

**ALEUTIAN GERMPLASM
COLLECTION AND PRESERVATION
PROJECT
1996 – 1999**

December 1999

**Aleutian Germplasm
Collection and Preservation
Project
1996 1999**

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Introduction

The Alaska Plant Materials Center (AKPMC) has been very active in the field of germplasm acquisition. In 1998, the U. S. Department of Agriculture, Agricultural Research Service established the Arctic Plant Germplasm Repository at the AKPMC. This was a long awaited event that came to fruition in part due to the support of the U.S. Navy and the U.S. Air Force. The Navy support for germplasm (seed) collection in Alaska certainly aided in achieving this goal by giving the AKPMC the needed experience and exposure.

The information being reported in this report was the second seed/germplasm collection effort funded by the U.S. Navy. The first effort was in 1993 and 1994. That project was intended to collect seed for commercialization and targeted species with a high degree of important commercial traits; i.e., seed presentation and seed volume. This collection resulted in commercial production of Aleutian plant material.

The second germplasm acquisition started in 1996. Collections occurred in 1996, 1997 and 1999. An effort planned in 1998 was cancelled due to scheduling conflicts and logistic problems. Collecting projects occurred on Adak Island and Attu Island. The intent of this effort was purely germplasm acquisition and preservation. There was no mandate to commercialize the collections. The collections were, however, to be made available for research.

Methods

The 1996 and 1997 collection programs relied on the efforts of single person collection trips. In 1999, two teams of two collectors were sent to Attu in order to make the most of the effort.

All individual collections of seed/germplasm are identified by genus and species as well as the common names. The exact latitude, longitude and elevation for each were noted. After the seed arrived at Palmer, it was cleaned and tested for germination.

The AKPMC's affiliation with USDA as germplasm repository allows us to enter all collection data on the national Germplasm Resource Information Network (GRIN). This process is being initiated and is expected to be finished by June 2000. This report will provide names of the species collected, total numbers for each species and location by island. All the other data will be available on GRIN.

Collection Efforts

Year	Date	Island	Collector
1996	Sep 25 – Oct 2	Adak	S. Wright
1997	Sep 9 – Sep 27	Adak	N. Moore
1999	Sep 22 – Oct 13	Attu	N. Moore and C. Parker
1999	Oct 13 – Oct 27	Attu	C. Wright and D. Ianson

Results

Inventory of Adak Collections

NUMBER OF COLLECTIONS	SPECIES	COMMON NAME
18	<i>Phleum commutatum</i>	Mountain Timothy
11	<i>Agrostis exarata</i>	Spike Bentgrass
1	<i>Calamagrostis canadensis</i>	Bluejoint Reedgrass
16	<i>Calamagrostis nutkatensis</i>	Nootka Reedgrass
165	<i>Deschampsia beringensis</i>	Bering Hairgrass
1	<i>Trisetum spicatum</i>	Spike Trisetum
48	<i>Poa macrocaylx</i>	Large Glume Bluegrass
9	<i>Poa arctica/turneri</i>	Arctic Bluegrass
8	<i>Festuca rubra</i>	Red Fescue
91	<i>Bromus sitchensis</i>	Sitka Brome
4	<i>Hordeum brachyantherum</i>	Meadow Barley
108	<i>Leymus mollis</i>	Beach Wildrye
5	<i>Graminae</i>	Grass
10	<i>Eriophorum russeolum</i>	Russet Cottongrass
9	<i>Carex Kelloggii</i>	Kellogg Sedge
8	<i>Carex macrochaeta</i>	Large Awned Sedge
57	<i>Carex Lyngbyaei</i>	Lyngbye Sedge
3	<i>Carex pluriflora</i>	Several Flowered Sedge
3	<i>Carex sp.</i>	Sedge
13	<i>Juncus arcticus</i>	Arctic Rush
9	<i>Juncus ensifolius</i>	Dagger Leaved Rush
7	<i>Juncus Mertensiana</i>	Merten's Rush
11	<i>Luzula parviflora</i>	Small Flowered Wood Rush
9	<i>Platanthera convallariaefolia</i>	Northern Bog Orchid
6	<i>Rumex fenestratus</i>	Western Dock
5	<i>Sagina crassicaulis</i>	Beach Pearlwort
10	<i>Honckenya peploides</i>	Seabeach Sandwort
5	<i>Aconitum maximum</i>	Kamchatka Monkshood
9	<i>Anemone narcissiflora</i>	Narcissus Anemone
1	<i>Draba aleutica</i>	Aleutian Rockcress
5	<i>Sibbaldi procumbens</i>	Sibbaldi
1	<i>Geum macrophyllum</i>	Large Leaf Avens
3	<i>Geum calthifolium</i>	Caltha Leaf Avens
33	<i>Lupinus nootkatensis</i>	Nootka Lupine

NUMBER OF COLLECTIONS	SPECIES	COMMON NAME
5	<i>Geranium erianthum</i>	Northern Geranium
2	<i>Viola langsdorfii</i>	Alaska Violet
5	<i>Epilobium ciliata ssp behringianum</i>	Bering Purple Leaved Willow Herb
9	<i>Ligusticum scoticum</i>	Sea Lovage
21	<i>Conioselinum chinese</i>	Hemlock Parsley
119	<i>Angelica lucida</i>	Sea Watch
65	<i>Heracleum lanatum</i>	Cow Parsnip
2	<i>Rhododendron camschaticum</i>	Kamchatka Rhododendron
1	<i>Diapensia lapponica</i>	Diapensia
6	<i>Mimulus guttatus</i>	Yellow Monkey Flower
1	<i>Veronica americana</i>	Speedwell
32	<i>Pedicularis Chamissonis</i>	Whorled/Chamisso Lousewort
31	<i>Plantago macrocarpa</i>	Seashore Plantain
13	<i>Erigeron peregrinus</i>	Subalpine Daisy/Fleabane
26	<i>Anaphalis margaritacea</i>	Pearly Everlasting
3	<i>Antemaria dioica</i>	Pussy Toes
16	<i>Achillea millefolium/borealis</i>	Yarrow
19	<i>Arnica unalaschensis</i>	Aleutian Arnica
53	<i>Senecio pseudo-Arnica</i>	Beach Groundsel
62	<i>Artemisia Tilesii</i>	Tilesy Sage

Inventory of Attu Collections

NUMBER OF COLLECTIONS	SPECIES	COMMON NAME
25	<i>Phleum commutatum</i>	Mountain Timothy
8	<i>Agrostis exarata</i>	Spike Bentgrass
2	<i>Calamagrostis canadensis</i>	Bluejoint Reedgrass
5	<i>Calamagrostis nutkatensis</i>	Nootka Reedgrass
2	<i>Calamagrostis inexpansa</i>	Reedgrass
2	<i>Calamagrostis sp.</i>	Reedgrass
2	<i>Deschampsia beringensis</i>	Bering Hairgrass
1	<i>Deschampsia sp.</i>	Hairgrass
9	<i>Vahlodea atropurpurea</i>	Mountain Hairgrass
8	<i>Trisetum spicatum</i>	Spike Trisetum
22	<i>Poa eminens</i>	Eminent Bluegrass
3	<i>Poa macrocaylx</i>	Large Glume Bluegrass
12	<i>Poa arctica/turneri</i>	Arctic Bluegrass
1	<i>Poa alpina vivipara</i>	Viviparous Alpine Bluegrass
7	<i>Poa sp.</i>	Bluegrass
3	<i>Elymus arenarius</i>	Sand Ryegrass
3	<i>Puccinellia langeana</i>	Arctic Alkaligrass
7	<i>Festuca rubra</i>	Red Fescue
4	<i>Bromus sitchensis</i>	Sitka Brome
4	<i>Hordeum brachyantherum</i>	Meadow Barley
1	<i>Gramineae</i>	Grass
4	<i>Leymus mollis</i>	Beach Wildrye

NUMBER OF COLLECTIONS	SPECIES	COMMON NAME
20	<i>Eriophorum russeolum</i>	Russet Cottongrass
7	<i>Carex Kelloggii</i>	Kellogg Sedge
9	<i>Carex Lyngbyaei</i>	Lyngbye Sedge
3	<i>Carex stylosa</i>	Variiegated Sedge
13	<i>Carex gmelini</i>	Gmelin Sedge
25	<i>Carex macrochaeta</i>	Large Awned Sedge
	<i>Carex pluriflora</i>	Several Flowered Sedge
	<i>Carex Bigelowii</i>	Bigelow Sedge
	<i>Carex saxatilis</i>	Sedge
	<i>Carex spectabilis</i>	Showy Sedge
1	<i>Carex dioica</i>	Northern Bog Sedge
4	<i>Carex sp.</i>	Sedge
	<i>Juncus arcticus</i>	Arctic Rush
5	<i>Juncus sp.</i>	Wood Rush
1	<i>Juncus Drummondii</i>	Drummond Rush
9	<i>Juncus ensifolius</i>	Dagger Leaved Rush
10	<i>Juncus falcatus</i>	Sickle Leaved Rush
1	<i>Luzula sp.</i>	Rush
25	<i>Luzula parviflora</i>	Small Flowered Wood Rush
6	<i>Luzula arcuata</i>	Curved Wood Rush
24	<i>Luzula multiflora</i>	Many Flowered Wood Rush
3	<i>Tofieldia coccinea</i>	Northern Asphodel
13	<i>Veratrum album</i>	White Hellebore
2	<i>Streptopus amplexifolius</i>	Clasping Twisted-stalk/Cucumber-root
2	<i>Streptopus</i>	Clasping Twisted-stalk/Cucumber-root
	<i>Fritillaria camschatcensis</i>	Chocolate Lily
	<i>Iris sibirica</i>	Iris/Wild Flag
2		
6		Arctic Willow
4		
2	<i>Sagina crassicaulis</i>	Beach Pearlwort
14	<i>Honckenya peploides</i>	Seabeach Sandwort
	<i>Coptis trifolia</i>	Trifoliolate Goldthread
2	<i>Aconitum maximum</i>	Kamchatka Aconite
1	<i>Anemone Richardsonii</i>	
31		
15	<i>Ranunculus Bongardi</i>	Bongard Buttercup
1	<i>Ranunculus Escholtzii</i>	Escholtz Bu
1	<i>Barbarea orthoceras</i>	Wintercress

NUMBER OF COLLECTIONS	SPECIES	COMMON NAME
1	<i>Saxifraga bronchialis</i>	Spotted Saxifrage
2	<i>Parnassia palustris</i>	Northern Grass of Parnassus
2	<i>Parnassia sp.</i>	Grass of Parnassus
18	<i>Aruncus sylvestris</i>	Goatsbeard
13	<i>Sorbus sambucifolius</i>	Mountain Ash
1	<i>Rubus arcticus</i>	Nagoonberry
7	<i>Potentilla villosa</i>	Villous Cinquefoil
10	<i>Sibbaldi procumbens</i>	Sibbaldi
2	<i>Geum macrophyllum</i>	Large Leaf Avens
9	<i>Geum calthifolium</i>	Caltha Leaf Avens
2	<i>Geum sp.</i>	Avens
33	<i>Lupinus nootkatensis</i>	Nootka Lupine
2	<i>Lathyrus maritimum</i>	Beach Pea
20	<i>Geranium erianthum</i>	Northern Geranium
11	<i>Viola langsdorfii</i>	Alaska Violet
1	<i>Viola epipsila</i>	Marsh Violet
4	<i>Epilobium latifolium</i>	Dwarf Fireweed/River Beauty
1	<i>Epilobium glandulosum</i>	Glandular Willow Herb
4	<i>Epilobium ciliata ssp behringianum</i>	Bering Purple Leaved Willow Herb
1	<i>Epilobium hornemannii</i>	Hornemanns Willow Herb
2	<i>Epilobium sp.</i>	Willow Herb
20	<i>Ligusticum scoticum</i>	Sea Lovage
15	<i>Conioselinum chinese</i>	Hemlock Parsley
22	<i>Angelica lucida</i>	Sea Watch
15	<i>Heracleum lanatum</i>	Cow Parsnip
2	<i>Cornus suecica</i>	Bog Bunchberry
3	<i>Cornus canadensis</i>	Dwarf Dogwood
3	<i>Pyrola minor</i>	Lesser Wintergreen
5	<i>Empetrum nigrum</i>	Crowberry
12	<i>Rhododendron camschaticum</i>	Kamchatka Rhododendron
6	<i>Loiseleuria procumbens</i>	Alpine Azalea
13	<i>Phyllodoce aleutica</i>	Aleutian Mountain Heather
1	<i>Cassiope lycopodiodes</i>	Club-Moss Mountain Heather
6	<i>Vaccinium uliginosum</i>	Alpine Blueberry
1	<i>Vaccinium vitis idaea</i>	Lingonberry
4	<i>Primula cunefolia</i>	Wedge-Leafed Primrose
2	<i>Gentiana amarella</i>	Northern Gentian
1	<i>Gentiana</i>	Gentian
3	<i>Mertensia maritima</i>	Oysterleaf
1	<i>Veronica americana</i>	Speedwell
4	<i>Veronica serpyllifolia</i>	Thyme-Leaf Speedwell
1	<i>Veronica Stelleri</i>	Steller Veronica
1	<i>Veronica sp.</i>	Veronica
16	<i>Castellia unalaschensis</i>	Unalaska Indian Paintbrush
17	<i>Rhianthus minor</i>	Yellow Rattle
1	<i>Rhianthus borealis</i>	Rattlebox

NUMBER OF COLLECTIONS	SPECIES	COMMON NAME
13	<i>Pedicularis verticullata/Chamissonis</i>	Whorled/Chamisso Lousewort
2	<i>Pedicularis Lansdorffii</i>	Langsdorf's Lousewort
4	<i>Pinguicula vulgaris</i>	Bog Violet – Common Butterwort
12	<i>Plantago macrocarpa</i>	Seashore Plantain
1	<i>Plantago sp.</i>	Plantain
1	<i>Linnaea borealis</i>	Twinflower
27	<i>Erigeron peregrinus</i>	Subalpine Daisy/Fleabane
1	<i>Galium aparine</i>	Cleavers
3	<i>Compositae</i>	Composite Family
2	<i>Cornus canadensis</i>	Bunchberry/Canadian Dwarf Cornel
11	<i>Anaphalis margaritacea</i>	Pearly Everlasting
6	<i>Achillea millefolium/borealis</i>	Yarrow
8	<i>Chrysanthemum arcticum</i>	Arctic Daisy
12	<i>Artemisia Tilesii</i>	Tilesy Sage
3	<i>Artemisia arctica</i>	Arctic Sage
32	<i>Arnica unalaschensis</i>	Aleutian Arnica
17	<i>Cacalia auriculata</i>	Cacalia
5	<i>Senecio cannabifolius</i>	Aleutian Groundsel
7	<i>Senecio pseudo-Arnica</i>	Beach Groundsel
17	<i>Cirsium Kamtschaticum</i>	Kamchatka Thistle
16	<i>Picris hieracioides Kamtschatica</i>	Kamchatka Hawkweed
4	<i>Ledum palustre</i>	Labrador Tea