

*AN INVENTORY OF RARE PLANTS OF
MISTY FIORDS NATIONAL MONUMENT,
USDA FOREST SERVICE, REGION TEN*

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INTRODUCTION

In 1993 the University of Alaska's Alaska Natural Heritage Program (AKNHP) initiated a Challenge Cost-Share project with the Alaska Region of the Forest Service's Misty Fiords National Monument (MFNM). This cooperative project was designed to enhance the Monument's ability to manage for rare plant species and contribute to protecting the biodiversity of natural systems under its jurisdiction. The initial objective was to conduct a floristic survey and identify rare vascular plant species on Misty Fiords National Monument lands.

This report summarizes that survey and elaborates on the status of the rare vascular plant species of the Monument.

The 1993 Misty Fiords rare plant field survey consisted of over 20 field days from June through August. The survey documented six plant taxa considered globally rare by AKNHP to be present in Misty Fiords National Monument. As described in "Rare Vascular Plant Species of the U.S. Forest Service Alaska Region" and its supplements (DeLapp, 1991, 1992, 1993) the determining of a taxon as "globally rare" uses global and state plant occurrence patterns to order the status of a species. The standard ranks range from globally rare or endangered, state rare or endangered (G1/S1) to globally abundant, state abundant (G5/S5). The above six taxa are ranked globally as G1, G2, or G3 (and one species ranked G3G4). In addition to these taxa, there are 27 species documented from Misty Fiords National Monument ranked G4 or G5. These taxa are globally common but are rare on USFS lands in Alaska and possibly vulnerable to extirpation there. This report provides detailed information on the global, state, and local distributions of all these taxa. In addition to a discussion of rare taxa, a series of lists of more common vascular plant taxa encountered during the field survey are also presented here.

This report will be a practical reference for the managers, scientists, and planners of Misty Fiords National Monument. The report represents a continuing effort on the part of AKNHP and Region Ten to integrate a wide variety of information into a permanent, ongoing information database for use in rare plant species management. The purpose is to ensure continuing stewardship of rare plant taxa through basic research, inventory, and monitoring.

THE ALASKA NATURAL HERITAGE PROGRAM

The Alaska Natural Heritage Program (AKNHP) was, at the inception of this project, a part of The Nature Conservancy (TNC), an international nonprofit organization dedicated to the conservation of biological diversity. In July of 1993 AKNHP was incorporated into the University of Alaska, Anchorage as part of its Environment and Natural Resources Institute. The biodiversity conservation ethic continues to drive AKNHP's program and define its goals.

The Alaska Natural Heritage Program identifies the elements of Alaskan natural diversity: plants, animals, plant communities, and critical natural features. Program inventory priorities are primarily driven by the element's abundance, distribution, and threat status, with an emphasis on rarity or endangerment. This methodology is standard within over 85 national and international heritage programs and requires data acquisition, interpretation, and management by a trained staff of scientists.

Species and plant community information is entered into a centralized AKNHP database in a stepwise fashion initiated by an extensive data collection process. A comprehensive document and archive search results in retrieval of primary and secondary literature, as well as notes, collections, and unpublished reports within and outside of Alaska. The database files are systematically populated according to subject and topic themes, such as ranking, taxonomy, biology, management, location, reference source, etc. The files are quality controlled at several stages of processing and relationally linked in a codified system. All location information is cross referenced to topographic maps and spatially referenced for GIS ready export.

U.S. FOREST SERVICE MISTY FIORDS NATIONAL MONUMENT

The USFS has encouraged Challenge Cost-Share cooperative projects that provide unmistakable benefits to biodiversity management. The AKNHP/USFS Misty Fiords National Monument rare plant project is a mutual investment in attaining a comprehensive understanding of rare plant species on the Monument. This project builds upon the past cooperative projects between USFS Region Ten and AKNHP. It is our hope that this project will serve as a foundation on which further surveys in other USFS Region Ten management units can be based.

THE NATURE OF THE RARE VASCULAR PLANTS OF MISTY FIORDS NATIONAL MONUMENT

Present day Southeast Alaska can be characterized as an area that has been open to colonization by vascular plants for a relatively short period of time. At the height of Pleistocene glaciation (20,000-18,000 years ago) much of Southeast Alaska was covered by the Cordilleran Ice Sheet. Scientists are uncertain whether the ice sheet was unbroken across great distances or whether it consisted of a series of mountain glaciers and icefields such as persist at higher elevations of Southeast Alaska today (Pielou, 1991). Glacial refugia (areas free of ice at glacial maximum) were possibly present on the outer coast and on high alpine peaks. The distribution of this ice and its effect on the land continue to have a profound effect on the present-day distributions of the plants of the region. This effect is nowhere more evident than in the Misty Fiords National Monument.

Most of the vascular plant species of Southeast Alaska are widespread species that colonized the area after the melt of the ice. The majority of our flora consists of these relatively common taxa, particularly in forested communities. However, there are other elements of our flora that are less widespread, less common. The rarest elements of the flora of Southeast Alaska consist of regional endemics and disjuncts that may have persisted during the Pleistocene in scattered glacial refugia of two types: 1) coastal refugia of the outer islands and 2) nunataks of the high mountain peaks.

Coastal refugia are known to have existed on the Queen Charlotte Islands (Heusser, 1989). Recent field surveys on the outer islands of southern Southeast Alaska indicate that coastal refugia were present here as well. Nunatak refugia were those high peaks that protruded above the continental ice sheet. These refugia were especially common on the outer coast where the ice sheet dropped to the sea, but were also present further inland at higher elevations in Southeast Alaska. Many of these refugial areas are underlain by limestone or carbonate substrates. Modern day rare vascular plant species which probably persisted through the Pleistocene in these ice-free refugia include *Senecio moresbiensis* (found on Dall, Coronation, and Prince of Wales Islands), *Ligusticum calderi* (found on Dall Island), and *Salix reticulata* ssp. *glabellcarpa* (found in alpine areas near Juneau).

Due to the intense level of glaciation in Misty Fiords National Monument, its relative distance from the outer coast, and the lack of any significant limestone substrates, few of these globally rare relictual plant species are to be expected here (areas of Southeast Alaska closer to the outer coast with carbonate geologic substrates such as on the Craig and Thorne Bay Ranger Districts have a far greater incidence of rare plants). The Monument flora is dominated by those more widespread species which colonized the area after the retreat of the continental ice sheet. While

these widespread taxa are more common on a global scale, a number of them are uncommon or rare on the regional or state level.

Most of the rare plant taxa of Misty Fiords National Monument exhibit one of two distribution patterns: 1) peripheral or 2) sporadic. Peripheral species are those occurring at or near the limit of their range. In Misty Fiords National Monument these consist primarily of plants of the Pacific Northwest at the northernmost limit of their range. Other peripheral species on Misty Fiords National Monument include interior species reaching their southernmost or westernmost limit and Beringian species reaching their easternmost and southernmost limit. Rare or uncommon peripheral species include *Taxus brevifolia*, *Abies lasiocarpa*, and *Lobelia dortmanna*. Species with sporadic distribution patterns are uncommon or rare plants with widely scattered occurrences. Locally rare sporadic species of Misty Fiords National Monument include *Asplenium viride*, *Malaxis monophylla*, and *Nymphaea tetragona*.

While ecological and silvicultural surveys have been conducted on Misty Fiords National Monument, few botanical surveys have been conducted in the area. The current project is the first Monument-wide intensive botanical survey to be conducted. Until now, our knowledge of the area's botanical resources has been based primarily on historical collections. And these historic collections are rare. While limited plant collections were made in areas such as Hyder, Cape Fox, and Yes Bay as long ago as 1894, the bulk of the Monument remains unexplored by botanists.

Recent vascular plant collections are limited. They include those of USFS biologists E.L. Little and Wayne Robuck, both who collected in the Monument during the early 1970's. USFS botanist Linda Vorobik conducted a rare plant survey on the Ketchikan Area in the late 1970's. Vorobik's collections include specimens from Monument lands in the Big and Little Goat Lakes area (Vorobik, 1980). Also, in the 1980's VTN Environmental Sciences (1982) conducted plant surveys in the Quartz Hill area for the Quartz Hill Molybdenum project Environmental Impact Statement.

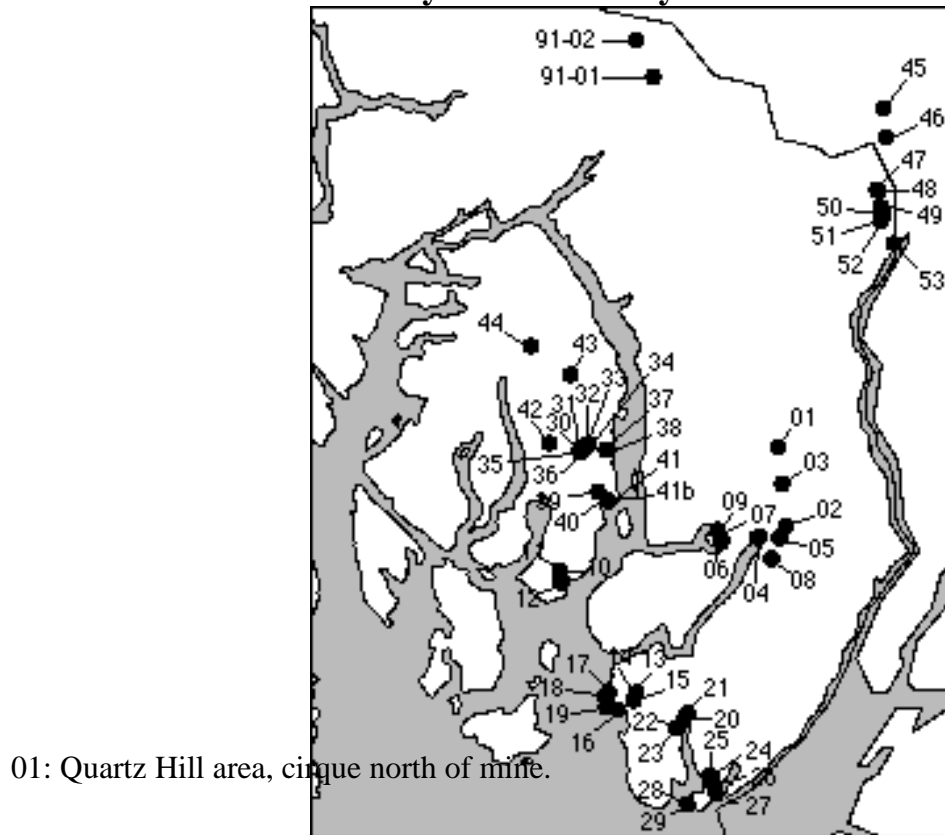
In addition to the vascular plants of the Monument, numerous moss, liverwort, alga, and lichen species occur, often exhibiting similar distributional patterns as those of the vascular species. Some of these species may be quite rare (Schofield, 1989; Worley, 1972). Our knowledge of these species is almost nonexistent.

1993 STUDY METHODOLOGY

FIELD METHODS

AKNHP botanists John DeLapp and Mike Duffy conducted a floristic survey of Misty Fiords National Monument from June to August of 1993. Over 20 days were spent in the field with Misty personnel. Survey sites were selected on the basis of potential rare plant occurrences. Geologic substrate, previously documented occurrences of rare plants, unique habitat, and accessibility were among the parameters considered in selecting these field sites. At each site, a complete list of vascular plants was compiled, the site was photographed, specimens of flowering and fruiting species were collected, and community types and dominants were described. Nonvascular plants were collected when time allowed. Associated environmental parameters recorded included location, elevation, aspect, soil characteristics, and substrate type. Plant specimens were later identified and archived at the University of Alaska Museum Herbarium in Fairbanks and at the Tongass National Forest Herbarium in Sitka. Over fifty sites were surveyed during the field season. In addition to those sites surveyed during the 1993 season, information concerning two sites surveyed by the author during the 1991 field season are included as well. These sites are listed below. Full site descriptions are included in Appendix A of this report.

Rare Plant Survey Sites Of Misty Fiords National Monument



- 02: Quartz Hill area, lower area on alpine ridge east of mine.
- 03: Quartz Hill area, higher area of alpine ridge east of mine.
- 04: Quartz Hill area, alpine ridge south of mine.
- 05: Quartz Hill area, alpine ridge east of Boca de Quadra.
- 06: Quartz Hill area, subalpine ridge SW of survey camp, between Wilson and Bakewell Arms.
- 07: Quartz Hill area, subalpine survey camp area, between Wilson and Bakewell Arms.
- 08: Quartz Hill area, alpine cirque in valley E of Boca de Quadra.
- 09: Wilson Arm at S end of Quartz Hill Road.
- 10: Alava Ridge muskeg.
- 11: Alava Ridge forest.
- 12: Alava Cabin area.
- 13: Head of Very Inlet.
- 14: Upper head of Very Inlet.
- 15: Marble narrows of Very Inlet.
- 16: Isthmus cove, Foggy Bay at mouth of Very Inlet.
- 17: Kirk Point village beach and slough.
- 18: Foggy Bay, eagle nest island.
- 19: Foggy Bay, Delong Island.
- 20: Head of Nakat Inlet, on fish corral island.
- 21: Estuarine head of Nakat Inlet, east drainage.
- 22: West side of Nakat Inlet, 2 miles S of head of inlet.
- 23: West side of Nakat Inlet, 2 miles S of head of inlet, along forested stream.
- 24: Just Island, mouth of Fillmore Inlet.
- 25: Just Island, at mouth of Fillmore Inlet, along stream feeding into small inlet.
- 26: Just Island, at mouth of Fillmore Inlet, mooring cove.
- 27: Mouth of Fillmore Inlet, point of land S of Just Island, S of mooring cove.
- 28: Tongass Island, Port Tongass, Fort site area.
- 29: Tongass Island, large cove on south shore, old village site.
- 30: Ella Lake, Ella Narrows cabin lakeshore.
- 31: Ella Lake, lower lake meadow on NE shore.
- 32: Ella Lake, lower lake outlet, E shore.
- 33: Ella Lake, lower lake outlet, N shore.
- 34: Ella Lake, small waterfall on NW shore near lake outlet.
- 35: Ella Lake, forested lakeshore N of Ella Narrows cabin.
- 36: Muskeg ponds N of Ella Narrows cabin, Ella Lake.
- 37: Ella Lake Trail muskeg.
- 38: Mouth of Ella Creek, Ella Bay, Behm Canal.
- 39: Head of Princess Bay, old growth forest.
- 40: East side of Princess Bay, in muskeg E of banding cabin.
- 41: Princess Bay lake, E side of Bay, E of banding cabin.
- 41b: Princess Bay, on E shore at banding cabin cove.
- 42: Above Marble Creek, in Revilla Island alpine.
- 43: Above Lake Grace, Revilla Island alpine.

- 44: Mt. Reid, Revilla Island alpine.
 45: Summit Lake alpine, Canada, near Hyder; Mile 23.1 from Hyder intersection.
 46: Hyder area, road above Premier Mine, Canada; Mile 18.5 from Hyder intersection.
 47: Hyder area, river bar at Ninemile; Mile 8.2 from Hyder intersection.
 48: Hyder area, beaver pond; Mile 8.0 from Hyder intersection, east of road.
 49: Hyder area, Moe's Road; Mile 5.3 from Hyder intersection, 0.3 miles up trail.
 50: Hyder area, Fish Creek; Mile 4.6 from Hyder intersection at trailhead, at confluence of Fish and Slide Creeks.
 51: Hyder area, Titan Trail; Mile 4.2 from Hyder intersection, 0.5 mi. up trail.
 52: Hyder area, river bar forest at end of second dike; Mile 3.9 from Hyder intersection.
 53: Hyder town area, salt marsh at site of old border station.
- 91-01: Lower Blue River Lava Field.
 91-02: Shore of Blue Lake.

INFORMATION MANAGEMENT METHODS

At the end of the field season all collected plants were identified and archived at the University of Alaska Museum Herbarium in Fairbanks. All collection information was computerized and is on file at the Herbarium and at the AKNHP office. All rare plant information was entered into the AKNHP Biological and Conservation Database (BCD). The BCD consists of a relational database of Alaskan rare plant (and animal) information which includes species ranking, taxonomy, biology, management, location, information sources, and protection status.

Species (rareness) ranks are defined on the basis of the species' global and state rareness (or abundance). Within this report, taxa referred to as "high ranked species" are those taxa which are rarest on a scale of 1-5, from rare to abundant. These rankings are presented in the following tables:

Alaska Natural Heritage Program Rare Species Global Rankings

- G1: Critically imperiled globally.
 G2: Imperiled globally.
 G3: Either very rare and local throughout its range or found locally in a restricted range.
 G4: Apparently secure globally.
 G5: Demonstrably secure globally.
 G#Q: Taxonomically questionable.
 G#T#: Global rank of species and global rank of the described variety or subspecies of the species.
 G#G#: Global rank of species uncertain, best

described as a range between the two ranks.

Alaska Natural Heritage Program Rare Species State Rankings

S1: Critically imperiled in state because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from the state.

S2: Imperiled in state because of rarity or because of some factor(s) making it very vulnerable to extirpation from the state.

S3: Rare or uncommon in the state.

S4: Apparently secure in state, with many occurrences.

S5: Demonstrably secure in state, with many occurrences.

SR#: Reported from the state, but not yet verified.

SP: Occurring in nearby state or province; not yet reported in state, but probably will be encountered with further inventory.

S#S#: State rank of species uncertain, best described as a range between the two ranks.

Nomenclature

Plant nomenclature in this report follows that of the University of Alaska at Fairbanks Herbarium and its Northern Plant Documentation Center Database (D.F. Murray, pers. com.). When the plant scientific names vary from those as stated in Hulten (1968) or Muller (1982) synonyms are included.

RARE VASCULAR PLANTS OF MISTY FIORD NATIONAL MONUMENT

Over 300 taxa of vascular plants were collected in Misty Fiords National Monument during the course of this project. Almost 500 vascular taxa are expected to occur on the Monument according to Hulten (1968). The following table summarizes these numbers:

Vascular Plant Taxa of Misty Fiords National Monument:

| | Family | Genus | Species |
|----------------------------|--------|-------|---------|
| Collected | 61 | 184 | 317 |
| Expected But Not Collected | 7 | 63 | 167 |
| Total | 68 | 247 | 484 |

A full list of collected and expected taxa is presented (by family) in Appendix B of this report.

Over 430 ranked Alaskan vascular plant taxa are currently being tracked by AKNHP. Of these, over 140 are known to occur on USFS Region 10 lands. Thirty-three of these taxa were collected from Misty Fiords National Monument during the present study. Three of these taxa are on the Region Ten sensitive species list: *Carex lenticularis* var. *dolia*, *Cirsium edule*, and *Platanthera chorisiana*. The tracked taxa occurring on Misty Fiords National Monument lands are listed as follows:

Tracked Rare Plants Documented on Misty Fiords National Monument

| <u>Taxon</u> | <u>Rank</u> |
|--|-------------|
| <i>Abies amabilis</i> (Douglas) James Forbes | G4 S3 |
| <i>Abies lasiocarpa</i> (Hook.) Nutt. | G5 S4 |
| <i>Agoseris glauca</i> (Pursh) Raf. | G4G5 S1 |
| <i>Asplenium viride</i> Hudson | G5 S3 |
| <i>Atriplex patula</i> L. var. <i>alaskensis</i> (Wats.) Welsh | G3G4Q S3S4 |
| <i>Campanula lasiocarpa</i> Cham. | G5 S5 |
| <i>Carex atrostachya</i> Olney | G5 S1S2 |

| | |
|--|-----------|
| <i>Carex lenticularis</i> Michaux var. <i>dolia</i> (M.E. Jones) Standley | G5T2 S2 |
| <i>Carex stipata</i> Muhlenb. | G5 S1 |
| <i>Cassiope lycopodioides</i> (Pallas) D. Don | G3 S3 |
| <i>Castilleja parviflora</i> Bong. | G4? S2 |
| <i>Chimaphila umbellata</i> (L.) W. P. G. Barton ssp. <i>occidentalis</i> (Rydb.) Hulten | G5T5 S3 |
| <i>Cirsium edule</i> Nutt. | G3 S1 |
| <i>Geocaulon lividum</i> (Richardson) Fern. | G5 S5 |
| <i>Kalmia polifolia</i> Wangenh. ssp. <i>polifolia</i> | G5T5 S3S4 |
| <i>Lobelia dortmanna</i> L. | G4 S1 |
| <i>Lonicera involucrata</i> (Richardson) Banks | G4G5 S2 |
| <i>Lycopodium inundatum</i> L. | G5 S3 |
| <i>Lycopus uniflorus</i> Michaux | G5 S3 |
| <i>Malaxis monophylla</i> (L.) Sw. | G5 S3S4 |
| <i>Mimulus lewisii</i> Pursh | G5 S1 |
| <i>Nymphaea tetragona</i> Georgi | G5 S5 |
| <i>Oxycoccus palustris</i> Pers. | G5 S1 |
| <i>Pentstemon serrulatus</i> Menzies | G4 S1 |
| <i>Platanthera</i> cf. <i>chorisiana</i> (Cham.) Reichb. | G2G3 S2 |
| <i>Polystichum setigerum</i> (Presl) Presl | G3 S2 |
| <i>Rorippa curvisiliqua</i> (Hook.) Besser | G5 S1 |
| <i>Scirpus subterminalis</i> Nelson | G4G5 S1 |
| <i>Smilacina racemosa</i> (L.) Desf. | G5 S2 |
| <i>Spiraea douglasii</i> Hook. ssp. <i>menziesii</i> (Hook.) Calder & R. Taylor | G5 S2 |
| <i>Stachys emersonii</i> Piper | G5 S1 |
| <i>Taxus brevifolia</i> Nutt. | G4 S2 |
| <i>Woodsia glabella</i> R. Br. | G5 S4 |

The global and state ranks of all these species are summarized as follows:

Tracked Taxa by Global Rank:

| | |
|------|----|
| G1 | 0 |
| G1G2 | 0 |
| G2 | 1 |
| G2G3 | 1 |
| G3 | 3 |
| G3G4 | 1 |
| G4 | 5 |
| G4G5 | 3 |
| G5 | 19 |

Tracked Taxa by State Rank:

| | |
|------|----|
| S1 | 10 |
| S1S2 | 1 |
| S2 | 8 |
| S2S3 | 0 |
| S3 | 6 |
| S3S4 | 3 |
| S4 | 2 |
| S4S5 | 0 |
| S5 | 3 |

Total 33

Total 33

TRACKED SPECIES DESCRIPTIONS

Abies amabilis (Douglas) James Forbes

Common Name: Pacific Silver Fir.

Taxonomic Status: A distinct species.

Global Rank: G4 - Moderately widespread in limited geographic range.

Alaska Rank: S3 - Uncommon in restricted range.

Plant Habit: Dicot, Pinaceae; an evergreen tree.

Habitat: Forested slopes and flats, with spruce and hemlock.

Abundance: Locally abundant in appropriate habitat; in Alaska common in restricted areas of appropriate habitat.

Global Range: Southern Southeast Alaska to northwestern California.

Alaska Range: Limited to extreme Southeast Alaska. Common in the Hyder area. Viereck and Little (1972) include unverified reports from Kosciusko and northern Prince of Wales Islands.

Misty Fiord Specifics: Occasional in mixed hemlock - spruce forest. Collected in 1993 from the west slope of upper Nakat Bay and mouth of Fillmore Inlet; also recorded from the Very Inlet area, Marten Arm, Hyder, and Smeaton Bay.

Abies lasiocarpa (Hook.) Nutt.

Common Name: Subalpine Fir.

Taxonomic Status: A distinct species.

Global Rank: G5 - Common and widespread in mountainous Western North America.

Alaska Rank: S4 - Uncommon to occasional, restricted range.

Plant Habit: Dicot, Pinaceae; an evergreen tree.

Habitat: Forested flats and slopes to subalpine slopes near timberline.

Abundance: Abundant in appropriate habitat in the center of its range; rare to occasional in Southeast Alaska.

Global Range: Southeastern Alaska, western Canada, south to Oregon, Arizona, and New Mexico.

Alaska Range: Scattered through Southeast Alaska. Documented by Worley and Jaques (1973) from Hyder, Dall Island, central and northern Prince of Wales Island, Taku Inlet, and upper Lynn Canal. Also known from Heceta Island.

Misty Fiord Specifics: Locally common in Sitka spruce forest along Salmon River near Hyder. Previous reports of the species' occurrence in Very Inlet and Boca de Quadra areas were not verified during the current survey and were considered doubtful according to Worley and Jaques (1973).

Agoseris glauca (Pursh) Raf.

Common Name: Pale Agoseris.

Taxonomic Status: A distinct species.

Global Rank: G4G5 - Widespread and common in western North America.

Alaska Rank: S1 - Limited to less than five documented occurrences, all in Southeast.

Plant Habit: Dicot, Asteraceae; a perennial scapose herb.

Habitat: Open slopes and meadows.

Abundance: Common in appropriate habitat; abundance in Alaska unknown, inventory needed.

Global Range: Northwest and Yukon Territories, Southeastern Alaska, south to Arizona, east to Minnesota.

Alaska Range: Limited to upper Lynn Canal and alpine near Hyder.

Misty Fiord Specifics: Not documented from Misty Fiords land, but collected in 1993 from Summit Lake alpine of Canada, near Hyder. Almost certainly to be found on Misty Fiords National Monument lands.

Asplenium viride Hudson

Common Name: Green Spleenwort.

Taxonomic Status: A distinct species; referred to as *Asplenium trichomanes-ramosum* L. by Lellinger (1985).

Global Rank: G5 - Tens of thousands of occurrences across boreal northern hemisphere.

Alaska Rank: S3 - Occasional throughout Southeast Alaska in appropriate habitat.

Plant Habit: Pteridophyte, Aspleniaceae, small evergreen fern.

Habitat: On (often calcareous) rocks and crevices.

Abundance: Occasional in appropriate habitat.

Global Range: Scattered across boreal Northern Hemisphere.

Alaska Range: Primarily in Southeast Alaska, with isolated occurrences in Southcentral and Seward Peninsula.

Misty Fiord Specifics: Collected in 1993 from Very Inlet and Ella Lake, with additional documented occurrences from the Salmon River near Hyder and Yes Bay according to Hulten (1941).

Atriplex patula L. var. *alaskensis* (Wats.) Welsh

Common Name: Alaska Orache.

Taxonomic Status: A distinct taxon. Treated as distinct species, *Atriplex alaskensis* S. Wats., by Hulten (1968) and by Douglas, et al. (1989).

Global Rank: G5T3T4Q - 12-20 occurrences, but clearly under collected.

Alaska Rank: S3S4 - While there are only 13 occurrences documented in Alaska in Hulten (1968), characteristics of the distribution and habitat indicate that the species is likely more

widespread.

Plant Habit: Dicot, Chenopodiaceae; an annual herb.

Habitat: Saline sandy soils of seashores.

Abundance: Global and Alaska abundance unknown. Probably more common throughout its range in Southeast and Southcentral Alaska.

Global Range: Limited to coastal southern Alaska.

Alaska Range: Limited to seashores of southern Alaska from Shumagin Islands to southern Southeast Alaska.

Misty Fiord Specifics: Collected in 1993 from shores of Foggy Bay. Other occurrences on beaches of Misty Fiords are likely.

Campanula lasiocarpa Cham.

Common Name: Common Alaska Harebell.

Taxonomic Status: A distinct species.

Global Rank: G5 - 175 occurrences documented, species frequent in northern and western North America.

Alaska Rank: S5 - Occasional to common in much of Alaska, except coastal Southeastern Alaska, where rare.

Plant Habit: Dicot, Campanulaceae; a perennial herb.

Habitat: Alpine heaths and sandy tundra.

Abundance: Common in appropriate habitat.

Global Range: Throughout Alaska, western Alberta, British Columbia, western Mackenzie, Yukon.

Alaska Range: Common throughout much of Alaska except in coastal Southcentral and Southeast, where rare.

Misty Fiord Specifics: Not documented from Misty Fiords land, but collected in 1993 from Summit Lake alpine of Canada, near Hyder. Almost certainly to be found on Misty Fiords National Monument lands.

Carex atrostachya Olney

Common Name: Slender Beak Sedge.

Taxonomic Status: A distinct species. Sometimes spelled *Carex athrostachya*.

Global Rank: G5 - Rank is based on the extent of the species range.

Alaska Rank: S1S2 - Few documented element occurrences in Alaska, but very possibly overlooked and more common, as it is fairly widespread in British Columbia (Taylor, 1983).

Plant Habit: Monocot, Cyperaceae; a perennial sedge.

Habitat: Dry to wet meadows.

Abundance: Occasional to common in appropriate habitat. Uncommon to rare in Alaska.

Global Range: Cordilleran species, extending from coastal southern and southeast AK (less commonly interior AK) southward to CA, UT, CO.

Alaska Range: Isolated occurrences in southeast, south central and interior Alaska.

Misty Fiord Specifics: Collected in 1993 in Hyder area, on shore of beaver pond in wet sedge meadow. To be expected elsewhere in the Monument.

Carex lenticularis Michaux var. *dolia* (M.E. Jones) Standley

Common Name: Goose-grass Sedge.

Taxonomic Status: A distinct taxon. There is some question concerning the status of this species in Alaska. Standley (1981) treats this taxon in a broad sense, including *Carex enanderi* Hult. The taxon originally described as *Carex plectocarpa* F.J. Hermann was restricted in distribution to Montana and the vicinity of Juneau, Alaska.

Global Rank: G5T2 - Possibly declining populations; "few collections of var. *dolia* are known" (Standley, 1981). Listed as Federal category 2 in 90-02-21 Federal Register.

Alaska Rank: S2 - Few verified occurrences of the species in the state. Included on Region Ten sensitive species list.

Plant Habit: Monocot, Cyperaceae; a caespitose perennial sedge, producing only short rhizomes; forming small to large populations.

Habitat: Wet meadows and lake shores, snowbeds, occurring primarily between 1500-3000 meters (down to 600 meters in southeast Alaska).

Abundance: Unknown, inventory needed. Alaskan abundance unknown. Limited number of collections would indicate a small number of individuals.

Global Range: Coast mountains of Alaska and British Columbia and in the Rocky Mountains from Jasper, B.C., south to Glacier National Park, Montana.

Alaska Range: Limited to the alpine of coastal Southcentral and Southeast Alaska.

Misty Fiord Specifics: Collected in 1993 from Revilla Island alpine above Marble Creek. Also documented from Chickamin Glacier area.

Carex stipata Muhlenb.

Common Name: Sawbeak Sedge.

Taxonomic Status:

Global Rank: G5 - Widespread in North America and east Asia, with thousands of occurrences.

Alaska Rank: S1 - Rare in Alaska, with fewer than five documented occurrences.

Plant Habit: Monocot, Cyperaceae; a caespitose perennial sedge.

Habitat: Stream sides, wet meadows, and muskegs according to Welsh (1974).

Abundance: Common in appropriate habitat.

Global Range: Widespread from coastal southern Alaska to California, to east coast of North America.

Alaska Range: Limited to Kenai Peninsula and Southeastern Alaska.

Misty Fiord Specifics: Collected in 1993 in the Hyder area on shore of beaver pond in wet sedge meadow. Possibly elsewhere in the monument as a rare occurrence.

Cassiope lycopodioides (Pallas) D. Don

Common Name: Alaska Cassiope; Clubmoss Bell-Heather.

Taxonomic Status: A distinct species. A locally occurring subspecies, *Cassiope lycopodioides* ssp. *crista-pilosa* Calder & Taylor, has been recognized by Calder and Taylor (1968) as occurring in the Queen Charlotte Islands. This taxon, ranked as G3?T2Q S1 by AKNHP, is not recognized as distinct by most modern workers (including Kartesz, 1989). Specimens meeting the description of this subspecies have been collected from Misty Fiords National Monument of southern Southeast Alaska.

Global Rank: G3? - 36 occurrences documented, species possibly more overlooked than rare.

Alaska Rank: S3 - Less than 100 documented occurrences in the state.

Plant Habit: Dicot, Ericaceae; a low evergreen shrub.

Habitat: Mountain slopes.

Abundance: Occasional to locally common in appropriate habitat.

Global Range: British Columbia, SE Alaska, Aleutian Islands to East Asia.

Alaska Range: Limited to southern coastal Alaska, on alpine and subalpine slopes.

Misty Fiord Specifics: Not previously documented from southern Southeast Alaska. Collected in 1993 in Quartz Hill alpine and in alpine of Mt. Reid on Revilla Island.

Castilleja parviflora Bong.

Common Name: Small-flowered Indian Paintbrush.

Taxonomic Status: A distinct species.

Global Rank: G4?

Alaska Rank: S2 - Fewer than 20 documented occurrences in Alaska.

Plant Habit: Dicot, Scrophulariaceae; a perennial hemiparasitic herb.

Habitat: Subalpine meadows.

Abundance: Occasional to locally common in appropriate habitat.

Global Range: Coast mountains of Southcentral Alaska south to Oregon.

Alaska Range: Limited to coast mountains of Southcentral and Southeast Alaska.

Misty Fiord Specifics: Collected from wet subalpine meadow in Quartz Hill ridge between Wilson and Bakewell Arms. Previously documented from Revilla alpine.

Chimaphila umbellata (L.) W. P. G. Barton ssp. *occidentalis* (Rydb.) Hulten

Common Name: Pipsissewa.

Taxonomic Status: A distinct subspecies of a widespread species complex.

Global Rank: G5T5 - Common North American variety of widespread species, with tens of thousands of occurrences.

Alaska Rank: S3 - Restricted to Southeast Alaska, where occasional to rare.

Plant Habit: Dicot, Pyrolaceae; an evergreen subshrub.

Habitat: Moist woods and coniferous forests.

Abundance: Common to occasional in appropriate habitat. Uncommon in Alaska.

Global Range: Southeastern Alaska to California and New Mexico.

Alaska Range: Limited to Southeastern Alaska, primarily Upper Lynn Canal area.

Misty Fiord Specifics: Collected in 1993 near Hyder along Salmon River in open spruce forest.
First documented occurrence in Alaska south of Juneau.

Cirsium edule Nutt.

Common Name: Edible Thistle; Indian Thistle.

Taxonomic Status: A distinct species.

Global Rank: G3 - Species occurs in fairly limited range as a regional endemic.

Alaska Rank: S1 - Limited to less than five documented occurrences in Alaska. Included on Region Ten sensitive species list.

Plant Habit: Dicot, Asteraceae; a taprooted biennial or short-lived perennial herb; monocarpic according to Hitchcock, et al. (1955).

Habitat: Wet meadows, woods.

Abundance: Common within its range. In Alaska existing collections would indicate that the species probably does not occur in great numbers in the state.

Global Range: Native to coastal Oregon, Washington, and British Columbia, barely reaching southernmost Southeast Alaska.

Alaska Range: Limited to southernmost Southeast Alaska, near Hyder.

Misty Fiord Specifics: Collected in 1993 in Hyder area just outside Monument boundary above Premier Mine in adjacent Canada. Previously documented from Monument in Hyder area along glacial stream above Salmon River. Only recorded occurrence of the species in Alaska is on Monument land. Probably limited to Hyder area.

Geocaulon lividum (Richardson) Fern.

Common Name: Northern Comandra.

Taxonomic Status: A distinct species.

Global Rank: G5 - Widespread and abundant throughout much of boreal North America, with tens of thousands of occurrences. Abundant in Interior Alaska.

Alaska Rank: S5 - Widespread and abundant in Interior, rare in southern coastal Alaska.

Plant Habit: Dicot, Santalaceae; a small perennial semi-parasitic herb.

Habitat: Open lowland woods to alpine and arctic tundra.

Abundance: Abundant through most of its range.

Global Range: Widespread across boreal North America.

Alaska Range: Widespread in Interior Alaska, uncommon to rare in Southern Alaska.

Misty Fiord Specifics: Collected in 1993 from muskeg along Ella Lake Trail. To be expected as an uncommon or occasional occurrence elsewhere in the Monument.

Kalmia polifolia Wangenh. ssp. *polifolia*

Common Name: Bog Kalmia, Bog Laurel.

Taxonomic Status: A distinct taxon.

Global Rank: G5T5 - Widespread with many thousands of occurrences.

Alaska Rank: S3S4 - While there are fewer than 20 documented occurrences in the state, it is almost certainly more common than previous collections would indicate.

Plant Habit: Dicot, Ericaceae; an evergreen subshrub.

Habitat: Bogs.

Abundance: Occasional to locally abundant.

Global Range: Widespread across boreal North America.

Alaska Range: Limited to Southeast Alaska.

Misty Fiord Specifics: Collected in 1993 from Quartz Hill subalpine between Wilson and Bakewell Arms, Alava Ridge muskeg, and Ella Lake muskeg meadow. Occasional to common in appropriate habitat of Monument.

Lobelia dortmanna L.

Common Name: Water Lobelia; Water Gladiole.

Taxonomic Status: A distinct species.

Global Rank: G4 - A widespread if occasional species of boreal Northern Hemisphere.

Alaska Rank: S1 - Known only from southernmost Southeast Alaska; two documented occurrences in the state.

Plant Habit: Dicot, Campanulaceae; a small scapose perennial aquatic herb.

Habitat: Rooted in sand or mud in shallow water of lakes and ponds.

Abundance: Occasional to locally abundant within primary range of species.

Global Range: Spotty circumboreal distribution, with many disjunctions.

Alaska Range: Known only from southernmost Southeast Alaska.

Misty Fiord Specifics: Until the present study the northernmost occurrence of this species in Western North America was documented from the Queen Charlotte Islands (Calder and Taylor, 1968). While Hulten, in his 1973 review of the Flora of Alaska, expected the species to be found in Alaska, it was twenty years before the species was to be encountered. It is known in Alaska only from Misty Fiords National Monument, in the shallows of Ella Lake and the Ella Lake outlet stream along the Ella Lake Trail near Ella Bay. Possibly elsewhere in the Monument, additional inventory needed.

Lonicera involucrata (Richardson) Banks

Common Name: Bearberry Honeysuckle.

Taxonomic Status: A distinct species.

Global Rank: G4G5 - Common to occasional in appropriate habitat with many occurrences.

Alaska Rank: S2 - Fewer than 10 documented occurrences, limited to coastal forests of southern Alaska.

Plant Habit: Dicot, Caprifoliaceae; a deciduous shrub.

Habitat: Woods, stream banks, moist open areas, forest margins.

Abundance: Common to occasional in much of boreal and western North America, with thousands of occurrences. Uncommon to locally abundant in Alaska.

Global Range: Widespread in boreal Canada, south along western Cordillera to northern Mexico.

Alaska Range: Limited to scattered occurrences in Southeast and Southcentral Alaska. Documented from (but not limited to) Kayak Island, Upper Lynn Canal, Foggy Bay, and Dall Island.

Misty Fiord Specifics: Collected in 1993 from forest edge and upper beach meadow in Foggy Bay area, specifically Delong Island, head of Very Inlet, and Kirk Point area. Previously documented from Monument along Portland Canal. To be expected as an occasional occurrence elsewhere in the Monument.

Lycopodium inundatum L.

Common Name: Bog Clubmoss.

Taxonomic Status: A distinct species.

Global Rank: G5 - Patchy distribution through North America, sometimes common, with tens of thousands of occurrences.

Alaska Rank: S3 - Fewer than 20 documented occurrences, all in Southeast, but with more occurrences likely.

Plant Habit: Vascular cryptogam, Lycopodiaceae; a perennial clubmoss with spreading annual stems.

Habitat: Bogs and shores.

Abundance: Occasional to common in limited range in Alaska.

Global Range: Europe, northeastern North America, and spotty distribution in northwestern North America.

Alaska Range: Limited to southern Southeast Alaska Northernmost collections in Southeast from Baranof Island (Muller, 1981).

Misty Fiord Specifics: Collected in 1993 from Ella Lake freshwater meadow and from muskeg on west side of upper Nakat Inlet. Additional occurrences likely in appropriate habitat.

Lycopus uniflorus Michaux

Common Name: Northern Bugleweed.

Taxonomic Status: A distinct species.

Global Rank: G5 - Widespread distribution through North America and eastern Asia, sometimes common, with tens of thousands of occurrences.

Alaska Rank: S3 - Locally abundant in restricted range in Southeast, with isolated populations in Interior.

Plant Habit: Dicot, Lamiaceae; a rhizomatous perennial herb.

Habitat: Wet places - marshes and edges of water bodies.

Abundance: Common in appropriate habitat. Common in Alaska in limited range.

Global Range: Widespread to spotty distribution through boreal and temperate North America and southeast Asia.

Alaska Range: Limited to southern Southeast Alaska and isolated occurrences in vicinity of Interior hot springs.

Misty Fiord Specifics: Collected in 1993 from Ella Lake freshwater wet meadow and sedge meadow of creek bank near Princess Bay. Documented previously from Yes Bay area. Occasional in appropriate habitat in much of Monument.

Malaxis monophylla (L.) Sw.

Common Name: White Adder's-tongue.

Taxonomic Status: A distinct species.

Global Rank: G5 - Patchy distribution through much of (primarily northern) Eastern Hemisphere, with additional occurrences in northwestern North America. Tens of thousands of occurrences.

Alaska Rank: S3S4 - Less than 20 documented occurrences, all in southern Alaska, but more occurrences likely with additional inventories.

Plant Habit: Monocot, Orchidaceae; a perennial herb.

Habitat: Moist open areas.

Abundance: Common to occasional in appropriate habitat. Occasional in Alaska.

Global Range: Widespread to spotty distribution from Alaska and British Columbia, Asia and Europe.

Alaska Range: Limited to coastal Southeast and Southcentral Alaska.

Misty Fiord Specifics: Collected in 1993 on west slope of upper Nakat Inlet in moss bed on bank of stream in cedar - hemlock forest. First documented occurrence in southern Southeast Alaska.

Mimulus lewisii Pursh

Common Name: Purple Monkey-flower.

Taxonomic Status: A distinct species.

Rank: G5 S1

Global Rank: G5 - Common to occasional in western North America, with thousands of occurrences.

Alaska Rank: S2 - Fewer than 10 documented occurrences, with more likely, limited to Southeast Alaska.

Plant Habit: Dicot, Scrophulariaceae; an annual herb.

Habitat: Wet open areas and woods.

Abundance: Common in appropriate habitat. Common to occasional.

Global Range: Southeast Alaska to California and Wyoming.

Alaska Range: Limited to southern half of Southeast Alaska.

Misty Fiord Specifics: Collected in 1993 from bank of Fish Creek at Slide Creek confluence

near Hyder. Also collected in open area just outside Monument above Premier Mine near Hyder. Previously documented from near Silver Falls on Fish Creek near Hyder. Additional occurrences in Hyder area of Monument likely.

Nymphaea tetragona Georgi

Common Name: Pygmy Waterlily.

Taxonomic Status: A distinct circumboreal species. Alaskan specimens included in the somewhat questionable subspecies of *Nymphaea tetragona* ssp. *leibergii* (Morong) Pors.

Global Rank: G5 - A common species, widespread through much of Northern Hemisphere, with tens of thousands of occurrences.

Alaska Rank: S5 - Common in Interior, uncommon in coastal southern Alaska.

Plant Habit: Dicot, Nymphaeaceae; a perennial aquatic herb.

Habitat: Shallow water (to 2 meters depth) of ponds and lakes.

Abundance: Common. Widespread in Interior Alaska, uncommon elsewhere in the state.

Global Range: Spotty circumboreal distribution.

Alaska Range: Abundant in appropriate habitat in the Interior, uncommon in coastal areas of southern Alaska..

Misty Fiord Specifics: Collected in 1993 from lake on east side of Princess Bay near banding cabin. No other documented occurrences on Monument land, but to be expected elsewhere.

Oxycoccus palustris Pers.

Common Name: Swamp Cranberry.

Taxonomic Status: Taxonomic status uncertain. A segregate of the common and widespread *Oxycoccus microcarpus* Turcz. ex Rupr., with coarser stems and larger leaves. Treated as *Oxycoccus microcarpus* var. *intermedium* Gray in Welsh (1974), *Oxycoccus quadripetalus* Gil. in Porsild and Cody (1980), and included in the common and widespread *Vaccinium oxycoccus* L. in Calder and Taylor (1968). Recognized as a distinct species by University of Alaska Museum Herbarium (D. Murray, pers. com.).

Global Rank: G5 - Widespread and common with thousands of occurrences.

Alaska Rank: S1 - Limited to less than 5 documented occurrences, restricted to southernmost Southeast Alaska.

Plant Habit: Dicot, Ericaceae; a small vine-like evergreen sub-shrub.

Habitat: Bogs.

Abundance: Common in appropriate habitat. Rare in Alaska.

Global Range: Widespread through boreal Northern Hemisphere.

Alaska Range: Limited to southernmost Southeast Alaska, with documented occurrences on Prince of Wales Island (according to Viereck and Little, 1972) and Glacier Bay.

Misty Fiord Specifics: Collected in 1993 in muskeg on east side of Princess Bay near banding cabin. To be expected elsewhere in the Monument in appropriate habitat.

Pentstemon serrulatus Menzies

Common Name: Beardtongue.

Taxonomic Status: A distinct species. Genus spelled *Penstemon* by some authors.

Global Rank: G4 - Common to occasional in northwestern North America, with hundreds of occurrences.

Alaska Rank: S1 - Less than five documented occurrences, all in southernmost Southeast Alaska.

Plant Habit: Dicot, Scrophulariaceae; a subshrub to 0.7 m. tall.

Habitat: Moist open places.

Abundance: Common in appropriate habitat. In Alaska occasional in restricted range.

Global Range: Southeast Alaska to Oregon.

Alaska Range: Limited to southernmost Southeast Alaska in the vicinity of Hyder.

Misty Fiord Specifics: Collected in 1993 in Hyder are from above Premier Mine in adjacent Canada. Previously documented from wet bank of Fish Creek near Hyder and from near West Fork Texas Creek, also near Hyder. Expected as an occasional to common species elsewhere in Hyder area.

Platanthera chorisiana (Cham.) Reichb.

Common Name: Choris Bog-orchid.

Taxonomic Status: A distinct species. Referred to by some authors as *Habenaria chorisiana* Cham.

Global Rank: G2G3 - Not very widespread, occurs in specialized habitat.

Alaska Rank: S2 - Limited to fewer than 20 documented occurrences in the state. Included on USFS Region Ten sensitive species list.

Plant Habit: Monocot, Orchidaceae; an erect herb from fleshy root-like tuberoid.

Habitat: Heaths, swamps, and sphagnum bogs from near sea level to 500 feet.

Abundance: Considered rare throughout most of its range according to Calder and Taylor (1968). Most abundant on Kamchatka Peninsula and Aleutian Islands, southern coastal Alaska, elsewhere disjunct and infrequent.

Global Range: Aleutian Islands, British Columbia (Vancouver and Queen Charlotte Islands), and Washington; Japan and Kamchatka Peninsula (var. *elatior*).

Alaska Range: Limited to the Aleutians (Adak, Atka, Atu, and Unalaska) and Southern coastal Alaska.

Misty Fiord Specifics: Collected in 1993 on open muskeg slope of west side of upper Nakat Inlet. One occurrence indicated in Hulten (1968) from Boca de Quadra area. Possibly to be found elsewhere in the Monument, but never common.

Polystichum setigerum (Presl) Presl

Common Name: Alaska Holly Fern.

Taxonomic Status: A distinct species. Considered a hybrid of *Polystichum braunii* and

Polystichum munitum according to Lellinger (1985). Not included in Hulten (1968).

Global Rank: G3 - 23 occurrences documented, limited range.

Alaska Rank: S2 - Limited to fewer than 20 documented occurrences.

Plant Habit: Pteridophyte, Aspleniaceae; an evergreen fern.

Habitat: Lowland forests.

Abundance: Globally rare according to Lellinger (1985). State abundance unknown.

Global Range: Coastal Southeast Alaska and British Columbia.

Alaska Range: Limited to southern Southeast Alaska.

Misty Fiord Specifics: Collected in 1993 from stream side of Fish Creek at confluence with Slide Creek, near Hyder. To be expected elsewhere as a rare or occasional species in the Monument in appropriate habitat.

Rorippa curvisiliqua (Hook.) Besser

Common Name: Western Yellowcress.

Taxonomic Status: A more or less well-defined species in a difficult genus. Possibly introduced in Alaska (Hulten, 1941).

Global Rank: G5 - Common widespread weedy species.

Alaska Rank: S1 - Fewer than 5 documented occurrences.

Plant Habit: Dicot, Brassicaceae; an annual or biennial herb.

Habitat: In wet open habitat.

Abundance: Rare in Alaska, where only known from Hyder, Juneau, and the Haines Highway.

Global Range: Widespread in western North America to southern British Columbia, disjunct to Southeast Alaska.

Alaska Range: Limited to Southeast Alaska, where rare.

Misty Fiord Specifics: Collected in 1993 from wet sedge meadow by beaver pond near Hyder. No other documented occurrences in area. Possibly introduced.

Scirpus subterminalis Nelson

Common Name: Swaying Rush.

Taxonomic Status: A distinct species.

Global Rank: G4G5 - Patchy distribution through northern North America, with hundreds to thousands of occurrences.

Alaska Rank: S1 - Less than five documented occurrences, all in Southeast.

Plant Habit: Monocot, Cyperaceae; a perennial clubrush.

Habitat: Shallow water of ponds and streams.

Abundance: Common in appropriate habitat. Rare in Alaska.

Global Range: Spotty distribution from southern Alaska to Oregon, disjunct to Northeastern North America south to Georgia.

Alaska Range: Limited to southern coastal Alaska.

Misty Fiord Specifics: Collected in 1993 from freshwater meadow at outlet of Ella Lake.

Possibly elsewhere in Monument, inventory needed.

Smilacina racemosa (L.) Desf.

Common Name: False Solomon-seal.

Taxonomic Status: A distinct species.

Global Rank: G5 - Widespread and common in forested areas of North America, with many thousands of occurrences.

Alaska Rank: S2 - Fewer than 10 documented occurrences in the state.

Plant Habit: Monocot, Liliaceae; a rhizomatous perennial herb.

Habitat: Rich woods.

Abundance: Common in appropriate habitat. Uncommon in limited area of Alaska.

Global Range: Widespread in temperate North America.

Alaska Range: Limited to southernmost Southeast Alaska.

Misty Fiord Specifics: Collected in open Sitka spruce forest along Salmon River near Hyder.

Previously documented from east bank of Salmon River west of Hyder, where it was said to be locally common. To be expected elsewhere in the Monument.

Spiraea douglasii Hook. ssp. *menziesii* (Hook.) Calder & R. Taylor

Common Name: Douglas Spiraea.

Taxonomic Status: A distinct taxon. Treated by some as a distinct species, *Spiraea menziesii* Hook.

Global Rank: G5 - Common to occasional in northwestern North America, with thousands of occurrences.

Alaska Rank: S2 - Fewer than 20 documented occurrences, with more likely.

Plant Habit: Dicot, Rosaceae; a deciduous shrub.

Habitat: Moist soil at edge of water bodies wet meadows, and bogs.

Abundance: Common in appropriate habitat. In Alaska occasional in very limited range.

Global Range: Southeast Alaska to California and Idaho.

Alaska Range: Limited to southern Southeast Alaska.

Misty Fiord Specifics: Collected in 1993 in wet meadow of Ella Lake; also recorded from creek bank near lake on east side of Princess Bay near banding cabin. Previously documented from Hyder, Salmon River valley near Hyder, and Yes Bay. Relatively widespread in Monument.

Stachys emersonii Piper

Common Name: Ciliate Hedge-nettle.

Taxonomic Status: A distinct species. Treated by some as *Stachys mexicana*

Global Rank: G5 - Common in coastal western North America, with thousands of occurrences.

Alaska Rank: S1 - Fewer than five documented occurrences, in restricted geographic area.

Plant Habit: Dicot, Lamiaceae; a rhizomatous perennial herb.

Habitat: Moist woods and swamps.

Abundance: Common in appropriate habitat. Rare in Alaska.

Global Range: Southeast Alaska to California.

Alaska Range: Limited to southernmost Southeast Alaska.

Misty Fiord Specifics: Collected in 1993 in Sitka spruce forest on Tongass Island. To be expected as an occasional species elsewhere in the Monument.

Taxus brevifolia Nutt.

Common Name: Pacific Yew.

Taxonomic Status: A distinct species.

Global Rank: G4 - A slow-growing species of northwest North America, limited to forests where much timbering activity is taking place through much of its range. Thousands of occurrences.

Alaska Rank: S2 - Limited to fewer than 20 documented occurrences in small geographic area of the state.

Plant Habit: Gymnosperm, Taxaceae; an evergreen shrub to small tree with needles in two rows.

Habitat: Light to deep, somewhat moist forest, especially along streams and on slopes, according to Hitchcock, et al. (1955). In Alaska found in poorly drained mixed conifer forests.

Abundance: Not uncommon within main range of distribution. Scattered individuals in appropriate habitat in southernmost Southeast Alaska.

Global Range: Limited to the Pacific Northwest of North America, ranging from northwest California north to southernmost Southeast Alaska and east to Montana.

Alaska Range: Limited to islands of southernmost Southeast Alaska, including Annette, Bold, Cat, Dog, Gravina, Kasaan, Mary, and Prince of Wales Islands.

Misty Fiord Specifics: Collected in 1993 from small island at the head of Nakat Inlet. To be expected as an occasional occurrence in other areas of the Monument.

Woodsia glabella R. Br.

Common Name: Smooth Woodsia, Smooth Cliff Fern.

Taxonomic Status: A distinct species.

Global Rank: G5 - A widespread species with tens of thousands of occurrences.

Alaska Rank: S4 - Widespread in most of Alaska north of the southern coast mountains.

Plant Habit: Pteridophyte, Aspleniaceae ; a small deciduous fern.

Habitat: On rocks and crevices.

Abundance: Uncommon throughout its widespread range.

Global Range: Widespread across boreal Northern Hemisphere.

Alaska Range: Widespread across central and northern Alaska, rare in southern coastal areas.

Misty Fiord Specifics: Collected in 1993 from rocks of exposed slope of alpine valley east of Boca de Quadra. Not previously collected from Southeast Alaska.

INFORMATION NEEDS

While the present study provides a valuable base of information concerning the occurrence of rare plants on Misty Fiord National Monument, much remains unknown. Many acres of potential rare plant habitat remain unsurveyed by botanists. The status of rare plants on most of the Monument lands has not yet been assessed. It is hoped that future projects will fill many of these information gaps. Priority survey areas include:

Pearse Canal and the Hyder area where rare plant species more common to the south and to the interior may occur.

Hyder area alpine (as well as the alpine peaks along the US - Canada border) where rare species more common in the interior may be found.

Chickamin and Unuk River drainages, where interior influences may result in the occurrence of rare taxa more common in neighboring Canada.

Monument areas with unusual substrates such as the Blue River lava flow and isolated outcrops of marble such as are scattered through the Monument.

The major lakes systems of mid to lower elevations of the Monument, including Gokachin, Mirror, and Wilson Lakes and Lake Grace, where additional occurrences of *Lobelia dortmanna* and other rare aquatics species may be found.

In addition to the survey for rare vascular plants, further attention needs to be paid to the occurrence of rare nonvascular plant species.

LITERATURE CITED

- Calder, J.A., and R.L. Taylor. 1968. Flora of the Queen Charlotte Islands. Canada Department Agric. Res. Branch Monogr. 4, Part 1.
- DeLapp, J.A. 1991. Rare vascular plants of the United States Forest Service Alaska Region, Including Sensitive Species Recommendations. A Report by the Alaska Natural Heritage Program. Anchorage, AK. 221 p.
- DeLapp, J.A. 1992. 1992 Supplement to the Rare Vascular Plant Species of the United States Forest Service Alaska Region. A Report by the Alaska Natural Heritage Program. Anchorage, AK. 277 p.
- DeLapp, J.A. 1993. 1993 Supplement to the Rare Vascular Plant Species of the United States Forest Service Alaska Region. A Report by the Alaska Natural Heritage Program. Anchorage, AK. 350 p.
- Douglas, G.W., G.B. Straley, and D. Meidinger (eds.). 1989. The vascular plants of British Columbia. Part 1 - Gymnosperms and Dicotyledons (Aceraceae through Cucurbitaceae). British Columbia Ministry of Forests, Research Branch, Victoria, British Columbia, Canada. 208 p.
- Heusser, C.J. 1989. North Pacific coastal refugia--the Queen Charlotte Islands in perspective. Pp. 91-106. In: Scudder, G.G.E., and N. Gessler (eds.). The outer shores. Based on the proceedings of the Queen Charlotte Islands First International Symposium, Univ. of British Columbia, August 1984.
- Hitchcock, C.L., A. Cronquist, M. Ownby, and J.W. Thomson. 1955-1969. Vascular plants of the Pacific Northwest. Parts 1-5. Univ. Washington Press, Seattle, WA.
- Hulten, E. 1941-1950. Flora of Alaska and Yukon. 1-10. Lunds Univ. Arsskr. N.F. Avd. 2, Vol. 37-46. 1,902 p.
- Hulten, E. 1968. Flora of Alaska and neighboring territories. Stanford Univ. Press, Stanford, CA. 1,008 p.

- Hulten, E. 1973. Supplement to flora of Alaska and neighboring territories: A study in the flora of Alaska and the transberingian connection. *Bot. Not.* 126:459-512.
- Kartesz, J.T. 1989. Working draft of vascular plants of Alaska. The Nature Conservancy, Arlington, Virginia. 71 p.
- Lellinger, D.B. 1985. A field manual of the ferns and fern allies of the United States and Canada. Smithsonian Institution Press. 389 p.
- Muller, M.C. 1981. Range extensions for two lycopods on Baranof Island, southeastern Alaska. *Am. Fern J.* 71(1):31.
- Muller, M.C. 1982. Wildlife and fisheries habitat notes: A preliminary checklist of the vascular plants in Southeastern Alaska. United States Forest Service, Alaska Region Admin. Doc. No. 112. 32 p.
- Pielou, E.C. 1991. *After the Ice Age, The Return of Life to Glaciated North America.* University of Chicago Press, Chicago, IL. 366 p.
- Porsild, A.E., and W.J. Cody. 1980. Vascular plants of continental Northwest Territories, Canada. National Museum of Natural Sciences, National Museums of Canada, Ottawa, Ontario, Canada.
- Schofield, W.B. 1989. Structure and Affinities of the Bryoflora of the Queen Charlotte Islands. Pp. 109-119. *In*: Scudder, G.G.E., and N. Gessler (eds.). *The outer shores. Based on the proceedings of the Queen Charlotte Islands First International Symposium, Univ. of British Columbia, August 1984.*
- Standley, L.A. 1981. The systematics of *Carex* section *Carex* (Cyperaceae) in the Pacific Northwest. Ph.D. thesis. Univ. of Washington.
- Taylor, T.M.C. 1983. The sedge family of British Columbia. B.C. Provincial Mus. Handbook No. 43. 375 p.
- Viereck, L.A. and E.L. Little, Jr. 1972. Alaska trees and shrubs. Agriculture Handbook No. 410. U.S. Forest Service, Washington, D.C. 265 p.
- Vorobik, L.A. 1980. Field season 1979 rare and endangered plant species report for Tongass National Forest, Ketchikan Region. Unpubl. rep. United States Forest Service. 165 p.

- VTN Environmental Sciences. 1982. 1982 Terrestrial vegetation and wildlife, annual environmental report, Quartz Hill Molybdenum Project, Southeast Alaska. United States Borax and Chemical Corporation, 82 p. + appendices.
- Welsh, S.L. 1974. Anderson's flora of Alaska and adjacent parts of Canada. Brigham Young Univ. Press, Provo, UT. 724 p.
- Worley, I.A. 1972. The bryo-geography of southeastern Alaska. Ph.D. dissertation. Univ. of British Columbia, Vancouver, BC. 715 p.
- Worley, I.A., and D. Jacques. 1973. Subalpine fir (*Abies lasiocarpa*) in coastal western North America. Northwest Science 47(4):265-273.

APPENDICES

APPENDIX A: 1993 MISTY FIORDS NATIONAL MONUMENT RARE PLANT SURVEY SITES

During the summer of 1993 53 sites were surveyed for rare plants in or near Misty Fiords National Monument by AKNHP botanists John DeLapp and Mike Duffy. Site summaries are included here. Two sites surveyed during the summer of 1991 in the Blue River Lava Flow area are included here as well.

Survey Site: 01

Survey Date: 6/27/93

Location: Quartz Hill area, cirque north of mine.

Plant collection numbers: 1-35

Latitude and Longitude: N 55° 30' 0.1" W 130° 25' 8.9"

Elevation: 1160 m (3800 ft.)

Quadrangle, Township, Range, and Section: Ketchikan C-2, T73S, R99E, S32, NW4NW4

Habitat types and dominant species:

Alpine meadow on upper slope just below peak; *Fauria crista-gallii*, *Veratrum viride*, *Pedicularis verticillata*, and *Geum calthifolium*.

Ericaceous shrub scrub in moist chute; *Luetkea pectinata*, *Cassiope* spp., *Loiseleuria procumbens*, and *Silene acaulis*.

Phyllodoce - *Cassiope* heath; *Cladina* sp., *Saxifraga ferruginea*, and *Stereocaulon* sp.

Upper slope just below peak; *Fauria crista-gallii*, *Veratrum viride*, and *Pedicularis verticillata*.

Survey Site: 02

Survey Date: 6/27/93

Location: Quartz Hill area, lower area on alpine ridge east of mine.

Plant collection numbers: 36, 37

Latitude and Longitude: N 55° 20' 21.7" W 130° 23' 42.4"

Elevation: 700 m (2300 ft.)

Quadrangle, Township, Range, and Section: Ketchikan B-2, T74S, R99E, S20, SE4NE4

Habitat types and dominant species:

Rocky fellfield, *Cassiope* heath; *Lycopodium* spp., *Phyllodoce aleutica*, occasional stunted *Tsuga mertensiana* and *Picea sitchensis*.

Survey Site: 03

Survey Date: 6/27/93

Location: Quartz Hill area, higher area of alpine ridge east of mine.

Plant collection numbers: 38-49

Latitude and Longitude: N 55° 25' 27.5" W 130° 24' 31.9"

Elevation: 1340 m (4400 ft.)

Quadrangle, Township, Range, and Section: Ketchikan B-2, T74S, R99E, S29, NW4SW4

Habitat types and dominant species:

Exposed *Cassiope* heath and associated rock crevices; gravel soil; *Phyllodoce aleutica*, *Artemisia arctica*, *Saxifraga* spp., and *Carex* spp.

Survey Site: 04

Survey Date: 6/27/93

Location: Quartz Hill area, alpine ridge south of mine.

Plant collection numbers: 50-59

Latitude and Longitude: N 55° 18' 57.5" W 130° 29' 41.2"

Elevation: 1190 m (3900 ft.)

Quadrangle, Township, Range, and Section: Ketchikan B-4, T75S, R98E, S2, center SE4

Habitat types and dominant species:

Cassiope - *Phyllodoce* heath on narrow ridgetop; *Empetrum nigrum*, *Luetkea pectinata*, *Fauria crista-gallii*, *Tsuga mertensiana*, *Picea sitchensis*.

Survey Site: 05

Survey Date: 6/27/93

Location: Quartz Hill area, alpine ridge east of Boca de Quadra.

Plant collection numbers: 60-65

Latitude and Longitude: N 55° 18' 57.5" W 130° 25' 10.2"

Elevation: 1460 m (4800 ft.)

Quadrangle, Township, Range, and Section: Ketchikan B-2, T76S, R99E, S6, NW4NE4

Habitat types and dominant species:

Sparsely vegetated exposed gravel and sandy soils; occasional individuals of *Cassiope* spp. and *Phyllodoce aleutica*.

Survey Site: 06

Survey Date: 6/28/93

Location: Quartz Hill area, subalpine ridge SW of camp, between Wilson and Bakewell Arms.

Plant collection numbers: 66-91

Latitude and Longitude: N 55° 20' 34" W 130° 36' 24"

Elevation: 810 m (2650 ft.)

Quadrangle, Township, Range, and Section: Ketchikan B-2, T75S, R97E, S25, SE4SW4

Habitat types and dominant species:

Exposed wet subalpine ridgetop; *Cassiope* spp. and *Phyllodoce aleutica*.

Shallow pool of wet subalpine meadow - muskeg; *Eriophorum angustifolium*.

Mountain hemlock woodland of wet hanging valley floor with much exposed bedrock.

Rocks of wet subalpine meadow of side slope; *Carex* spp., *Tsuga mertensiana*, *Pedicularis verticillata*.

Ridgetop gully, wet subalpine meadow; *Fauria crista-gallii*, *Cornus canadensis*, stunted *Tsuga mertensiana*.

Wet subalpine meadow of exposed ridgetop; *Cassiope* spp., *Phyllodoce aleutica*.

Wet subalpine meadow of side slope; *Carex* spp., *Tsuga mertensiana*, *Pedicularis verticillata*.

Wet subalpine meadow/muskeg of hanging valley floor.

Tracked Species:

Castilleja parviflora Bong. (G4? S2S4)

Survey Site: 07

Survey Date: 6/29/93

Location: Quartz Hill area, subalpine camp area, between Wilson and Bakewell Arms.

Plant collection numbers: 92-124

Latitude and Longitude: N 55° 20' 52" W 130° 36' 25"

Elevation: 750 m (2450 ft.)

Quadrangle, Township, Range, and Section: Ketchikan B-2, T75S, R97E, S24, NE4NW4

Habitat types and dominant species:

Rocky wet stream ravine below camp lake; *Caltha biflora*, *Luetkea pectinata*, *Leptarrhena pyrolifolia*.

Rock outcrops in subalpine wet meadow/muskeg next to camp lake; *Vaccinium* spp. and *Tsuga mertensiana*.

Subalpine wet meadow, along rocky drainage below camp lake; *Cassiope* spp., *Caltha biflora*, *Tsuga mertensiana*, *Picea sitchensis*, *Pedicularis verticillata*.

Tree island in subalpine wet meadow; *Picea sitchensis*, *Caltha biflora*, and *Cassiope* spp.

Tracked Species:

Castilleja parviflora (G4? S2S4)

Kalmia polifolia ssp. *polifolia* (G5T5 S3S4)

Survey Site: 08

Survey Date: 6/29/93

Location: Quartz Hill area, alpine cirque in valley E of Boca de Quadra.

Plant collection numbers: 125-138

Latitude and Longitude: N 55° 16' 16" W 130° 26' 49"

Elevation: 870 m (2850 ft.)

Quadrangle, Township, Range, and Section: Ketchikan B-2, T76S, R98E, S24,
NW4NE4

Habitat types and dominant species:

Exposed alpine ridgetop; *Geum calthifolium*, *Vaccinium uliginosum*, *Phyllodoce aleutica*,
Cassiope spp.

Rocks and wet exposed slope of alpine ridge; *Cassiope* spp., *Luetkea pectinata*, *Fauria*
crista-gallii, and *Lycopodium* spp.

Tracked Species:

Cassiope lycopodioides ssp. *crista-pilosa* (G4G5T2 S1)

Woodsia glabella (G5 S4)

Survey Site: 09

Survey Date: 6/29/93

Location: Wilson Arm at S end of Quartz Hill Road.

Plant collection numbers: 139-141

Latitude and Longitude: N 55° 22' 02" W 130° 37' 20"

Elevation: 01 m (03 ft.)

Quadrangle, Township, Range, and Section: Ketchikan B-2, T75S, R97E, S14, SW4NE4

Habitat types and dominant species:

Gravelly beach above mean high tide; *Dodecatheon pulchellum*, *Prunella vulgaris*, *Castilleja*
miniata.

Survey Site: 10

Survey Date: 7/1/93

Location: Alava Ridge muskeg.

Plant collection numbers: 142-161

Latitude and Longitude: N 55° 13' 58" W 131° 09' 05"

Elevation: 60 m (200 ft.)

Quadrangle, Township, Range, and Section: Ketchikan A-4, T76S, R94E, S32, SE4SE4

Habitat types and dominant species:

Open western red cedar western hemlock muskeg.

Tracked Species:

Kalmia polifolia ssp. *polifolia* (G5T5 S3S4)

Survey Site: 11

Survey Date: 7/3/93

Location: Alava Ridge forest.

Plant collection numbers: 162-197

Latitude and Longitude: N 55° 14' 57" W 131° 09' 29"

Elevation: 180 m (600ft.)

Quadrangle, Township, Range, and Section: Ketchikan A-4, T76S, R94E, S29, SW4NE4

Habitat types and dominant species:

Boulders of shoreline, in margin of closed Sitka spruce western red cedar forest.

Closed Sitka spruce western red cedar forest.

Open Sitka spruce western red cedar forest and muskeg.

Rocks in closed Sitka spruce western red cedar forest.

Survey Site: 12

Survey Date: 7/2/93

Location: Alava Cabin area.

Plant collection numbers: 198-217

Latitude and Longitude: N 55° 13' 27" W 131° 09' 14"

Elevation: 02 m (06 ft.)

Quadrangle, Township, Range, and Section: Ketchikan A-4, T77S, R95E, S6, SE4NE4

Habitat types and dominant species:

Forest edge next to upper beach meadow.

Lower beach meadow; *Glaux maritima*, *Cakile edentula*, *Plantago macrocarpa*, *Triglochin maritimum*.

Tidepool of Alava Bay; *Zostera marina*.

Upper beach meadow. boulders, and forest edge.

Survey Site: 13

Survey Date: 9/6/93

Location: Head of Very Inlet.

Plant collection numbers: 224-255, 265

Latitude and Longitude: N 54° 59' 59" W 130° 53' 58"

Elevation: 01 m (02 ft.)

Quadrangle, Township, Range, and Section: Prince Rupert D-3, T79S, R96E, S23, SW4SE4

Habitat types and dominant species:

Beach meadow and boulders; *Glaux maritima*, *Puccinellia nutkaensis*, *Deschampsia beringensis*.

Forest edge at wet upper beach meadow.

Upper beach meadow; *Castilleja miniata*, *Epilobium* spp., *Conioselinum pacificum*.

Tracked Species:

Asplenium viride (G5 S3)

Lonicera involucrata (G4G5 S2)

Survey Site: 14

Survey Date: 9/6/93

Location: Upper head of Very Inlet.

Plant collection numbers: 256-261

Latitude and Longitude: N 55° 00' 07" W 130° 54' 10"

Elevation: 01 m (01 ft.)

Quadrangle, Township, Range, and Section: Ketchikan A-4, T79S, R96E, S23, NW4SE4

Habitat types and dominant species:

Tidal meadow at head of upper lagoon; *Hordeum brachyantherum*, *Castilleja miniata*,
Potentilla egedii.

Survey Site: 15

Survey Date: 9/6/93

Location: Marble narrows of Very Inlet.

Plant collection numbers: 262-264

Latitude and Longitude: N 54° 59' 03" W 130° 54' 42"

Elevation: 05 m (16 ft.)

Quadrangle, Township, Range, and Section: Prince Rupert D-3, T79S, R96E, S26,
SW4SW4

Habitat types and dominant species:

Rock outcrop of narrow channel at edge of Sitka spruce western red cedar forest.

Survey Site: 16

Survey Date: 9/6/93

Location: Isthmus cove, Foggy Bay at mouth of Very Inlet.

Plant collection numbers: 266-277

Latitude and Longitude: N 54° 57' 53" W 130° 57' 39"

Elevation: 1 m (3 ft.)

Quadrangle, Township, Range, and Section: Prince Rupert D-3, T79S, R96E, S33,
NW4SE4

Habitat types and dominant species:

Forest edge next to upper beach meadow.

Shallow tidepool in sheltered cove.

Sitka spruce western red cedar forest next to upper beach meadow.

Upper beach meadow; *Castilleja miniata*, *Ligusticum scoticum*, *Dodecatheon pulchellum*,
Deschampsia beringensis.

Survey Site: 17

Survey Date: 7/7/93

Location: Kirk Point village beach and slough.

Plant collection numbers: 278-290, 305

Latitude and Longitude: N 54° 59' 58" W 130° 59' 43"

Elevation: 01 m (03 ft.)

Quadrangle, Township, Range, and Section: Prince Rupert D-3, T79S, R96E, S19, SE4SE4

Habitat types and dominant species:

Forest edge next to upper beach meadow of main beach; *Calamagrostis canadensis*, *Conioselinum pacificum*.

Lower beach meadow, with *Glaux maritima*, *Puccinellia*, *Triglochin*.

Sandy flats of estuarine slough; *Salicornia virginica*, *Plantago* and *Glaux*.

Upper beach meadow of main beach; *Potentilla egedii*, *Castilleja miniata*.

Survey Site: 18

Survey Date: 7/7/93

Location: Foggy Bay, eagle nest island.

Plant collection numbers: 291-299

Latitude and Longitude: N 54° 59' 29" W 131° 00' 26"

Elevation: 1 m (1 ft.)

Quadrangle, Township, Range, and Section: Prince Rupert D-4, T79S, R96E, S30, S1/2

Habitat types and dominant species:

Lower beach meadow among rocks.

Upper beach meadow among boulders at forest edge; *Castilleja miniata*, *Deschampsia beringensis*, *Carex* spp.

Tracked Species:

Lonicera involucrata (G4G5 S2)

Survey Site: 19

Survey Date: 7/7/93

Location: Foggy Bay, DeLong Island.

Plant collection numbers: 300-304

Latitude and Longitude: N 54° 58' 15" W 131° 00' 01"

Elevation: 01 m (03 ft.)

Quadrangle, Township, Range, and Section: Prince Rupert D-3, T79S, R96E, S33, W1/2

Habitat types and dominant species:

Sitka spruce forest; *Vaccinium* spp., *Oplopanax horridus*, *Maianthemum dilatatum*.

Tall shrub margin above beach, margin of closed Sitka spruce forest.

Upper sandy beach, among driftwood; *Honckenya peploides*, *Cakile edentula*.

Tracked Species:

Atriplex patula L. var. *alaskensis* (G3G4Q S3S4)

Lonicera involucrata (G4G5 S2)

Survey Site: 20

Survey Date: 7/7/93

Location: Head of Nakat Inlet, on fish corral island.

Plant collection numbers: 306-308

Latitude and Longitude: N 54° 56' 36" W 130° 44' 39"

Elevation: 15 m (40 ft.)

Quadrangle, Township, Range, and Section: Prince Rupert D-3, T80S, R97E, S11, NE4SE4

Habitat types and dominant species:

Open Sitka spruce forest above beach meadow.

Upper beach meadow; *Conioselinum pacificum*, *Ligusticum scoticum*, *Castilleja miniata*, *Hordeum brachyantherum*.

Tracked Species:

Taxus brevifolia (G4 S2)

Survey Site: 21

Survey Date: 7/7/93

Location: Estuarine head of Nakat Inlet, east drainage.

Plant collection numbers: 309, 310

Latitude and Longitude: N 54° 57' 30" W 130° 43' 57"

Elevation: 03 m (10 ft.)

Quadrangle, Township, Range, and Section: Prince Rupert D-3, T80S, R97E, S1, SE4SW4

Habitat types and dominant species:

Closed Sitka spruce forest.

Survey Site: 22

Survey Date: 7/8/93

Location: West side of Nakat Inlet, 2 miles S of head of inlet.

Plant collection numbers: 311-324, 329-353, 355-357

Latitude and Longitude: N 54° 55' 47" W 130° 45' 49"

Elevation: 75 m (250 ft.)

Quadrangle, Township, Range, and Section: Prince Rupert D-3, T80S, R97E, S14, NW4SW4

Habitat types and dominant species:

Closed western red cedar western hemlock forest.

Nootka cedar shore pine wet muskeg.

Shallow pools and wet *Sphagnum* in Nootka cedar - shore pine wet muskeg.

Tracked Species:

Lycopodium inundatum (G5 S3)
Malaxis monophylla (G5 S3S4)
Platanthera cf. chorisiana (G2G3 S2)

Survey Site: 23**Survey Date:** 7/8/93**Location:** West side of Nakat Inlet, 2 miles S of head of inlet, along forested stream.**Plant collection numbers:** 325, 326, 328, 354, 358**Latitude and Longitude:** N 54° 55' 40" W 130° 46' 21"**Elevation:** 180 m (300 ft.)**Quadrangle, Township, Range, and Section:** Prince Rupert D-3, T80S, R97E, S14, NW4SW4**Habitat types and dominant species:**

Closed Sitka spruce western hemlock forest.

Sitka spruce - western hemlock - Pacific silver fir woodland; *Fauria crista-gallii*, *Menziesia ferruginea*.**Tracked Species:***Abies amabilis* (G4 S3)**Survey Site: 24****Survey Date:** 7/8/93**Location:** Just Island, mouth of Fillmore Inlet.**Plant collection numbers:** 364-381**Latitude and Longitude:** N 54° 49' 43" W 130° 38' 59"**Elevation:** 0 m (0 ft.)**Quadrangle, Township, Range, and Section:** Prince Rupert D-2, T81S, R99E, S20, center.**Habitat types and dominant species:**

Brackish stream at head of inlet.

Low tide zone, in estuarine marsh at head of inlet.

Snag in *Carex* marsh at head of inlet.Upper beach meadow at head of inlet; *Deschampsia beringensis*, *Plantago maritima*, *Potentilla egedii*, *Juncus arcticus*, *Castilleja miniata*, *Conioselinum pacificum*.**Survey Site: 25****Survey Date:** 7/8/93**Location:** Just Island, at mouth of Fillmore Inlet, along stream feeding into small inlet.**Plant collection numbers:** 382, 383**Latitude and Longitude:** N 54° 49' 55" W 130° 39' 20"**Elevation:** 01 m (05 ft.)

Quadrangle, Township, Range, and Section: Prince Rupert D-2, T81S, R99E, S20, SE4 to center.

Habitat types and dominant species:

Open Sitka spruce / Nootka cedar forest.

Tracked Species:

Abies amabilis (G4 S3)

Survey Site: 26

Survey Date: 7/9/93

Location: Just Island, at mouth of Fillmore Inlet, mooring cove.

Plant collection numbers: 384

Latitude and Longitude: N 54° 48' 34" W 130° 38' 30"

Elevation: 15 m (50 ft.)

Quadrangle, Township, Range, and Section: Prince Rupert D-2, T81S, R99E, S33, NW4NW4.

Habitat types and dominant species:

Closed Sitka spruce - western red cedar forest.

Survey Site: 27

Survey Date: 7/9/93

Location: Mouth of Fillmore Inlet, point of land S of Just Island, S of mooring cove.

Plant collection numbers: 385-389

Latitude and Longitude: N 54° 47' 38" W 130° 38' 14"

Elevation: 01 m (02 ft.)

Quadrangle, Township, Range, and Section: Prince Rupert D-2, T82S, R99E, S4, NW4NW4.

Habitat types and dominant species:

Closed Sitka spruce - western red cedar forest, steep slope below wet rock face.

Lower beach meadow; *Puccinellia* spp., *Triglochin maritimum*.

Tracked Species:

Abies amabilis (G4 S3)

Survey Site: 28

Survey Date: 7/9/93

Location: Tongass Island, Port Tongass, Fort site area.

Plant collection numbers: 393-408

Latitude and Longitude: N 54° 46' 25" W 130° 43' 59"

Elevation: 01 m (02 ft.)

Quadrangle, Township, Range, and Section: Prince Rupert D-3, T82S, R98E, S11, center.

Habitat types and dominant species:

Second-growth Sitka spruce forest.

Tall *Rubus parviflorus* - *Sambucus racemosa* thicket.

Upper beach at second-growth Sitka spruce forest edge.

Upper beach margin of tall *Rubus parviflorus* - *Sambucus racemosa* - *Alnus sinuata* scrub thicket..

Tracked Species:

Stachys emersonii (G5 S1)

Survey Site: 29

Survey Date: 7/9/93

Location: Tongass Island, large cove on south shore, old village site.

Plant collection numbers: 390-392

Latitude and Longitude: N 54° 46' 19" W 130° 44' 04"

Elevation: 01 m (03 ft.)

Quadrangle, Township, Range, and Section: Prince Rupert D-3, T82S, R98E, S11, center.

Habitat types and dominant species:

Rocky beach and tall scrub margin.

Survey Site: 30

Survey Date: 7/13/93

Location: Ella Lake, Ella Narrows cabin lakeshore.

Plant collection numbers: 422-434, 495-498

Latitude and Longitude: N 55° 29' 23" W 131° 05' 34"

Elevation: 76 m (255 ft.)

Quadrangle, Township, Range, and Section: Ketchikan B-4, T73S, R94E, S33, SW4SW4

Habitat types and dominant species:

Freshwater lake shallows with sandy substrate; *Sparganium angustifolium*, *Lobelia dortmanna*.

Sandy freshwater lakeshore; *Alnus sinuata*, *Salix sitchensis*.

Tracked Species:

Lobelia dortmanna (G4 S1)

Survey Site: 31

Survey Date: 7/14/93

Location: Ella Lake, lower lake meadow on NE shore.

Plant collection numbers: 436-469

Latitude and Longitude: N 55° 29' 50" W 131° 04' 34"

Elevation: 76 m (255 ft.)

Quadrangle, Township, Range, and Section: Ketchikan B-4, T73S, R94E, S35, SE4NE4

Habitat types and dominant species:

Freshwater wet meadow; *Carex sitchensis*, *Fritillaria camschatcensis*, *Spiraea douglasii*, *Gentiana douglasiana*, *Deschampsia beringensis*.

Lake shallows with mud substrate, next to freshwater wet meadow.

Mudflat of creek delta, next to freshwater wet meadow.

Western red cedar - shore pine island in freshwater wet meadow.

Wet muskeg in freshwater wet meadow.

Tracked Species:

Lycopus uniflorus (G5 S3)

Spiraea douglasii ssp. *menziesii* (G5 S2)

Survey Site: 32

Survey Date: 7/14/93

Location: Ella Lake, lower lake outlet, E shore.

Plant collection numbers: 470-474, 476, 478, 479, 482, 484, 486-491

Latitude and Longitude: N 55° 30' 25" W 131° 03' 42"

Elevation: 76 m (255 ft.)

Quadrangle, Township, Range, and Section: Ketchikan C-4, T73S, R94E, S25, NE4SW4

Habitat types and dominant species:

Freshwater meadow.

Shallow pool in freshwater meadow.

Tracked Species:

Lycopodium inundatum (G5 S3)

Scirpus subterminalis (G4G5 S1)

Survey Site: 33

Survey Date: 7/14/93

Location: Ella Lake, lower lake outlet, N shore.

Plant collection numbers: 475, 477, 480, 481, 483, 485

Latitude and Longitude: N 55° 30' 29" W 131° 03' 39"

Elevation: 76 m (255 ft.)

Quadrangle, Township, Range, and Section: Ketchikan C-4, T73S, R94E, S26, NE4SW4

Habitat types and dominant species:

Muskeg meadow; scattered stunted *Chamaecyparis nootkatensis*.

Tracked Species:

Kalmia polifolia ssp. *polifolia* (G5T5 S3S4)

Survey Site: 34

Survey Date: 7/14/93

Location: Ella Lake, small waterfall on NW shore near lake outlet.

Plant collection numbers: 492-494

Latitude and Longitude: N 55° 30' 21" W 131° 04' 02"

Elevation: 76 m (255 ft.)

Quadrangle, Township, Range, and Section: Ketchikan C-4, T73S, R94E, S25, SW4SW4

Habitat types and dominant species:

Rock face next to lake shore.

Sheltered lake shore shallows with mud substrate.

Wet lake shore and mudflat.

Survey Site: 35

Survey Date: 7/14/93

Location: Ella Lake, forested lakeshore N of Ella Narrows cabin.

Plant collection numbers: 500, 501

Latitude and Longitude: N 55° 29' 27" W 131° 05' 17"

Elevation: 80 m (270 ft.)

Quadrangle, Township, Range, and Section: Ketchikan B-4, T73S, R94E, S35, SW4SW4

Habitat types and dominant species:

Wet rock face in closed spruce - hemlock forest at lake's edge.

Tracked Species:

Asplenium viride (G5 S3)

Survey Site: 36

Survey Date: 7/15/93

Location: Muskeg ponds N of Ella Narrows cabin, Ella Lake.

Plant collection numbers: 499, 502-518

Latitude and Longitude: N 55° 29' 44" W 131° 05' 22"

Elevation: 135 m (450 ft.)

Quadrangle, Township, Range, and Section: Ketchikan B-4, T73S, R94E, S35, W center.

Habitat types and dominant species:

Mud shore of muskeg pond.

Muskeg; *Rubus chamaemorus*, *Empetrum nigrum*.

Muskeg pool; *Nuphar polysepalum*, *Menyanthes trifoliata*.

Open western hemlock forest.

Muskeg, wet depression; *Menyanthes trifoliata*, *Carex sitchensis*.

Wet graminoid - dominated muskeg; *Carex* spp., *Vaccinium* spp.

Survey Site: 37

Survey Date: 7/16/93

Location: Ella Lake Trail muskeg.

Plant collection numbers: 521-530

Latitude and Longitude: N 55° 29' 49" W 131° 00' 14"

Elevation: 25 m (75 ft.)

Quadrangle, Township, Range, and Section: Ketchikan B-4, T73S, R95E, S32, NW4SE4

Habitat types and dominant species:

Marshy shore of stream-fed lake in muskeg; *Calamagrostis canadensis*, *Deschampsia beringensis*.

Muskeg; scattered *Chamaecyparis nootkatensis*, *Carex* spp., *Andromeda polifolia*.

Tracked Species:

Geocaulon lividum (G5 S5)

Survey Site: 38

Survey Date: 7/16/93

Location: Mouth of Ella Creek, Ella Bay, Behm Canal.

Plant collection numbers: 531-540

Latitude and Longitude: N 55° 29' 46" W 130° 59' 35"

Elevation: 1 m (3 ft.)

Quadrangle, Township, Range, and Section: Ketchikan B-3, T73S, R95E, S33, SW4NW4

Habitat types and dominant species:

Lower beach meadow; *Glaux*, *Honckenya*, *Plantago*.

Rocky stream side at forest - shore ecotone.

Upper beach sand; *Potentilla egedii*, *Deschampsia beringensis*.

Survey Site: 39

Survey Date: 7/17/93

Location: Head of Princess Bay, old growth forest.

Plant collection numbers: 542-546, 571

Latitude and Longitude: N 55° 24' 36" W 131° 01' 44"

Elevation: 30 m (100 ft.)

Quadrangle, Township, Range, and Section: Ketchikan B-4, T74S, R95E, S31, SW4NE4

Habitat types and dominant species:

Closed old growth Sitka spruce forest.

Survey Site: 40

Survey Date: 7/17/93

Location: East side of Princess Bay, in muskeg E of banding cabin.

Plant collection numbers: 547-555

Latitude and Longitude: N 55° 23' 38" W 130° 59' 48"

Elevation: 25 m (75 ft.)

Quadrangle, Township, Range, and Section: Ketchikan B-3, T75S, R95E, S5, SW4NE4

Habitat types and dominant species:

Muskeg meadow, with small pools and exposed bedrock; *Loiseleuria procumbens*, *Juniperus communis*, *Sphagnum* spp., *Eriophorum angustifolium*.

Tracked Species:

Oxycoccus palustris (G5 S1)

Survey Site: 41

Survey Date: 7/17/93

Location: Princess Bay lake, E side of Bay, E of banding cabin.

Plant collection numbers: 541, 556, 557, 559-570,

Latitude and Longitude: N 55° 23' 26" W 130° 59' 30"

Elevation: 25 m (76 ft.)

Quadrangle, Township, Range, and Section: Ketchikan B-3, T75S, R95E, S4, SW4SW4

Habitat types and dominant species:

Freshwater graminoid marsh with occasional muskeg and exposed mudflats.

Freshwater lake shallows.

Tracked Species:

Nymphaea tetragona (G5 S5)

Scirpus subterminalis (G4G5 S1)

Survey Site: 41b

Survey Date: 7/17/93

Location: Princess Bay, on E shore at banding cabin cove.

Plant collection numbers:

Latitude and Longitude: N 55° 23' 26" W 130° 59' 30"

Elevation: 0 m (0 ft.)

Quadrangle, Township, Range, and Section: Ketchikan B-3, T75S, R95E, S4, SW4SW4

Habitat types and dominant species:

Intertidal marine of sheltered Princess Bay cove.

Survey Site: 42

Survey Date: 8/1/93

Location: Above Marble Creek, in Revilla Island alpine.

Plant collection numbers: 867-884

Latitude and Longitude: N 55° 30' 31" W 131° 11' 39"

Elevation: 1040 m (3400 ft.)

Quadrangle, Township, Range, and Section: Ketchikan C-4, T73S R94E, S30 NW4SW4

Habitat types and dominant species:

Alpine meadow with talus.

Low ericaceous scrub; talus slope with wet gravel and rock outcrops.

Tracked Species:

Carex lenticularis var. *dolia* (G5T2 S2)

Survey Site: 43

Survey Date: 8/1/93

Location: Above Lake Grace, Revilla Island alpine.

Plant collection numbers: 885-888

Latitude and Longitude: N 55° 38' 51" W 131° 07' 29"

Elevation: 1235 m (4050 ft.)

Quadrangle, Township, Range, and Section: Ketchikan C-4, T72S R93E, S10 NE4NE4

Habitat types and dominant species:

Graminoid/forb tundra and meadow.

Low ericaceous scrub.

Survey Site: 44

Survey Date: 8/1/93

Location: Mt. Reid, Revilla Island alpine.

Plant collection numbers: 889-898

Latitude and Longitude: N 55° 42' 30" W 131° 15' 32"

Elevation: 1160 m (3800 ft.)

Quadrangle, Township, Range, and Section: Ketchikan C-4, T71S R92E, S14 SW4SE4

Habitat types and dominant species:

Dwarf scrub over gravel.

Low forb meadow.

Talus meadow and rock face.

Tracked Species:

Cassiope lycopodioides (G4G5 S4)

Survey Site: 45

Survey Date: 8/3/93

Location: Summit Lake alpine, Canada, near Hyder; Mile 23.1 from Hyder intersection.

Plant collection numbers: 903-915, 943, 944

Latitude and Longitude: N 56° 11' 19" W 130° 02' 45"

Elevation: 975 m (3200 ft.)

Quadrangle, Township, Range, and Section: (in Canada, no T, R, or Section indicated)

Habitat types and dominant species:

Mountain hemlock - subalpine fir woodland.

Low ericaceous scrub on talus slope.

Talus meadow.

Tracked Species:

Abies lasiocarpa (G5 S4)

Agoseris glauca (G4G5 S1)
Campanula lasiocarpa (G5 S5)

Survey Site: 46

Survey Date: 8/3/93

Location: Hyder area, road above Premier Mine, Canada; Mile 18.5 from Hyder intersection.

Plant collection numbers: 916-922, 937

Latitude and Longitude: N 56° 07' 38" W 130° 02' 16"

Elevation: 820 m (2700 ft.)

Quadrangle, Township, Range, and Section: (in Canada, no T, R, or Section indicated)

Habitat types and dominant species:

Gravel roadside, ditch, and beaver pond.

Tracked Species:

Cirsium edule (G3 S1)

Mimulus lewisii (G5 S1)

Pentstemon serrulatus (G4 S1)

Survey Site: 47

Survey Date: 8/4/93

Location: Hyder area, river bar at Ninemile; Mile 8.2 from Hyder intersection.

Plant collection numbers: 923-926

Latitude and Longitude: N 56° 01' 19" W 130° 04' 21"

Elevation: 75 m (250 ft.)

Quadrangle, Township, Range, and Section: Bradfield Canal A-1, T67S R99E, S34
NE4NE4

Habitat types and dominant species:

Sitka spruce - cottonwood forest island.

Tracked Species:

Abies lasiocarpa (G5 S4)

Survey Site: 48

Survey Date: 8/4/93

Location: Hyder area, beaver pond; Mile 8.0 from Hyder intersection, east of road.

Plant collection numbers: 927-936

Latitude and Longitude: N 56° 01' 13" W 130° 04' 11"

Elevation: 75 m (250 ft.)

Quadrangle, Township, Range, and Section: Bradfield Canal A-1, T67S R99E, S35
NW4NW4

Habitat types and dominant species:

Muddy pond margin; wet sedge meadow and tall willow scrub.

Tracked Species:

Carex atrostachya (G5 S1S2)

Carex stipata (G5 S1)

Rorippa curvisiliqua (G5 S1)

Survey Site: 49

Survey Date: 8/5/93

Location: Hyder area, Moe's Road; Mile 5.3 from Hyder intersection, 0.3 miles up trail.

Plant collection numbers: 938

Latitude and Longitude: N 55° 59' 10" W 130° 03' 41"

Elevation: 150 m (500 ft.)

Quadrangle, Township, Range, and Section: Ketchikan D-1, T68S R99E, S11 NE4SW4

Habitat types and dominant species:

Closed Sitka spruce forest.

Survey Site: 50

Survey Date: 8/5/93

Location: Hyder area, Fish Creek; Mile 4.6 from Hyder intersection at trailhead, at confluence of Fish and Slide Creeks.

Plant collection numbers: 939-941

Latitude and Longitude: N 55° 58' 35" W 130° 03' 10"

Elevation: 75 m (250 ft.)

Quadrangle, Township, Range, and Section: Ketchikan D-1, T68S R99E, S14 NW4NE4

Habitat types and dominant species:

Tall willow and alder scrub along stream, with rock outcrops and gravel substrate.

Tracked Species:

Mimulus lewisii (G5 S1)

Polystichum setigerum (G3 S2)

Survey Site: 51

Survey Date: 8/5/93

Location: Hyder area, Titan Trail; Mile 4.2 from Hyder intersection, 0.5 mi. up trail.

Plant collection numbers: 942

Latitude and Longitude: N 55° 58' 02" W 130° 03' 03"

Elevation: 180 m (600 ft.)

Quadrangle, Township, Range, and Section: Ketchikan D-1, T68S R99E, S14 SE4SE4

Habitat types and dominant species:

Sitka spruce forest, margin of open scrub in avalanche chute .

Survey Site: 52

Survey Date: 8/6/93

Location: Hyder area, river bar forest at end of second dike; Mile 3.9 from Hyder intersection.

Plant collection numbers: 945-953

Latitude and Longitude: N 55° 57' 30" W 130° 03' 40"

Elevation: 45 m (150 ft.)

Quadrangle, Township, Range, and Section: Ketchikan D-1, T68S R99E, S23 NE4SW4

Habitat types and dominant species:

Open Sitka spruce forest.

Tracked Species:

Abies lasiocarpa (G5 S4)

Chimaphila umbellata ssp. *occidentalis* (G5T5 S3)

Smilacina racemosa (G5 S2)

Survey Site: 53

Survey Date: 8/7/93

Location: Hyder town area, salt marsh at site of old border station.

Plant collection numbers: 954

Latitude and Longitude: N 55° 54' 42" W 130° 00' 57"

Elevation: 0 m (0 ft.)

Quadrangle, Township, Range, and Section: Ketchikan D-1, T69S R100E, S1 SE4SW4

Habitat types and dominant species:

Upper wet sedge meadow.

Survey Site: 91-01

Survey Date: 6/24-26/91

Location: Lower Blue River Lava Field.

Plant collection numbers: 91-01 - 91-21

Latitude and Longitude: N 56° 15' 23" W 130° 50' 25"

Elevation: 60 m. (200 ft.)

Quadrangle, Township, Range, and Section: Bradfield Canal B-3, T65S, R94E, S2, NW4SW4

Habitat types and dominant species:

Accumulated soil on poorly vegetated surface of fragmented lava.

Closed spruce-hemlock forest.

Crevice of collapsed lava tubes of lava field.

Margin of closed spruce-hemlock forest on open lava surface.

Dry moss mat on open poorly weathered lava substrate.

Survey Site: 91-02

Survey Date: 6/27-28/91

Location: Shore of Blue Lake.

Plant collection numbers: 91-22 - 91-47

Latitude and Longitude: N 56° 19' 53" W 130° 53' 54"

Elevation: 220 m.(730 ft.)

Quadrangle, Township, Range, and Section: Bradfield Canal B-3, T64S, R93E, S9, SE4

Habitat types and dominant species:

Cottonwood woodland on alluvial delta of small creek.

Creek delta on shore of Blue Lake.

Open alder - willow scrub on sandy alluvium at lake's shore.

APPENDIX B: PLANT TAXA OF MISTY FIORDS NATIONAL MONUMENT

The following appendix consists of a complete listing of vascular plant taxa collected in the course of the 1993 rare plant survey. In addition, those plants with an asterisk (*) following their name were not collected from the Monument, but are to be expected to occur there based on previous plant collections as described in Hulten (1968) and Welsh (1974). The plants are listed by plant family, in alphabetical order. Common names for most of the taxa can be found in Mary Stensvold's "Preliminary Checklist of the Vascular Plants in Southeastern Alaska" (Muller, 1982). Nomenclature follows that of the University of Alaska at Fairbanks Herbarium and its Northern Plant Documentation Center Database. When the plant scientific names vary from those as stated in Hulten (1968) and Muller (1982) synonyms are included in parentheses.

Aceraceae

Acer glabrum Torrey ssp. *douglasii* (Hook.) Wesm.

Adiantaceae

Adiantum pedatum L. var. *aleuticum* Rupr.

Cryptogramma acrostichoides R. Br. (*Cryptogramma crispa* var. *acrostichoides*)

Pteris aquilina L. ssp. *lanuginosa* Bong. * (*Pteridium aquilinum*)

Apiaceae

Angelica genuflexa Nutt.

Angelica lucida L.

Cicuta douglasii (DC.) J. Coulter & Rose *

Conioselinum pacificum (S. Wats.) J. Coulter & Rose (*Conioselinum chinense*)

Heracleum lanatum Michaux *

Ligusticum scoticum L. ssp. *Hultenii* (Fern.) Calder & R. Taylor

Oenanthe sarmentosa C. Presl

Osmorhiza chilensis Hook. & Arn.

Osmorhiza purpurea (J. Coulter & Rose) Suksd. *

Araceae

Lysichiton americanus Hulten & H. St. John * (*Lysichiton americanum*)

Araliaceae

Oplopanax horridus (Smith) Miq. * (*Echinopanax horridum*)

Aspleniaceae

Asplenium viride Hudson
Athyrium distentifolium Tausch ssp. *americanum* (Maxon) Hulten *
Athyrium filix-femina (L.) Roth ssp. *cyclosum* (Rupr.) C. Chr.
Cystopteris fragilis (L.) Bernh. ssp. *fragilis*
Dryopteris dilatata (Hoffm.) A. Gray (*Dryopteris austriaca*)
Gymnocarpium dryopteris (L.) Newman
Polystichum braunii (Spenner) Fee var. *alaskense* (Maxon) Hulten
Polystichum lonchitis (L.) Roth
Polystichum munitum (Kaulf.) C. Presl
Polystichum setigerum (Presl) Presl (not in Hulten, 1968)
Woodsia glabella R. Br.

Asteraceae

Achillea borealis Bong. (*Achillea millefolium* ssp. *borealis*)
Agoseris aurantiaca (Hook.) E. Greene *
Agoseris glauca (Pursh) Raf.
Anaphalis margaritacea (L.) Benth. & Hook. f. *
Antennaria alpina (L.) Gaertner (not in Muller, 1982)
Arnica amplexicaulis Nutt. ssp. *prima* Maguire
Arnica chamissonis Less. *
Arnica latifolia Bong.
Artemisia arctica Less. ssp. *arctica*
Aster modestus Lindley *
Aster subspicatus Nees
Bidens frondosa L. *
Chrysanthemum arcticum L. *
Chrysanthemum leucanthemum L. *
Chrysanthemum vulgare (L.) Bernh. * (not in Muller, 1982)
Cirsium edule Nutt.
Cirsium vulgare (Savi) Ten. *
Cotula coronopifolia L. *
Erigeron acris L.
Erigeron peregrinus (Pursh) E. Greene ssp. *peregrinus*
Hieracium albiflorum Hook.
Hieracium gracile Hook. var. *alaskanum* Zahn
Hieracium triste Willd.
Lapsana communis L. *
Matricaria matricarioides (Less.) Porter *
Microseris borealis (Bong.) Schultz-Bip. * (*Apargidium boreale*)
Petasites nivalis E. Greene (*Petasites hyperboreus*, *Petasites frigidus*)

Prenanthes alata (Hook.) A. Dietr.
Senecio pseudoarnica Less. *
Senecio triangularis Hook. *
Senecio vulgaris L. *
Solidago lepida DC. * (*Solidago canadensis* var. *subserrata*)
Solidago multiradiata Aiton *
Sonchus arvensis L.
Taraxacum lyratum (Ledeb.) DC. (*Taraxacum kamtschaticum*)
Taraxacum officinale Weber *

Balsaminaceae

Impatiens noli-tangere L. *

Betulaceae

Alnus rubra Bong. (*Alnus oregana*)
Alnus sinuata (Regel) Rydb. (*Alnus crispa* ssp. *sinuata*)

Blechnaceae

Blechnum spicant (L.) Roth

Boraginaceae

Amsinckia lycopsoides Lehm. *

Brassicaceae

Arabis hirsuta (L.) Scop. *
Arabis lyrata L. ssp. *kamchatica* (Fischer) Hulten *
Barbarea orthoceras Ledeb.
Brassica rapa L. * (*Brassica campestris*)
Cakile edentula (Bigelow) Hook. ssp. *californica* (A. A. Heller) Hulten
Cardamine bellidifolia L.
Cardamine pennsylvanica Muhlenb.
Cardamine umbellata E. Greene (*Cardamine oligosperma*)
Capsella bursa-pastoris (L.) Medikus *
Cochlearia officinalis L.
Erysimum cheiranthoides L. ssp. *altum* Ahti *
Rorippa curvisiliqua (Hook.) Besser
Rorippa palustris (L.) Besser ssp. *occidentalis* (S. Watson) Abrams (*Rorippa islandica*)
Sinapsis arvensis L. * (*Brassica kaber*)
Sisymbrium altissimum L. *
Subularia aquatica L. ssp. *americana* G. Mulligan & Calder

Callitrichaceae

Callitriche anceps Fern. *

Callitriche heterophylla Pursh ssp. *bolanderi* (Hegelm.) Calder & R. Taylor (including
Callitriche verna L. emend. Lonnr.)

Campanulaceae

Campanula lasiocarpa Cham.

Campanula latisejala Hulten * (*Campanula rotundifolia*)

Campanula rotundifolia L.

Lobelia dortmanna L. (not in Hulten, 1968; not in Muller, 1982)

Caprifoliaceae

Linnaea borealis L. ssp. *longiflora* (Torrey) Hulten

Lonicera involucrata (Richardson) Banks

Sambucus racemosa L. ssp. *pubens* (Michaux) House *

Viburnum edule (Michaux) Raf. *

Caryophyllaceae

Cerastium arvense L. *

Cerastium fontanum Baumg. ssp. *triviale* (Link) Jalas * (*Cerastium vulgatum*)

Cerastium glomeratum Thuill. * (*Cerastium viscosum*)

Honckenya peploides (L.) Ehrh. ssp. *major* (Hook.) Hulten

Sagina maxima A. Gray ssp. *crassicaulis* (S. Watson) Crow (*Sagina crassicaulis*)

Sagina decumbens (Ell.) Torr. & A. Gray ssp. *occidentalis* (S. Wats.) Crow * (*Sagina occidentalis*)

Sagina nivalis (Lindblom) Fries (*Sagina intermedia*)

Silene acaulis L. ssp. *acaulis*

Spergula arvensis L. *

Spergularia canadensis (Pers.) G. Don

Stellaria borealis Bigelow ssp. *sitchana* (Steudel) Piper * (*Stellaria sitchana*, *Stellaria calycantha* var. *sitchana*)

Stellaria calycantha (Ledeb.) Bong. *

Stellaria crispa Cham. & Schldl.

Stellaria cf. *humifusa* Rottb.

Stellaria longifolia Muhlenb. ex Willd. *

Stellaria media (L.) Villars *

Chenopodiaceae

Atriplex patula L. var. *alaskensis* (Wats.) Welsh (*Atriplex alaskensis*)

Atriplex patula L. var. *obtusata* (Cham.) C.L. Hitchc. (*Atriplex gmelinii* and *Atriplex drymarioides*)
Salicornia virginica L. (*Salicornia pacifica*)
Suaeda depressa (Pursh) S. Watson * (*Suaeda maritima*)

Cornaceae

Cornus canadensis L.
Cornus canadensis x *suecica* L. *
Cornus suecica L. *
Swida stolonifera (Michx.) Rydb. (*Cornus stolonifera*)

Crassulaceae

Rhodiola integrifolia Raf. (*Sedum rosea* ssp. *integrifolium*)
Sedum oreganum Nutt. *

Cupressaceae

Chamaecyparis nootkatensis (Lambert) Spach
Juniperus communis L.
Thuja plicata D. Don

Cyperaceae

Carex anthoxantha C. Presl
Carex atrostachya Olney (*Carex athrostachya*)
Carex buxbaumii Wahlenb.
Carex canescens L. *
Carex circinnata C. Meyer
Carex disperma Dewey *
Carex flava L.
Carex gmelinii Hook. & Arn.
Carex kelloggii W. Boott (*Carex lenticularis* var. *limnophila*)
Carex laeviculmis Meinsh.
Carex lenticularis Michaux var. *dolia* (M.E. Jones) Standley (*Carex enanderi*)
Carex leptalea Wahlenb. ssp. *pacifica* Calder & R. Taylor *
Carex livida (Wahlenb.) Willd.
Carex lyngbyaei Hornem.
Carex macrochaeta C. Meyer
Carex magellanica Lam. ssp. *irrigua* (Wahlenb.) Hulten
Carex mertensii Prescott
Carex micropoda C. Meyer (*Carex pyrenaica* ssp. *micropoda*)
Carex nigricans C. Meyer
Carex oederi Retz. ssp. *viridula* (Michaux) Hulten *

Carex pachystachya Cham. ex Steudel * (*Carex macloviana* ssp. *pachystachya*)
Carex pauciflora Light
Carex phyllomanica W. Boott
Carex pluriflora Hulten
Carex rostrata Stokes
Carex saxatilis L. ssp. *laxa* (Trautv.) Kalela
Carex scirpoidea Michaux
Carex sitchensis Prescott
Carex stipata Muhlenb.
Carex stylosa C. Meyer *
Eleocharis acicularis (L.) Roemer & Schultes
Eleocharis kamtschatica (C. Meyer) V. Komarov *
Eleocharis palustris (L.) Roemer & Schultes
Eriophorum angustifolium Honck. ssp. *scabriusculum* Hulten (*Eriophorum polystachion*)
Eriophorum russeolum Fries var. *majus* Sommier (*Eriophorum chamissonis*)
Eriophorum russeolum Fries var. *rufescens* (E. S. Anderson) N. Hylander * (*Eriophorum chamissonis*)
Rhynchospora alba (L.) M. Vahl
Scirpus microcarpus C. Presl
Scirpus subterminalis Nelson
Scirpus validus M. Vahl *
Trichophorum caespitosum (L.) Hartman (*Scirpus caespitosus*)

Droseraceae

Drosera anglica Hudson
Drosera rotundifolia L.

Empetraceae

Empetrum hermaphroditum (Lange) Hagerup (*Empetrum nigrum* ssp. *hermaphroditum*)
Empetrum nigrum L.

Equisetaceae

Equisetum arvense L.
Equisetum fluviatile L. ampl. Ehrh.
Equisetum variegatum Schleicher *

Ericaceae

Andromeda polifolia L.
Cassiope lycopodioides (Pallas) D. Don
Cassiope lycopodioides (Pallas) D. Don ssp. *crista-pilosa* Calder & Taylor

Cassiope mertensiana (Bong.) D. Don
Cassiope stelleriana (Pallas) DC.
Cladothamnus pyrolaeflorus Bong.
Gaultheria shallon Pursh
Kalmia polifolia Wangenh. ssp. *polifolia*
Ledum groenlandicum Oeder (*Ledum palustre* ssp. *groenlandicum*)
Loiseleuria procumbens (L.) Desv.
Menziesia ferruginea Smith
Oxycoccus microcarpus Turcz. ex Rupr. (*Vaccinium oxycoccus* var. *microcarpus*)
Oxycoccus palustris Pers. (*Vaccinium oxycoccus* var. *intermedium*)
Phyllodoce aleutica (Sprengel) A. A. Heller ssp. *glanduliflora* (Hook.) Hulten (*Phyllodoce glanduliflora*)
Vaccinium alaskaense J. Howell
Vaccinium caespitosum Michaux
Vaccinium ovalifolium Smith *
Vaccinium parvifolium Smith
Vaccinium uliginosum L. ssp. ssp. *alpinum* (Bigelow) Hulten
Vaccinium vitis-idaea L. ssp. *minus* (Lodd.) Hulten

Fabaceae

Lathyrus maritimus L. ssp. *maritimus* (*Lathyrus japonicus* var. *glaber*)
Lathyrus palustris L. ssp. *pilosus* (Cham.) Hulten
Lathyrus venosus Muhlenb. var. *intonsus* F. K. Butters & H. St. John * (*Lathyrus ochroleucus*)
Lupinus nootkatensis Donn
Medicago hispida Gaertn. *
Trifolium hybridum L. *
Trifolium pratense L. *
Trifolium repens L. *
Trifolium wormskjoldii Lehm. *
Vicia americana Muhl. *
Vicia gigantea Hook.

Gentianaceae

Fauria crista-gallii (Menzies) Makino *
Gentiana douglasiana Bong.
Gentiana platypetala Griseb. *
Menyanthes trifoliata L.

Geraniaceae

Geranium erianthum DC.

Haloragaceae

Hippuris montana Ledeb.
Hippuris tetraphylla L. f. *
Hippuris vulgaris L. *

Hydrophyllaceae

Romanzoffia sitchensis Bong.

Iridaceae

Iris setosa Pallas
Sisyrinchium litorale E. Greene (*Sisyrinchium angustifolium*)

Isoetaceae

Isoetes muricata Durieu ssp. *maritima* (L. Underw.) Hulten (*Isoetes echinospora*)

Juncaceae

Juncus arcticus Willd. ssp. *sitchensis* Engelm.
Juncus biglumis L.
Juncus bufonius L.
Juncus effusus L. *
Juncus ensifolius Wikstrom
Juncus falcatus E. Meyer ssp. *sitchensis* (Buchenau) Hulten
Juncus filiformis L.
Juncus mertensianus Bong.
Juncus oreganus S. Watson (*Juncus supiniformis*)
Juncus stygius L. ssp. *americanus* (Buchenau) Hulten *
Juncus tenuis Willd. *
Luzula arcuata (Wahlenb.) Sw. ssp. *unalaschcensis* (Buchenau) Hulten
Luzula multiflora (Retz.) Lej. * (*Luzula campestris* var. *multiflora*)
Luzula parviflora (Ehrh.) Desv.
Luzula wahlenbergii Rupr.

Juncaginaceae

Triglochin maritimum L.
Triglochin palustris L. *

Lamiaceae

Galeopsis bifida Boenn. * (*Galeopsis tetrahit* var. *bifida*)
Lycopus uniflorus Michaux

Mentha arvensis L. var. *villosa* (Benth.) Steven (*Mentha arvensis* L. var. *glabrata*)
Prunella vulgaris L. ssp. *lanceolata* (Barton) Hulten
Stachys emersonii Piper (*Stachys mexicana*)

Lentibulariaceae

Pinguicula villosa L. *
Pinguicula vulgaris L. ssp. *macroceras* (Link) Calder & R. Taylor
Utricularia intermedia Hayne
Utricularia minor L.
Utricularia vulgaris L. ssp. *macrorrhiza* (Le Conte) R. T. Clausen *

Liliaceae

Clintonia uniflora (Schultes) Kunth
Fritillaria camschatcensis (L.) Ker-Gawler
Lloydia serotina (L.) Reichb. *
Maianthemum dilatatum (Howell) Nelson & J. F. Macbr. *
Smilacina racemosa (L.) Desf.
Streptopus amplexifolius (L.) DC.
Streptopus roseus Michaux ssp. *curvipes* (Vail) Hulten
Streptopus streptopoides (Ledeb.) Frye & Rigg var. *brevipes* (Baker) Fassett
Tofieldia glutinosa (Michaux) Pers. ssp. *brevistyla* A. Hitchc.
Veratrum viride Aiton ssp. *eschsoltzii* (A. Gray) A. Loeve & D. Loeve *

Loranthaceae

Arceuthobium tsugense (Rosend.) G. Jones (*Arceuthobium campylopodum*)

Lycopodiaceae

Huperzia selago (L.) C. Martius ssp. *selago* (*Lycopodium selago*)
Lycopodium alpinum L.
Lycopodium annotinum L. ssp. *annotinum*
Lycopodium clavatum L. ssp. *clavatum*
Lycopodium complanatum L.
Lycopodium dendroideum Michaux (*Lycopodium obscurum* var. *dendroideum*)
Lycopodium inundatum L.
Lycopodium sabinaefolium Willd. var. *sitchense* (Rupr.) Fern. (*Lycopodium sitchense*)

Myricaceae

Myrica gale L. var. *tomentosa* C. DC.

Nymphaeaceae

Nuphar polysepalum Engelm. *
Nymphaea tetragona Georgi

Onagraceae

Circaea alpina L.
Epilobium anagallidifolium Lam. (*Epilobium alpinum* var. *alpinum*)
Epilobium angustifolium L. *
Epilobium ciliatum Raf. ssp. *adenocaulon* (Hausskn.) Hoch & Raven (*Epilobium adenocaulon*)
Epilobium ciliatum Raf. ssp. *glandulosum* (Lehm.) Hoch & Raven * (*Epilobium glandulosum*)
Epilobium hornemannii Reichb. (*Epilobium alpinum* var. *nutans*)
Epilobium hybrid? (*E. treleasianum*?)
Epilobium latifolium L. *
Epilobium leptocarpum Hausskn. * (*Epilobium glandulosum*)
Epilobium luteum Pursh
Epilobium sp.

Orchidaceae

Calypso bulbosa (L.) Oakes *
Coeloglossum viride (L.) C. Hartman ssp. *bracteatum* (Muhlenb.) Hulten * (*Habenaria viridis* var. *bracteata*)
Corallorrhiza maculata Raf. ssp. *mertensiana* (Bong.) Calder & R. Taylor
Goodyera oblongifolia Raf. *
Listera caurina Piper
Listera cordata (L.) R. Br.
Hammarbya paludosa (L.) Kuntze * (*Malaxis paludosa*)
Malaxis monophylla (L.) Sw.
Platanthera cf. *chorisiana* (Cham.) Reichb. (*Habenaria chorisiana*)
Platanthera dilatata Pursh (*Habenaria dilatata*)
Platanthera orbiculata (Pursh) Lindley * (*Habenaria orbiculata*)
Platanthera stricta Lindley (*Habenaria stricta*)
Spiranthes romanzoffiana Cham.

Orobanchaceae

Boschniakia rossica (Cham. & Schldl.) B. Fedtsch. *

Pinaceae

Abies amabilis (Douglas) James Forbes
Abies lasiocarpa (Hook.) Nutt.
Picea sitchensis (Bong.) Carriere
Pinus contorta Douglas ex Loudon

Tsuga heterophylla (Raf.) Sarg.
Tsuga mertensiana (Bong.) Sarg.

Plantaginaceae

Plantago macrocarpa Cham. & Schldl.
Plantago major L. *
Plantago maritima L. ssp. *juncoides* (Lam.) Hulten

Poaceae

Agrostis alaskana Hulten
Agrostis borealis Hartm.
Agrostis exarata Trin. *
Agrostis gigantea Roth * (*Agrostis alba* var. *alba*)
Agrostis scabra Willd. *
Agrostis stolonifera L. * (*Agrostis alba* var. *stolonifera*)
Agrostis tenuis Sibth. *
Bromopsis pacifica (Shear) Holub * (*Bromus pacificus*)
Bromus sitchensis Trin.
Calamagrostis canadensis (Michaux) P. Beauv.
Calamagrostis nutkaensis (C. Presl) Steudel
Cinna latifolia (Trevir.) Griseb. *
Danthonia spicata (L.) P. Beauv. *
Deschampsia beringensis Hulten
Deschampsia cespitosa (L.) P. Beauv. *
Elymus glaucus Buckley *
Elymus hirsutus C. Presl
Elytrigia repens (L.) Nevski * (*Agropyron repens*)
Festuca brachyphylla Schultes & Schultes f. (*Festuca ovina* ssp. *brachyphylla*)
Festuca rubra L.
Festuca subulata Trin. *
Glyceria borealis (Nash) Batch. *
Glyceria pauciflora Presl (*Torreyochloa pauciflora*)
Hierochloe alpina (Sw.) Roemer & Schultes
Hierochloe odorata (L.) P. Beauv.
Hordeum brachyantherum Nevski *
Hordeum jubatum L. *
Leymus mollis (Trin.) Hara (*Elymus mollis*)
Phleum commutatum Gaudin var. *americanum* (Fourn.) Hulten *
Phleum pratense L. *
Poa annua L. *

Poa arctica R. Br.
Poa eminens Presl *
Poa laxiflora Buckley *
Poa nemoralis L. *
Poa c.f. *paucispicula* Scribner & Merr. (*Poa leptocoma*)
Poa stenantha Trin. *
Poa trivialis L. *
Podagrostis aequivalvis (Trin.) Scribner & Merr. (*Agrostis aequivalvis*)
Puccinellia nutkaensis (Presl) Fern. & Weath.
Puccinellia pumila (Vasey) A. Hitchc.
Trisetum cernuum Trin.
Vahlodea atropurpurea (Wahlenb.) Fries ssp. *latifolia* (Hook.) A. Pors. (*Deschampsia atropurpurea* var. *latifolia*)

Polygonaceae

Bistorta vivipara (L.) Gray (*Polygonum viviparum*)
Oxyria digyna (L.) Hill
Polygonum aviculare L. *
Polygonum convolvulus L. *
Polygonum pennsylvanicum L. ssp. *oneillii* (Brenckle) Hulten * (*Polygonum lapathifolium*)
Polygonum persicaria L. *
Rumex acetosella L. ssp. *angiocarpus* (Murb.) Murb. *
Rumex fenestratus E. Greene (*Rumex occidentalis*)
Rumex transitorius K. H. Rech. * (*Rumex salicifolius*)

Polypodiaceae

Polypodium vulgare L. ssp. *occidentale* (Hook.) Hulten (*Polypodium glycyrrhiza*)

Portulacaceae

Claytonia chamissoi Eschsch. * (*Montia chamissoi*)
Claytonia parvifolia Moq. ssp. *flagellaris* (Bong.) Hulten (*Montia parvifolia* ssp. *flagellaris*)
Claytonia sibirica L.
Montia fontana L. *

Potamogetonaceae

Phyllospadix scouleri Hook.
Potamogeton alpinus Balbis ssp. *tenuifolius* (Raf.) Hulten
Potamogeton epihydrus Raf. *
Potamogeton gramineus L.
Potamogeton natans L.

Ruppia spiralis L. (*Ruppia maritima*)
Zostera marina L.

Primulaceae

Dodecatheon jeffreyi Van Houtte *
Dodecatheon pulchellum (Raf.) Merr. ssp. *superbum* (Pennell & Stair) Hulten
Glaux maritima L.
Trientalis europaea L. ssp. *arctica* (Fischer) Hulten

Pyrolaceae

Chimaphila umbellata (L.) W. P. G. Barton ssp. *occidentalis* (Rydb.) Hulten
Moneses uniflora (L.) A. Gray var. *reticulata* (Nutt.) S. F. Blake
Monotropa hypopitys L. ssp. *lanuginosa* (Michaux) Hara * (*Hypopitys monotropa*)
Orthilia secunda (L.) House (*Pyrola secunda*)
Pyrola asarifolia Michaux var. *asarifolia*
Pyrola asarifolia Michaux var. *purpurea* (Bunge) Fern.
Pyrola minor L. *

Ranunculaceae

Aconitum delphinifolium DC. ssp. *chamissonianum* (Reichb.) Hulten *
Actaea rubra (Aiton) Willd. ssp. *arguta* (Nutt.) Hulten *
Anemone narcissiflora L. ssp. *alaskana* Hulten *
Anemone parviflora Michaux
Aquilegia formosa Fischer *
Caltha biflora DC.
Caltha leptosepala DC.
Caltha palustris L. ssp. *asarifolia* (DC.) Hulten *
Coptis aspleniifolia Salisb.
Coptis trifolia (L.) Salisb.
Ranunculus bongardii E. Greene (*Ranunculus uncinatus*)
Ranunculus cooleya Vasey & Rose
Ranunculus cymbalaria Pursh var. *alpina* Hook. *
Ranunculus eschscholtzii Schlechter
Ranunculus macounii Britton *
Ranunculus occidentalis Nutt.
Ranunculus orthorhynchus Hook. ssp. *alascensis* (L. Benson) Hulten *
Ranunculus pacificus (Hulten) L. Benson *
Ranunculus pennsylvanicus L. F. *
Ranunculus repens L. *
Ranunculus reptans L. var. *intermedius* (Hook.) Torrey & A. Gray (*Ranunculus flammula* var.

filiformis)
Ranunculus trichophyllus Chaix var. *trichophyllus*

Rosaceae

Amelanchier alnifolia (Nutt.) Nutt. ssp. *florida* (Lindley) Hulten * (*Amelanchier florida*)
Aruncus sylvester Kostel.
Comarum palustre L. (*Potentilla palustris*)
Crataegus douglasii Lindley *
Geum calthifolium Menzies
Geum macrophyllum Willd. ssp. *macrophyllum*
Luetkea pectinata (Pursh) Kuntze
Malus fusca (Raf.) C. Schneider (*Pyrus fusca*)
Physocarpus capitatus (Pursh) Kuntze *
Potentilla anserina L. *
Potentilla egedii Wormsk. ssp. *grandis* (Torrey & A. Gray) Hulten (*Potentilla anserina* var. *grandis*)
Potentilla hyparctica Malte
Potentilla norvegica L. ssp. *monspeliensis* (L.) Asch. & Graebner *
Potentilla villosa Pallas ex Pursh
Rosa nutkana C. Presl
Rubus chamaemorus L. *
Rubus idaeus L. ssp. ssp. *melanolasius* (Dieck) Focke *
Rubus leucodermis Douglas *
Rubus parviflorus Nutt. ssp. *grandiflorus* Farw.
Rubus pedatus Smith
Rubus spectabilis Pursh *
Rubus stellatus Smith (*Rubus arcticus* ssp. *stellatus*)
Sanguisorba menziesii Rydb.
Sanguisorba officinalis L.
Sanguisorba stipulata Raf. (*Sanguisorba sitchensis*)
Sibbaldia procumbens L.
Sorbus sitchensis Roemer
Spiraea douglasii Hook. ssp. *menziesii* (Hook.) Calder & R. Taylor

Rubiaceae

Galium aparine L.
Galium kamtschaticum Steller
Galium trifidum L. ssp. *columbianum* (Rydb.) Hulten
Galium trifidum L. ssp. *trifidum*
Galium triflorum Michaux

Salicaceae

Populus balsamifera L. ssp. *trichocarpa* (Torrey & A. Gray) Brayshaw * (*Populus trichocarpa*)
Salix commutata Bebb
Salix lucida Muhl. ssp. *lasiandra* (Benth.) Argus (*Salix lasiandra*)
Salix polaris Wahlenb.
Salix scouleriana J. Barratt
Salix sitchensis Sanson
Salix stolonifera Cov.

Santalaceae

Geocaulon lividum (Richardson) Fern.

Saxifragaceae

Heuchera glabra Willd.
Leptarrhena pyrolifolia (D. Don) Ser.
Mitella pentandra Hook.
Parnassia fimbriata König
Ribes bracteosum Douglas
Ribes lacustre (Pers.) Poiret
Ribes laxiflorum Pursh
Saxifraga ferruginea Graham
Saxifraga lyallii Engler ssp. *Hultenii* (Calder & Savile) Calder & Savile
Saxifraga mertensiana Bong.
Saxifraga nelsoniana D. Don ssp. *pacifica* (Hulten) Hulten (*Saxifraga punctata* ssp. *pacifica*)
Saxifraga oppositifolia L. ssp. *oppositifolia*
Saxifraga rivularis L. var. *flexuosa* (Sternb.) Engler & Irmscher
Saxifraga tolmiei Torrey & A. Gray
Tellima grandiflora (Pursh) Douglas *
Tiarella trifoliata L.
Tiarella unifoliata Hook.
Tolmiea menziesii (Pursh) Torrey & A. Gray

Scheuchzeriaceae

Scheuchzeria palustris L. ssp. *americana* (Fern.) Hulten

Scrophulariaceae

Castilleja miniata Douglas (including *Castilleja hyetophila* and *Castilleja chrymactis*)
Castilleja parviflora Bong.
Castilleja unalaschcensis (Cham. & Schldl.) Malte *

Collinsia parviflora Douglas *
Mimulus guttatus DC.
Mimulus lewisii Pursh
Pedicularis oederi M. Vahl *
Pedicularis ornithorhyncha Benth.
Pedicularis parviflora Smith *
Pedicularis verticillata L. *
Pentstemon serrulatus Menzies (*Pentstemon serrulatus*)
Rhinanthus minor L. ssp. *borealis* (Stern.) A. Loeve * (*Rhinanthus crista-galli*)
Veronica americana Schwein.
Veronica peregrina L. ssp. *xalapensis* (Kunth.) Pennell *
Veronica serpyllifolia L. *
Veronica wormskjoldii Roemer & Schultes

Selaginaceae

Selaginella selaginoides (L.) Link

Sparganiaceae

Sparganium angustifolium Michaux
Sparganium hyperboreum Laest.
Sparganium minimum (Hartman F.) Fries *
Sparganium multipedunculatum (Morong) Rydb. * (*Sparganium emersum* var. *multipedunculata*)

Taxaceae

Taxus brevifolia Nutt.

Thelypteridaceae

Thelypteris limbosperma (All.) H. P. Fuchs
Thelypteris phegopteris (L.) Slosson

Urticaceae

Urtica lyallii S. Wats. * (*Urtica dioica* ssp. *gracilis* var. *lyallii*)

Valerianaceae

Valeriana sitchensis Bong. *

Violaceae

Viola adunca Smith *
Viola epipsila Ledeb.

Viola glabella Nutt.

Viola langsdorffii Fischer