

Specimen Imaging and Databasing at ALA



QuickTime™ and a
decompressor
are needed to see this picture.

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ALA Herbarium overview

Table 1. Taxonomic scope of collections at ALA

	# of specimens
Vascular plants	157,282
Bryophytes	35,453
Lichens	16,978
Fungi	43
Algae	7060

Table 2. Geographic representation of vascular plant specimens at ALA*

Region, country	# of specimens of vascular plants
Alaska	81368
Russia	3339
Canada	4318

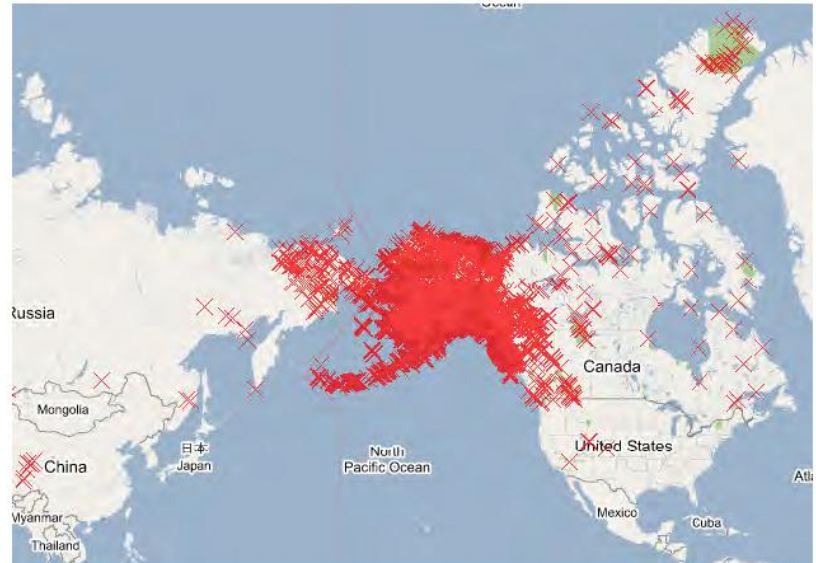


Fig. 2. Graphical representation of vascular plant specimen records (x) at ALA using BerkeleyMapper (available in Arctos).

QuickTime™ and a
decompressor
are needed to see this picture.

Specimen Imaging: Steps 1-4

1. Place barcode on folder
2. Scan barcode and enter folder name into Arctos
3. Place barcode on sheet
4. Scan barcode and enter ALA accession number into Arctos



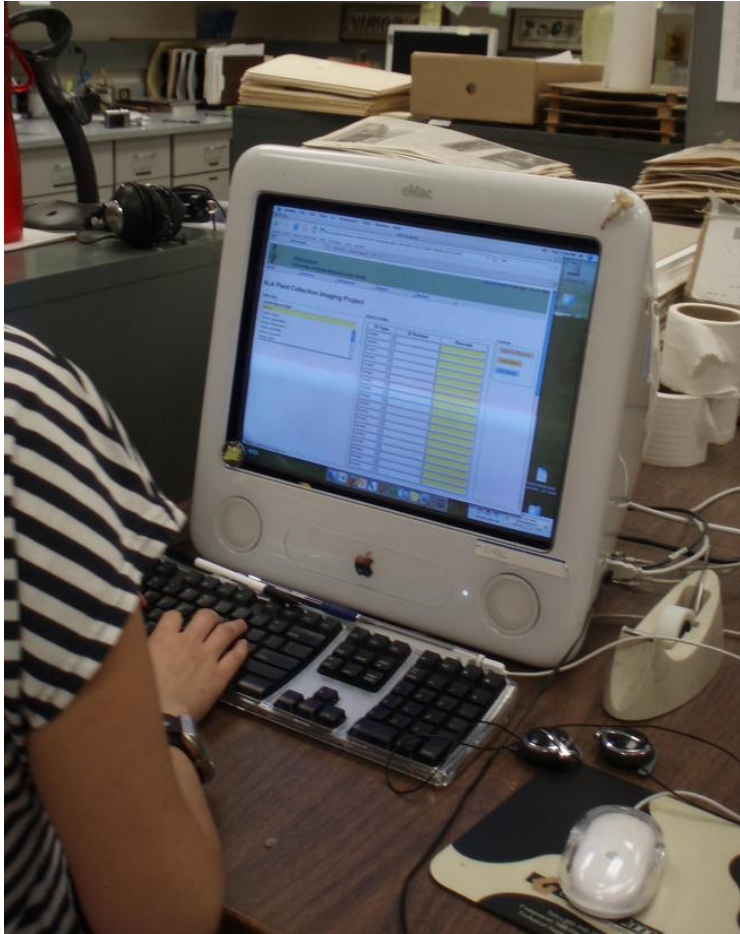
Specimen Imaging: Step 5

5. Photograph specimen



- Canon Mark II EOS-1 DS mounted over fenced bed
 - scale and color standard
 - resolution of 240 dpi
 - DNG is 13MB, JPG is 600 kb
- Barcode is scanned to generate file name
- **One trained user=1000 specimens/day!**

Specimen Imaging: Step 6



- automated scripts:
 - verify taxonomy
 - check for duplicates
 - enter specimen into Arctos
- Send image to Texas Advanced Computing Center (TACC)- long-term storage (tape-backup at San Diego Supercomputing as well)
 - convert from cr2 to DNG
 - create jpg
 - post jpg and DNG online

Search My Stuff About Arctos Dates

Access to 186866 records

Holdings Details

Search Clear Form Use Last Values See results as: Specimen Records

Include Observations? Require Tissues? Require Media: image

Identifiers Customize Show More Options

Collection: All Number:

Identification and Taxonomy Show More Options

Any Taxonomic Element:

Locality Show More Options

Any Geographic Element: Select on Google Map

Date/Collector Show More Options

Help Collector

Biological Individual Show More Options

Part Name: Define Add = for exact match

Usage Show More Options

Basis of Citation: Define

Search Clear Form Use Last Values See results as: Specimen Records



92199 of these 163145 records have coordinates and can be displayed with BerkeleyMapper

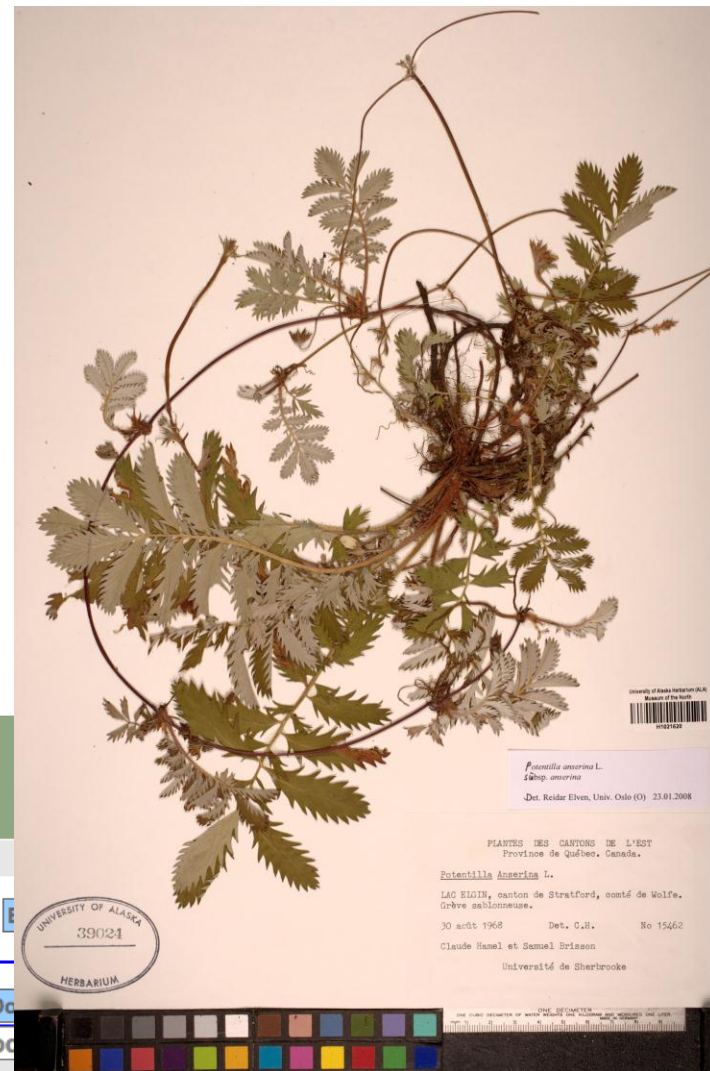
page? Click for HTML version Report Bad Data

Records... Order by... then order by

1 - 20 collection collection

Customize Form

Cat Num	Identification	Specific Loc			
UAM Herbarium 214893 Media	Calamagrostis purpurascens	No specific locality recorded.	not recorded		
UAM Herbarium Vascular Plants 38286 Media	Arctagrostis latifolia var. latifolia	Chitina R. Basin, Towhead Mtn.	1996/08/08	61.05	-142.66
UAM Herbarium Vascular Plants 43608 Media	Calamagrostis canadensis	Coast Mts., Davidson Cr., Taku Inlet, T40SR70E	1980/09/26	58.35	-133.99
UAM Herbarium Vascular Plants 66716 Media	Calamagrostis canadensis	Alaska Range, Tonzona R., upper valley	1961/08/15	62.66	-152.5
UAM Herbarium Vascular Plants 86266 Media	Arctagrostis latifolia	Seward Peninsula Highlands, Golovin	1925/07/27	64.43	-162.83





Vegetative differences between *Salix bebbiana* & *Salix scouleriana*

Nan Werdin-Pfisterer



Salicaceae

- Woody shrubs and trees
- Leaves deciduous, simple and alternate
- Plants dioecious (separate ♂ & ♀ plants)
- Catkin inflorescence (pistillate & staminate)
- Flowers without petals
- Fruit a capsule
- Comose seeds

Salix bebbiana Sarg.

“Bebb willow”

Most common upland willow in
interior Alaska

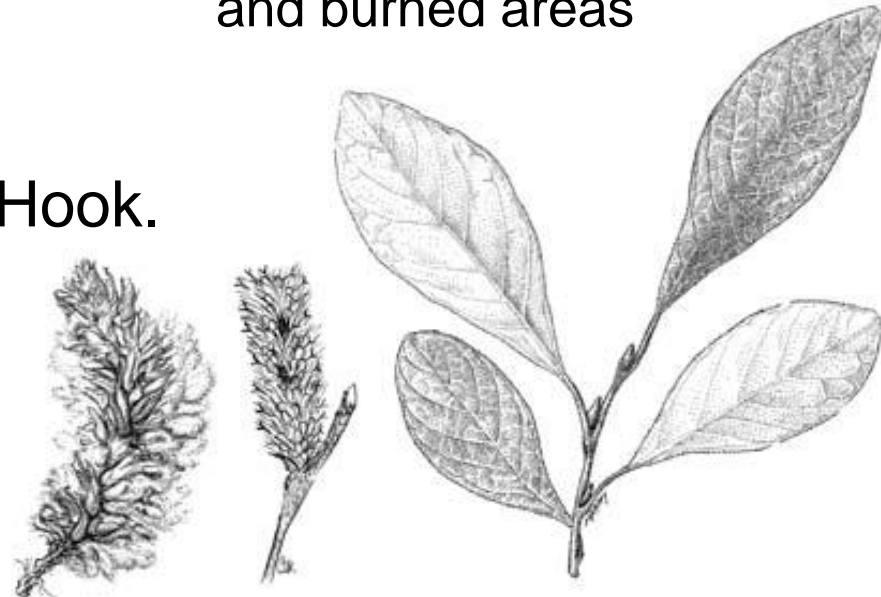
Habitat: most forest types, common
along streams, roadsides, logged
and burned areas



Salix scouleriana Barratt ex Hook.

“Scouler willow”

Most common willow of
southcentral & southeast Alaska



-170° W

-160° W

-150° W

-140° W

-130° W

-120° W

70° N

65° N

60° N

55° N

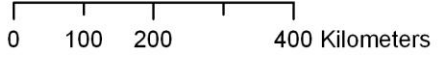
65° N

60° N

55° N

Legend

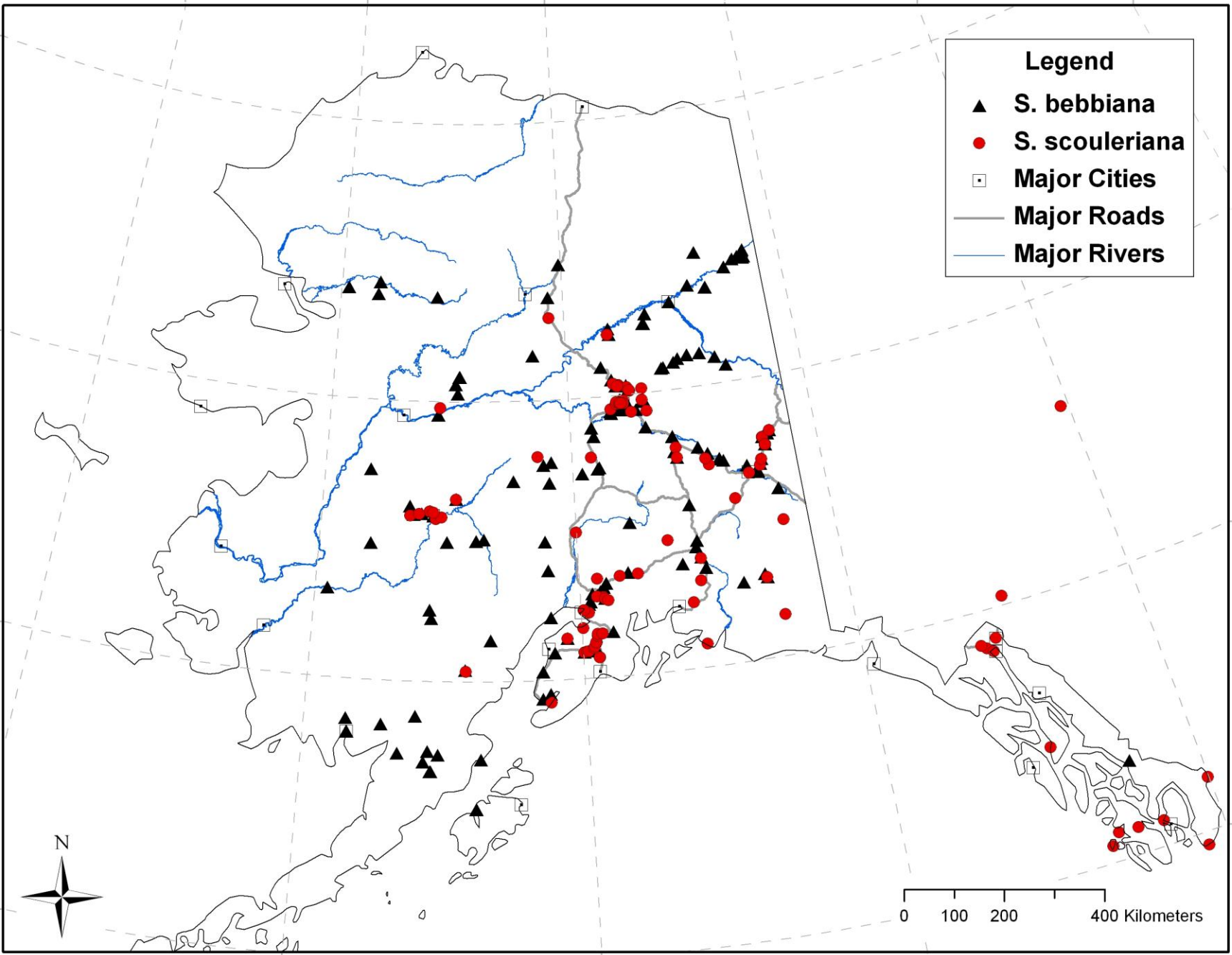
- ▲ *S. bebbiana*
- *S. scouleriana*
- Major Cities
- Major Roads
- Major Rivers



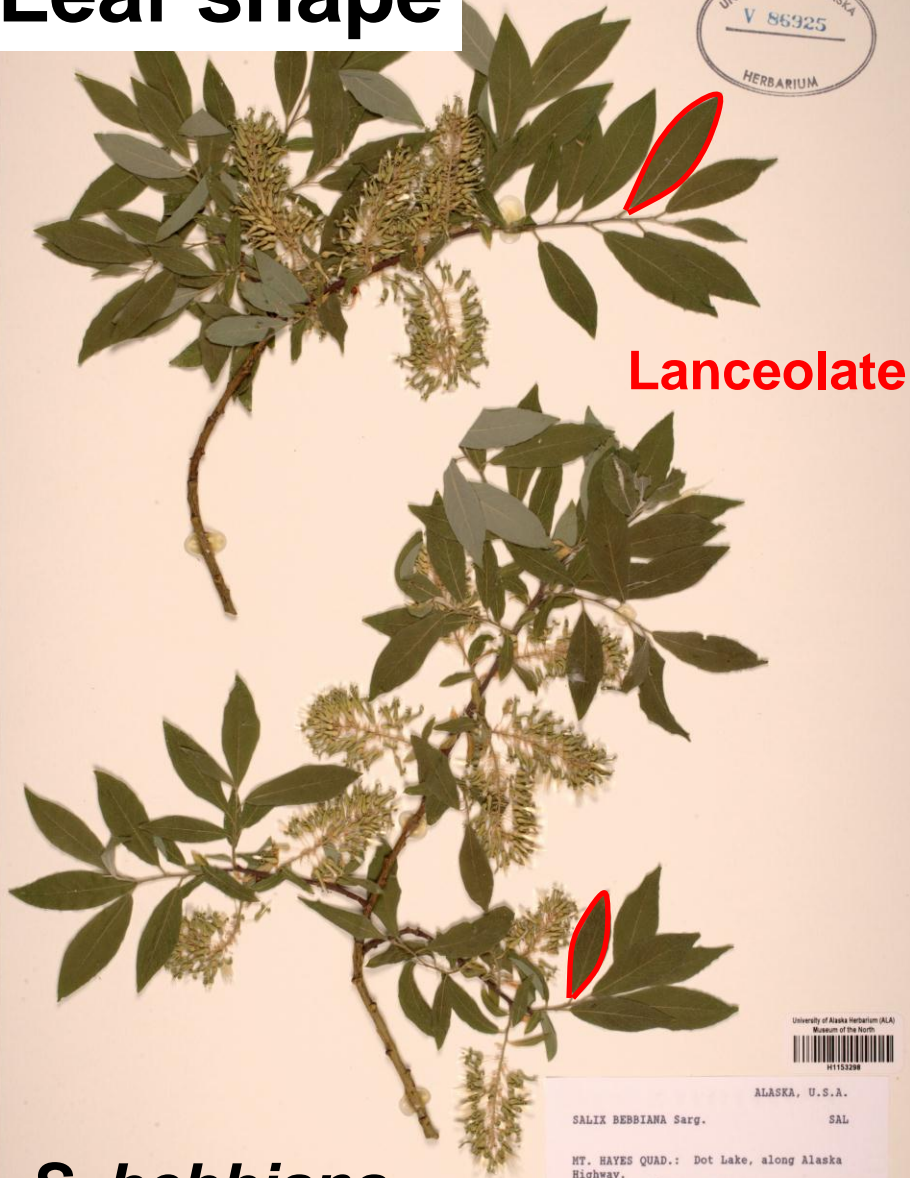
-160° W

-150° W

-140° W



Leaf shape



S. bebbiana

Oblanceolate



S. scouleriana

V86925

V06935

Upper leaves

S. bebbiana

- Moderately densely pubescent, short-silky
- Impressed veins
- Wrinkled

S. scouleriana

- Nearly hairless



V86925



V86925

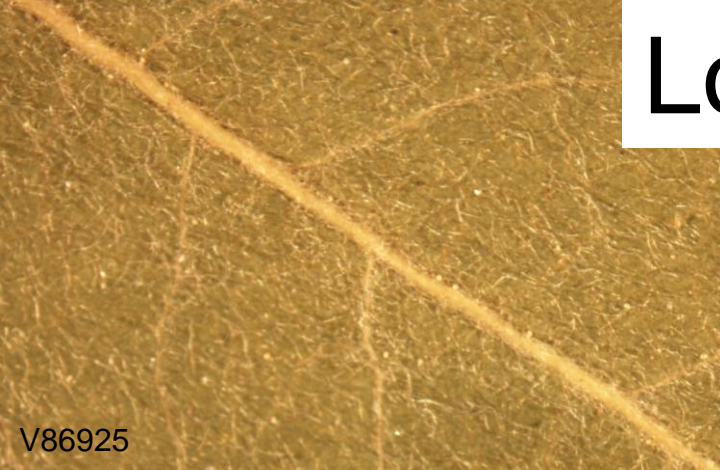


V141757

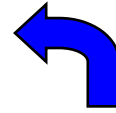


V133276

Lower leaves



V86925

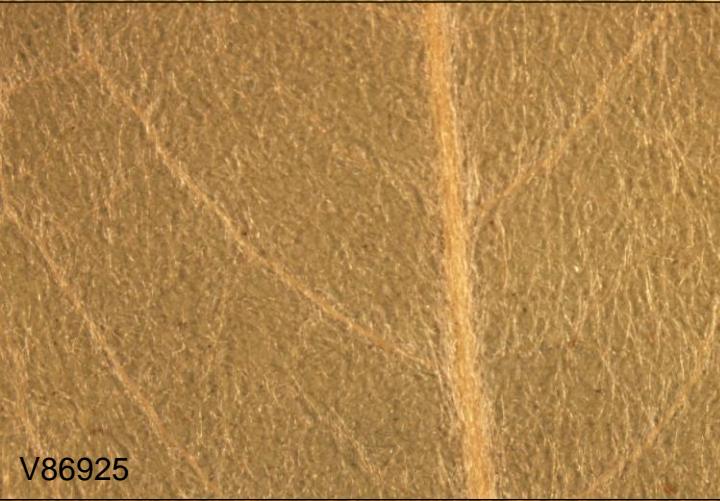


S. bebbiana

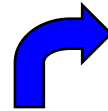
- White hairs
- Long, wavy, spreading
- Less hairy with age



V58557



V86925

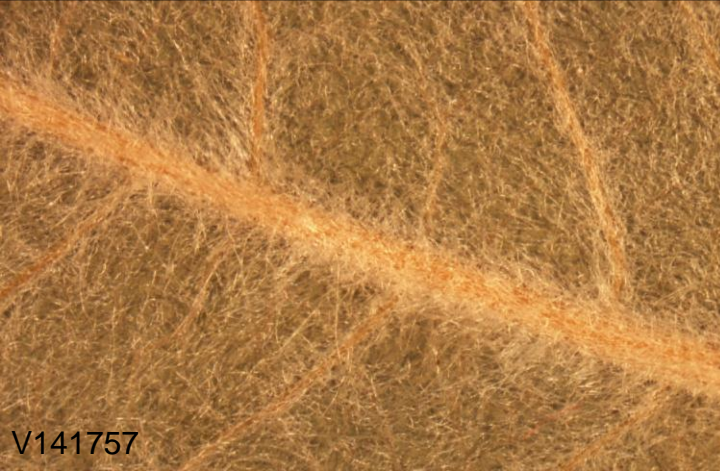


S. scouleriana

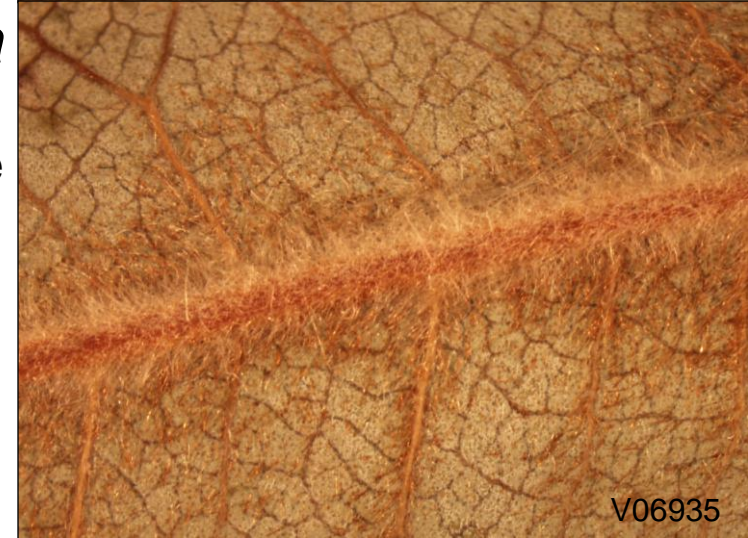
- Rust colored hairs
- Stiff, straight, dense
- Young leaves with white straight or curly hairs
- Less hairy with age



V06935

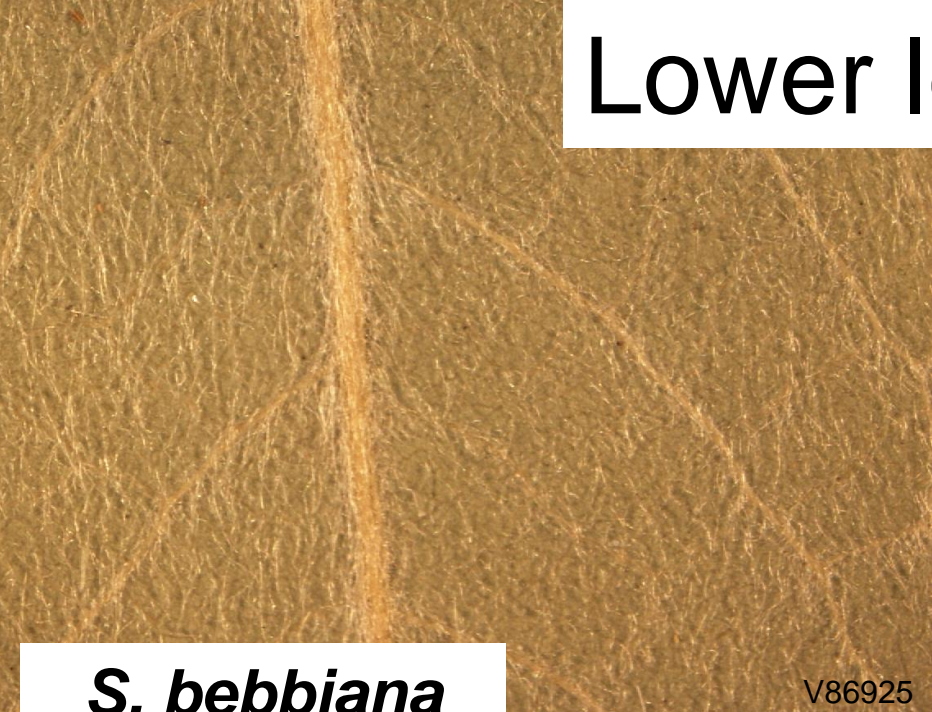


V141757



V06935

Lower leaf color

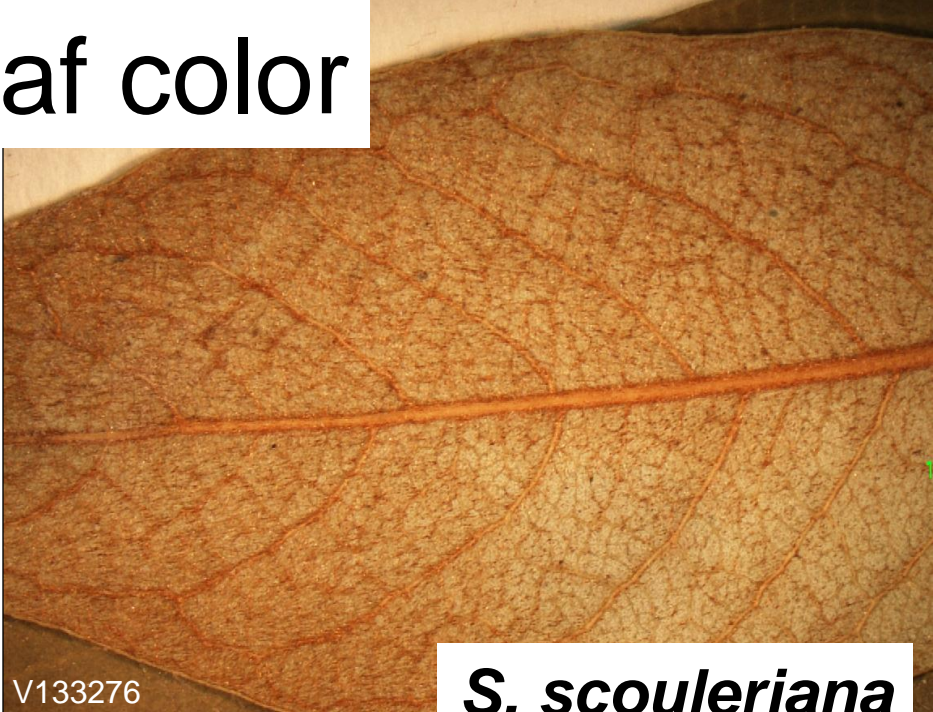


S. bebbiana
Gray or whitish color

V86925



V141757



V133276

S. scouleriana
Rusty color



H1193784
(V120506)

Petioles & young branches



V141757

S. bebbiana

Hairy—wavy, spreading white hairs



V06935

S. scouleriana

Velvety—dense, short, erect white hairs



V141757



V58557

Literature Cited

- Argus, G.W. 2004. *A guide to the identification of Salix (willows) in Alaska, the Yukon Territory and adjacent regions*. Guide distributed at July 2004 workshop on willow identification, Fairbanks, AK. Merrickville, ON: self-published, 86 pp.
- Argus, G.W. Personal communication. Dec. 10, 2008 and Dec. 22, 2008.
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