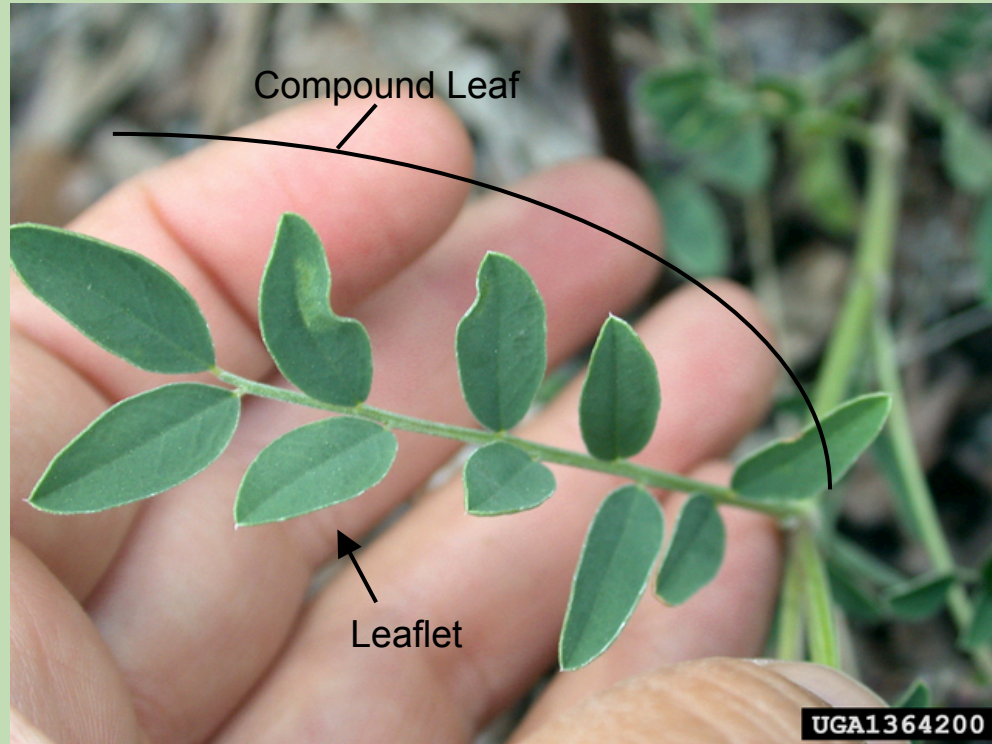
As members of Fabaceae:

Flowers zygomorphic
consisting of a
banner, 2 wings and a
keel made up of 2
fused petals



Mel Harte / www.discoverlife.org

As members of Fabaceae:



Compound leaves
made up of individual
leaflets

Specific to *H. Boreale* and *Alpinum* in Alaska

- No tendrils present
- Fruit is a loment
- Compound leaves consist of 3+ leaflets

AND

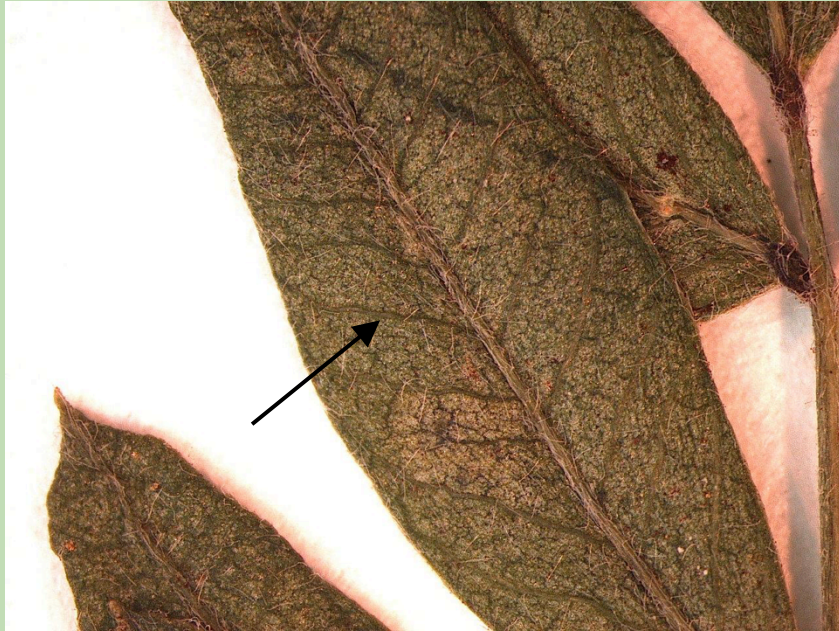
Differences between *H. Boreale* and *Alpinum*

Leaflets thin: *H. alpinum*

Thick: *H. boreale*



Lateral veins
prominent:



ALA # V174744. Collector Kitty L. LaBounty.

Lateral veins not
prominent:



ALA # 18987. Collector Clay Yamada.

Leaflets glabrous or slightly pubescent



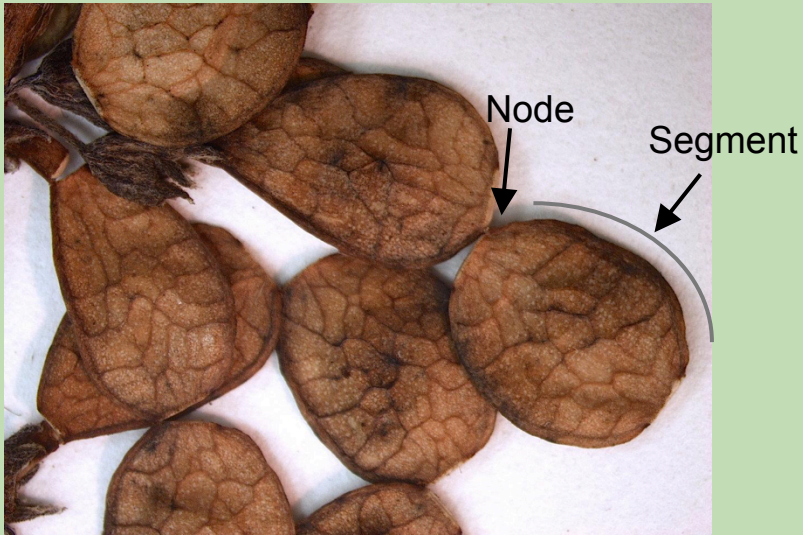
J. alpinum
ALA # V174744. Collector Kitty L. LaBounty.

Leaflets pubescent



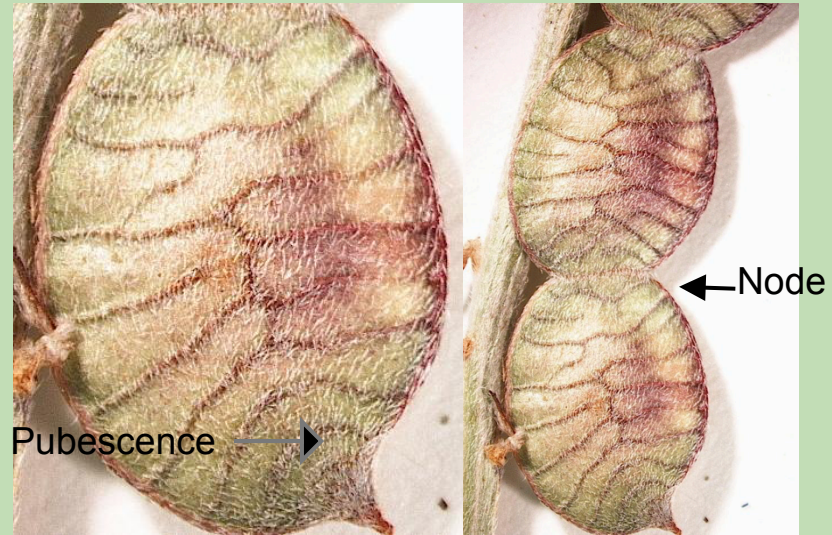
J. nana
ALA # V70009. Collectors A.P. Khokhryakov, B.A. Yurtsev, and D.F. Murray.

Loments glabrous and segments elliptical with narrower nodes:



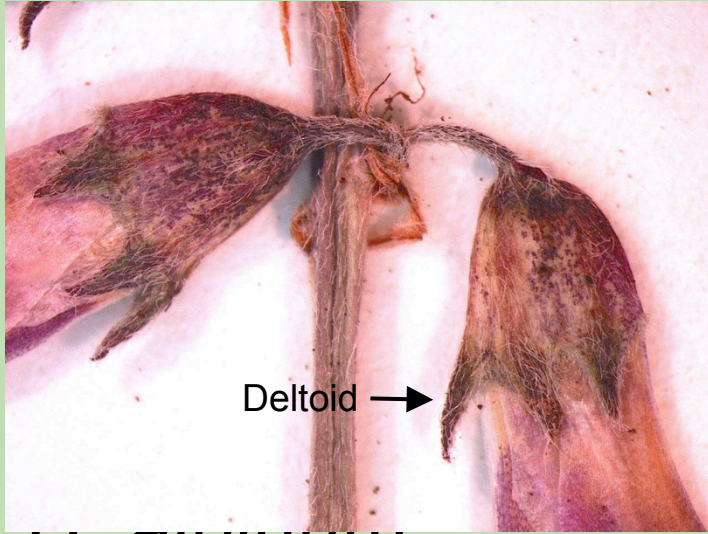
H. alpinum
ALA # V174744. Collector Kitty L. LaBounty.

Loments pubescent and segments circular with wider nodes:



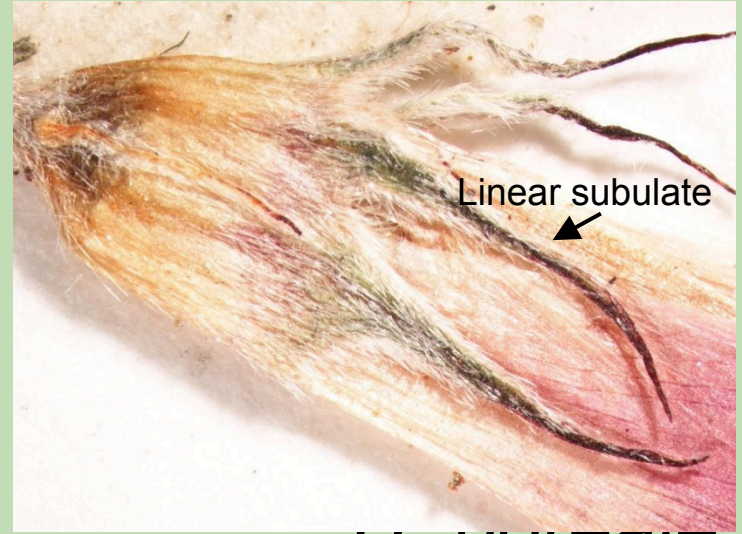
H. boreale
ALA # V70009. Collectors A.P. Khokhryakov, B.A. Yurtsev, and D.F. Murray.

Calyx teeth deltoid



ALA # 140430. Collectors Amy Breen Carroll, Henrik Wahren.

Calyx teeth lance or linear subulate



ALA # 6427. Collector L.J. Palmer.

Specimens: *Hedysarum Alpinum*

ALA # V174744. University of Alaska Museum (UAM). Original collector: Kitty L. LaBounty. Collection date: 23-Aug-2013. Field location: North America, United States, Alaska. Tongass National Forest, Endicott River Wilderness, 58.772725/-135.615863. Elev. 730-730 ft, infrequently used landing strip in open shrublands. Family, genus and species: Fabaceae; *Hedysarum alpinum* L. Date examined: 10-Apr-2015.

ALA # V140430. University of Alaska Museum (UAM). Original collectors: Amy Breen Carroll, Henrik Wahren. Collection date: 27-Jun-2001. Field location: North America, United States, Alaska. Philip Smith Mountains Quad: Drainage east of Toolik Lake, 2.5 km west of Toolik Field Station, Zone 6 7615314 mN 392146 mE. Kame and kettle topography, south facing hillside, rocky/shallow soil, common. Family, genus and species: Fabaceae; *Hedysarum alpinum* L. Date examined: 10-Apr-2015.

ALA # 23729. University of Alaska Museum (UAM). Original collector: G. M. Frohne. Collection date: 17-July-1954. Field location: North America, United States, Alaska. Healy Quadrant. Alaska Range, Cantwell. Coordinates 63.39 / -148.94. Family, genus and species: Fabaceae; *Hedysarum alpinum* L. Date examined: 10-Apr-2015.

Specimens: *Hedysarum mackenzii*

ALA # 33112. University of Alaska Museum (UAM). Original collector: Vernon L. Harms. Collection date: June 1965. Field location: North America, United States, Alaska, Just south of Delta Junction, AK. 64 degrees 05' N 145 degrees 45' W. Family, genus and species: Fabaceae; *Hedysarum mackenzii* Richardson. Date examined: 10-Apr-2015.

ALA # 6427. University of Alaska Museum (UAM). Original collector: L.J. Palmer. Collection date: 1939. Field location: Buffalo Range, Warwick. Family, genus and species: Fabaceae; *Hedysarum mackenzii* Richardson. Date examined: 10-Apr-2015.

ALA # 18987. University of Alaska Museum (UAM). Original collector: Clay Yamada. Collection date: September 1961. Field location: North America, United States, Alaska. Collected on the University of Alaska campus. Family, genus, and species: Fabaceae; *Hedysarum mackenzii* Richardson. Date examined: 10-Apr-2015.

ALA # V70009. University of Alaska Museum (UAM). Original collectors: A.P. Khokhryakov, B.A. Yurtsev, and D.F. Murray. Collection date: 06-Jul-1981. Field location: Big Delta Quad.: Shaw Creek Bluffs, confluence of Shaw Creek and Tanana River, 64 degrees 16' N, 146 degrees 08'W. 305-427 m.s.m. Steep, south facing slope and summit. Family, genus, and species: Fabaceae; *Hedysarum mackenzii* Richardson. Date examined: 10-Apr-2015.

Literature Cited

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