A second annotated checklist of vascular plants in Wells Gray Provincial Park and vicinity, British Columbia, Canada

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SUMMARY

Wells Gray Provincial Park is a vast wilderness preserve situated in the mountains and highlands of south-central British Columbia.

The first major floristic study of the vascular plants of Wells Gray and its vicinity was published in 1965 by Leena Hämet-Ahti, who documented 550 taxa, including a first Canadian record of *Carex praeceptorium*.

The present study contributes nearly 500 additional taxa documented by us between 1976 and 2010 in connection with our personal explorations of the Clearwater Valley. The vascular flora of Wells Gray Park and vicinity now stands at 1046 taxa, including 881 native species and 165 species introduced from Eurasia and other portions of British Columbia.

Wells Gray Park is notable both for the presence of numerous taxa (45) at or near the northern limits of their range, as well as for an unexpectedly high number of taxa (43) accorded conservation status by the British Columbia Conservation Data Centre.

Antennaria corymbosa has its only known Canadian locality within Wells Gray, while five additional species reported here are known in Canada from fewer than six localities. About a dozen unknown, possibly undescribed taxa have also been detected.

Botanical inventory has thus far been confined to the southern portions of Wells Gray. Future studies in northern half of the park will certainly greatly increase our knowledge of the biological diversity safeguarded in this magnificent wilderness preserve.

DEDICATION

This second annotated checklist of the vascular plants of southern Wells Gray Provincial Park and its vicinity expands on floristic work conducted in Wells Gray by botanists Leena Hämet-Ahti and Teuvo Ahti during the summer of 1961, and later published as Hämet-Ahti (1965a, b, 1978). Taken together these papers represent a major contribution to our knowledge not only of the vascular plants of interior British Columbia, but also of their zonal distribution in a circumpolar context.

It gives us considerable pleasure to dedicate this first edition of our own Wells Gray vascular checklist to Leena and Teuvo. Early in our respective careers, each of us benefited personally from the generous encouragement of these eminent scholars; and over the years we have continued to glean much inspiration from their work. In 2010, Leena and Teuvo celebrated their golden wedding anniversary. 2011 is the fiftieth anniversary year of their reconnaissance work in Wells Gray Park, and a fitting time to recognize their contributions to western North American botany.

Leena Hämet-Ahti was Associate Professor of Botany at the University of Helsinki (later also Director of the university's Botanical Garden), while Teuvo (Ted) Ahti was Professor of Cryptogamic Botany (later also "Academy Professor") at the same university. Beginning in 1958 and 1961, respectively, Ted and Leena made numerous forays to western North America, especially British Columbia, ultimately amassing c. 10,500 specimens from this region. Most of this material is deposited at the Finnish Natural History Museum (H), with replicates at the University of British Columbia (UBC), the Canadian Museum of Nature (CANL), and other major herbaria worldwide. Relevant publications include, for Leena: vegetation zones of western Canada (1965a), vascular flora of Wells Gray Park (1965b), timberline meadows (1978), *Juncus* (1986), and *Luzula* (1965c, 1971, 1973); and for Ted: Wells Gray Park mosses (1967), British Columbia lichen checklist (1967, 1987), Wells Gray Park macrolichens (1992), Alaska Highway lichens (1994) and Haida Gwaii Cladoniae (1995). These publications appear in the bibliography following this document; but for a more complete listing of papers, see our tribute to Leena and Ted at http://waysofenlichenment.net/wells/ahti. The name "Ahti" is now associated with western North American botany in the lichen genus *Ahtiana*.

Many thanks, Leena, Ted, for everything.

INTRODUCTION

Previous studies and rationale

In marked contrast to Canada's national parks, which have long received considerable attention from professional and amateur botanists alike, most parks within the B.C. Parks system are poorly inventoried for their vascular and non-vascular floras. Wells Gray Provincial Park might be said to constitute an exception to this rule – but only in the sense that it underwent a brief period of intense biological research in the 1950s and early1960s.

Botanical research during this period culminated in the summer of 1961, when Finnish botanists Leena Hämet-Ahti and Teuvo Ahti undertook a two-month floristic reconnaissance of Wells Gray, later published as Ahti & Fagerstén (1967: mosses), Hämet-Ahti (1965a: vascular plants) and Goward & Ahti (1992: macrolichens). The publication of Hämet-Ahti (1965a) documented 550 vascular plants from Wells Gray Park and vicinity.

During the past fifty years, B.C. Parks has shown little interest or initiative around the importance of protected areas as repositories of biological diversity. Nevertheless, the unprecedented destruction of natural ecosystems now taking place across British Columbia[1] has lately made it rather urgent to determine which species do and which do not find adequate representation within protected areas. It is to this end that we make available the results our own cursory botanical explorations of Wells Gray Park and its vicinity.

Study area

Wells Gray Provincial Park is a vast, 540,000 ha wilderness area in south-central British Columbia[2]. Different from most protected areas, Wells Grays is ecologically defensible, its boundaries being in large part defined by the drainages of Clearwater River and its major tributary the Murtle River, south to the town of Clearwater. Within this mostly unroaded region, we have largely confined our field studies to accessible areas lying south of Azure Lake. Accessibility has prompted us to include within our flora area regions outside the park, south to the vicinity of Blackpool, as well as east to the North Thompson River, from Clearwater north to Gosnell (Figures 1 and 2).

Climate. Central inland British Columbia occupies a longitudinal transition area between the oceanic climates to the west and the continental climates to the east, and a latitudinal transition area from the winter-wet/summer-dry climates to the south and winter-dry/summer-wet climates to the north. Within that area, Wells Gray Provincial Park is positioned at another transition, this from the rain-shadow climate of the Chilcotin to the west, and the very wet climate at the crest of the Columbia Mountains to the east.

In the flora area, a dual peak in precipitation occurs in winter and summer, with peak precipitation in most years occurring in late May through the first half of July. It is doubtless this

1 http://waysofenlichenment.net/wells/chessboard
2 http://waysofenlichenment.net/wells/checklists/vascular_plants

growing-season "June monsoon" that accounts for the lush vegetation characteristic of the study area – even in areas of total annual precipitation as low as 750 mm. Humidity during the growing season is high by regional standards, and in this respect our study area resembles summer-humid regions in eastern North America. In part we attribute this to high levels of evapotranspiration from the extensive deciduous forest cover at lower and middle valley elevations. By contrast, late summer and early autumn can bring periods of drought lasting weeks or, in exceptional years, months. At such times the forests may become very dry very and prone to wildfires. The early winter months are often accompanied by a second peak in precipitation, with a heavy snowpack accumulating at valley, and especially, mountain elevations.

Temperatures are moderately continental with most summer days reaching highs of about 20 to 25˚C at valley elevations. Summer night-time temperatures are rather low – between about 8 to 12°C – even during July, owing to cold air drainage from the adjacent highlands. Dew is thus common throughout the summer months. Winter temperatures tend to be comparatively mild – -5 to -2°C by day and -15 to -10° by night – owing to periodic onshore flow of moderating air from the Pacific. Occasionally, however, cold dry arctic air penetrates into the area, though cold spells seldom last more than about a week.

Springtime comes late to most portions of our study area. This is partly owing to prolonged dry weather that usually beings in late February, in most years persisting until early May. Under clear skies, night-time temperatures during this period typically drop below 0°C, causing the snowpack, even at valley elevations, periodically to refreeze, and hence to linger much longer than would be the case in climates subject to warmer spring nights. As a result, only in early to mid May does the vegetation finally "green up". At upper forested elevations, the snow pack persists well into June – July in some years – effectively resulting in a growing season of only two or three months.

Topography and geology. Much of the flora area encompasses middle- to high-elevation plateaus and mountains, with gently undulating terrain punctuated by meandering creeks and myriad lakes, ponds and wetlands. Here and there the plateau surface is dissected by deep, rather narrow valleys following the Clearwater, Murtle, Azure, Blue and North Thompson Rivers. Embedded within these valleys are Clearwater, Azure, Murtle and Mahood Lakes, all of which are long, narrow, deep, and essentially fjord-like.

Geologically, the flora area is underlain by a great many rock types. This is partly owing to the presence of three exotic island terrains (Cassiar, Kootenay and Slide Mountain) that docked onto the continent roughly 100 million years ago, and nowadays account for most of Wells Gray and its vicinity. These terrains and the seams between them introduce a rich assortment of chemically heterogeneous metamorphic and sedimentary rocks including, at valley elevations, limestone and high-pH phyllites. These and other calcareous rocks here and there elevate the pH of ground water in the Clearwater Valley, giving rise to calcareous wetlands and pockets of high-pH soils. The valley of the North Thompson River has a smattering of calcareous rock types, most notably the extensive limestones of the Raft Canyon and Vavenby.

A significant portion of the flora area is underlain by igneous rocks associated with local volcanism. Included here is the Raft batholith: a volcanic plume that cooled gradually within the Earth's crust, but that has since protruded upwards, forming massive granitic outcroppings such as Raft Peak and portions of Trophy and Battle Mountains. Elsewhere the magma breached the surface, pouring forth approximately 25 km^3 of plateau basalts and, embedded within them, small volcanic cones like Pyramid Mountain, Kostal Cone and Buck Hill. The plateau basalts dominate the southern portions of the Clearwater Valley, where we have made most of our collections and observations.

Pleistocene refugia. With the exception of Garnet Peak, at 2800 m, our entire study area was apparently locked within the Cordilleran ice sheet until about 15,000 years ago, when the Pleistocene glaciation began to subside. Presumably the first alpine plants colonized around this time, though most low-elevation plants are unlikely to have arrived into the area until some time after the final retreat of the valley glaciers around 11,000 years ago. It is possible that an ice-free corridor existed in Alberta on the leeward side of the Rocky Mountains; and if so this may have provided a refugium for portions of our area's modern vascular flora. Small areas of coastal and far northern British Columbia were also ice-free and may likewise have harboured source populations. These small refugia aside, most of Wells Gray's existing vascular flora will have arrived into the area from regions to the south (the Pleistocene ice-sheet reached its southward limits at about 47-48˚ N) or else far to the north, in the Yukon, far western Northwest Territories and Alaska.

Vegetation and special habitats. Valley elevations in the flora area are divided in their dominant vegetation types between the Interior Douglas-fir (IDF) forests of the driest southernmost fringe, and the Interior Cedar-Hemlock (ICH) forests of most of the remainder. We also recognize a "transition area" in which forest vegetation is intermediate between these two forest types, with *Betula papyrifera, Picea engelmanii x glauca, Pinus contorta* and *Populus tremuloides* being the most abundant canopy-forming trees. The bulk of this transition area is situated in the Clearwater Valley between the town of Clearwater and the Murtle River.

The vascular flora of the southern Clearwater Valley and adjacent portions of the Murtle River Valley was profoundly affected by the "great fire" of 1926, which resulted in the loss of multi-aged forests over an area of about 500 square kilometres. Included in this burn is most of our "transition area," in which the current vegetation has thus had a recovery period of only 85 years. Within the past decade, the forest vegetation in this portion of our flora area has been undergoing a major shift, owing in part to the almost complete loss of mature Lodgepole Pine (*Pinus contorta*) from an intense outbreak of the mountain pine beetle (*Dendroctonus ponderosae*). How this phenomenon plays out in coming years will likely vary depending on stand structure prior to dieback. Stands consisting entirely of Lodgepole Pine are likely to burn, and hence return the flora to the pioneer stage. On the other hand, stands in which Lodgepole is present as a sub-dominant will, in the absence of fire, tend to become more open as the dead stems topple. As a result, these latter stands – which make up by far the greatest portion of the transition area – can

be expected to acquire some of the structural characteristics normally associated with oldgrowth forests, e.g., a multi-aged canopy.

Around the fringes of Wells Gray Park, industrial-scale logging has lately converted more than half of the forest landscape from mature or old-growth status to young regenerative status, now often in the form of managed forest plantations[3]. Compared with young, naturally regenerated stands elsewhere in our flora area, these young stands – in most cases initiated in the absence of a natural pioneer phase – support a depauperate vascular flora in which rare species in particular are conspicuously lacking.

An important finding of the present survey is that a majority of low-elevation plant diversity in the flora area is limited to special habitats of very limited areal extent in the landscape. For the most part, unbroken forest landscapes support mostly widespread and common vascular plants. Punctuating, however, the low-diversity forest matrix are occasional small, often highly localized diversity nodes. It is here that a majority of the vascular plants native to the Clearwater Valley are to be found. Most such species are intolerant of dense or permanent forest cover, so they persist as small populations on isolated rock outcrops, cliffs, talus, lava flows and volcanic cones, as well as along lake shores and creek and river margins, and in seeps and springs, bogs, fens, marshes, swamps, ponds, and waterfall spray zones. These, then, are the main strongholds of vascular plant diversity at forested elevations in our flora area.

Worthy of special mention are open, non-forested calcareous sites which, though few in number, harbour a great many rare and uncommon species. The limestone outcrops of Raft River Canyon and the Vavenby area are outstanding examples, supporting a remarkably high percentage of one-time vascular plant occurrences reported here.

The numerous cliffs, outcrops and talus slopes associated with river canyons provide permanently open, non-forested habitat. Many of these sites can never gain dense forest cover, even during wetter/cooler climatic periods lasting thousands of years, and this has allowed species normally found in grassland or shrub steppe regions to persist there. In some cases such habitats are both very stable habitats and, in sheltered sites, buffered from climatic swings and extremes; here grow some of the rarest species in the flora area. Even some middle-elevation rock outcrops harbour grassland species otherwise not known within 100 km of the flora area.

Waterfalls also can provide highly stable conditions over very long periods of time through periods of climate change, as the spray from the falls moderates both high and low temperatures, and keeps the surrounding atmosphere permanently humid. A number of rare fern species occur in the flora area more or less exclusively in the vicinity of waterfalls.

Disturbed sites, such as pastures, road margins, gravel pits, and settlements provide habitat for a large number of introduced species. Very few native species favour these disturbance habitats. Some disturbance sites have served as launch pads for invasion into wild vegetation, as for example in the case of certain pasture grasses that are now common in undisturbed wetlands.

3 http://waysofenlichenment.net/wells/chessboard

Upper forested elevations in the flora area are dominated by Engelmann Spruce and Subalpine Fir. These forests have no major deciduous component, and as a whole are notably poor in vascular plant species. As in the case of low-elevation forests, subalpine forests exclude all but a small number of understory species tolerant of deep shade, acidic and high-humus soils and prolonged snow-pack.

Open alpine tundra and subalpine meadows provide open, sparse vegetation with high carrying capacity for vascular plant diversity. These high elevation habitats vary greatly in soil moisture, substrate rock chemistry, ground temperature, exposure to wind and duration of the winter snowpack. The lack of tree cover allows a wide array of plant species to sort themselves out according to these factors, without interference of shade or humus accumulation.

The localities

Hämet-Ahti (1965a) provides a summary of 38 collection localities, arranged in accordance with the "bioclimatic" system of Ahti et al. (1968) and Tuhkanen (1984): see also Goward & Ahti (1992)[4]. In Figures 1 and 2, we compare these earlier collecting localities with 83 localities subsequently visited by us. As can be seen, the northern portions of Wells Gray Park remain almost as poorly explored today as half a century ago. The vascular flora of Wells Gray can be expected to increase substantially once floristic research has been extended to the northern portions of the park.

Taxonomy and checklist conventions

Our species concepts are based for the most part on recently published volumes of the Flora of North America, though in many cases we have diverged on the basis of additional literature or personal observations. Where the names adopted here are at variance with the Illustrated flora of British Columbia (Douglas et al. 2002), we provide notes on synonymy. We also note points of departure from Hämet-Ahti (1965a). An asterisk preceding a species name denotes its status as an introduced species. In some cases, these species are native in British Columbia, but are clearly not native in the flora area. Placement of flowering plant genera into families follows the APG III classification on-line (Angiosperm Phylogeny Group III, 2011). The specimens of Björk and Goward are deposited at UBC (Vancouver, British Columbia).

For species that are rare or uncommon in the flora area, we have listed localities known to us, including those given by Hämet-Ahti (1965a). In the case of localities given as "Clearwater River" without any greater specificity, the species occurs along the length of the river in suitable habitat. For the remainder of our localities, the representative coordinates given in Appendix 1 specify the locality within a margin of error of about 1 km.

Provincial Blue or Red status is given as currently applied by the British Columbia Conservation Data Centre (2011). Other significance, i.e., disjunct population, or northernmost global population, is also given where appropriate.

4 http://waysofenclichenment.net/public/pdfs/Goward_Ahti_1992_Wells_Gray_macros.pdf

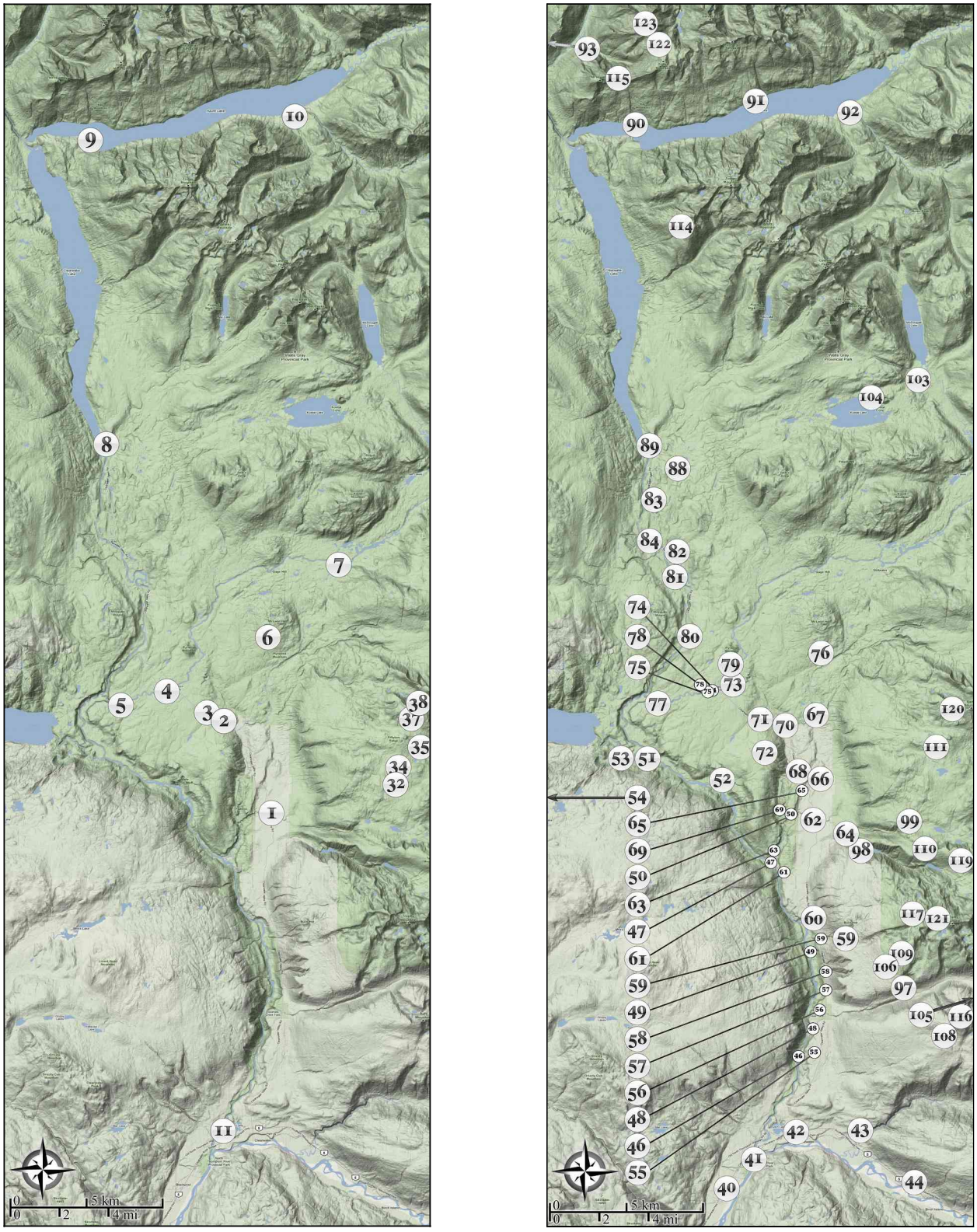

Figure 1. Collection localities in western portions of the park. Leena Hämet-Ahti's locations are on the left, Curtis Björk and Trevor Goward's on the right. See Appendix 1 for exact coordinates. Map background © 2011 Google.com; overlays by Andrew Simon and Jason Hollinger.

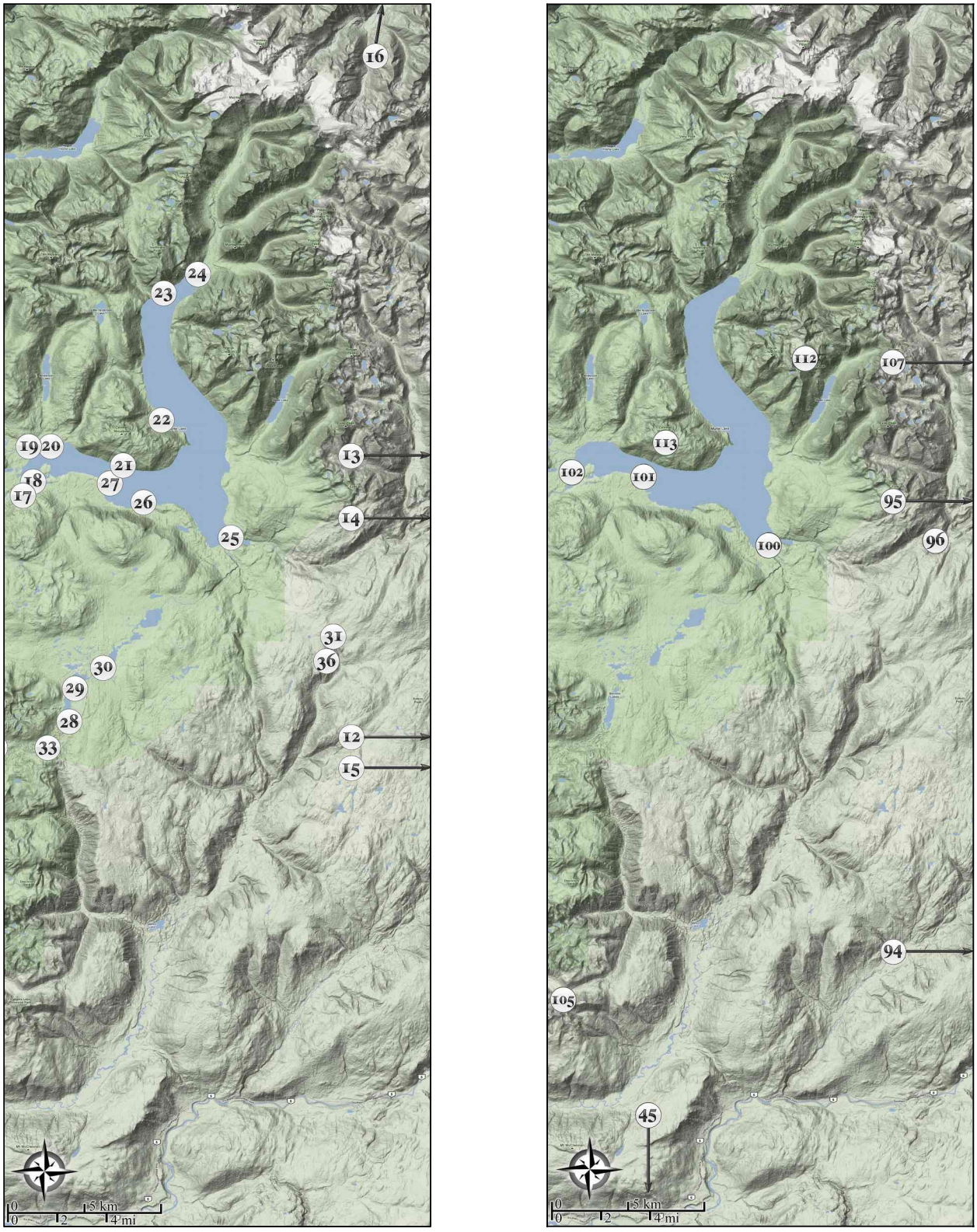

Figure 2. Collection localities in eastern portions of the park. Leena Hämet-Ahti's locations are on the left, Curtis Björk and Trevor Goward's on the right. See Appendix 1 for exact coordinates. Map background © 2011 Google.com; overlays by Andrew Simon and Jason Hollinger.

Species richness and floristic analysis Counting all terminal entities (species/subspecies/varieties), the total flora recorded from the study area currently stands at 1046 taxa (Tables 1, 2 and 3). Eight hundred and eighty-one of these are native to the area, whereas 165 are non-native, or introduced. Some of the species we treat as nonnative (i.e. *Ericameria nauseosa, Lepidium densiflorum* and *Leymus cinereus*) are native in interior BC, but we consider their presence in the flora area to be due to human activity. Few of the nonnative taxa are aggressive weeds; most are waifs, limited to gardens or other ruderal habitats, or observed only once or few times.

Some families and higher taxa are particularly well represented in the flora area, both in terms of numbers of species, and as a percent of the total flora. Free-sporing plants are diverse in the region by western North American standards, with an especially large array of Lycopodiaceae and Equisetaceae taxa. Indeed, a majority of North American Lycopodiaceae species are present in the flora area, as are nearly half of the world's species of *Equisetum.* As with many other north-temperate and southern boreal regions in western North America, the moonwort ferns of the genus *Botrychium* subgenus *Botrychium* (Ophioglossaceae) are especially diverse. Also well represented are the leptosporangiate ferns, particularly the families Dryopteridaceae and Woodsiaceae. Characteristic of far western North America, the conifer flora is diverse. Though the flora area and BC itself are peripheral to the region of much greater conifer diversity further south (especially northern California and Oregon), the flora area harbours a much higher conifer richness than most Eurasian or central/eastern North American regions of similar latitude.

	Total families	**Total genera**	**Total taxa**
Free-sporing plants	13	22	74
Lycopodioids	1	4	13
Isoetoids	2	2	6
Equisetoids	1	1	9
Psilotoids	1	2	16
Leptosporangiate Ferns	8	13	30
Conifers	3	7	16
Angiosperms	83	350	956
Dicotyledonous monocolpates	1	1	1
Monocots	19	84	306
Eudicots	63	265	649
All vascular plants	**97**	**379**	**1046**

Table 1. Numerical overview of the vascular flora of Wells Gray Park and vicinity, tabulated as families, genera and terminal taxa, inclusive of both native and nonnative taxa.

	Native families	Native genera	Native taxa
Free-sporing plants	13	22	74
Lycopodioids	1	4	13
Isoetoids	2	2	6
Equisetoids	1	1	9
Psilotoids	1	2	16
Leptosporangiate Ferns	8	13	30
Conifers	3	7	16
Angiosperms	75	274	791
Dicotyledonous monocolpates	1	1	1
Monocots	19	70	275
Eudicots	55	203	515
All vascular plants	**89**	**303**	**881**

Table 2. Numerical overview of the vascular plants of Wells Gray Park and vicinity, tabulated as families, genera and terminal taxa, including only native taxa.

	Nonnative families	Nonnative genera	Nonnative taxa
Free-sporing plants	0	0	0
Lycopodioids	0	0	0
Isoetoids	0	0	0
Equisetoids	0	0	0
Psilotoids	0	0	0
Leptosporangiate Ferns	0	0	0
Conifers	0	0	0
Angiosperms	8	120	165
Dicotyledonous monocolpates	0	0	0
Monocots	0	23	31
Eudicots	8	97	135
All vascular plants	**8**	**120**	**165**

Table 3. Numerical overview of the vascular plants of Wells Gray Park and vicinity, tabulated as families, genera and terminal taxa, including only nonnative taxa.

Tables 4 and 5 summarize those flowering plant families and genera that are most amply represented in the flora area. Of these, some might be expected to be diverse in any north-temperate/boreal region, for example the Caryophyllaceae (especially *Minuartia* and *Stellaria*), Cyperaceae (*Carex*), Ericaceae, Juncaceae (*Juncus* and *Luzula*), Ranunculaceae (*Anemone, Ranunculus*), Rosaceae (Potentilloid genera and *Rubus*), and Salicaceae (*Salix*).

Other well represented families have high floristic richness in most regions of temperate western North America, indicative perhaps of a Cordilleran biogeographical history rather than a circumboreal one. Local native members of the Asteraceae in the genera *Antennaria, Arnica, Packera*, and especially the Astereae tribe (*Erigeron, Solidago,* and *Symphyotrichum*) have their closest affinities the temperate American flora rather than with the circumboreal flora. The Poaceae too is well represented in the flora area, with a much larger representation of genera rooted more in the New World than of circumboreal genera. Included here are *Achnatherum, Muhlenbergia, Oryzopsis, Piptatherum, Schizachne,* and *Torreyochloa*. By contrast, some speciose Poaceae of the flora area are well represented throughout the circumboreal flora: *Agrostis, Bromus, Calamagrostis, Festuca, Glyceria* and *Poa*. The Saxifragaceae is well represented in terms of western North American genera that are either endemic or likely of North American and/or north Pacific origins: *Hemieva, Heuchera, Leptarrhena, Lithophragma, Micranthes, Mitella, Tellima* and *Tiarella*. This family is best represented around the North Pacific; and despite the presence of a large number of *Saxifraga* species across northern North America and Eurasia, it is hardly otherwise part of the circumboreal flora. Even within some characteristically circumboreal families and genera, it is possible to discern some distinctly North American groups, as for example in section *Ovales* of the genus *Carex.*

Some families present in the flora area are strikingly poorly represented within the context of the circumboreal flora. A case in point is the Orchidaceae which, however, is by world standards decidedly depauperate in western North America as a whole. The Gentianaceae and Lamiaceae also belong here. Especially noteworthy in this connection are various widespread endemic western North American genera of the Apiaceae (especially *Lomatium*), which are practically lacking in the flora area. Other families that are well represented in western North America, but poorly in the Clearwater Valley are: Alliaceae, Boraginaceae, Fabaceae, Grossulariaceae, Montiaceae, Polemoniaceae and Polygonaceae.

Provincially and nationally rare species. A total of 43 provincially Blue- and Red-listed rare species (British Columbia Conservation Data Centre 2011) are now known to occur in the flora area (Table 6). Some of the Red-listed species are extremely rare in Canada as a whole, recorded to date from fewer than five localities additional to the Clearwater Valley: *Botrychium paradoxum, Carex scopulorum var. prionophylla, Carex adusta,* and *Muhlenbergia filiformis*. More noteworthy still is our report of the only known Canadian locality for *Antennaria corymbosa*. Only one species listed under the federal Species at Risk Act (*Pinus albicaulis*, Endangered) is present in the flora area, though another federally listed species (*Azolla mexicana*, Threatened) occurs a short distance to the south (Goward 1994), and may yet be found in the flora area.

Family	Native genera	Native taxa
Cyperaceae	8	109
Asteraceae	30	95
Poaceae	28	76
Rosaceae	17	47
Ericaceae	16	38
Brassicaceae	11	33
Ranunculaceae	10	30
Salicaceae	2	28
Saxifragaceae	10	24
Caryophyllaceae	8	21
Orchidaceae	8	21
Onagraceae	3	20
Juncaceae	2	19
Ophioglossaceae	2	16
Plantaginaceae	6	15

Table 4. Fifteen largest plant families in Wells Gray Park and vicinity (native species only).

Genus	Native taxa
Carex	88
Salix	20
Epilobium	17
Juncus	17
Botrychium	15
Ranunculus	15
Draba	14
Potamogeton	13
Antennaria	12
Juncus	12
Viola	11
Arnica	10
Erigeron	10

Table 5. Genera having at least ten species in Wells Gray Park and vicinity.

Agoseris lackschewitzii S2S3 Blue	*Dryopteris cristata* S2S3 Blue
Antennaria corymbosa S1 Red	*Eleocharis elliptica* S2S3 Blue
Botrychium ascendens S2 Red	*Epilobium davuricum* S1S3 Red
Botrychium crenulatum S2S3 Blue	*Epilobium halleanum* sensu lato S2S3 Blue
Botrychium hesperium S2S3 Blue	*Epilobium leptocarpum* S2S3 Blue
Botrychium paradoxum S1 Red	*Epilobium oregonense* S2S3 Blue
Botrychium pedunculosum S2 Red	*Epilobium saximontanum* S1S3 Red
Botrychium simplex S2S3 Blue	*Impatiens aurella* S2S3 Blue
Carex adusta S1 Red	*Juncus stygius* S2S3 Blue
Carex comosa S2 Red	*Mimulus breweri* S2S3 Blue
Carex heleonastes S2S3 Blue	*Muhlenbergia filiformis* S1 Red
Carex lenticularis var. *lenticularis* S2 Red	*Muhlenbergia glomerata* S3 Blue
Carex praeceptorum S1S3 Red	*Ophioglossum pusillum* S2S3 Blue
Carex scopulorum var. *prionophylla* S1S2 Red	*Packera plattensis* S2S3 Blue
Carex tenera S2S3 Blue	*Pellaea gastonyi* S2S3 Blue
Cicuta virosa (sensu lato) S2S3 Blue	*Persicaria punctata* S2S3 Blue
Draba densifolia S2S3 Blue	*Pinus albicaulis* S3? Blue (listed Endangered federally)
Draba fladnizensis S2S3 Blue	*Potamogeton perfoliatus* S2S3 Blue
Draba lonchocarpa (var. *vestita*) S2S3 Blue	*Salix boothii* S2S3 Blue
Draba ruaxes S2S3 Blue	*Trichophorum pumilum* S2S3 Blue
Draba ventosa S2S3 Blue	
Drosera linearis S1 Red	

Table 6. Vascular plants occurring with Wells Gray Park and vicinity, and accorded conservation status in BC (Blue or Red) by the Conservation Data Centre (2011); see http://www.env.gov.bc.ca/cdc/ for an explanation of ranking symbols.

Other species are of noteworthy occurrence though they are not currently given conservation status in British Columbia. Among these are *Botrychium alaskense* and *B. mormo*, though the latter of these may be best treated as including *B. montanum*, a rare species with additional populations known in BC. *Huperzia selago* is not generally recognized as occurring in western North America, though it may actually be common in portions of interior BC. *Antennaria*

densifolia is a globally rare species previously known only from few sites in far northwestern North America and west-central Montana. Its presence in BC is poorly documented, but it may merit consideration as a conservation priority.

Taxonomically critical taxa. Several entities are listed for the flora area that may need to be proposed as new species; a few of these are highlighted below, but see also the notes under *Berberis aquifolium, Carex tenera, Epilobium halleanum, Gentianella cf. campestris, Micranthes occidentalis, Mimulus cf. patulus, Poa sp. nov., Viola langsdorfii,* and *Viola renifolia*.

- *Cystopteris* is represented in the flora area not only by the widespread species *C. fragilis* (at least in a broad sense) and *C. montana*, but also by two glandular species of unknown identity. No other verified glandular species of *Cystopteris* are otherwise known in northwestern North America with the exception of *C. utahensis*, a southern species that does not appear to account for either of the hypothetical species. One of the local species may perhaps prove conspecific with *C. laurentiana*, otherwise known only in eastern North America, though differences in spore size suggests these are probably separate species. Here again, further work is needed.

- The form of *Cicuta virosa* present in the flora area is clearly not typical for that species and may represent an undescribed taxon (which also is not accounted for by *C. mackenzieana*, a boreal North American synonym of *C. virosa* that may itself require resurrection from synonymy).

- *Artemisia michauxiana* is present in the flora area in its low elevation form, differing from typical material in habitat and morphology: leaves silvery on both surfaces, more pinnate than tripartite, and with relatively narrow involucres and a usually narrower inflorescence. This form may merit description as a new species or subspecific taxon, known to us only from within the area covered by the ice-age Cordilleran ice sheet.

- *Rorippa sp. 1* was first detected in the flora area, though the species is now known to us from a wide area of southern BC. This species is similar to *R. palustris*, but is more strongly perennial, with larger petals, longer, thicker fruits that are truncate apically and often 3- or 4- septate. It may be a stabilized hybrid involving *R. palustris* and *R. barbariaefolia*, the latter species known currently only from far northern BC, and northwestward.

- Another anomalous *Rorippa* has emerged from the flora area, which we currently place under *R. palustris*. It may be closer to *R. curvipes*, but differs from both of those species in having the fruit suture lined along its exterior by short, triangular hairs. This morphology, however, is known to us only in a single population, so we do not feel confident in treating it as a putative new species.

That several taxonomically critical plants should be found to occur in a region available for colonization only within the past 15,000 to 11,000 years was unexpected, and strikingly

underscores the need for further botanical exploration in the region – as indeed across British Columbia in general. Clearly much work remains to be done before a settled taxonomy of the province's vascular plants can be arrived at.

Disjunct and peripheral populations. Generally speaking, the Clearwater Valley might well be described as overlapping with the northern end of the temperate zone, at least as it occurs in inland western North America. This assessment is supported by the very large number of species that have their northernmost known populations within the flora area (Table 7). Here it can be mentioned that five plant genera – *Dulichium, Heterotheca, Lithophragma, Pseudognaphalium,* and *Rhus* – likewise reach their northern limits here.

Agoseris lackschewitzii	*Hieracium scouleri* var. *scouleri*	*Phacelia hastata*
Antennaria corymbosa	*Lithophragma glabrum*	*Phacelia linearis*
Botrychium mormo	*Lithophragma parviflorum*	*Pinus monticola*
Botrychium paradoxum	*Lupinus latifolius*	*Piperia elongata*
Carex amplifolia	*Luzula fastigiata*	*Piptatherum micranthum*
Carex comosa	*Micranthes nidifica*	*Plantago patagonica*
Carex scopulorum	*Mimulus breweri*	*Polygonum spergulariiforme*
Ceanothus velutinus	*Mimulus moschatus*	*Pseudognaphalium macounii*
Chenopodium fremontii	*Mimulus cf. patulus*	*Pseudognaphalium microcephalum*
Claytonia rubra	*Muhlenbergia filiformis*	*Rhus glabra*
Crepis atribarba	*Myriophyllum farwellii*	*Silene antirrhina*
Dulichium arundinaceum	*Ophioglossum pusillum*	*Silene parryi*
Epilobium foliosum	*Penstemon ellipticus*	*Stellaria nitens*
Epilobium oregonense	*Persicaria punctata*	*Vaccinium oreophilum*
Gaultheria ovatifolia		
Heterotheca villosa		

Table 7. Vascular plants believed to have their northernmost geographical range in Wells Gray Park and vicinity.

Some of the species in Table 7 exhibit rather large north-south disjunctions, in some being separated from the nearest known locality by 100 km or more. Examples are *Claytonia rubra* ssp. *depressa, Crepis atribarba, Micranthes nidifica, Muhlenbergia filiformis, Ranunculus glaberrimus,* and *Stellaria nitens*. Most of these species occur on dry, south-facing slopes, cliffs and outcrops, though *Muhlenbergia filiformis* seems to be restricted locally to wet travertine in the vicinity of a mineral spring. Characteristic grassland/shrub steppe species occur in the

vicinity of Birch Island and Vavenby in particular, but also at the Grouse Creek Notch, Whitehorse Bluffs, First Canyon uplands, and the south end of Green Mountain. At Birch Island and Vavenby, the south-facing slopes maintain areas of open habitat that preserves entire grassland biomes in patches that are in some cases several hectares in size.

By contrast, comparatively few species reach their southernmost limits (at least in western North American) in the flora area: *Botrychium alaskense, Carex loliacea, Cryptogramma sitchensis, Epilobium davuricum,* and *Saxifraga tricuspidata*.

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CHECKLIST OF PLANTS OF THE FLORA AREA

Note: species preceded by an asterisk are nonnative.

LYCOPODIOIDS

LYCOPODIACEAE

***Diphasiastrum alpinum* (L.) Holub** Common. Alpine habitats, especially heaths. *Goward 84-1025, Björk 9233, 9351, 11699, 21921*. Syn. *Lycopodium alpinum* L.

***Diphasiastrum complanatum* (L.) Holub** Common. Lower elevation forests. *Goward 81-177, 84-1024*. Syn. *Lycopodium complanatum* L.

***Diphasiastrum sitchense* (Rupr.) Holub** (Hämet-Ahti 1965) Common. Alpine habitats, especially heaths. *Björk 11700*. Syn. *Lycopodium sitchense* Rupr.

***Huperzia haleakalae* (Brackenr.) Holub** (Hämet-Ahti 1965 as *Lycopodium selago* varieties *patens* and *appressum*, both of which are assumed by us to apply here.) Occasional. Various low to high elevation habitats, usually in open sun on mossy rocks. *Goward 81-500, Björk 11693. Lycopodium selago* misapplied.

***Huperzia miyoshiana* (Makino) Ching sensu lato** Occasional. Various low to high elevation habitats in the wettest-climate areas. *Goward 81-122, Björk 14792*. This name may not be properly applied to western North American populations. *Lycopodium selago* misapplied.

***Huperzia occidentalis* (Clute) Kartesz & Gandhi** Rare, Nakiska Ranch area, Spahats Valley. Old-growth cedar-hemlock forests. *Lycopodium selago* misapplied.

***Huperzia selago* (L.) Bernh. ex Schrank & Martius** (Hämet-Ahti 1965) Rare, Murtle Lake, Edgewood, also reported from Fish Lake Hill by Hämet-Ahti. Tussocks in bogs and fens, and in forest-margin meadows. *Björk 9423*. This name as used here may not include typical material, but represents material that clearly does not fit with the other regional *Huperzia* species.

***Lycopodiella inundata* (L.) Holub** Rare, Blue River area. In fen at low elevations. *Björk 9825*. Syn. *Lycopodium inundatum* L..

***Lycopodium annotinum* L. var. *alpestre* Hartm.** Uncommon, Trophy Mountains. Open sites on rock outcrops and cliffs in the alpine.

Lycopodium annotinum* L. var. *annotinum (Hämet-Ahti 1965) Common. Low to middle elevation forests. *Björk 9826*.

***Lycopodium clavatum* L. var. *integrifolium* Goldie** Occasional. Forests and heaths, mostly at middle to high elevations.

***Lycopodium dendroideum* Michaux** (Hämet-Ahti 1965, as *L. obscurum*) Common. Lower elevation forests. *Goward 94-18*.

***Lycopodium lagopus* (Laest. ex Hartm.) Zinserl. ex Kuzen.** Uncommon, Blue River area, Azure Lake area, Caligata Lake. Forests and open habitat in cooler sites, mostly on calcareous substrates. *Björk 9422, Goward 84-1023, 89-80*. *Lycopodium clavatum* misapplied.

ISOETOIDS

ISOETACEAE

***Isoetes bolanderi* Engelm.** (Hämet-Ahti 1965) Rare, south end of Murtle Lake. Submerged in shallow, cool water. Murtle Lake. *Björk 9772a*. Probably hybridizing with *I. echinospora*.

***Isoetes echinospora* Durieu var. *braunii* (Durieu) Engelmann** Rare, west and south ends of Murtle Lake. Submerged in shallow water of large lakes and mountain pools.

***Isoetes maritima* Underwood** Rare, Stevens Lakes. Submerged in high elevation lakes. Det. D.F. Brunton, but we have not examined the specimen.

***Isoetes occidentalis* Henders.** Rare, west end of Murtle Lake, Stevens Lakes. Submerged, found stranded in wave drifts. *Goward 92-1392*.

SELAGINELLACEAE

***Selaginella scopulorum* Maxon** Rare, Trophy Mountains. Alpine tundra. *Björk 9348*. Syn. *Selaginella densa* Rydb. var. *scopulorum* (Maxon) Tyron.

***Selaginella wallacei* Hieron.** (Hämet-Ahti 1965) Uncommon, Battle Mountain, Hemp Creek Canyonlands, Spahats Falls, Eye-of-the-Needle. Rocky habitats in sun or light shade, low to high elevations. *Goward 90-1253, 91-97, 94-12*.

EQUISETOIDS

EQUISETACEAE

***Equisetum arvense* L.** (Hämet-Ahti 1965) Common. In a wide variety of habitats, low to moderately high elevations. *Goward 81-430, 81-592, 93-22*.

***Equisetum x ferrisii* Clute** (Hämet-Ahti 1965) Locally common at Clearwater. In open, moist habitats at low elevations.

***Equisetum fluviatile* L.** (Hämet-Ahti 1965) Uncommon, Murtle Lake, Placid Lake. Shallow water of marshes at low elevations. *Goward 93-41*.

***Equisetum hyemale* L. var. *affine* (Engelm.) Calder & Taylor** (Hämet-Ahti 1965) Uncommon, Blue River, Clearwater, Battle Creek. Along streams, roadsides, and on sandy slopes. *Goward 81-556*.

***Equisetum palustre* A. Br.** (Hämet-Ahti 1965) Occasional. Marshes and other wet sites.

***Equisetum pratense* Ehrh.** (Hämet-Ahti 1965) Occasional. In meadows. *Goward 93-21, Björk 9194*.

***Equisetum scirpoides* Michx.** (Hämet-Ahti 1965) Occasional. Forests, talus, and alpine sites, low to high elevations. *Goward 81-945*.

***Equisetum sylvaticum* L.** (Hämet-Ahti 1965, as var. *pauciramosum*). Common. Forests and forest clearings. *Goward 81-290*.

Equisetum variegatum* Schleicher var. *variegatum (Hämet-Ahti 1965). Occasional. Moist, open sites, especially on lake shores and in roadside ditches. *Goward 81-495, 84-1028*.

PSILOTOIDS

OPHIOGLOSSACEAE

***Botrychium alaskense* W.H. Wagner & J.R. Grant** Rare, Edgewood. Weedy meadow at low elevations. *Björk 21961*. This species has not previously been reported from BC, and is otherwise known only from Alaska and the Yukon. It is similar to *B. pinnatum*, but has narrower pinnules that are more cuneate than rounded at the base, and the sporophore is ternate or nearly so from a short common stalk, while those of *B. pinnatum* are pinnate from a long common stalk.

***Botrychium cf. ascendens* W.H. Wagner** Rare, Spahats Creek. In clearing in an old-growth cedar-hemlock forest at low elevations. *Björk 12087.* Only a single plant is known from the cited population. We apply the name *B. ascendens* applied only tentatively. With that species, the plant shares the strongly ascending pinnae, but it differs in having the pinnae cuneate at the base and with the lower pinnae distinctly longer than the upper pinnae. It may instead be a hybrid of *B. lanceolatum* and *B. mormo*, both of which are present at the site. *Botrychium ascendens* is listed Red (S2) by the BC Conservation Data Centre (2011).

***Botrychium crenulatum* W.H. Wagner** Rare, Edgewood. In weedy meadows and forest margins at low elevations. *Björk 9181, 9190, 9195, 9207*. Often difficult to discern from forms of *B. lunaria* and *B. minganense*. Listed Blue (S2S3) by the BC Conservation Data Centre (2011).

***Botrychium hesperium* (Maxon & Clausen) W.H. Wagner & Lellinger** Rare, Edgewood. In weedy meadows at low elevations. *Björk 9197*. Listed Blue (S2S3) by the BC Conservation Data Centre (2011).

Botrychium lanceolatum* (Gmelin) Angstrom ssp. *lanceolatum Rare, Edgewood, Spahats Creek, near Nakiska Ranch, Battle Creek area. In weedy meadows and forest clearings at low elevations. *Björk 9204, 9256, 21953, 21990*.

***Botrychium lunaria* (L.) Sw.** (Hämet-Ahti 1965) Uncommon, Edgewood, near Battle Creek, Hemp Creek. In weedy meadows at low elevations. *Björk 9189, 9198, 9208, 21992*.

***Botrychium minganense* Vict.** Rare, Blue River, Edgewood. In forests and forest margins at low elevations. *Goward 81-673*.

***Botrychium mormo* W.H. Wagner** Rare, near Battle Creek, Spahats Creek. In old-growth forests at low to middle elevations. *Björk 21999* (coll. T. Goward). These plants are here named *B. mormo* rather than *B. montanum* due to the lack of a glaucous coating on the trophophore, which consistently characterizes *B. montanum*, and because they have the firmly succulent trophophore of *B. mormo*. The flora area is within the geographical range of *B. montanum*, and that species should be sought. No other reports of *B. mormo* not accounted for by *B. montanum* are known to us from western North America. Otherwise, *B. mormo* is known only from the Great Lakes region. Both of the populations are active above ground in late summer, while all our other *Botrychia* except *B. multifidum* and *B. virginianum* are seen above ground only in late spring and early summer.

***Botrychium multifidum* (Gmelin) Rupr.** (Hämet-Ahti 1965a) Uncommon, Edgewood, Helmcken Falls area. In weedy meadows, forest clearings and wetland margins at low elevations. *Goward 81-929*.

***Botrychium paradoxum* W.H. Wagner** Rare, Edgewood. In a weedy meadow at low elevations. Listed Red (S1) by the BC Conservation Data Centre (2011).

***Botrychium pedunculosum* W.H. Wagner** Rare, Edgewood. In a weedy meadow. Identification tentative. Only a single plant seen, this with a long-stalked trophophore, but with pinnae that are widely fan-shaped, deeply notched, and overlapping. Listed Red (S1) by the BC Conservation Data Centre (2011).

***Botrychium pinnatum* H. St. John** (Hämet-Ahti 1965a, as *B. boreale* ssp. *obtusilobum*). Uncommon, Edgewood, near Battle Creek, Blue River, Trophy Mountains. In weedy meadows and trail sides, also collected once on a grassy alpine slope, low and high elevations. *Björk 9191, 9199, 9206, 9254, 12101, 21991*. See notes under *B. alaskense*.

***Botrychium simplex* E. Hitchc.** Rare, Edgewood. In a weedy meadow at low elevations. Both glaucous and non-glaucous forms present and intermixed. Listed Blue (S2S3) by the BC Conservation Data Centre (2011).

***Botrychium virginianum* (L.) Sw.** (Hämet-Ahti 1965a) Occasional. Weedy meadows and forests at low elevations. *Goward 81-168, Björk 9188, 9193.*

Botrychium lunaria x hesperium Rare, Edgewood. In a weedy meadow at low elevations. Growing with the two putative parent species.

***Ophioglossum pusillum* Raf.** Rare, Ray Farm. Meadow around mineral springs at low elevations. *Goward 81-928, 83-679*. Listed Blue (S2S3) by the British Columbia Conservation Data Centre (2011).

LEPTOSPORANGIATE FERNS

ASPLENIACEAE

Asplenium trichomanes* L. ssp. *trichomanes Uncommon, near Battle Creek, Natural Bridge, near Clearwater River 10 km N of town of Clearwaater. On cliffs at low to middle elevations. Not or only weakly calciphilic. *Goward 81-729, Björk 21895.*

***Asplenium trichomanes-ramosum* L.** (Hämet-Ahti 1965a) Rare, Azure Lake, Cougar Creek Canyon. On cliffs near waterfalls at low elevations, probably on calcareous material in both cases. *Goward 81-570, 81-935*. Syn. *Asplenium viride* Huds.

DENNSTAEDTIACEAE

***Pteridium aquilinum* (L.) Kuhn var. *latiusculum* (Desv.) L. Underw.** Uncommon, Edgewood East, Birch Island. In forests at low elevations.

Pteridium aquilinum* (L.) Kuhn var. *pubescens (Hämet-Ahti 1965a) Occasional. Forests and clearings at low elevations.

DRYOPTERIDACEAE

***Dryopteris carthusiana* (Vill.) H.P. Fuchs** Occasional. Swamp forests and sylvan pools at low elevations. *Björk 12079*.

***Dryopteris cristata* (L.) A. Gray** (Hämet-Ahti 1965a) Rare, Blue River, Clearwater Springs, Placid Lake. Moist, mossy shrub carrs at low elevations. *Björk 9688, 21920*. Listed Blue (S2S3) by the British Columbia Conservation Data Centre (2011).

***Dryopteris expansa* (C. Presl) Fraser-Jenkins & Jermy** (Hämet-Ahti 1965a, as *D. dilitata*). Common. Forests, low to middle (rarely high) elevations. Hämet-Ahti describes under this species an unusual specimen collected from Fish Lake Hill. It is hoped that this population can be relocated for further study. *Goward 81-162*. *Dryopteris dilitata* (Hoffm.) A. Gray*, D. austriaca* (Jacq.) Woynar misapplied.

***Dryopteris filix-mas* (L.) Schott** Rare, Azure Lake, Birch Island. Forests and cliff bases at low elevations. *Goward 81-188*.

***Polystichum braunii* (Spenner) Fée** Rare, Moul Falls, Spahats Falls. Cliff bases near waterfalls. *Goward 89-34, 91-98*.

***Polystichum lonchitis* (L.) Roth** Occasional. Rocky sites at high elevations. *Goward 81-190*, *81-346, 81-946*.

***Polystichum munitum* (Kaulf.) C. Presl** Rare, Eye-of-the-Needle. Forest at cliff base, low elevations. *Goward 94-14*.

ONOCLEACEAE

***Mattheuccia struthiopteris* (L.) Todaro** (Hämet-Ahti 1965a) Rare, near Blue River. Riparian forests and margins of marshes at low elevations.

POLYPODIACEAE

***Polypodium hesperium* Maxon** Uncommon. Avola, Hemp Creek Canyonlands, Natural Bridge. On cliffs and large boulders, low elevations. *Goward 81-730, 83-794, Björk 11447*.

PTERIDACEAE

***Cryptogramma achrostichoides* R. Br.** Occasional. On siliceous talus and rock outcrops, low to middle elevations. *Goward 81-345, Björk 9421*. *Cryptogramma crispa* misapplied.

***Cryptogramma sitchensis* (Rupr.) T. Moore** (Hämet-Ahti 1965a) Rare, Murtle Lake, Grouse Creek Notch. On siliceous talus and rock outcrops at low to middle elevations. *Björk 17776*. Syn. *C. crispa* (L.) R. Br. var. *sitchensis* (Rupr.) C. Chr.

***Cryptogramma stelleri* (S.G. Gmel.) Prantl** Rare, Azure Lake at Osprey Point, Cougar Creek Canyon, Vavenby. On calcareous cliffs where shaded and sheltered from direct rain-splash, low elevations. *Goward 81-412, 83-717, 83-860, Björk 11404*.

***Pellaea gastonyi* Windham sensu stricto** Rare, Raft Canyon, Vavenby. On limestone cliffs in sun or light shade at low elevations. *Björk 11359, 11369, 11403, 11427*. Listed Blue (S2S3) by the British Columbia Conservation Data Centre (2011).

***Pellaea glabella* Mett. ex Kuhn var. *simplex* (Butters) Á. Löve & D. Löve** Rare, Vavenby. Limestone and calcareous-modified siliceous rocks at low elevations. *Björk 11358, 11453, 11455*.

THELYPTERIDACEAE

***Phegopteris connectilis* (Michx.) Watt** (Hämet-Ahti 1965a) Uncommon, Murtle Lake, Azure Lake, Edgewood West, Second Canyon. On moist cliffs and around waterfalls. *Goward 81-161, 81-701*.

WOODSIACEAE

***Athyrium americanum* (Butters) Maxon** (Hämet-Ahti 1965a). Common. Rocky sites, alpine and subalpine. *Goward 81-379*. Syn. *Athyrium distentifolium* Tausch ex Opiz ssp. *americanum* (Butters) Hultén.

***Athyrium filix-femina* (L.) Roth var. *cyclosorum* Rupr.** Common. Moist, mostly shaded sites at low to middle elevations.

***Cystopteris sp.* 1** Rare, Vavenby. On limestone cliffs and talus in light to deep shade at low elevations. *Björk 11441*. Leaves firm, dark green, ascending to erect, narrowly triangular, with the lowest pinnae the longest; multicellular scales on the rachis and pinna bases tipped in red glands.

***Cystopteris sp.* 2** (cf. *laurentiana* (Weath.) Blasdell) Uncommon, Vavenby, Natural Bridge. On calcareous rocks at low elevations. *Björk 11365, 11405.* Leaves firm, yellow-green, usually strictly erect, lanceolate, with the longest pinnae in the lower half, rachis and pinnae densely covered in short, gland-tipped hairs. Close to *C. laurentiana* in macroscopic characters, but differing in spore size.

***Cystopteris fragilis* (L.) Bernh.** (Hämet-Ahti 1965a) Common in open to shaded habitats, low to middle elevations. *Björk 11366*. Leaves delicate, usually medium green, ascending, horizontal or drooping, ovate-lanceolate, with the longest pinnae in the lower half; rachis and pinnae lacking short, gland-tipped hairs, and multicellular scales lacking glandular tips. Echinate and tuberculate spored forms are present.

***Cystopteris montana* (Lam.) Bernh. ex Desv.** (Hämet-Ahti 1965a). Rare, Azure Lake. Humid forest by waterfalls, probably on calcareous soil, low elevations. *Goward 81-702*.

***Gymnocarpium disjunctum* (Rupr.) Ching** Common. Humid forests at low elevations. *Björk 9111*.

***Gymnocarpium dryopteris* (L.) Newman** (Hämet-Ahti 1965a) Common. Humid forests, low elevations.

***Woodsia oregana* D.C. Eat.** Rare, Third Creek Canyon, Cougar Creek Canyon. Open or lightly shaded, rocky habitats at low elevations. *Goward 83-806, 83-859*.

***Woodsia scopulina* D.C. Eat. var. *laurentiana* Windh.** Abundance unknown, most populations of *W. scopulina* have not been identified to variety (var. *laurentiana* identified at Vavenby). The species, inclusive of varieties is common on talus, rock outcrops and cliffs at low to middle elevations.

Woodsia scopulina* D.C. Eat. var. *scopulina (Hämet-Ahti 1965a) See notes under *W. scopulina* var. *laurentiana*. *Björk 11450*.

GYMNOSPERMS

CUPRESSACEAE

***Juniperus communis* L. var. *depressa* Pursh** (Hämet-Ahti 1965a) Occasional. On rock outcrops, low elevations.

***Juniperus communis* L. var. *montana* Ait.** (Hämet-Ahti 1965a, as var. *saxatilis*) Common. Forests at low to high elevations.

***Juniperus scopulorum* Sargent** Uncommon. Clearwater River, Vavenby. Along sandy and gravelly shores, also on limestone cliffs, low elevations. *Björk 10946*.

***Thuja plicata* D. Don** (Hämet-Ahti 1965a) Common. Forests at low to middle elevations.

PINACEAE

***Abies lasiocarpa* (Hook.) Nutt.** (Hämet-Ahti 1965a) Common. Forests and meadows, mostly at high elevations.

***Picea engelmannii* Parry ex Engelm.** (Hämet-Ahti 1965a) Common. Forests and meadows at high elevations.

Picea engelmannii x glauca (Hämet-Ahti 1965a) Common. Low to middle elevations. This is the dominant low-elevation *Picea* in the flora area.

***Picea glauca* (Moench) Voss** (Hämet-Ahti 1965a) Rare, Hemp Creek, Murtle Lake, Battle Mountain. Forests at low elevations, rarely at high elevations.

***Picea mariana* (Miller) Britt., Stearns & Poggenb.** (Hämet-Ahti 1965a) Rare in the flora area, limited to a small area around Blue River, where it occurs further south than anywhere else in BC. Bogs and bog margins. Some *Picea* populations around bogs at low elevations elsewhere (e.g. Placid Lake) may be old hybrids involving this species.

***Pinus albicaulis* Engelm.** (Hämet-Ahti 1965a) Apparently uncommon in the flora area in the northeast portion, but much of its potential habitat in the northern portion of Wells Gray Park has yet to see botanical exploration. Mountain tops. Listed Endangered under the Species at Risk Act, and Blue (S3) by the British Columbia Conservation Data Centre (2011).

***Pinus contorta* Dougl. ex Loudon var. *latifolia* Engelm.** (Hämet-Ahti 1965a) Common. Both upland and wetland habitats at low to middle elevations, and rare at high elevations.

***Pinus monticola* Dougl. ex D. Don** (Hämet-Ahti 1965a) Uncommon, Clearwater River, Murtle Plateau, Blue River. Humid forest.

***Pseudotsuga menziesii* (Mirbel) Franco var. *glauca* (Mayr) Franco** (Hämet-Ahti 1965a) Common. Mostly in dry, warm sites, less common around wetlands, low to middle elevations.

***Tsuga heterophylla* (Raf.) Sarg.** (Hämet-Ahti 1965a) Common. Humid forest at low to middle elevations.

***Tsuga mertensiana* (Bong.) Carrière** (Douglas et al. 2002) Apparently rare, in the northernmost part of the park, where somewhat disjunct from the nearest known populations near the Upper Adams River. Not seen by us.

TAXACEAE

***Taxus brevifolia* Nutt.** (Hämet-Ahti 1965a) Uncommon, Natural Bridge, Edgewood West, Clearwater Lake. In humid forest and cliff bases at low elevations. *Goward 81-938*.

EUDICOTS

ADOXACEAE

***Adoxa moschatellina* L.** (Hämet-Ahti 1965a) Rare, Blue River. Not seen by us. Probably calciphilic.

***Sambucus racemosa* L. var. *melanocarpa* (A. Gray) McMinn** (Hämet-Ahti 1965a) Common. Forests, talus and clearings, mostly at middle to high elevations.

***Viburnum edule* (Michx.) Raf.** (Hämet-Ahti 1965a) Occasional. Humid forests and wetland margins at low elevations, apparently favouring nitrogen-rich soil. *Goward 81-356*.

***Viburnum opulus* L. var. *americanum* Ait.** (Hämet-Ahti 1965a, as *V. trilobum*) Rare, North Thompson River, Clearwater River. Riparian forests, low elevations. Syn. *V. trilobum* Marsh

AMARANTHACEAE

****Amaranthus albus* L.** Rare, Clearwater. Garden weed, low elevations. *Goward 81-855*.

****Amaranthus retroflexus* L.** Rare, Edgewood. Disturbed habitats at low elevations. *Björk 14942*.

****Chenopodium album* L.** (Hämet-Ahti 1965a) Common, Clearwater, Edgewood. Garden weed and in other disturbed habitats at low elevations.

***Chenopodium capitatum* (L.) Ambrosi** Rare, prison camp, Third Canyon. Cliff bases and in disturbed habitats, low elevations. *Goward 81-819, 83-803*.

****Chenopodium chenopodioides* (L.) Aellen** Rare, Clearwater. Waif in disturbed habitat, low elevations.

Chenopodium fremontii* S. Wats. var. *fremontii Rare, Raft Canyon, Vavenby. Cliff bases and on duff under large Douglas firs, low elevations. *Goward 81-251, Björk 9114b, 11368*.

***Chenopodium simplex* (Torr.) Raf.** Rare, Clearwater, Vavenby, Natural Bridge. Cliff bases and weed in garden. *Goward 81-854, Björk 11376*. *Chenopodium hybridum* L. misapplied.

****Chenopodium strictum* Roth** Occasional. Garden weed at low elevations. Syn. *Chenopodium album* L. ssp. *striatum* (Krasan) J. Murr in Urban & Graebn.

****Chenopodium urbicum* L.** Rare, Edgewood. Disturbed soil. Once a common garden weed, but apparently eradicated.

****Kochia scoparia* (L.) Schrad.** Rare, Clearwater. Waif in disturbed habitats. *Goward 81-834*.

****Salsola tragus* L.** (Hämet-Ahti 1965a, as *S. kali*) Rare, Clearwater. Waif in disturbed habitats. *Salsola kali* L. misapplied.

ANACARDIACEAE

***Rhus glabra* L.** Rare, Raft Canyon, Vavenby. On talus and at cliff bases, low elevations. *Goward 81-248, Björk 11458*.

***Toxicodendron rydbergii* (Sm. ex Rydb.) E. Greene** Rare, Vavenby, Whitehorse Bluffs. On talus and at cliff bases, low elevations. Syn. *Rhus rydbergii* Sm. ex Rydb. *Toxicodendron radicans* (L.) Kuntze misapplied.

APIACEAE

***Angelica genuflexa* Nutt. ex Torr. & A. Gray** Occasional. Moist shrub carrs and margins of fens, low to middle elevations. *Björk 21919*.

***Cicuta bulbifera* L.** Occasional. Moderately calcareous fens, low elevations. *Goward 81-741, Björk 9678, 17799*.

***Cicuta douglasii* (DC.) Coult. & Rose** (Hämet-Ahti 1965a) Common. Various wetlands at low to middle elevations.

***Cicuta maculata* L. var. *angustifolia* Hook.** Apparently rare, Sylvia Falls. River shore marsh fringe. *Goward 87-91*.

***Cicuta virosa* L.** Uncommon, Edgewood West, Flat Irons area. Sylvan pools at low elevations. *Björk 17792.* The form present is probably not best called *C. virosa*, differing from that species in having broader leaves of a different pinnation pattern, and spherical umbels, with the outer umbel branches reflexed. This is possibly the only form present in BC. *Cicuta virosa* is listed Blue (S2S3) by the BC Conservation Data Centre (2011).

***Heracleum lanatum* Michx.** (Hämet-Ahti 1965a) Occasional. Moist shrub carrs and shorelines at middle elevations, and common in moist subalpine meadows.

***Lomatium dissectum* (Nutt.) Mathias & Constance var. *multifidum* (Nutt.) Mathias & Constance** Rare, Vavenby, Raft Canyon. Talus and cliff bases in full sun, low elevations. *Goward 81-919, Björk 11364*.

***Lomatium macrocarpum* (Nutt. ex Torr. & A. Gray) Coulter & Rose** Rare, Vavenby. On open, grassy slopes on limestone, low elevations. *Björk 11456*.

***Osmorhiza berteroi* DC.** (Hämet-Ahti 1965a, as *O. chilensis*) Common. Lightly to densely forested habitats, low to middle elevations.

***Osmorhiza depauperata* Philippi** (Hämet-Ahti 1965a) Uncommon or rare, Blue River. Forests at low elevations.

***Osmorhiza purpurea* (Coulter & Rose) Suksd.** (Hämet-Ahti 1965a) Occasional. Meadows and forests at subalpine elevations. *Goward 81-562, 81-588*.

****Pastinaca sativa* L.** Rare, Helmcken Lodge. Persisting from cultivation, low elevations. *Goward 83-664*.

***Sanicula marilandica* L.** Uncommon, Edgewood West, Clearwater River, Ray Farm. Forests on rich soil, low elevations; either moderately calciphilic or nitrophilic *Goward 81-331, 88-154*.

***Sium suave* Walter** Rare, Edgewood West, Alice Lake, Shadow Lake. Lake shores and sylvan pools. *Goward 81-209, Goward 81-740, Björk 9696*.

APOCYNACEAE

Apocynum androsaemifolium* L. ssp. *androsaemifolium (Hämet-Ahti 1965a) Common. Open habitats and sparse forest at low elevations. Most conspicuous in habitats with a history of human disturbance, as in old pastures.

ARALIACEAE

***Aralia nudicaulis* L.** (Hämet-Ahti 1965a) Common. In forests, especially on mineral-rich and/or nitrogen-rich soil, low elevations.

***Oplopanax horridus* (Sm.) Miq.** (Hämet-Ahti 1965a) Common. Wet sites in forests and along creeks, especially with *Thuja*. Low to middle elevations.

ASTERACEAE

***Achillea millefolium* L. var. *alpicola* (Rydb.) Garrett** (Hämet-Ahti 1965a) Uncommon, Trophy Mountains, Battle Mountain. Dry alpine tundra at high elevations.

***Achillea millefolium* L. var. *lanulosa* (Nutt.) Piper** (Hämet-Ahti 1965a) Common and widespread in open and lightly forested habitats at low elevations.

***Achillea alpina* L.** Rare, North Thompson River near Blue River. Sedge-fringe vegetation along muddy shores at low elevations. *Björk 17819*. Syn. *A. sibirica* Ledeb.

Achillea alpina* x *millefolium Rare, growing with *A. alpina*. *Björk 17819*.

***Adenocaulon bicolor* Hook.** (Hämet-Ahti 1965a) Common. Humid forests, especially on nitrogen-rich soil.

***Agoseris aurantiaca* (Hook.) E. Greene** (Hämet-Ahti 1965a) Uncommon, Battle Mountain, Stevens Lakes, Murtle River, Trophy Mountains. Subalpine and alpine meadows; rare along river shore at low elevations. Growing in drier sites than *A. lackschewitzii*. *Goward 81-434, Björk 12091*.

***Agoseris glauca* (Pursh) Raf.** Rare, Trophy Mountains. Open alpine habitats. *Goward 84-971*.

***Agoseris lackschewitzii* Douglass M. Hend. & R.K. Moseley** Rare, Trophy Meadows. Wet subalpine meadows. *Goward 88-259*, *Björk 9407, 11684*. Listed Blue (S2S3) by the BC Conservation Data Centre (2011).

***Anaphalis margaritacea* (L.) Benth. & Hook.** (Hämet-Ahti 1965a) Common. Open to lightly forested habitats at low to high elevations. *Goward 81-205, 90-1187*.

***Antennaria alpina* (L.) Gaertn.** (Hämet-Ahti 1965a, presumably including her records of *A. cf. stolonifera*). Uncommon, Trophy Mountains, Garnet Mountain. Alpine tundra and heaths. *Goward 81-392*, *Björk 11683*. The name *A. alpina* is used here in a very broad sense. Our material is likely to be of different origins than those of typical, European *A. alpina*, and ours is more strongly tomentose.

***Antennaria anaphaloides* Rydb.** Uncommon, Vavenby. Open, dry forest at low elevations. Syn. *Antennaria pulcherrima* (Hook.) E. Greene var. *anaphaloides* (Rydb.) G.W. Douglas.

***Antennaria corymbosa* E. Nels.** Rare, near summit of road from Blue River to Murtle Lake. Growing on tussocks in a fen at middle elevations. *Björk 9415*. This is the only verified record of this species known in Canada. Listed Red (S1) by the BC Conservation Data Centre (2011).

***Antennaria densifolia* Porsild** Rare, Trophy Mountains. On a calcareous seam on alpine outcrops.

***Antennaria howellii* E. Greene ssp. *canadensis* (E. Greene) R.J. Bayer** Common. Open and lightly forested habitats, low to middle elevations. *Antennaria neglecta* E. Greene misapplied.

Antennaria howellii* E. Greene ssp. *howellii (Hämet-Ahti 1965a, without varieties) Common. Open and lightly forested habitats, low to middle elevations. *Antennaria neglecta* E. Greene misapplied.

***Antennaria lanata* (Hook.) E. Greene** (Hämet-Ahti 1965a) Common. Subalpine and alpine heaths. *Goward 81-433, 88-223, Björk 9343, 11666*.

***Antennaria media* E. Greene** Occasional. Alpine tundra and heaths. *Björk 11682*.

***Antennaria monocephala* DC.** Rare, Trophy Mountains. Rocky alpine tundra.

***Antennaria parvifolia* Nutt.** Common. Open and lightly forested habitats, especially on sandy soil, low elevations.

***Antennaria racemosa* Hook.** (Hämet-Ahti 1965a) Occasional. Moderately dense forest at low to middle elevations. *Goward 81-124*.

***Antennaria rosea* E. Greene** (Hämet-Ahti 1965a) Common. Open and lightly forested habitats. *Björk 11377*. *Antennaria microphylla* misapplied.

***Antennaria umbrinella* Rydb.** (Hämet-Ahti 1965a) Occasional. Dry habitats in subalpine and alpine rock outcrops and tundra. *Goward 81-489, 81-719, 89-100*.

****Anthemis cotula* L.** Rare, Edgewood. Waif in disturbed habitats at low elevations.

****Arctium minus* Bernh.** Rare, Clearwater. Along roadsides where moist.

***Arnica amplexicaulis* Nutt.** Uncommon, Azure Lake, Bailey's Chute. Along rivers, streams and near waterfalls at low elevations. *Goward 81-141, 81-426, 83-747*.

Arnica chamissonis* Less. ssp. *chamissonis (Hämet-Ahti 1965a, with mention of ssp. *foliosa*, apparently treated as synonymous) Occasional. In and around wetlands at low to middle elevations. *Goward 81-364, Björk 9258, 9378*.

***Arnica chamissonis* Less. ssp. *foliosa* (Nutt.) Maguire** (Douglas et al. 2002) In and around wetlands. Abundance unknown, not seen by us.

***Arnica cordifolia* Hook.** (Hämet-Ahti 1965a, as var. *cordifolia*) Occasional. Moderately dense forest at low to middle elevations. *Goward 81-123, 91-438*.

***Arnica gracilis* Rydb.** Rare, Kostal Lake. Open lava field at middle elevations. *Goward 81-626*.

***Arnica latifolia* Bong.** (Hämet-Ahti 1965a, as var. *latifolia*) Common. Meadows and (especially) forest at subalpine elevations.

***Arnica mollis* Hook.** (Hämet-Ahti 1965a) Common. Subalpine meadows. Some forms approach *Arnica nevadensis* or *A. angustifolia*. A broad sense of the species is used here. *Goward 89-81, 81-388, Björk11659*.

***Arnica ovata* E. Greene** (Hämet-Ahti 1965a, as *A. diversifolia*) Uncommon, Caligata Lake, Battle Mountain. Forests and meadows at middle to high elevations. *Goward 90-1222*. Syn. *Arnica diversifolia* E. Greene.

***Arnica parryi* A. Gray** Rare, Kostal Volcano. Open, dry volcanic cone, middle elevations. *Goward 81-621*.

***Arnica rydbergii* E. Greene** (Hämet-Ahti 1965a) Uncommon, Huntley-Buchanan Ridge, Battle Mountain. Alpine meadows. *Goward 81-381*.

Artemisia borealis* Pallas ssp. *borealis Uncommon, Clearwater River. On rocks and sand along rivers. *Björk 19003*. *Artemisia campestris* L. misapplied.

***Artemisia campestris* L. ssp. *pacifica* (Nutt.) H.M. Hall & Clem.** Rare, Clearwater River 10 km north of town of Clearwater, Raft Canyon. On sandy soil in open sites. *Goward 81-731*.

***Artemisia frigida* Willd.** Rare, Vavenby, Flat Irons, Whitehorse Bluffs. Dry, open, grassy or talus habitats on south facing slopes. *Goward 81-256, Björk 11424*.

***Artemisia michauxiana* Besser sensu lato** Rare, Whitehorse Bluffs, Third Canyon. Calcareous cliffs at low elevations. This silvery form with more pinnate leaf lobing is apparently limited to northern localities from northeast Washington to northern BC and Alberta. It probably merits taxonomic recognition as a new species or subspecies.

***Artemisia norvegica* Fries ssp. *saxatilis* (Besser) H.M. Hall & Clem.** (Hämet-Ahti 1965a, as *A. arctica*) Common. Subalpine and alpine habitats, usually in full sun on humus-rich soil. *Goward 81-494, Björk 9231*.

****Artemisia vulgaris* L.** Rare, Birch Island. Persisting around an old dump site, low elevations.

***Aster alpinus* L. ssp. *vierhapperi* Onno** Rare, Trophy Mountain. Open, alpine habitats. *Goward 84-984*.

***Balsamorhiza sagittata* (Pursh) Nutt.** Rare, Vavenby. Dry, open, grassy slopes on limestone, low elevations. *Björk 11454*.

***Bidens cernua* L.** Occasional. Various wetlands, mostly on open mud or on tussocks, low elevations. *Goward 82-1488a, Björk 9247*.

***Canadanthus modestus* (Lindl.) G.L.Nesom** (Hämet-Ahti 1965a, as *Aster modestus*) Common. Moist, open to lightly forested habitats at low to middle elevations. *Goward 81-207, 81-525, 87-81*. Syn. *Aster modestus* Lindl.

****Centaurea stoebe* L.** Locally common. Disturbed habitats, mostly on sandy soil, low elevations. *Goward 81-826, 90-1186*. Syn. *Centaurea maculosa* Lam., *C. biebersteinii* DC.

****Cichorium intybus* L.** Uncommon, Clearwater. Roadside weed at low elevations. *Goward 82-1516*.

****Cirsium arvense* (L.) Scop.** (Hämet-Ahti 1965a, as var. *maritimum*) Occasional. Weed of disturbed habitats, mostly where moist, low elevations. *Goward 86-219*.

***Cirsium edule* Nutt. var. *macounii* (E. Greene) D.J. Keil** Rare, Ray Farm, river between Azure and Clearwater Lakes. Moist, riparian and forest clearing habitats at low elevations. *Goward 81-153, 83-759*.

***Cirsium flodmanii* (Rydb.) Arthur** Rare, Vavenby, Birch Island. Open, grassy sites on south-facing slopes at low elevations. *Björk 18840, 21973*. *Cirsium undulatum* misapplied.

***Cirsium hookerianum* Nutt.** (Douglas et al. 2002) Apparently rare, not seen by us. East end of Mahood Lake, low elevations.

****Cirsium vulgare* (Savi) Ten.** (Hämet-Ahti 1965a) Occasional. Disturbed habitats at low elevations. *Goward 96-218*.

***Conyza canadensis* (L.) Cronq.** (Hämet-Ahti 1965a) Common as a garden weed, occasional in natural habitats, as along river shores, low elevations. *Goward 81-368, 81-925, 82-1532*.

****Coreopsis lanceolata* L.** Rare, Second Canyon area, Clearwater area. On weedy road-cut slope, low elevations.

***Crepis atribarba* A.A. Heller ssp. *originalis* Babc. & Stebb.** Rare, Vavenby. Open, grassy, south-facing slopes at low elevations. *Goward 81-252, Björk 11423*.

****Crepis tectorum* L.** (Hämet-Ahti 1965a) Occasional. Disturbed habitats at low to middle elevations. *Goward 82-1498, Björk 9269, 11418*.

****Ericameria nauseosa* (Pall. ex Pursh) G.L.Nesom & Baird ssp. *speciosa* (Nutt.) G. L.Nesom & Baird** Rare, Clearwater rail yard. Waif in disturbed site at low elevations. *Goward 81-850*. Syn. *Chrysothamnus nauseosus* (Pall.) Britt.

***Erigeron compositus* Pursh** Rare, Vavenby. On rock outcrops in forest clearings at middle elevations. *Björk 11409*.

***Erigeron elatus* (Hook.) E. Greene** (Hämet-Ahti 1965a, as *E. acris* sensu lato) Uncommon, Hemp Creek, Philip Creek Notch. Mostly in disturbed semi-shaded habitats at low elevations. *Goward 81-645*. Syn. *Trimorpha acris* (L.) G.L.Nesom var. *elatus* (Hook.) G.L.Nesom.

***Erigeron flagellaris* A. Gray** Rare, Raft Canyon. Open sites on limestone, low elevations. *Goward 81-255.*

Erigeron glacialis* (Nutt.) A. Nels. var. *glacialis (Hämet-Ahti 1965a, as *E. peregrinus* ssp. *callianthemus* var. *callianthemus*) Common and widespread in moist subalpine meadows. *Erigeron peregrinus* (Banks ex Pursh) E. Greene ssp. *callianthemus* (E. Greene) Cronq. misapplied.

***Erigeron humilis* Grah.** (Hämet-Ahti 1965a) Occasional. Alpine tundra and heaths. *Goward 81-462, 81-487, 89-94, Björk 9353*.

***Erigeron lonchophyllus* Hook.** Rare, Raft Canyon. On limestone-derived soil in open sites, low elevations. *Goward 81-255*. Syn. *Trimorpha lonchophylla* (Hook.) G.L.Nesom.

***Erigeron nivalis* Nutt.** Occasional. Open habitats at low to high elevations, mostly on rock outcrops. *Goward 83-581, Björk 9420*. Syn. *Trimorpha acris* (L.) G.L.Nesom var. *debilis* (A. Gray) G.L.Nesom.

Erigeron philadelphicus* L. var. *philadelphicus (Hämet-Ahti 1965a) Occasional. Along rocky river shores, and on roadsides elsewhere. *Goward 81-365, 81-425, 87-77*, *Björk 9272*.

***Erigeron speciosus* (Lindl.) DC.** Rare, Vavenby. Warm, dry, grassy slopes at low elevations.

***Erigeron strigosus* Muhl. ex Willd.** Occasional. Along roadsides and in open, grassy sites at low elevations. *Goward 81-646, 82-1487b, Björk 12104*.

***Eucephalus engelmannii* (D.C. Eat.) E. Greene** (Hämet-Ahti 1965a, as *Aster engelmannii*) Blue River. Apparently rare, not seen by us. Syn. *Aster engelmannii* (D.C. Eat.) A. Gray

***Eurybia conspicua* (Lindl.) G.L. Nesom** (Hämet-Ahti 1965a, as *Aster conspicuus*) Common. Forests and clearings at low elevations. *Goward 87-83*. Syn. *Aster conspicuus* Lindl.

***Gaillardia aristata* Pursh** Uncommon, Clearwater River, Vavenby. On south-facing, grassy slopes, and on rock outcrops along river shores, low elevations. *Goward 82-1525*.

***Gnaphalium palustre* L.** Uncommon, marsh near Clearwater Dump. Open, sparsely vegetated habitat on wetland margins at low elevations.

****Gnaphalium uliginosum* L.** Locally common, Edgewood. Garden weed, low elevations. *Goward 81-942, 81-2031b.*

****Helianthus annuus* L.** Rare weed, Mailbox Ridge. Along roadsides and in gardens, low elevations. *Goward 81-940*.

***Heterotheca villosa* (Pursh) Shinners** Rare, Vavenby, Whitehorse Bluffs. Rocky, open sites on south facing slopes at low elevations. *Goward 83-790*. Syn. *Chrysopsis villosa* (Pursh) Nutt.

***Hieracium albiflorum* Hook.** (Hämet-Ahti 1965a) Common. Forests and open sites, low to moderately high elevations. *Goward 81-125*.

****Hieracium aurantiacum* L.** Locally common, Edgewood, Battle Mountain Road. Meadows and gardens at low elevations. *Goward 90-1147*.

****Hieracium cespitosum* Dumort.** Occasional. Disturbed habitats at low elevations.

***Hieracium gracile* Hook.** (Hämet-Ahti 1965a) Occasional. Subalpine and alpine habitats, mostly in non-forested sites. *Goward 81-454, 89-83*.

****Hieracium pilosella* L.** Common. Open, disturbed habitats at low elevations. *Björk 9185*.

***Hieracium scouleri* Hook. var. *griseum* (Rydb.) A. Nels.** Rare, Vavenby. Dry, grassy, south-facing slopes at low elevations. Syn. *H. cynoglossoides* Arv.-Touv.

Hieracium scouleri* Hook. var. *scouleri Uncommon, Trophy Meadows. Open forests and meadows at middle to high elevations. *Björk 11655*.

***Hieracium triste* Willd. ex Spreng.** Uncommon, Trophy Mountains. Alpine tundra and subalpine meadows and heaths. *Björk 11664*.

***Hieracium umbellatum* L.** (Hämet-Ahti 1965a, as *H. canadense*) Occasional. Open and lightly forested habitats at low elevations. *Goward 82-1466, 82-1502*, *Björk 9308*.

***Lactuca biennis* (Moench) Fern.** (Hämet-Ahti 1965a) Uncommon, Edgewood West, Spahats Valley, Clearwater area. Moist shrub carrs, creek margins and avalanche chutes, low to moderately high elevations. *Goward 92-267*.

****Lactuca serriola* L.** Rare, Clearwater. Waif in disturbed sites. *Goward 90-1230*.

****Leontodon autumnalis* L.** Rare, Majerus Farm, Redsprings. Disturbed habitats at low elevations. *Goward 81-776, Björk 9262*.

****Leucanthemum vulgare* Lam.** (Hämet-Ahti 1965a) Locally common. Mostly in disturbed habitats, low to middle, rarely high elevations. *Goward 81-533*. Syn. *Chrysanthemum leucanthemum* L.

****Logfia arvensis* (L.) Holub** Occasional. Garden weed at low elevations. *Goward 81-154*. Syn. *Filago arvensis* L.

****Matricaria discoidea* DC.** (Hämet-Ahti 1965a, as *M. matricarioides*) Occasional. Weed in gardens and along trails and road sides, low to middle elevations. *Goward 81-950*. Syn. *Matricaria matricarioides* (Less.) Porter.

***Microseris nutans* (Hook.) Schultz-Bip.** Rare, Raft Canyon, Vavenby. Open, dry, grassy slopes at low elevations. *Goward 81-253, Björk 11452*.

****Mycelis muralis* (L.) Dumort.** Occasional. Humid habitats, especially in forests, capable of spreading without disturbance. Syn. *Lactuca muralis* (L.) Gaertn.

***Packera cana* (Hook.) W.A. Weber & Á. Löve** (Hämet-Ahti 1965a, as *Senecio canus*) Rare, Vavenby. Open, rocky slopes at low elevations. *Björk 11407*. Syn. *Senecio canus* Hook.

***Packera indecora* (E. Greene) Weber & Á. Löve** Occasional. Open or lightly shaded habitats at low elevations. *Goward 81-140, 81-424, Goward 86-170*. Syn. *Senecio indecorus* E. Greene.

***Packera pauciflora* (Pursh) Á. Löve & D. Löve** (Hämet-Ahti 1965a, as *Senecio pauciflora*) Uncommon, Battle Mountain, Clearwater River. Open, usually rocky habitat at low and high elevations. Syn. *Senecio pauciflorus* Pursh.

***Packera paupercula* (Michx.) Á. Löve & D. Löve** Occasional. Open or lightly forested habitats at low elevations. *Goward 81-366, 82-1530*, *Björk 9145, 12102*. Syn. *Senecio pauperculus* Michx.

***Packera plattensis* (Nutt.) W.A. Weber & Á. Löve** Rare, Alice Lake. Shoreline vegetation at low elevations. *Goward 81-334*. Syn. *Senecio plattensis* Nutt. Listed Blue (S2S3) by the British Columbia Conservation Data Centre (2011).

Packera pseudaurea* (Rydb.) W.A. Weber & Á. Löve var. *pseudaurea (Hämet-Ahti 1965a, as *Senecio pseudaureus*) Rare, Edgewood, Bee Farm. Open forest at low elevations. *Goward 81-119*, *81-133*. Syn. *Senecio pseudaureus* Rydb.

***Petasites frigidus* (L.) Fr. var. *nivalis* (E. Greene) Cronq.** (Hämet-Ahti 1965a, as *P. hyperboreus*) Uncommon, Trophy Mountains, Hemp Creek. Mossy wetlands at low and high elevations.

***Petasites frigidus* (L.) Fr. var. *palmatus* (Ait.) Cronq.** (Hämet-Ahti 1965a) Common. Forests and wetland margins at low elevations.

***Petasites* x *vitifolius* E. Greene** Rare, Ray Farm, Gateway Bog. Calcareous wetlands at low elevations. *Björk 11483, 17823*. Recurrent hybrid involving *P. frigidus x sagittatus*.

***Petasites sagittatus* (Banks ex Pursh) A. Gray** Uncommon, Blue River, Chain Lakes, Ray Farm, Foot Lake. Marshy, calcareous wetlands and shrub carrs at low to middle elevations. *Goward 81-720*.

***Pseudognaphalium macounii* (E. Greene) Kartesz** (Hämet-Ahti 1965a, as *Gnaphalium viscosum*) Rare, Grouse Lake Notch, Clearwater, Hemp Creek. Forest clearings at middle elevations. Perhaps formerly more common at the time of Hämet-Ahti's work, when the Clearwater Valley had had only 35-years to recover its forest cover after the 1926 fires. *Goward 82-1489b.* Syn. *Gnaphalium macounii* E. Greene; *Gnaphalium viscosum* H.B.K. misapplied.

***Pseudognaphalium microcephalum* (E.E. Nelson) G.L.Nesom** Rare, Vavenby. Open, grassy, south-facing slopes at low elevations. Syn. *Gnaphalium microcephalum* Nutt.

***Senecio integerrimus* Nutt. var. *exaltatus* (Nutt.) Cronq.** (Hämet-Ahti 1965a) Occasional. Meadows and on grassy slopes, low and high elevations *Goward 81-382*.

***Senecio triangularis* Hook.** (Hämet-Ahti 1965a) Common. Forests, cool meadows, shrub carrs and along river shores at low to especially high elevations. *Goward 83-763, 84-906*.

****Senecio viscosus* L.** Rare, Clearwater. Waif in disturbed sites. *Goward 81-848*.

***Solidago elongata* Nutt.** Rare, Majerus Farm. Moist meadow at low elevations. *Björk 9262*. *Solidago canadensis* L. misapplied.

***Solidago lepida* DC.** (Hämet-Ahti 1965a, as *S. canadensis* var. *salebrosa* and var. *subserrata*) Occasional. Forests, meadows and (especially) along roads and trails, low elevations. *Goward 81-156*. *Solidago canadensis* L. misapplied.

***Solidago multiradiata* Ait.** (Hämet-Ahti 1965a, as var. *scopulorum*) Occasional. Open, well drained habitats at high elevations. *Goward 81-391, 81-672*.

Solidago simplex* Kunth var. *simplex Uncommon, Third Canyon, Whitehorse Bluffs. Sandy slopes, open or lightly shaded, low elevations. *Goward 81-369. Solidago spathulata* DC. misapplied.

****Sonchus arvensis* L.** Uncommon, Clearwater, Edgewood. Moist soil along roads and in gardens at low elevations. *Goward 90-1244*.

****Sonchus oleraceus* L.** Rare, Edgewood, Helmcken Falls Lodge area. Garden weed at low elevations. *Goward 81-106*.

***Symphyotrichum boreale* (Torr. & A. Gray) Á. Löve & D. Löve** (Hämet-Ahti 1965a, as *Aster junciformis*). Occasional. Fens, bogs and other cool, mossy wetlands at low elevations. *Goward 81-527, 81-692, 83-784, Björk 9685, 11476*. Syn. *Aster borealis* (Torr. & A. Gray.) Prov.

***Symphyotrichum ciliolatum* (Lindl.) Á. Löve & D. Löve** (Hämet-Ahti 1965a, as *Aster ciliolatus*) Common. Forests and around wetlands at low elevations. *Goward 81-526, 81-949, 86-199b*. Syn. *Aster ciliolatus* Lindl.

***Symphyotrichum eatonii* (A. Gray) G.L.Nesom** Uncommon, Clearwater River, Mahood Lake, Ray Farm. On wetland margins and river shore sedge-fringe vegetation, low elevations. *Goward 81-473, Björk 12106, 17821*. Syn. *Aster eatonii* (A. Gray) T.J. Howell.

***Symphyotrichum ericoides* (L.) G.L.Nesom var. *pansum* (Blake) G.L.Nesom** Rare, Vavenby. Dry, south-facing slopes on limestone at low elevations. Syn. *Aster ericoides* L. ssp. *pansus* (Blake) A.G. Jones.

Symphyotrichum foliaceum* (Lindl.) G.L.Nesom var. *foliaceum (Hämet-Ahti 1965a, as *Aster foliaceus* var. *foliaceus*) Common. Subalpine meadows and heaths, rare at low elevations along river shores. *Goward 81-538, Björk 9377*. Syn. *Aster foliaceus* Lindl. var. *foliaceus*.

***Symphyotrichum laeve* (L.) Á. Löve & D. Löve var. *geyeri* (A. Gray) G.L.Nesom** (Douglas et al. 2002). Mahood Lake. Apparently rare, not seen by us. Syn. *Aster laevis* L. var. *geyeri* (A. Gray) Piper.

Symphyotrichum spathulatum* (Lindl.) G.L.Nesom var. *spathulatum Uncommon, Clearwater River shores, low elevations.

***Symphyotrichum subspicatum* (Nees) G.L.Nesom** Uncommon, Battle Creek, river between Clearwater and Azure Lakes. Along river and creek shores and around marshes at low elevations. *Goward 81-650, 83-758*. Syn. *Aster subspicatus* Nees.

****Tanacetum vulgare* L.** Uncommon, Clearwater and 20 km north of Clearwater. Disturbed habitats, especially along roads, at low elevations. *Goward 82-1514*.

***Taraxacum ceratophorum* (Ledeb.) DC.** Uncommon, Trophy Mountains, Table Mountain. Alpine tundra. *Goward 81-639, Björk 9347*.

****Taraxacum erythrospermum* Andrz. sensu lato** Common. Usually in disturbed habitats at low to middle elevations.

****Taraxacum officinale* F.H. Wigg. sensu lato** (Hämet-Ahti 1965a, as *T. scanicum*, with mention of two specimens that "approach *T. croceiflorum*") Common. Usually in disturbed habitats at low to middle elevations. We may be applying this name to more than one species, but as the segregate apomictic species of the *T. officinale* complex are poorly known in North America, we refrain from employing these names.

***Taraxacum scopulorum* (A. Gray) Rydb.** (Hämet-Ahti 1965a, as *T. lyratum*) Rare, Battle Mountain, Garnet Mountain, Trophy Mountains. Alpine tundra. *Goward 81-488, Björk 12092*. *T. ceratophorum* (Ledeb.) DC. and *Taraxacum lyratum* (Ledeb.) DC. misapplied.

****Tragopogon dubius* Scop.** Rare, Clearwater. Waif in disturbed sites. *Goward 81-794*.

****Tragopogon pratensis* L.** (Hämet-Ahti 1965a) Rare, Clearwater, Hemp Creek. Waif in disturbed sites. *Goward 88-272*.

BALSAMINACEAE

***Impatiens aurella* Rydb.** Occasional in swamp forests and wetland margins at low elevations. *Goward 90-1194*, *Goward 81-734, Björk 9731, 17796*. Listed Blue (S2S3) by the British Columbia Conservation Data Centre (2011).

***Impatiens noli-tangere* L.** Rare, marsh near Clearwater Dump. On pond shores, probably only where calcareous. *Goward 81-727*.

BERBERIDACEAE

***Berberis aquifolium* Pursh sensu lato** (Hämet-Ahti 1965a). Common. Open and forested habitats at low elevations. *Goward 93-40*. Typical *B. aquifolium* occurs in southwest and south-central BC and southward. It is characterized by its taller stature, abundant short shoot-borne flower clusters in additional to terminal clusters, glossier, more coriaceous, more firmly spiny leaves, and lack of rhizomes or nearly so. The species in the flora area is intermediate in characteristics between *B. aquifolium* and *B. repens*, and may have arisen from hybridization between those two species. This intermediate form is much more common and widespread in BC than typical forms of *B. aquifolium* or *B. repens*. Syn. *Mahonia aquifolium* (Pursh) Nutt.

BETULACEAE

***Alnus incana* (L.) Moench ssp. *tenuifolia* (Du Roi) R.T. Clausen** (Hämet-Ahti 1965a) Common. Various moist to moderately dry habitats at low to middle elevations. *Goward 81-407*.

***Alnus viridis* (Chaix) DC. ssp. *sinuata* (Regel) Á. Löve & D. Löve** (Hämet-Ahti 1965a) Common. Various open to forested habitats, mostly at middle to high elevations. *Goward 81-274*. Syn. *Alnus sinuata* (Regel) Rydb.

***Betula glandulosa* Michx.** (Hämet-Ahti 1965a) Uncommon, near Hemp Creek, Blue River. Acidic bogs and fens at low elevations.

Betula papyrifera* Marsh. var. *papyrifera (Hämet-Ahti 1965a) Common and widespread in various non-wetland habitats and swamps at low to middle elevations.

***Betula pumila* L.** Uncommon, Foot Lake, Placid Lake, Chain Lakes, Edgewood West. Moderately to strongly calcareous wetlands, mostly with *Sphagnum* cover, at low elevations. *Björk 9303*.

Corylus cornuta* Marsh. ssp. *cornuta (Hämet-Ahti 1965a) Locally common. Forests and clearings, mostly where the soil is moderately calcareous or rich in nitrogen.

BORAGINACEAE

Amsinckia menziesii* (Lehm.) A Nels. & J.F. Macbr. var. *menziesii Rare, Whitehorse Bluffs. Dry, open, south-facing slopes at low elevations. *Goward 83-793*.

****Borago officinalis* L.** Rare, Edgewood. Garden weed, low elevations. *Goward 81-898*.

****Buglossoides arvensis* (L.) I.M. Johnst.** Uncommon, Birch Island. Weed of disturbed habitats, low elevations. Syn. *Lithospermum arvense* L.

***Cynoglossum boreale* Fern.** Uncommon, Hemp Creek, Ray Farm, Foot Lake, Edgewood West. Forests and forest clearings, apparently limited to soils rich in nitrogen. *Goward 81-581, 86-162*, *Björk 9260*.

***Hackelia deflexa* (Wahl.) Opiz** Rare, Vavenby, Whitehorse Bluffs. Dry, open or lightly shaded rocky habitats at low elevations. *Goward 92-1428*.

Lappula occidentalis* (S. Wats.) E. Greene var. *occidentalis Rare, Whitehorse Bluffs, Vavenby. Dry, open, south-facing slopes at low elevations. *Björk 11426*. *Lappula redowskii* (Hornem.) E. Greene misapplied.

****Lappula squarrosa* (Retz.) Dumort.** Rare, prison camp, Vavenby. Dry, disturbed habitats at low elevations. *Goward 81-817, 83-771*. Syn. *Lappula echinata* Gilib.

***Myosotis laxa* Lehm.** Occasional. Along shorelines, especially where moderately calcareous, at low elevations. *Goward 87-95, Björk 11413, 17807*.

****Myosotis sylvatica* Ehrh. ex Hoffm.** Uncommon, Edgewood. Garden weed at low elevations.

***Phacelia hastata* Lehm.** Rare, Whitehorse Bluffs, Third Canyon. Open, well-drained habitat on dry, south-facing slopes at low elevations.

***Phacelia linearis* (Pursh) Holtz.** Rare, Whitehorse Bluffs, Raft River Canyon, Vavenby, Birch Island. Open to lightly shaded sites on dry, well-drained, south-facing slopes at low elevations. *Goward 81-249, 90-1127, Björk 11428*.

***Romanzoffia sitchensis* Bong.** Uncommon, Trophy Mountains, Raft Mountain. Open, cold, lightly shaded sites at alpine elevations. *Goward 84-982*, *Björk 9232, 21950*.

****Symphytum officinale* L.** Occasional. Garden weed, also persisting around homesteads, low elevations.

BRASSICACEAE

***Arabidopsis lyrata* (L.) O'Kane & Al-Shehbaz ssp. *kamchatica* (Fisch. ex DC.) O'Kane & Al-Shehbaz** Occasional. Open or lightly shaded, cool, moist habitats on well drained soil, low to high elevations. Some low elevation populations are intermediate to ssp. *lyrata*. *Goward 92-103, Björk 9112, 9219, 21915*. Syn. *Arabis kamchatica* (Fisch.) Ledeb.

****Arabidopsis thaliana* (L.) Heynh.** Uncommon, Vavenby, Clearwater. Weed in disturbed, low elevation habitats, mostly not persisting.

***Arabis eschscholtziana* Andrz.** Rare, Natural Bridge. Cliff bases at low elevations. *Björk 21877*. Syn. *Arabis hirsuta* (L.) Scop. var. *eschscholtziana* (Andrz.) Rollins.

***Arabis pycnocarpa* M. Hopkins.** Rare, Kostal Lake. Lava flows at medium elevations. *Goward 81-275*. Syn. *Arabis hirsuta* (L.) Scop. var. *pycnocarpa* (Hopkins) Rollins.

****Armoracia rusticana* Gaertn., Mey. & Scherb.** Rare, Birch Island. Persisting where planted or where the roots are dumped in yard-waste piles, probably not spreading independently.

***Barbarea orthoceras* Ledeb.** (Douglas et al. 2002). Apparently rare, not seen by us. To be expected around wetlands and along creeks.

****Berteroa incana* (L.) DC.** Locally common, Clearwater, Edgewood. Weed of disturbed habitats at low elevations. *Goward 81-531*.

***Boechera lemmonii* (S. Wats.) W.A. Weber** Rare, Trophy Mountains. Rocky alpine habitats. *Goward 81-678*. Syn. *Arabis lemmonii* S. Wats.

***Boechera macounii* (S. Wats.) Windham & Al-Shehbaz** Rare, Natural Bridge, Vavenby. On cliffs and talus at low elevations. *Björk 11402, 21894*. *Arabis microphylla* Nutt. (*Boechera m.)* misapplied.

***Boechera retrofracta* (Graham) Á. Löve & D. Löve** (Hämet-Ahti 1965a, whose record of *Arabis holboellii* var. *pendulocarpa* is assumed to be this common and widespread species, though it could also refer to *B. collinsii*, but not likely to *B. pendulocarpa*, a previously misinterpreted species very dissimilar to the *B. holboellii* complex. *Boechera pendulocarpa* is common in drier portions of BC unlikely to grow in the flora area) Occasional in dry, open habitats, especially where sandy, low elevations. *Björk 9171*. Syn. *Arabis holboellii* Hornem. var. *retrofracta* (Grah.) Rydb.

***Boechera stricta* (Graham) Al-Shehbaz** (Hämet-Ahti 1965a, whose record of *Arabis drummondii* is assumed to be this species, though it could also refer to *B. calderi*) Occasional. Open, rocky subalpine and alpine habitats. *Björk 12024*. Syn. *Arabis drummondii* A. Gray.

****Brassica campestris* L.** Rare, near Clearwater. Weed in gardens, low elevations. *Goward 82-1505*.

****Capsella bursa-pastoris* (L.) Medic.** (Hämet-Ahti 1965a) Locally common. Garden weed, also uncommon in other disturbed habitats at low elevations.

Cardamine bellidifolia* L. var. *bellidifolia (Hämet-Ahti 1965a) Occasional. Cold, rocky habitats in the alpine. *Björk 9220, 9361, 21886, 11696*.

***Cardamine oligosperma* Torr. & A. Gray** Occasional. Moist habitats in forests, also a garden weed, at low to middle elevations. *Goward 81-184, 92-1410*.

***Cardamine pensylvanica* Muhl.** (Hämet-Ahti 1965a) Uncommon, Edgewood West, Clearwater. Wet habitats in forests, low elevations. *Goward 81-243*.

***Cardamine umbellata* E. Greene** (Hämet-Ahti 1965a) Uncommon, Trophy Mountains. Moist, cold habitats at alpine elevations. *Goward 81-439*. Syn. *Cardamine oligosperma* Torr. & A. Gray var. *kamtschatica* (Regel) Detl.

***Descurainia pinnata* (Walter) Britt. ssp. *brachycarpa* (Richardson) Detling** Rare, Natural Bridge, Vavenby. Cliffs and talus at low elevations, where open or lightly shaded. *Björk 11421*.

****Descurainia sophia* (L.) Webb ex Prantl** Rare, Clearwater. Waif in disturbed, low elevation habitats. *Goward 86-187*.

***Draba albertina* E. Greene** (Douglas et al. 2002) Apparently rare, not seen by us.

***Draba cana* Rydb.** Rare, Green Mountain, Vavenby. On limestone and phyllite cliffs and talus where lightly shaded, low elevations. *Goward 91-443*.

***Draba crassifolia* Graham** (Hämet-Ahti 1965a) Uncommon, Trophy Mountains. Various open, subalpine and alpine habitats. *Goward 81-595, 84-979, Björk 12094*.

***Draba densifolia* Nutt.** Uncommon in open, gravelly habitats at high elevations. *Björk 12023, 12099*. Listed Blue (S2S3) by the BC Conservation Data Centre (2011).

***Draba fladnizensis* Wulf.** Rare in open, gravelly, cold habitats at high elevations. Listed Blue (S2S3) by the BC Conservation Data Centre (2011).

***Draba incerta* Pays.** (Hämet-Ahti 1965a) Rare, Table Mountain. Gravelly, open sites at alpine elevations. *Goward 81-600*.

***Draba lonchocarpa* Rydb.** Rare, Trophy Mountains. Alpine tundra. *Draba lonchocarpa* var. *vestita* is listed Blue (S2S3) by the BC Conservation Data Centre (2011).

***Draba nemorosa* L.** Rare, Vavenby. Cliff ledges and open or lightly treed, south-facing slopes on limestone. *Björk 11391, 21878*.

***Draba nivalis* Lilj.** (Hämet-Ahti 1965a) Rare, Battle Mountain, Trophy Mountains. Rocky sites, alpine and subalpine. *Goward 81-601*.

***Draba novolympica* Pays. & H. St. John** Rare, Raft Mountain. Open, gravelly, alpine habitats.

***Draba oligosperma* Hook.** Uncommon, Trophy Mountains. Open, dry, alpine habitats. *Goward 81-461*.

***Draba ruaxes* (Lam.) Fern.** (Douglas et al. 2002). Apparently rare, not seen by us. Alpine. Listed Blue (S2S3) by the BC Conservation Data Centre (2011).

***Draba stenoloba* Ledeb.** (Hämet-Ahti 1965a) Occasional. Open, subalpine meadows, uncommon in alpine habitats. *Goward 88-193, Björk 9406, 11663, 12029*.

***Draba ventosa* A. Gray** (Douglas et al. 2002). Apparently rare. Not seen by us, and possibly accounted for by *D. ruaxes*. Alpine. Listed Blue (S2S3) by the BC Conservation Data Centre (2011).

****Draba verna* L.** Rare, Clearwater. Weed in disturbed habitats at low elevations.

****Erysimum cheiranthoides* L.** (Hämet-Ahti 1965a, as ssp. *cheiranthoides*) Rare, Clearwater. Waif in disturbed habitats at low elevations.

***Erysimum inconspicuum* (S. Wats.) MacMill.** (Hämet-Ahti 1965a) Rare, Clearwater, Vavenby. Once collected as a waif, but also in native habitat on open, dry, south-facing slopes at low elevations.

****Lepidium densiflorum* Schrad.** Rare, Clearwater, prison camp. Open, dry, disturbed habitats at low elevations. *Goward 81-822, Björk 14938*.

***Nasturtium officinale* R. Br.** Rare, Millers Pond. Along outflow from a spring at low elevations. *Goward 82-1527*. Syn. *Rorippa nasturtium-aquaticum* (L.) Hayek

***Rorippa curvisiliqua* (Hook.) Britt.** Rare, Azure Lake. Shoreline mudflats at low elevations. *Goward 81-690*.

***Rorippa palustris* (L.) Besser ssp. *hispida* (Desv.) Rydb.** Occasional. Various wetlands at low elevations. *Björk 9251, 17825*. *Rorippa islandica* (Oed.) Borbás misapplied.

Rorippa palustris* (L.) Besser ssp. *palustris (Hämet-Ahti 1965a, as *R. islandica* var. *fernaldii*) Occasional. Various wetlands at low elevations, also occasionally becoming a garden weed. *Rorippa islandica* (Oed.) Borbás misapplied.

***Rorippa sp.* 1** Rare, Grouse Creek Notch, Azure Lake. Middle-elevation sylvan pool, lake shoreline, at low elevations. Similar to *R. palustris*, but longer-lived, with larger petals, larger, thicker fruits that are usually truncate apically and tapered or truncate basally, with 2-4 fruit valves and a perforated septum. Also known from several other localities elsewhere in southern BC.

***Sisymbrium altissimum* L.** (Hämet-Ahti 1965a) Uncommon, Edgewood, Clearwater Lake, Hemp Creek, Clearwater. Weed of disturbed sites at low elevations. *Goward 81-608, 90-1170*.

***Sisymbrium loeselii* L.** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Edgewood. Weed of disturbed sites at low elevations. *Björk 14937*.

***Subularia aquatica* L. ssp. *americana* Mulligan & Calder** (Hämet-Ahti 1965a) Rare, Murtle Lake. Shallow water at lake shorelines.

***Thlaspi arvense* L.** Uncommon, Clearwater, Helmcken Lodge. Weed of disturbed sites at low elevations. *Goward 82-1497, 83-665*.

***Turritis glabra* L.** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Ray Farm. Various open, dry habitats at low elevations, often where disturbed. *Goward 83-681*. Syn. *Arabis glabra* (L.) Bernh.

CAMPANULACEAE

***Campanula lasiocarpa* Cham.** (Hämet-Ahti 1965a) Occasional. Alpine tundra, heaths and cliff ledges. *Björk 9214, 21945*.

***Campanula rotundifolia* L.** (Hämet-Ahti 1965a) Occasional. Rocky sites at low to middle elevations, especially along rocky river shores.

***Campanula uniflora* L.** (Douglas et al. 2002) Apparently rare, not seen by us. Alpine.

CAPRIFOLIACEAE

***Linnaea borealis* L. ssp. *longiflora* (Torr.) Hultén** (Hämet-Ahti 1965a) Common. Forests at low to middle elevations.

Lonicera involucrata* (Richards.) Banks ex Spreng. var. *involucrata (Hämet-Ahti 1965a) Common. Various wetlands at low elevations.

***Lonicera utahensis* S. Wats.** (Douglas et al. 2002) Apparently rare, not seen by us. Forests.

***Symphoricarpos albus* (L.) S.F. Blake var. *laevigatus* (Fern.) S.F. Blake** (Hämet-Ahti 1965a) Common. Various open and forested habitats at low elevations.

CARYOPHYLLACEAE

****Arenaria serpyllifolia* L.** (Hämet-Ahti 1965a) Occasional. Weed in gardens and other disturbed sites, also in native vegetation on open, dry, south-facing slopes. *Goward 81-920*.

***Cerastium arvense* L. ssp. *strictum* Gaudin** Rare, Raft Canyon. Dry, south-facing slopes at low elevations. *Goward 81-246*.

****Cerastium fontanum* Baumg.** (Hämet-Ahti 1965a, as ssp. *triviale*) Common. Moist to wet habitats in open or lightly forested sites, low to middle elevations. *Goward 81-699*. Some populations in the flora area may be *C. semidecandrum*.

***Eremogone capillaris* (Poiret) Fenzl var. *americana* (Maguire) R.L. Hartman & Rabeler** Occasional. Open, dry subalpine and alpine habitats. Syn. *Arenaria capillaris* Poir. ssp. *americana* Maguire.

****Lychnis coronaria* (L.) Clairville** Rare, Edgewood. Garden escape in open habitats at low elevations. *Goward 82-1521*.

***Minuartia biflora* (L.) Schinz & Thell.** (Hämet-Ahti 1965a) Occasional. Alpine scree and tundra. *Björk 9222, 9356, 12033, 21887*.

***Minuartia obtusiloba* (Rydb.) House** (Hämet-Ahti 1965a) Occasional. Alpine tundra. *Goward 81-174*. Syn. *Arenaria obtusiloba* (Rydb.) Fern.

***Minuartia rubella* (Wahlenb.) Hiern** (Hämet-Ahti 1965a) Occasional. Scree and outcrops at high and (rarely) low elevations. *Björk 11435*. Syn. *Arenaria rubella* (Wahlenb.) J.E. Smith

***Moehringia lateriflora* (L.) Fenzl** (Hämet-Ahti 1965a) Occasional. Forests at low elevations. Syn. *Arenaria lateriflora* L.

***Sagina procumbens* L.** Locally common. Along river shores, also becoming weedy in moist, disturbed sites. *Goward 81-761, Björk 11414.*

***Sagina saginoides* (L.) H. Karsten** (Hämet-Ahti 1965a) Uncommon, Trophy Mountains, Raft Mountain. Alpine tundra. *Goward 81-467, Björk 11687*.

****Scleranthus annuus* L. ssp. *annuus*** Occasional. Weed in gardens at low elevations. *Goward 93-23*.

***Silene acaulis* (L.) Jacq. var. *subacaulescens* (F.N. Williams) Fern. & H. St. John** (Hämet-Ahti 1965a) Occasional. Alpine tundra and on high elevation cliffs.

***Silene antirrhina* L.** Rare, Whitehorse Bluffs, Vavenby. Rocky, south-facing, dry slopes at low elevations. *Goward 81-371, 83-608, Björk 9114a*.

****Silene dichotoma* Ehrh.** Rare, Clearwater. Waif in disturbed habitats. *Björk 14936*.

****Silene latifolia* Poir. ssp. *alba* (P. Mill.) Greuter & Burdet** (Hämet-Ahti 1965a, as *Lychnis alba*) Occasional. Weed in disturbed habitats and gardens at low elevations. Syn. *Lychnis alba* Mill.

***Silene menziesii* Hook.** Rare, Spahats Creek. Old-growth forest at low elevations. *Björk 12088*.

****Silene noctiflora* L.** Rare, Clearwater. Waif in disturbed sites. *Goward 81-530*.

***Silene parryi* (S. Wats.) C.L. Hitchc. & Maguire** (Hämet-Ahti 1965a) Uncommon, Huntley-Buchanan Ridge. Avalanche slope at subalpine elevations. *Goward 81-384*.

****Spergula arvensis* L.** Rare, Clearwater, Edgewood. Waif in disturbed habitats. *Goward 82-1507, 87-57*.

****Spergularia rubra* (L.) J. & K. Presl** Common. Weed in disturbed habitats, especially along roads and trails. Low to high elevations. *Goward 81-197*.

Stellaria borealis* Bigelow ssp. *borealis Occasional. Shrub carrs and around wetlands at low elevations. *Björk 17798*.

***Stellaria borealis* Bigelow ssp. *sitchana* (Steudel) Piper & Beattie** (Hämet-Ahti 1965a) Uncommon. Various wetlands at low to middle elevations.

***Stellaria calycantha* (Ledeb.) Bong.** (Hämet-Ahti 1965a) Occasional. Wetlands and shrub carrs at low elevations. *Björk 12097*.

***Stellaria crispa* Cham. & Schlecht.** (Hämet-Ahti 1965a) Occasional. Moist, mossy ground in forests and shrub carrs, low to (especially) high elevations.

***Stellaria longifolia* Muhl. ex Willd.** (Hämet-Ahti 1965a) Occasional. Moist meadows and shrub carrs at low elevations. *Björk 9180*.

****Stellaria media* (L.) Vill.** (Hämet-Ahti 1965a) Locally common. Weed in gardens, mostly on moist soil. Rare in wild vegetation.

Stellaria longipes* Goldie var. *longipes (Hämet-Ahti 1965a, as *S. stricta*) Occasional. Wetlands at low to middle elevations. *Björk 9257*.

***Stellaria monantha* Hultén** (Hämet-Ahti 1965a) Occasional. Open subalpine and alpine habitats on rocky or gravelly ground. *Goward 81-452, Björk 9354, 21885*. Syn. *Stellaria longipes* Goldie var. *altocaulis* (Hultén) C.L. Hitchc.

***Stellaria nitens* Nutt.** Rare, Vavenby. Open, dry, grassy, south-facing slopes on limestone.

***Stellaria umbellata* Turcz.** Rare, Trophy Meadows. Moist soil in subalpine meadows. *Björk 11670*.

CELASTRACEAE

***Paxistima myrsinites* (Pursh) Raf.** (Hämet-Ahti 1965a) Common. Forests, low to middle elevations.

CERATOPHYLLACEAE

***Ceratophyllum demersum* L.** Rare, Silver Dollar Lake. Shallow water at low elevations. *Björk 17794*.

COMANDRACEAE

***Comandra umbellata* (L.) Nutt. var. *pallida* (DC.) M.E. Jones** Rare, Vavenby. Open, grassy, south-facing slopes on limestone. *Björk 11448*.

***Geocaulon lividum* (Richards.) Fern.** (Hämet-Ahti 1965a) Occasional. Forest understory at low elevations. *Björk 9418, 9670*.

CONVOLVULACEAE

****Convolvulus arvensis* L.** Rare, Clearwater. Weed in disturbed sites.

CORNACEAE

***Cornus canadensis* L.** (Hämet-Ahti 1965a) Common. Forest understory, low to middle elevations. *Björk 9129*.

***Cornus stolonifera* Michx.** (Hämet-Ahti 1965a) Common. Growing in a wide variety of habitats, but most common in moist sites, low elevations.

***Cornus* x *unalaschkensis* Ledeb.** Rare, Blue River. Bog at low elevations. *Björk 16579*.

CRASSULACEAE

***Sedum acre* L.** Rare, Edgewood, Clearwater. Garden escape.

***Sedum divergens* S. Wats.** (Hämet-Ahti 1965a, as *Sedum oreganum*, which is not known to grow in interior regions, so the record is assumed to represent the similar species *S. divergens* instead) Rare, Blue River, Silvertip Falls. Seen by us only on a calcareous seem on a large siliceous boulder at middle elevations.

***Sedum hispanicum* L.** Locally common, Edgewood. Garden weed, low elevations.

Sedum lanceolatum* Nutt. var. *lanceolatum (Hämet-Ahti 1965a, as *S. stenopetalum*, which does not occur in alpine habitats of the cited locality, Battle Mountain) Uncommon, Battle Mountain, Hemp Creek Canyonlands, Trophy Mountains, Raft Mountain. On wind-blown alpine ridges and on low-elevation rock outcrops. *Goward 81-499, 92-48*.

***Sedum stenopetalum* Pursh** Rare, Vavenby. Cliff ledges at low elevations.

DROSERACEAE

***Drosera anglica* Huds.** (Hämet-Ahti 1965a) Uncommon, Murtle Lake, Chain Lakes, Bone Creek. Bogs and fens at low elevations. *Björk 9160, 9131, 9419.*

***Drosera linearis* Goldie** Rare, bog near Bailey's Chute. Bog at low elevations *Björk 9177*. Listed Red (S1) by the BC Conservation Data Centre (2011).

***Drosera rotundifolia* L.** (Hämet-Ahti 1965a) Common. Bogs and fens at low elevations.

ELAEAGNACEAE

***Shepherdia canadensis* (L.) Nutt.** (Hämet-Ahti 1965a) Common. Forests and clearings at low elevations.

ERICACEAE

***Andromeda polifolia* L.** (Hämet-Ahti 1965a, citing Hartman 1957). Rare. Bogs at low elevations. Not seen by us.

***Arctostaphylos uva-ursi* (L.) Spreng.** (Hämet-Ahti 1965a) Common. Forests and rock outcrops at low to middle elevations.

***Cassiope mertensiana* (Bong.) G. Don** (Hämet-Ahti 1965a, as var. *mertensiana*) Common. Alpine and subalpine heaths and rocky habitats. *Goward 81-689, Björk 9216, 21944*.

***Cassiope tetragona* (L.) G. Don ssp. *saximontana* (Small) Porsild** (Hämet-Ahti 1965a) Uncommon, Trophy Mountains. Alpine tundra and outcrops. *Goward 88-191, Björk 9358*.

***Chimaphila umbellata* (L.) Bartram ssp. *occidentalis* (Rydb.) S.F. Blake** (Hämet-Ahti 1965a) Common. Forests at low to middle elevations.

***Empetrum nigrum* L.** (Hämet-Ahti 1965a) Uncommon, Blue River, Stevens Lakes, Battle Mountain, Placid Lake, Trophy Mountains. Bogs at low elevations and in alpine heaths and tundra. *Goward 81-348, Björk 9356, 11675*.

***Gaultheria hispidula* (L.) Muhl. ex Bigelow** (Hämet-Ahti 1965a) Occasional. Open forest and wetland margins, usually over well decayed logs, low elevations.

***Gaultheria humifusa* (Grah.) Rydb.** (Hämet-Ahti 1965a) Rare, Battle Mountain, Fish Lake Hill. Heaths at high elevations. *Goward 83-868*.

***Gaultheria ovatifolia* A. Gray** Rare, near Nakiska Ranch, north end of Clearwater Lake. Old-growth forests at low elevations. *Goward 92-1140*.

Kalmia microphylla* (Hook.) A.A. Heller var. *microphylla (Hämet-Ahti 1965a) Occasional. Bogs and fens, low to high elevations. *Goward 89-77, Björk 9355*.

***Kalmia microphylla* (Hook.) A.A. Heller var. *occidentalis* (Sm.) Ebinger** Uncommon, Hemp Creek, Murtle Lake, Stevens Lakes, Chain Lakes. Bogs at low elevations. Syn. *K. occidentalis* Sm.

Menziesia ferruginea* J.E. Smith var. *ferruginea (Hämet-Ahti 1965a) Occasional. Humid forests at low elevations. *Goward 81-277, 90-1121, 91-292*.

***Menziesia ferruginea* J.E. Smith var. *glabella* (A. Gray) Calder & Taylor** (Hämet-Ahti 1965a) Common. Forests at low to high elevations.

***Moneses uniflora* (L.) A. Gray** Occasional. Forests at low to middle elevations.

***Monotropa hypopitys* L.** (Hämet-Ahti 1965a) Rare, Blue River, Azure Lake. Old-growth conifer forest at low elevations. *Goward 81-605*.

***Monotroopa uniflora* L.** Occasional. Forests at low to middle elevations.

***Orthilia secunda* (L.) House var. *obtusata* Turcz.** Occasional. Forests at low to middle elevations.

Orthilia secunda* (L.) House var. *secunda (Hämet-Ahti 1965a) Common. Forests at low to middle elevations.

***Phyllodoce empetriformis* (Sm.) D. Don** (Hämet-Ahti 1965a) Common. Heaths at high elevations, rare in forests at middle to low elevations. The species identity of the low elevations is uncertain however, as these plants never flower.

***Phyllodoce glanduliflora* (Hook.) Coville** (Hämet-Ahti 1965a) Common. Heaths at high elevations. *Goward 81-360.*

***Phyllodoce x intermedia* (Hook.) Camp** Occasional. Heaths at high elevations. *Björk 9342.*

***Pterospora andromedea* Nutt.** (Hämet-Ahti 1965a) Rare, Blue River, Third Canyon. Dry forests at low elevations, on humus-rich soil. *Björk 9172.*

Pyrola asarifolia* Michx. var. *asarifolia (Hämet-Ahti 1965a) Common. Forests at low to middle elevations, particularly on nitrogen-rich soil surrounding wetlands.

***Pyrola asarifolia* Michx. var. purpurea (Bunge) Fern.** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Murtle River, Blue River, Murtle Lake, Clearwater River Trail. Forests and clearings at low elevations, apparently not dependent on abundant nitrogen.

***Pyrola chlorantha* Sw.** (Hämet-Ahti 1965a) Occasional. Forests at low to middle elevations. *Goward 81-604, 83-592, Björk 9255.*

***Pyrola minor* L.** (Hämet-Ahti 1965a) Occasional. Forests at low to middle elevations. *Goward 87-56.*

***Pyrola picta* Sm.** Rare, Ray farm. Forests at low elevations. *Goward 87-82.*

***Rhododendron albiflorum* Hook.** (Hämet-Ahti 1965a) Common. Subalpine forest, avelanche tracks and forest clearings Uncommon in forests at lower elevations.

***Rhododendron columbianum* (Piper) Harmaja** (Hämet-Ahti 1965a, citing Szczawinski 1962, the report doubtful since no other reports of this species have since been gathered from the flora area. However, the species is so unlike the other *Rhododendron species* in the flora area that it should not be presumed to be in error). Habitat unknown. Syn. *Ledum glandulosum* Nutt.

***Rhododendron groenlandicum* (Oeder) Kron & Judd** (Hämet-Ahti 1965a) Common. Bogs, fens, and around various wetlands, occasional in forest understory, low elevations. *Björk 9149*. Syn. *Ledum groenlandicum* Oeder.

***Vaccinium cespitosum* Michx.** (Hämet-Ahti 1965a) Occasional. Forests and clearings at low elevations, also uncommon in subalpine sedge meadows. *Goward 81-460, 83-776, Björk 9417, 9704, 9735*.

***Vaccinium globulare* Rydb.** Rare, east end of Murtle Lake. Brushy riparian forest. *Goward 83-848*. This record may represent a local hybrid of *V. membranaceum* with another species, perhaps *V. cespitosum*.

***Vaccinium membranaceum* Dougl. ex Hook.** (Hämet-Ahti 1965a) Common. Forests and clearings at low to high elevations.

***Vaccinium myrtilloides* Michx.** (Hämet-Ahti 1965a) Uncommon, Blue River, Murtle Lake. Forests and clearings at low elevations, usually on sandy soil. *Goward 83-850, Björk 9156*.

***Vaccinium oreophilum* Rydb.** Rare, Raft Mountain, Central Mountain. Open forest and heaths at subalpine elevations. *Vaccinium myrtillus* L. misapplied. *Goward 81-357*.

***Vaccinium ovalifolium* Sm.** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Murtle River, Azure Lake, Blue River. Forests in cool, humid sites, low elevations.

***Vaccinium oxycoccos* L.** (Hämet-Ahti 1965a) Occasional. Fens and bogs, usually overgrowing *Sphagnum*. *Goward 81-580, 81-948, 83-777, Björk 9128, 9158*.

***Vaccinium vitis-idaea* L. ssp. *minus* (Lodd.) Hultén** (Hämet-Ahti 1965a) Rare, Blue River, Placid Lake, Third Canyon, Caligata Lake. Margins of bogs at low to high elevations and on rocks at the mouth of a low-elevation cave. *Goward 83-802, 91-848, Björk 9683*.

EUPHORBIACEAE

****Chamaesyce glyptosperma* (Engelm.) Sm.** (Hämet-Ahti 1965a) Rare, Clearwater. Waif in disturbed habitats. Syn. *Euphorbia glyptosperma* Engelm.

FABACEAE

***Astragalus miser* Dougl. ex Hook. var. *serotinus* (A. Gray) Barneby** Uncommon, Raft Canyon, Vavenby, Birch Island, Grouse Creek Notch. Open *Pseudotsuga* forest at low elevations, also present on a rock outcrop complex at middle elevations. *Goward 81-247, Björk 11430*.

****Cytisus scoparius* (L.) Link** Rare, Clearwater. In disturbed habitat along rail bed.

***Hosackia denticulata* Drew** Rare, Birch Island. Open, dry, grassy, south-facing slopes at low elevations. *Björk 21904*. Syn. *Lotus denticulatus* (Drew) E. Greene.

***Lathyrus ochroleucus* Hook.** (Hämet-Ahti 1965a) Common. Mixed conifer-deciduous or pure deciduous forest at low elevations. *Goward 81-262, Björk 9305*.

****Lotus corniculatus* L.** Uncommon, along Clearwater Valley Road. Weed of roadside ditches and road cuts at low elevations. *Goward 81-861*.

***Lupinus arcticus* S. Wats. ssp. *subalpinus* (Piper & Robinson) D.B. Dunn** (Hämet-Ahti 1965a) Common. Meadows and open forests at subalpine elevations. *Goward 81-640, 81-733, Björk 11656*. Syn. *Lupinus latifolius* Lindl. ex Agardh var. *subalpinus* (Piper & Robinson) C.P. Sm.

Lupinus latifolius* J. Agardh var. *latifolius Common. Warm, low-elevation forests, clearings and roadsides. *Björk 21884*.

****Lupinus polyphyllus* Lindl.** Occasional. Along roadsides at low to middle elevations.

****Medicago lupulina* L.** (Hämet-Ahti 1965a, as var. *glanduligera*) Occasional. Weed in lawns and along roadsides, low elevations. *Goward 81-827, 82-1499*.

****Medicago sativa* L.** Occasional. Weed of roadsides and vacant lots, also in pastures and hayfields, low elevations. *Goward 81-828*.

****Melilotus alba* Desr.** (Hämet-Ahti 1965a) Uncommon, Edgewood, Clearwater, Second Canyon, Helmcken Falls Lodge. Weed of roadsides and vacant lots, low elevations. *Goward 81-805*.

***Oxytropis campestris* (L.) DC var. *varians* (Rydb.) Barneby** (Hämet-Ahti 1965a, as var. *gracilis*) Blue River. Apparently rare, not seen by us. Syn. *O. campestris* var. *gracilis* (A. Nels.) Barneby

****Trifolium aureum* Poll.** (Hämet-Ahti 1965a, as *T. agrarium*) Occasional. Weed of roadsides and other disturbed habitats at low elevations. *Goward 81-146, 86-216*.

****Trifolium dubium* Sibth.** (Hämet-Ahti 1965a) Uncommon, Murtle River. Weed of roadsides, low elevations.

****Trifolium hybridum* L.** (Hämet-Ahti 1965a) Common. Seeded in hayfields and pastures, and spreading along roadsides and other disturbed sites, low elevations.

****Trifolium pratense* L.** (Hämet-Ahti 1965a) Occasional. Seeded in hayfields and pastures, and spreading in both disturbed and undisturbed vegetation, low elevations. *Goward 81-172*.

****Trifolium repens* L.** (Hämet-Ahti 1965a) Common. Seeded in various disturbed habitats, uncommon in undisturbed vegetation, low to high elevations. *Goward 81-171*.

***Vicia americana* Muhl.** (Hämet-Ahti 1965a) Common. Forests and clearings, usually growing where deciduous trees are a major component of the canopy. *Goward 81-261*.

****Vicia cracca* L.** Rare, Clearwater, Trout Creek. Disturbed sites at low elevations. *Goward 81-837, 89-104*.

****Vicia tetrasperma* (L.) Schreb.** Rare, Edgewood. Growing in disturbed sites at low elevations.

****Vicia villosa* Roth** Rare, Clearwater. Waif in disturbed habitats.

GENTIANACEAE

***Gentiana glauca* Pallas** (Hämet-Ahti 1965a) Occasional. Heaths, tundra and around wetlands in the alpine and upper subalpine. *Björk 9349*.

***Gentianella amarella* (L.) Boerner** Uncommon, Flat Irons, Edgewood. Mostly in disturbed habitats at low to middle elevations. Syn. *Gentiana amarella* L.

***Gentianella cf. campestris* (L.) Boerner** Rare, Trophy Meadows, Birch Island area. Shrub carr at middle elevations, and on a grassy alpine slope on calcareous soil. Differs from regional populations of *G. amarella* in having leaves more ovate and rounded at the apex, longer corollas with a reddish-purple colour, and broader, lance-ovate, overlapping calyx segments.

***Halenia deflexa* (Sm.) Griseb.** Rare, Philip Creek. Creek-side sandbar at low elevations. *Björk 11412*.

GERANIACEAE

****Erodium cicutarium* (L.) L'Hérit.** Rare, Clearwater, Edgewood. Weed of disturbed sites, low elevations.

***Geranium bicknellii* Britt.** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Vavenby, Edgewood West. Sylvan pools and at cliff base, low elevations. *Björk 11378*.

****Geranium dissectum* L.** Rare, near Clearwater. Garden weed in disturbed habitats, low elevations. *Goward 81-869*.

****Geranium pusillum* L.** Rare, Edgewood. Weed of disturbed habitats, low elevations.

***Geranium richardsonii* Fisch. & Trautv.** Rare (or perhaps common in the northern portions of Wells Gray Park), Trumpeter Mountain. Alpine meadows. *Goward 81-193*.

GROSSULARIACEAE

***Ribes glandulosum* Grauer** Occasional. Rocky, lightly shaded habitats at low elevations. *Goward 81-612*.

Ribes hudsonianum* Richards. var. *hudsonianum (Hämet-Ahti 1965a) Occasional. Around wetlands at low elevations. *Goward 81-311, 92-46*.

***Ribes lacustre* (Pers.) Poir.** (Hämet-Ahti 1965a) Common. Lightly to densely forested habitats at low to moderately high elevations. *Goward 81-291, 81-568*.

Ribes oxyacanthoides* L. ssp. *oxyacanthoides (Hämet-Ahti 1965a, without varieties) Occasional. Lightly shaded or open habitats, especially where rocky, low elevations. *Goward 93-8*.

HALORAGACEAE

***Myriophyllum farwellii* Morong** Rare, Placid Lake, Alice Lake. Submerged in calcareous lakes at low elevations. *Björk 9774, 17805*.

***Myriophyllum sibiricum* Kom.** Rare, Placid Lake. Submerged in moderately calcareous lake at low elevations. *Björk 9668, 9773*.

***Myriophyllum verticillatum* L.** Occasional. Submerged in moderately calcareous ponds and lakes. *Björk 9690, 9744*.

HYPERICACEAE

***Hypericum anagalloides* Cham. & Schlecht.** Rare, south end of Clearwater Lake. In and around wetlands, low elevations. *Goward 83-647*.

****Hypericum x desetangsii* Lamotte** Rare, Vavenby. In an old roadbed at low elevations. *Björk 11390*. The similar and widespread weedy species *Hypericum perforatum* is also to be expected.

LAMIACEAE

***Dracocephalum parviflorum* Nutt.** Rare, Edgewood West. Forest clearing at low elevations. *Björk 9311*.

****Galeopsis bifida* Boenn.** (Hämet-Ahti 1965a) Common. Garden weed at low elevations.

****Lamium maculatum* L.** Occasional. Garden weed, low elevations.

***Lamium purureum* L.** Occasional. Garden weed, low elevations. *Goward 81-863*.

***Lycopus uniflorus* Michx.** (Hämet-Ahti 1965a) Common. In and around various wetlands. *Goward 81-402, 83-847*.

***Mentha arvensis* L.** (Hämet-Ahti 1965a, as var. *glabrata*) Common. In and around various wetlands. *Björk 22000*.

***Mentha spicata* L.** Rare, Clearwater. Weed of moist, disturbed habitats.

***Monarda fistulosa* L. var. *menthifolia* (Grah.) Fern.** Rare, Raft Canyon, Vavenby. On grassy, south-facing slopes at low elevations. *Goward 81-921, 83-770, Björk 11385*.

***Nepeta cataria* L.** Occasional. Weed of moderately disturbed habitats at low elevations. *Goward 87-92*.

***Origanum vulgare* L.** Locally common. Garden escape, low elevations.

***Physostegia parviflora* Nutt.** Rare, Writing-on-Stone. Sedge fringe vegetation of river shores at low elevations.

***Prunella vulgaris* L. ssp. *lanceolata* (Bart.) Hultén** (Hämet-Ahti 1965a) Common. Moist, open or forested habitats at low to middle elevations.

Prunella vulgaris* L. ssp. *vulgaris Uncommon, Edgewood, Clearwater. Lawn weed, low elevations.

***Scutellaria galericulata* L.** (Hämet-Ahti 1965a) Occasional. In and around wetlands, low elevations. *Goward 81-376, 81-745, 82-1483*.

***Stachys palustris* L. ssp. *pilosa* (Nutt.) Epling** Rare, The Horseshoe. In sedge fringe vegetation of river shorelines.

LENTIBURIALACEAE

Pinguicula vulgaris* L. ssp. *vulgaris Rare, Azure Lake. On calcareous rocks in cool, humid sites at low elevations.

***Utricularia intermedia* Hayne** (Hämet-Ahti 1965a) Occasional. In shallow water of fens at low elevations. *Björk 9147, 9827*.

***Utricularia macrorhiza* Le Conte** Occasional. Submerged in open water of various types of ponds and lakes, low elevations. *Goward 81-909, 82-1482*.

***Utricularia minor* L.** Uncommon, Edgewood, Blue River, Chain Lakes. In shallow water of fens at low elevations. *Goward 88-209*.

LINACEAE

***Linum usitatissimum* L.** Rare, Clearwater. Waif in disturbed habitats. *Goward 81-839*.

LYTHRACEAE

***Lythrum hyssopifolia* L.** (Douglas et al. 2002) East end of Mahood Lake. Apparently rare, not seen by us, habitat unknown.

MALVACEAE

***Abutilon theophrasti* Medic.** Rare, Edgewood. Waif in gardens at low elevations. Apparently germinating from bird seed mixes. *Björk 9981*.

MENYANTHACEAE

***Menyanthes trifoliata* L.** (Hämet-Ahti 1965a) Common. Various wetlands at low elevations. *Goward 81-298*.

MONTIACEAE

***Claytonia lanceolata* Pursh** (Hämet-Ahti 1965a) Common. Subalpine meadows. *Björk 9224*.

***Claytonia rubra* (Howell) Tidestr. ssp. *depressa* (A. Gray) J.M. Miller & K.L. Chambers** Rare, Natural Bridge. Mossy talus at low elevations. Only two plants seen. Perhaps the only extant population of this subspecies in interior BC. *Montia perfoliata* (Donn) Howell (*Claytonia perfoliata*) misapplied.

MYRSINACEAE

***Lysimachia thyrsiflora* L.** Rare, Silver Dollar Lake, Clearwater Springs. In and around wetlands at low elevations. *Goward 90-1153*.

***Trientalis europaea* L. ssp. *arctica* (Fisch. & Hultén) Hultén** Occasional. In and around bogs and fens at low elevations. *Goward 88-161*. Syn. *Trientalis arctica* Fisch.

NYMPHACEAE

***Nuphar polysepalum* Engelm.** (Hämet-Ahti 1965a) Rare, Murtle Lake, Stevens Lakes, Chain Lakes. Open water of ponds at low elevations. Syn. *Nuphar lutea* (L.) Sm. ssp. *polysepala* (Engelm.) Beal.

***Nuphar variegatum* Durand** Occasional. Open water of ponds at low elevations. Syn. *Nuphar lutea* (L.) Sm. ssp. *variegata* (Durand) Beal

****Nymphaea alba* L.** (Douglas et al. 2002) Reported from Clearwater, not seen by us.

****Nymphaea odorata* Ait.** (Douglas et al. 2002) Reported from Clearwater, not seen by us.

ONAGRACEAE

***Chamaerion angustifolium* (L.) Holub** (Hämet-Ahti 1965a) Common. Various open to moderately shaded habitats, low to moderately high elevations. Syn. *Epilobium angustifolium* L.

***Chamaerion latifolium* (L.) Holub** (Hämet-Ahti 1965a) Rare? Azure Lake. Apparently limited to the northern portions of Wells Gray Park, not seen by us. Syn. *Epilobium latifolium* L.

***Circaea alpina* L. var. *pacifica* (Asch. & Magnus) Raven** (Hämet-Ahti 1965a) Occasional. Forests at low to middle elevations. *Goward 87-96*.

***Epilobium anagallidifolium* Lam.** (Hämet-Ahti 1965a) Occasional. Moist sites at subalpine and alpine elevations. *Goward 81-715*.

***Epilobium brachycarpum* Presl** Uncommon, Whitehorse Bluffs, Raft Canyon, Clearwater, Vavenby, Birch Island. Dry, open sites at low elevations. *Goward 81-922, 82-1500*.

Epilobium ciliatum* Raf. ssp. *ciliatum (Hämet-Ahti 1965a, as *E. ciliatum* and *E. cf. adenocaulon*) Common. In and around various wetlands at low to middle elevations. Also occasional as a garden weed.

***Epilobium ciliatum* Raf. ssp. *glandulosum* (Lehm.) Hoch & Raven** Occasional. In and around various wetlands at low elevations.

***Epilobium ciliatum* Raf. ssp. *watsonii* (Barbey) Hoch & Raven** Occasional. In and around warm wetlands at low elevations. *Björk 11478*.

***Epilobium clavatum* Trel.** (Hämet-Ahti 1965a, as cf.) Common. In wet, mossy sites in open or light shade, high elevations. *Goward 87-93, Björk 12032*.

***Epilobium davuricum* Fisch. ex Hornem.** Rare, Gateway Bog. In calcareous fen at low elevations. *Björk 11472*. Listed Red (S1S3) by the British Columbia Conservation Data Centre (2011).

***Epilobium foliosum* (Torr. & A. Gray) Suksd.** Rare, Birch Island. Open, dry, rocky sites at low elevations.

***Epilobium halleanum* Hausskn.** Occasional. In and around various wetlands. *Goward 84-872*, *Björk 9823, 17815*. All populations assigned this name appear to be non-typical. They differ in being larger plants, larger leaves that spread out from the stem at a wider angle, and a more branched inflorescence. We do not know of typical forms of the species from BC. Listed Blue (S2S3) by the British Columbia Conservation Data Centre (2011).

Epilobium hornemannii* Reichenb. ssp. *hornemannii (Hämet-Ahti 1965a) Occasional. Moist habitats at middle to high elevations. *Goward 81-389, 81-620*.

***Epilobium lactiflorum* Hausskn.** Common. Moist habitats at middle to high elevations. *Goward 89-97, Björk 11689*.

***Epilobium leptocarpum* Hausskn.** (Hämet-Ahti 1965a) Uncommon, Azure Lake, Grouse Creek Falls, Spahats Falls, Silver Dollar Lake. In and around wetlands at low elevations. *Goward 90-1178a, 90-1193, Björk 17801*. Listed Blue (S2S3) by the British Columbia Conservation Data Centre (2011).

***Epilobium leptophyllum* Raf.** Occasional. In and around wetlands at low elevations. *Goward 86-213, Björk 9706, 11473, 11634*.

***Epilobium minutum* Lindl. ex Lehm.** Rare, Eye-of-the-Needle. Open, dry, rocky sites at low elevations. *Goward 94-496*.

***Epilobium oregonense* Hausskn.** (Hämet-Ahti 1965a) Rare, Murtle Lake. Seepy site at low elevations. Listed Blue (S2S3) by the British Columbia Conservation Data Centre (2011).

***Epilobium palustre* L.** (Hämet-Ahti 1965a) Occasional. In and around wetlands at low elevations.

***Epilobium saximontanum* Hausskn.** Rare, Chain Lake. Wetland margin at low elevations. *Björk 9376*. Listed Red (S1S3) by the British Columbia Conservation Data Centre (2011).

****Oenothera biennis* L.** (Hämet-Ahti 1965a) Uncommon, Clearwater. Weed of disturbed habitats at low elevations. *Goward 90-1229*, *Björk 14939*.

OROBANCHACEAE

***Castilleja hispida* Benth.** Rare, Vavenby. Open, dry, grassy, south-facing slope at low elevations.

***Castilleja miniata* Hook.** (Hämet-Ahti 1965a) Common. Open and moderately forested habitats, low to high elevations. *Goward 83-783*, *Björk 11389*. Forming a bewildering morphological array, presumably as a result of hybridization. The greatest diversity of these forms is found in

subalpine meadows, where hybrids may involve crosses to *C. occidentalis, C. parviflora* and *C. rhexifolia*.

***Castilleja occidentalis* Torr.** (Hämet-Ahti 1965a) Uncommon, Battle Mountain, Trophy Mountains. In subalpine meadows. Few individuals seen have had typical characteristics, perhaps reflecting hybridization.

***Castilleja parviflora* Bong.** Uncommon, Trophy Mountains. Subalpine meadows. Few individuals seen have had typical characteristics, perhaps reflecting hybridization.

***Castilleja rhexifolia* Rydb.** (Hämet-Ahti 1965a) Uncommon, Murtle Lake, Battle Mountain, Fish Lake Hill, Trophy Mountains, Raft Mountain. In subalpine meadows. Few individuals seen have had typical characteristics, perhaps reflecting hybridization, though typical *C. rhexifolia* becomes more common into alpine elevations.

****Euphrasia arctica* Lange** Common. Grassy or forested, disturbed and natural habitats, low to high elevations. *Goward 81-800*. *Euphrasia nemorosa* is attributed to the area of Clearwater in Douglas et al. 2002, but that species differs from populations we have seen in having acuminate to subulate leaf teeth while ours has leaf teeth acute and triangular-ovate. Though *E. arctica* is said to be native, we feel that our plants are most likely introduced.

***Melampyrum lineare* Desr.** (Hämet-Ahti 1965a) Common. Forests at low elevations. *Goward 81-423*.

***Orobanche fasciculata* Nutt.** Rare, Vavenby. Grassy, open, dry, south-facing slopes. *Björk 11449*.

Pedicularis bracteosa* Benth. var. *bracteosa (Hämet-Ahti 1965a, without variety) Common. Subalpine meadows and forests, rare at low elevations.

***Pedicularis groenlandica* Retz.** (Hämet-Ahti 1965a, citing Edwards and Ritcey 1960) Apparently rare, not seen by us.

***Rhinanthus minor* L.** Occasional. Meadows and forest clearings at low elevations.

OXALIDACEAE

****Oxalis stricta* L.** Locally common, Edgewood. Garden weed at low elevations.

PAPAVERACEAE

***Corydalis aurea* Willd.** (Hämet-Ahti 1965a) Uncommon, Murtle Lake, Vavenby, Natural Bridge. Rocky sites where open or lightly shaded. *Björk 11392.*

***Corydalis sempervirens* (L.) Pers.** Uncommon, Natural Bridge, Edgewood West. Open or lightly shaded, mossy rocks at low to middle elevations.

****Papaver argemone* L.** Locally common, Edgewood. Garden weed, low elevations.

PARNASSIACEAE

Parnassia fimbriata* Konig var. *fimbriata (Hämet-Ahti 1965a) Common. Moist, open to lightly forested habitats at high elevations.

Parnassia palustris* L. var. *neogaea (Hämet-Ahti 1965a) Occasional. In wetlands and along river shores, favouring strongly calcareous soils.

***Parnassia parviflora* DC.** (Douglas et al. 2002) Apparently rare, not seen by us.

PHRYMACEAE

***Mimulus breweri* (E. Greene) Coville** Rare, Grouse Creek Notch. Rock outcrop seep at middle elevations. Identification tentative, seen only in fruit, and found to have the right leaf shape and calyx for *M. breweri*. However, we hope to see the plants in flower to confirm the identification. This would be a very isolated population. Listed Blue (S2S3) by the British Columbia Conservation Data Centre (2011).

***Mimulus cf. patulus* Pennell.** Rare, Natural Bridge, Shadden. On cliff ledges at low elevations. This is apparently the same as collections from Montana, U.S.A. that bore the provisional, unpublished name of *M. patulus* var. *montanus* Meinke ined. (known also from Idaho, and probably also Alberta). Recent work has led some to rename specimens of this entity from Montana as *M. ampliatus*. That species is, however, dissimilar morphologically, and is endemic to a small area of west-central Idaho, U.S.A. The form present in the flora area probably also accounts for most or all of the records of *M. floribundus* in Canada. *Mimulus floribundus* is a larger, diffusely branched plant with larger flowers and a viscid pubescence of septate hairs. The species present in the flora area has short hairs tipped in ball-shaped glands.

***Mimulus guttatus* DC.** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Stevens Lakes, Philip Lake, Eye-of-the-Needle, Edgewood, Mushbowl. Various wetlands and seeps at low elevations. *Goward 81-641, 81-644, 86-206, 94-495*.

***Mimulus lewisii* Pursh** (Hämet-Ahti 1965a) Common. Wet, open or lightly forested habitats at high elevations.

Mimulus moschatus* Lindl. var. *moschatus (Hämet-Ahti 1965a) Rare, Kostal Lake, Shadow Lake, marsh near Clearwater Dump. Wetlands at low to middle elevations. *Goward 81-629, 84-875, Björk 9238*.

PLANTAGINACEAE

Antirrhinum sp. Rare, prison camp. Waif in disturbed habitats. *Goward 81-814*. Specimen not seen by CRB. Possibly *Chaenorrhinum minus*

***Callitriche hermaphroditica* L.** Rare, Trophy Mountains, Alice Lake, Shadow Lake. Shallow water of ponds and small lakes at low and high elevations. *Goward 80-695, 81-735, Björk 9701*.

***Callitriche palustris* L.** Uncommon, Alice Lake, Hemp Creek, Edgewood. Open water of ponds and lakes. *Goward 81-211, Björk 21854*.

***Collinsia parviflora* Lindl.** Rare, Vavenby, Whitehorse Bluffs. Limited to open, grassy, dry, south-facing slopes at low elevations. *Goward 81-158*.

***Hippuris montana* Ledeb.** (Hämet-Ahti 1965a) Uncommon, Stevens Lakes, Fish Lake Hill, Caligata Lake, Surprise Lake, above Hobson Lake. Among dense acrocarpous mosses in wet subalpine meadows and shores of subalpine lakes. *Goward 81-677, 84-1029*, *Björk 9390*.

***Hippuris vulgaris* L.** Uncommon, Murtle River, Alice Lake, Whale Lake, south end of Clearwater Lake. Growing in shallow water of calcareous lakes at low elevations. *Goward 81-476, 81-540, Björk 9694, 9725*.

***Linaria genistifolia* (L.) P. Miller ssp. *dalmatica* (L.) Maire & Petitmengin** Rare, Vavenby. Weed in open, dry sites on south-facing slopes at low elevations. Syn. *Linaria dalmatica* (L.) Mill.

***Linaria vulgaris* P. Miller** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Edgewood, Clearwater, prison camp. Weed of pastures, roadsides and other disturbed habitats at low elevations. *Goward 81-821*.

***Penstemon ellipticus* J. Coulter & Fisch.** Rare, Surprise Lake. Rocky sites at high elevations. *Goward 81-674*.

Penstemon fruticosus* (Pursh) E. Greene var. *fruticosus Occasional. Rocky sites, cliffs, sandy slopes at low to middle elevations. *Goward 81-471*.

***Penstemon procerus* Dougl.** (Hämet-Ahti 1965a) Apparently rare, Blue River. Not seen by us.

***Penstemon serrulatus* Menzies ex Smith** Rare, Hemp Creek. Moist cliffs at low elevations. *Goward 84-870*.

***Plantago lanceolata* L.** Occasional. Weed of disturbed habitats at low elevations. *Goward 81-339, 81-865, 82-1488b*.

***Plantago major* L. ssp. *intermedia* (DC.) Arcang.** Occasional. Along river shores at low elevations. Appears to be native.

****Plantago major* L. ssp. *major*** Occasional. Weed in disturbed habitats. Low to middle elevations.

***Plantago patagonica* Jacq.** Rare, Vavenby. Open, dry, grassy, south-facing slopes on limestone.

***Veronica americana* (Raf.) Benth.** (Hämet-Ahti 1965a) Common. In and around wetlands at low elevations. Also occasional as a weed in gardens. *Goward 81-724, 81-933*.

****Veronica arvensis* L.** Occasional. Weed in disturbed habitats at low elevations. *Goward 81-242, 90-1166*.

****Veronica chamaedrys* L.** Rare, Dawson Falls. Weed along roadsides. *Goward 87-58*.

****Veronica officinalis* L.** Occasional. Weed of disturbed sites at low elevations.

***Veronica scutellata* L.** Rare, marsh near Clearwater Dump. Open marsh at low elevations. *Björk 17808*.

***Veronica serpyllifolia* L. var. *humifusa* (Dicks.) Syme** (Hämet-Ahti 1965a) Occasional. Around wetlands and in forests, low to high elevations. *Goward 81-288*.

****Veronica serpyllifolia* L. var. *serpyllifolia*** Occasional. Weed of lawns, gardens and roadsides. *Goward 81-273*.

***Veronica wormskjoldii* Roemer & J.A. Schult.** (Hämet-Ahti 1965a) Occasional. Open alpine and subalpine habitats. *Goward 81-394, 81-440, Björk 9360.*

POLEMONIACEAE

***Collomia linearis* Nutt.** (Hämet-Ahti 1965a) Rare, Blue River, Whitehorse Bluffs. Open, dry habitats at low elevations. *Goward 81-372*.

***Phlox gracilis* (Hook.) E. Greene** (Hämet-Ahti 1965a, as *Microsteris gracilis var. humilior*) Rare, Hemp Creek, Birch Island. Open, dry habitats at low elevations.

POLYGONACEAE

***Bistorta vivipara* (L.) A. Gray** (Hämet-Ahti 1965a) Uncommon, Battle Mountain, Trophy Mountains. Tundra and cliff ledges in the alpine. *Goward 81-458, Björk 11694, 12028*. Syn. *Polygonum viviparum* L.

***Fagopyrum esculentum* Moench** Rare, Clearwater. Waif in disturbed habitats at low elevations. *Goward 81-839*.

***Fallopia convolvulus* (L.) Á. Löve** Occasional, Edgewood, Trout Creek, Clearwater. Garden weed at low elevations. *Goward 81-820, 90-1249*. Syn. *Polygonum convolvulus* L.

***Oxyria digyna* (L.) Hill** (Hämet-Ahti 1965a) Common. Open alpine and subalpine habitats, usually where rocky and well drained. *Goward 81-614*.

***Persicaria amphibia* (L.) A. Gray** Rare, Alice Lake. Open water of lakes and ponds at low elevations. *Goward 81-201*. Syn. *Polygonum amphibium* L.

***Persicaria lapathifolia* (L.) A. Gray** (Hämet-Ahti 1965a, as ssp. *nodosum*) Rare, Hemp Creek, marsh near Clearwater Dump. Open wetlands at low elevations. *Goward 81-199, 81-200, 82-1511, Björk 9242, 9243*. Syn. *Polygonum lapathifolium* L.

***Persicaria maculosa* A. Gray** Rare, Edgewood. Garden weed at low elevations. *Goward 86-188*. Syn. *Polygonum persicaria* L.

***Persicaria punctata* (Elliot) Small** Rare, Edgewood. Garden weed at low elevations. Syn. *Polygonum punctatum* Ell. Listed Blue (S2S3) by the British Columbia Conservation Data Centre (2011).

***Polygonum aviculare* L. ssp. *depressum* (Meisn.) Arcangeli** (Hämet-Ahti 1965a, as *P. arenastrum*) Rare? Hemp Creek. Weed of disturbed habitats at low elevations. Not seen by us. Syn. *Polygonum arenastrum* Jord. ex Bor.

Polygonum aviculare* L. ssp. *aviculare Occasional. Weed of disturbed habitats, particularly on compressed, gravelly soil at low to high elevations.

***Polygonum douglasii* E. Greene** (Hämet-Ahti 1965a) Uncommon, Clearwater, Grouse Creek Notch, First Canyon, Edgewood, Raft River Canyon. Growing on dry, well drained soil in open sites, rarely weedy in disturbed habitats at low elevations. *Goward 81-924, Björk 9173, 17778*.

***Polygonum minimum* S. Wats.** Uncommon, Pyramid Mountain, Grouse Lake Notch, lava flow at Kostal Lake. Dry, open habitats at middle elevations. *Goward 81-624, Björk 9720b*, *17777*.

***Polygonum spergulariiforme* Meisn. ex Small** Rare, Vavenby. Dry, open, south-facing limestone outcrop at low elevations. *Björk 11383*. Syn. *Polygonum douglasii* E. Greene ssp. *spergulariiforme* (Meisn. ex Small) Hickman.

***Rumex acetosa* L.** Rare, Ray Farm. Persisting from cultivation, low elevations. *Goward 81-309*.

***Rumex acetosella* L** (Hämet-Ahti 1965a) Occasional. Weed of disturbed habitats and gardens at low to high elevations.

***Rumex crispus* L.** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Clearwater Lake, Edgewood, Clearwater Dump. Weed of disturbed habitats at low elevations. *Goward 82-1517*.

***Rumex lapponicus* (Hiitonen) Czernov** (Hämet-Ahti 1965a, as *R. acetosa* ssp. *alpestris*). Battle Mountain. Apparently rare, not seen by us. Alpine. Syn. *R. acetosa* L. ssp. *alpestris* (Scop.) Á. Löve.

***Rumex obtusifolius* L. s. lat.** Rare, Philip Creek, south end of Clearwater Lake. Weed of moist, disturbed soil at low elevations. *Goward 81-405*.

***Rumex triangulivalvis* (Danser) Rech. f.** (Hämet-Ahti 1965a) Rare, Hemp Creek. Wetlands at low elevations. *Rumex salicifolius* Weinm. misapplied.

PORTULACACEAE

***Portulaca oleracea* L.** (Hämet-Ahti 1965a) Occasional. Garden weed at low elevations. *Goward 81-856*.

RANUNCULACEAE

***Actaea rubra* (Ait.) Willd.** (Hämet-Ahti 1965a, as *A. arguta*) Occasional. Forests at low to middle elevations, mostly under deciduous trees. White- and red-fruited forms are both present.

Anemone multifida* Poir. ssp. *multifida (Hämet-Ahti 1965a, without varieties) Occasional. Open or lightly forested habitats at low elevations. *Björk 9186, 11367*.

***Anemone multifida* Poir. ssp. *saxicola* B. Boivin** Rare, Raft Mountain and Vavenby. Alpine scree, also on limestone outcrops at low elevations.

***Anemone occidentalis* S. Wats.** (Hämet-Ahti 1965a) Common. Subalpine and alpine meadows.

***Anemone parviflora* Michx.** Uncommon, Alabaster Mountain, Maianth Falls, Raft Peak. In open sites on calcareous rocks. *Goward 81-485, 87-87*.

***Anemone richardsonii* Hook.** (Hämet-Ahti 1965a) Apparently rare, Stevens Lakes. Not seen by us.

***Aquilegia formosa* Fisch.** (Hämet-Ahti 1965a) Occasional. Moist, forested habitats at low to middle elevations.

Caltha leptosepala* DC. var. *leptosepala (Hämet-Ahti 1965a, without varieties) Common. Cold, wet sites at subalpine and alpine elevations. *Goward 88-188*.

***Clematis occidentalis* (Hornem.) DC. var. *grosseserrata* (Rydb.) J.S. Pringle** Occasional. Forests at low elevations. *Clematis columbiana* (Nutt.) Torr. & A. Gray misapplied.

***Coptis trifolia* (L.) Salisb.** (Hämet-Ahti 1965a) Rare, Blue River. Bogs at low elevations. *Björk 9136*.

***Delphinium glaucum* S. Wats.** (Douglas et al. 2002) Apparently rare or perhaps misreported, not seen by us.

***Delphinium nuttallianum* Pritzel** Locally common. Subalpine meadows, rare on middle-elevation rock outcrops and low elevation grassy slopes. *Goward 81-257, 81-655*.

***Ranunculus abortivus* L.** (Hämet-Ahti 1965a, as var. *acrolasius*) Rare, Hemp Creek, south park gate. Shrub carrs at low elevations. *Goward 81-572*.

****Ranunculus acris* L.** Common. Weedy meadows and along trails, low elevations. *Goward 90-1148*.

***Ranunculus aquatilis* L.** (Hämet-Ahti 1965a, as var. *capillaceus*) Rare, Battle Mountain, Clearwater Lake, Edgewood. In open, shallow water at low and high elevations. *Goward 81-528, 88-210*.

***Ranunculus eschscholtzii* Schlecht.** (Hämet-Ahti 1965a) Occasional. Open subalpine and alpine habitats. *Goward 81-432, 81-675, 88-222*.

***Ranunculus flabellaris* Raf.** Rare, Edgewood West. In open water of a pool at a large spring, low elevations.

***Ranunculus flammula* L. s. lat.** (Hämet-Ahti 1965a, as *R. reptans*) Uncommon, Murtle Lake, Stevens Lakes, Battle Mountain, Kostal Lake. Shallow water or stranded, ponds and lake and river shores, low to moderately high elevations. *Goward 81-358, 81-628*. It remains unclear in western North America whether this is the correct name for this plant.

***Ranunculus glaberrimus* Hook. var. *ellipticus* (E. Greene) E. Greene** Rare, Grouse Creek Notch. Rock outcrop at middle elevations.

***Ranunculus gmelinii* DC.** (Hämet-Ahti 1965a, as var. *hookeri*) Occasional, Edgewood West, near Clearwater Dump, in shallow open water of sylvan pools and springs at low elevations. *Goward 89-231, 89-254, Björk 17809, 9312a*.

***Ranunculus karelinii* Czern.** Rare, Trophy Mountains. Late snow-lie sites in the alpine. *Ranunculus gelidus* Karelin & Kirilov misapplied.

***Ranunculus macounii* Britt.** (Hämet-Ahti 1965a) Occasional. In and around wetlands at low elevations. *Goward 81-739, 88-204*.

Ranunculus occidentalis* Nutt. var. *occidentalis (Hämet-Ahti 1965a) Occasional. Meadows and forest clearings at low elevations.

***Ranunculus pensylvanicus* L.** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, marsh near Clearwater Dump. In and around wetlands at low elevations. *Björk 9273*.

***Ranunculus pygmaeus* Wahl.** Rare, Raft Mountain. Late snow-lie areas in the alpine. *Björk 9392*.

****Ranunculus repens* L.** (Hämet-Ahti 1965a) Occasional. Weed of moist soil at low elevations. *Goward 91-447a*

***Ranunculus scleratus* L. var. *multifidus* Nutt.** Uncommon, Edgewood West. Sylvan pools at low elevations.

Ranunculus uncinatus* D. Don var. *parviflorus (Hämet-Ahti 1965a) Common. Forests and shrub carrs at low to high elevations. *Goward 81-342, 81-931, 86-171*.

***Ranunculus verecundus* B.L. Robins.** (Hämet-Ahti 1965a) This name has at times been synonymized to *R. gelidus*, which in turn was determined to be misapplied to *R. karelinii*. Both *R. gelidus* and *R. karelinii* are species of cold alpine habitats, but the location (Murtle Lake) and habitat of the cited specimen in Hämet-Ahti, 1965 ("along a spring-fed brook in rich *Thuja* forests") suggests that *R. karelinii* cannot be assumed to account for this record. Hence, the original determination is maintained until a specimen is located or the population revisited.

***Thalictrum occidentale* A. Gray** (Hämet-Ahti 1965a) Uncommon, Blue River, near Cougar Creek. Forest clearings at low elevations. Favouring moderately high-pH soil.

***Thalictrum sparsiflorum* Turcz.** (Hämet-Ahti 1965a) Apparently rare, Murtle Lake. Not seen by us. On rich soil at low elevations.

***Trollius albiflorus* (A. Gray) Rydb.** (Hämet-Ahti 1965a) Common. Along streams and in wet depressions in the alpine and upper subalpine.

RHAMNACEAE

***Ceanothus sanguineus* Pursh** (Hämet-Ahti 1965a) Rare, Blue River, Second Canyon. Open forest and cliff bases at low elevations.

Ceanothus velutinus* Dougl. var. *velutinus (Hämet-Ahti 1965a) Locally common. Open, dry forest on sandy soil, low elevations. *Goward 81-370*.

ROSACEAE

***Amelanchier alnifolia* (Nutt.) Nutt.** (Hämet-Ahti 1965a) Common. Low elevations, usually in drier sites than *A. florida*.

***Amelanchier florida* Lindl.** Common. Low elevations, in relatively moist sites. *Amelanchier alnifolia* misapplied.

Aruncus dioicus* (Walter) Fern. var. *acuminatus (Hämet-Ahti 1965a, as *A. sylvester*) Locally common. Humid forests. Syn. *Aruncus sylvester* Kostel.

***Comarum palustre* L.** (Hämet-Ahti 1965a) Common. Shallow water of ponds and in various wetlands, low elevations. Syn. *Potentilla palustris* (L.) Scop.

***Crataegus douglasii* Lindl.** (Hämet-Ahti 1965a) Rare, Hemp Creek, Battle Mountain Road. Shrub thickets at low elevations.

***Dryas drummondii* Richards. ex Hook.** Rare, Clearwater River about 10 km north of town of Clearwater. Open, sandy ground, often where disturbed, along river shores and roadsides. *Goward 81-732*.

***Dryas octopetala* Rich var. *hookeriana* (Juz.) Hultén** (Hämet-Ahti 1965a, citing Hartman 1957) Uncommon, Trophy Mountains, Raft Mountain. Alpine tundra, probably limited to moderately to strongly calcareous rocks and seams.

***Drymocallis arguta* (Pursh) Rydb. sensu stricto** Rare, Natural Bridge. On rocks at base of cliff near waterfall. First record of this species in its strict sense from BC; previous applications of the name equal *D. convallaria*. *Björk 21873*. Syn. *Potentilla arguta* Pursh ssp. *arguta*.

***Drymocallis convallaria* (Rydb.) Rydb.** Rare, Vavenby, Grouse Creek Notch. Grassy, open, dry slope on limestone at low elevations, and a rock outcrop complex at middle elevations. Accounts for previous records of *Drymocallis arguta* (syn. *Potentilla arguta*) in BC. Syn. *Potentilla arguta* Pursh ssp. *convallaria* (Rydb.) Keck

***Drymocallis pseudorupestris* (Rydb.) Rydb.** Rare, Raft River Canyon, cliffs over Spahats Creek. On cliffs at middle elevations. *Goward 81-245*. Syn. *Potentilla glandulosa* Lindl. var. *pseudorupestris* (Rydb.) Breitung

***Fragaria vesca* L. var. *bracteata* (A.A. Heller) Davis** (Hämet-Ahti 1965a) Common. Forests at low to middle elevations.

***Fragaria virginiana* Duchesne var. *glauca* S. Wats.** (Hämet-Ahti 1965a) Common. Open and moderately densely forested habitats at low elevations.

***Fragaria virginiana* Duchesne var. *platypetala* (Rydb.) C.L. Hitchc.** (Hämet-Ahti 1965a) Uncommon, Stevens Lakes, Battle Mountain, Trophy Mountains. Meadows and open forest at middle to high elevations.

***Geum aleppicum* Jacq.** Uncommon, Clearwater River, Murtle River, Placid Lake. Around wetlands at low elevations.

Geum macrophyllum* Willd. var. *macrophyllum Uncommon, Clearwater River, Nakiska Ranch area. In and around wetlands at low elevations.

***Geum macrophyllum* Willd. var. *perincisum* (Rydb.) Raup** (Hämet-Ahti 1965a, as *G. cf. oregonense* (Scheutz) Rydb.) Common. Moist and wet habitats at low to middle elevations.

Geum aleppicum x macrophyllum Occasional. Around wetlands at low elevations.

***Luetkea pectinata* (Pursh) Kuntze** (Hämet-Ahti 1965a) Common. Open and lightly forested sites at high elevations.

****Malus pumila* Mill.** Uncommon, Third Canyon, Majerus Farm, Hemp Creek. Escape from cultivation, and persistent around old homesteads. *Goward 81-862*.

****Potentilla argentea* L.** Occasional. Weed of disturbed habitats, low to middle elevations. *Goward 81-777, 81-825, 86-165*.

***Potentilla biennis* E. Greene** Rare, Natural Bridge. At cliff base near waterfall.

***Potentilla drummondii* Lehm.** Rare, MacDougall Lake lava flows. Open, rocky habitat at middle elevations, to be expected in subalpine meadows also. *Goward 81-613*.

Potentilla glaucophylla* Lehm. ssp. *glaucophylla (Hämet-Ahti 1965a, as *P. diversifolia* var. *diversifolia*) Occasional. Open, alpine and upper subalpine habitats. *Goward 81-393, 81-435, 81-567, Björk 11698*.

***Potentilla gracilis* Dougl. ex Hook. ssp. *fastigiata* (Nutt.) S. Wats.** (Hämet-Ahti 1965a, as var. *nuttallii*) Rare, Hemp Creek, Clearwater Lake. Disturbed meadows at low elevations. *Goward 81-632*.

***Potentilla hyparctica* Malte** (Hämet-Ahti 1965a, as *P. emarginata*, or this record perhaps to be referred instead to *P. nana*) Uncommon or rare, Battle Mountain, Trophy Mountains. Alpine tundra. The plants seen by us are apparently var. *hyparctica*, which is the more northern variety, and would be unexpected for so far south. *Potentilla nana* Willd. ex Schlecht. misapplied.

***Potentilla norvegica* L.** (Hämet-Ahti 1965a) Common. Moist sites, often where disturbed. *Goward 81-206, 81-335, 81-824, 88-248*.

****Potentilla recta* L.** Uncommon, Clearwater, Vavenby, Edgewood. Weed of dry, disturbed habitats *Goward 81-849, 86-202*.

***Potentilla subvahliana* Jurtz.** Uncommon. Trophy Mountains, Raft Mountain. Cliff ledges and tundra in the alpine and upper subalpine. *Björk 12093*. *Potentilla villosa* Pall. ex Pursh misapplied.

Potentilla argentea x recta Uncommon, North Thompson Regional Park, Avola, Edgewood. Roadside weed. *Björk 16178*. Not always growing with the presumed parent species.

***Prunus emarginata* (Dougl. ex Hook.) Dietr.** (Hämet-Ahti 1965a) Occasional. Rocky sites at low to middle elevations.

***Prunus pensylvanica* L.** (Hämet-Ahti 1965a) Occasional. Open forest and clearings at low elevations.

***Prunus virginiana* L.** (Hämet-Ahti 1965a) Common. Various open and lightly forested habitats at low elevations. *Goward 81-586, 89-40*, *Björk 14941*.

***Rosa acicularis* Lindl. ssp. *sayi* (Schwein.) W.H. Lewis** (Hämet-Ahti 1965a) Common. Open and moderately forested habitats at low elevations.

***Rosa gymnocarpa* Nutt.** (Hämet-Ahti 1965a) Occasional. Conifer forest at low elevations. *Goward 81-329, 91-445*.

***Rosa nutkana* Presl** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Clearwater Lake, Ray Farm, Clearwater River. Forest clearings and other open habitats at low elevations. Work remains to correctly assign populations to this species versus *R. acicularis* and *R. woodsii* in the flora area.

***Rosa rugosa* Thunb.** Rare, Ray Farm. Persisting from an old planting. *Goward 86-193*.

***Rosa woodsii* Lindl.** (Hämet-Ahti 1965a as *cf.*) Rare, Blue River, Shadden. On talus at base of cliffs, low elevations. *Goward 93-28*.

***Rubus arcticus* L.** (Hämet-Ahti 1965a, as *R. paracaulis*) Uncommon, Stevens Lakes, Murtle Lake, Blue River, Placid Lake. Bogs and fens at low to middle elevations. *Björk 9150*.

***Rubus idaeus* L. var. *gracilipes* Jones** (Hämet-Ahti 1965a, as var. *sachalinensis*) Common. Various open and lightly forested habitats at low elevations. *Goward 90-1165*. The varieties given here comply with usage in Hitchcock & Cronquist (1973), while in Douglas et al. 1999, all BC material is assigned the name *R. idaeus* var. *strigosus*. In order to account for the distinctions seen by Hämet-Ahti (1965a) between *R. idaeus* and *R. viburnifolius*, we maintain the use of two varieties of *R. idaeus*, with *R. viburnifolius* placed under synonymy to *R. idaeus* var. *peramoenus*. The *R. idaeus* complex requires systematic study throughout its global range.

***Rubus idaeus* L. var. *peramoenus* (E. Greene) Fern.** (Hämet-Ahti 1965a, as *R. viburnifolius*) Apparently rare, Murtle Lake. On boulder bed at low elevations. Not seen by us.

***Rubus leucodermis* Dougl. ex Torr. & A. Gray** Rare, near Clearwater. Forest margins, low elevations. Possibly introduced. *Goward 92-266*.

***Rubus parviflorus* Nutt.** (Hämet-Ahti 1965a) Common. Forest and forest clearings at low to middle elevations.

***Rubus pedatus* J.E. Smith** (Hämet-Ahti 1965a) Common. Subalpine forest, uncommon in lower elevation conifer forest.

***Rubus pubescens* Raf.** (Hämet-Ahti 1965a) Common. Moist conifer-deciduous or pure deciduous forest, and around wetlands, low elevations. *Goward 81-271*.

Rubus arcticus x pubescens Rare, Placid Lake. Lakeshore fen at low elevations.

***Sanguisorba stipulata* Raf.** Rare, river between Azure and Clearwater Lakes. Riparian forest at low elevations. *Goward 83-761*. *Sanguisorba canadensis* L. misapplied.

***Sibbaldia procumbens* L.** (Hämet-Ahti 1965a) Common. Open, rocky habitats at high elevations. *Goward 81-175, 81-436*.

Sorbus scopulina* E. Greene var. *scopulina (Hämet-Ahti 1965a, without varieties) Occasional. Open forest at low to middle elevations.

Sorbus sitchensis* Roemer var. *sitchensis (Hämet-Ahti 1965a) Occasional. Forest clearings and thickets at high elevations.

***Spiraea douglasii* Hook. var. *menziesii* (Hook.) Presl** (Hämet-Ahti 1965a) Common. Wetlands, forests and clearings at low elevations.

***Spiraea lucida* Dougl.** (Hämet-Ahti 1965a) Common. Forest and clearings at low to middle elevations.

***Spiraea x pyramidata* E. Greene** Uncommon, Trout Creek, Battle Creek Road, Clearwater Lake Campground. Moist sites in open forest and clearings, and along roads. *Goward 87-80*, *Björk 9263*.

RUBIACEAE

***Galium aparine* L.** Rare, Natural Bridge, Vavenby. On talus and cliff ledges, low elevations.

***Galium boreale* L. ssp. *septentrionale* (Roemer & J.A. Schult.) Iltis** (Hämet-Ahti 1965a) Uncommon, Blue River, Ray Farm, Birch Island. *Goward 81-305*.

***Galium trifidum* L. ssp. *subbiflorum* (Wieg.) Puff** (Hämet-Ahti 1965a, as var. *pacificum*) Common. In and around wetlands at low elevations. *Goward 81-403, Björk 9702*.

Galium trifidum* L. ssp. *trifidum (Hämet-Ahti 1965a) Apparently rare, Stevens Lakes, Battle Mountain. Not seen by us. The localities given by Hämet-Ahti suggest that this species occurs in upper montane to subalpine sites.

***Galium triflorum* Michx.** (Hämet-Ahti 1965a) Common. Forests at low elevations. *Goward 81-327, Björk 11388*.

SALICACEAE

***Populus tremuloides* Michx.** (Hämet-Ahti 1965a) Common. Various habitats, low to (less often) middle elevations.

***Populus trichocarpa* Torr. & A. Gray ex Hook.** (Hämet-Ahti 1965a) Common. Mostly in moist sites, low to high elevations.

***Salix alaxensis* (Anderss.) Cov. var. *longistylis* (Rydb.) C.K. Schneid.** Uncommon, Flat Irons, Edgewood. In sylvan pools and around ponds, low elevations. *Björk 16556*.

***Salix arbusculoides* Anderss.** (Hämet-Ahti 1965a) Apparently rare, Murtle Lake. Not seen by us. Alluvial thickets near lake shore.

***Salix arctica* Pall.** Occasional. Alpine and upper alpine tundra and gravel ridges. *Goward 81-395*.

***Salix barclayi* Anderss.** (Hämet-Ahti 1965a) Occasional. Subalpine meadows. *Goward 81-385, 81-680, 88-186*.

***Salix barrattiana* Hook.** Uncommon, Trophy Mountains, Table Mountain. Open habitats, alpine and upper subalpine.

***Salix bebbiana* Sarg.** (Hämet-Ahti 1965a) Occasional. Forest margins, in shrub carrs, and around wetlands, low elevations. *Goward 81-265, 81-317, 81-585*.

***Salix boothii* Dorn** (Hämet-Ahti 1965a, as *S. pseudocordata*) Uncommon, Hemp Creek, Ray Farm. Shrub carrs at low elevations. *Goward 81-318*. Listed Blue (S2S3) by the British Columbia Conservation Data Centre (2011).

***Salix candida* Fluegge ex Willd.** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Murtle Lake, Chain Lakes, Ray Farm, Placid Lake, Foot Lake, Silver Dollar Lake. Calcareous wetlands at low elevations. *Goward 81-266, 81-316, Björk 9674, 11486*.

***Salix cascadensis* Cockerell** (Hämet-Ahti 1965a) Occasional. Alpine tundra and on outcrops in the upper subalpine. *Goward 81-466, 88-192*, *Björk 11673*.

***Salix commutata* Bebb** (Hämet-Ahti 1965a) Occasional. Subalpine thickets and around moderately calcareous wetlands, low to middle elevations.

***Salix discolor* Muhl.** Occasional. Shrub carrs and around wetlands at low elevations. *Goward 81-314*.

***Salix drummondiana* Barratt ex Hook.** (Hämet-Ahti 1965a, as *S. subcoerulea*) Occasional. Shrub carrs and around wetlands at low elevations. *Goward 81-315, 81-557, 81-587a*.

Salix exigua* Nutt. var. *exigua Uncommon, Mahood Lake, Clearwater River. Along river and lake shorelines at low elevations. *Goward 81-474*.

***Salix glauca* L.** Rare, Fight Lake. Shore of subalpine lake. *Goward 81-560*.

Salix lasiandra* Benth. var. *lasiandra (Hämet-Ahti 1965a, both varieties *lancifolia* and *lasiandra*) Occasional. Shrub carrs and around wetlands at low elevations. *Björk 12108*. Syn. *S. lucida* Muhl. ssp. *lasiandra* (Benth.) E. Murray.

***Salix maccalliana* Rowlee** (Hämet-Ahti 1965a) Occasional. Moderately calcareous wetlands at low elevations. *Goward 81-264, 81-578, Björk 11487*.

***Salix melanopsis* Nutt.** Uncommon, Clearwater River at Whitehorse Bluffs, Writing-on-Stone. Along river shores at low elevations. *Goward 81-362*.

***Salix myrtillifolia* Anderss.** Uncommon, Chain Lakes, Placid Lake, Foot Lake. Calcareous wetlands at low elevations.

***Salix nivalis* Hook.** (Hämet-Ahti 1965a) Common. Alpine tundra. *Goward 81-396*.

***Salix pedicellaris* Pursh** (Hämet-Ahti 1965a, as var. *hypoglauca*) Occasional. Bogs and fens at low elevations. *Goward 81-297, 81-579, Björk 9127*.

***Salix planifolia* Pursh** (Hämet-Ahti 1965a) Occasional. Shrub carrs and along creeks at low elevations.

***Salix prolixa* Anderss.** (Hämet-Ahti 1965a, as *Salix mackenzieana*) Uncommon, Blue River, Murtle Lake, Edgewood. Shrub carrs and forest clearings at low elevations.

***Salix pseudomonticola* C.R. Ball** (Hämet-Ahti 1965a, as *S. padophylla*) Rare, Murtle Lake, Foot Lake. Calcareous lake shore thickets at low elevations. *Goward 81-542*.

***Salix scouleriana* Barratt ex Hook.** (Hämet-Ahti 1965a) Occasional. Dry sites in open forests and outcrops at low to middle elevations. *Goward 81-510a.*

***Salix sitchensis* Bong.** (Hämet-Ahti 1965a) Occasional. Shrub carrs, lake shores and avalanche chutes at low to moderately high elevations. *Goward 81-295, 81-319, 81-352, 81-606, Björk 11677*.

Salix barclayi x commutata (Hämet-Ahti 1965a) Rare, Battle Mountain. Reported by Hämet-Ahti from a brookside at high elevations. Not seen by us.

SAPINDACEAE

***Acer glabrum* Torr. var. *douglasii* (Hook.) Dippel** (Hämet-Ahti 1965a) Occasional. Forests, clearings, talus and outcrops at low elevations.

***Acer negundo* L.** (Hämet-Ahti 1965a, as var. *negundo*) Rare, Blackpool. Roadsides at low elevations, and around old homesteads. In recent years, this species has been spreading rapidly north along the North Thompson River from Kamloops, northwards.

SAXIFRAGACEAE

***Chrysosplenium tetrandrum* (Lund) T. Fries** (Hämet-Ahti 1965a) Murtle Lake. Apparently rare, not seen by us.

***Hemieva ranunculifolia* (Hook.) Raf.** (Douglas et al. 2002). Report apparently originated from Raft Mountain. Not seen by us. Syn. *Suksdorfia ranunculifolia* (Hook.) Engl.

Heuchera cylindrica* Dougl. ex Hook. var. *cylindrica (Hämet-Ahti 1965a) Occasional. Cliff ledges, talus and outcrops, low to middle elevations. *Goward 81-916, 91-444*.

***Heuchera glabra* Willd. ex Roemer & J.A. Schult.** (Hämet-Ahti 1965a) Occasional. Shaded cliffs and stream banks, low elevations. *Goward 81-408, 81-529, 83-719, 89-92*.

***Leptarrhena pyrolifolia* (D. Don) R. Br.** (Hämet-Ahti 1965a) Common. Alpine and subalpine meadows, creek shores and around ponds. *Björk 9217, 11671, 21948*.

***Lithophragma glabrum* Nutt.** Rare, Vavenby. Dry, grassy, south-facing slopes at low elevations.

***Lithophragma parvifolium* (Hook.) Torr. & A. Gray** Rare, mouth of Hemp Creek. Open, dry outcrop at low elevations. *Goward 93-6*.

***Micranthes ferruginea* (Graham) Brouillet & Gornall var. *macounii* (Engl. & Irmsch.) comb. ined.** (Hämet-Ahti 1965a) Common. Alpine and subalpine outcrops and other open, rocky sites, rare at low elevations near waterfalls. *Goward 81-456, 81-937, 90-1149b, Björk 9213*. Syn. *Saxifraga ferruginea* Graham var. *macounii* Engl. & Irmsch.

***Micranthes lyallii* (Engl.) Small var. *hultenii* (Calder & Savile) Elven & D.F. Murray** (Hämet-Ahti 1965a) Uncommon, Battle Mountain, Trophy Mountains, Raft Mountain. Open, rocky, moist sites at high elevations. *Goward 89-90, Björk 9235, 11695*. Syn. *Saxifraga lyallii* Engl. ssp. *hultenii* Calder & Savile

***Micranthes nidifica* (E. Greene) Small** Rare, Grouse Creek Notch. Open rock outcrop complex at middle elevations. Syn. *Saxifraga nidifica* (E. Greene) Small.

***Micranthes occidentalis* (S. Wats.) Small** Uncommon, cliffs near Sabretooth Rapids, outcrop near Battle Mountain Road. On mossy cliff ledges at low elevations. *Goward 90-1149a, Björk 12037*. The collection *Goward 81-483* (Alabaster Mountain, on limestone, alpine) is odd in several characters, resembling *Micranthes reflexa*, a northern alpine species. Unfortunately, the specimen is too poor to allow a confident identification. Syn. *Saxifraga occidentalis* S. Wats.

***Mitella breweri* A. Gray** (Hämet-Ahti 1965a) Common. Subalpine forest and meadows. *Goward 81-183, 81-441, Björk 11662*.

***Mitella nuda* L.** (Hämet-Ahti 1965a) Common. Under deciduous trees, less common in pure conifer forest, low elevations. *Goward 81-313, 88-155*.

***Mitella pentandra* Hook.** (Hämet-Ahti 1965a) Rare, Murtle Lake, Huntley-Buchanan Ridge, Kostal Lake. Forest and clearings at middle to high elevations. *B.A. Bohm 1585* (UBC), Trophy Mountains. *Goward 81-498*, *81-619.*

***Mitella trifida* Graham** (Hämet-Ahti 1965a) Hemp Creek. Apparently rare, not seen by us. Mixed conifer-deciduous foreest.

***Saxifraga adscendens* L.** (Hämet-Ahti 1965a, as *Saxifraga oregonensis*) Uncommon, Battle Mountain, Trophy Mountains, Raft Mountain. Moist, rocky habitats in the alpine.

***Saxifraga bronchialis* L. ssp. *austromontana* (Wieg.) Jones** (Hämet-Ahti 1965a) Occasional. Mossy talus and cliff ledges. *Goward 81-465, 81-599*.

Saxifraga cespitosa* L. var. *minima Blank. Rare, Trophy Mountains, Raft Mountain. Alpine tundra and fine scree on calcareous rocks and seams.

***Saxifraga hyperborea* R. Br.** (Hämet-Ahti 1965a, as *S. rivularis* var. *flexuosa*) Uncommon, Battle Mountain, Raft Mountain. Moist, rocky sites in the alpine. *Björk 9234, 11688, 21947*. *Saxifraga rivularis* L. misapplied.

***Saxifraga mertensiana* Bong.** (Hämet-Ahti 1965a) Occasional. Moist sites at middle to high elevations. *Goward 89-91, Björk 9218*.

Saxifraga oppositifolia* L. ssp. *oppositifolia Uncommon, Raft Mountain, Alabaster Mountain. Alpine tundra and cliffs, apparently limited to calcareous rocks and seams. *Goward 81-484, 81-490, 89-102*.

***Saxifraga tricuspidata* Rottb.** Rare, Trophy Mountain. Alpine tundra, apparently limited to calcareous seams. *Goward 84-983*.

***Tellima grandiflora* (Pursh) Lindl.** (Hämet-Ahti 1965a) Rare, Murtle Lake, Clearwater Lake, Azure Lake, Spahats Falls. Old-growth conifer forest at low elevations. *Goward 81-603, 90-1179*.

***Tiarella trifoliata* sensu lato** (Hämet-Ahti 1965a, including also *T. unifoliata*) Common. Forests at low to middle elevations. *Goward 81-594, Björk 11791*.

SCROPHULARIACEAE

***Verbascum thapsus* L.** Occasional. Roadside weed at low elevations.

SOLANACEAE

***Solanum americanum* Miller** Rare, Clearwater. Waif in gardens at low elevations.

***Solanum sarrachoides* Sendt.** Rare, Whitehorse Bluffs, Raft Canyon. Open, dry sites. Perhaps native, but dependent on natural disturbance. *Goward 81-915, 82-1470*.

URTICACEAE

***Parietaria pensylvanica* B.D. Hinton** Rare, Shadden, Natural Bridge, Eye-of-the-Needle, Vavenby. Cliff ledges at low elevations. *Goward 93-455, Björk 11422*.

***Urtica dioica* L.** (Hämet-Ahti 1965a, as *U. gracilis* and *U. lyallii*) Common. Forest and moist clearings at low to middle elevations.

VALERIANACEAE

***Valeriana sitchensis* Bong.** (Hämet-Ahti 1965a) Common. Subalpine meadows, uncommon in forests at low elevations.

VIOLACEAE

Viola adunca* Small var. *adunca (Hämet-Ahti 1965a) Occasional. Open forest, clearings, cliffs, talus, meadows and other open habitats. *Björk 11420*.

***Viola arvensis* Murr.** Rare, Clearwater. Garden escape, low elevations. *Goward 81-958*.

***Viola canadensis* L. ssp. *rugulosa* (E. Greene) C.L. Hitchc.** (Hämet-Ahti 1965a) Occasional. Moist sites in forest under deciduous trees. *Goward 81-310, 83-789*.

***Viola epipsila* Ledeb. ssp. *repens* (Turcz.) W. Beck.** (Hämet-Ahti 1965a) Occasional. Wet sedge meadows at high elevations.

***Viola glabella* Nutt.** (Hämet-Ahti 1965a) Occasional. Wet sites in forest, low to middle elevations. *Goward 81-589*.

***Viola langsdorfii* (Regel) Fisch.** Rare, Ray Farm. Understory of open old-growth forest at margins of a meadow, low elevations. The plants of this population are intermediate between *V.*

langsdorfii and *V. labradorica*. Like the former, it has green rather than purplish leaves and laciniate rather than entire stipules. Like the latter, it grows from a stout rootstock rather than from thin stolons, its leaves are adaxially hirtellous rather than glabrous, and the stipules are glandular along the margins. Though the plants are perhaps closer morphologically to *V. labradorica*, we chose to attribute the name *V. langsdorfii*, as *V. labradorica* is not known from western North America. The population is, however, also out of range for *V. langsdorfii*, a coastal species.

***Viola macloskeyi* Lloyd** Common. Various wetlands, low to middle elevations.

***Viola nephrophylla* E. Greene** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Clearwater Springs, Gateway Bog. Wetlands at low elevations. *Goward 81-582, 90-1154, Björk 11471*.

***Viola orbiculata* Geyer ex Holtz.** (Hämet-Ahti 1965a) Common. Conifer forest at middle to high elevations. *Goward 94-24*.

Viola palustris* L. var. *palustris Uncommon, Edgewood West, Foot Lake, Hemp Creek Canyonlands, Chain Lakes. Wetlands at low elevations. *Goward 81-573, 89-33, Björk 9134*.

***Viola renifolia* A. Gray** (Hämet-Ahti 1965a) Occasional. Forest understory, mostly under deciduous trees, low elevations. *Goward 89-35*. Hämet-Ahti reports both var. *brainerdii* and var. *renifolia*. We hesitate to accept these varieties for BC pending further taxonomic work. Some or all BC populations have characters not known in either of the named varieties

***Viola selkirkii* Pursh ex Goldie** (Hämet-Ahti 1965a) Uncommon, Blue River, Natural Bridge, Edgewood West. Wetlands, on mossy talus, and forest understory at low elevations. *Björk 21876*.

****Viola tricolor* L.** Rare, Clearwater, Edgewood. Weed in disturbed sites, low elevations. *Goward 81-811*.

VISCACEAE

***Arceuthobium americanum* Engelm.** (Hämet-Ahti 1965a) Rare, Blue River, Murtle Lake, Spahats Falls. On twigs of *Pinus contorta* at low elevations.

MONOCOLPATES

MONOCOLPATE DICOTS

ARISTOLOCHIACEAE

***Asarum caudatum* Lindl.** Occasional. Forests at low elevations, mostly in old-growth on moist, nitrogen-rich soil.

MONOCOTS

ALISMATACEAE

***Alisma triviale* Pursh** Rare, Majerus Farm, marsh near Clearwater Dump. Shallow water and shorelines at low elevations. *Goward 93-37, Björk 9259*. *Alisma plantago-aquatica* L. misapplied.

***Sagittaria cuneata* E. Sheldon** Rare, Alice Lake, Ray Farm. Shallow water of lakes and marshes. *Goward 81-210, 86-220*.

ALLIACEAE

****Allium cepa* L.** Rare, Ray Farm. Persisting after cultivation around old homesteads.

***Allium cernuum* Roth** (Hämet-Ahti 1965a) Occasional. Rock outcrops and along river shores, low elevations.

ARACEAE

***Calla palustris* L.** Rare, marsh near Clearwater Dump. Open marsh, low elevations. *Björk 9237, 9742*.

***Lemna minor* L.** Uncommon, Edgewood, Millers Pond. Floating on open water of ponds at low elevations. *Goward 81-909*.

***Lemna trisulca* L.** Rare, Millers Pond, marsh near Clearwater Dump, Alice Lake. Shallowly submerged in open water of ponds and marshes at low elevations. *Goward 81-908*.

***Lemna turionifera* Landolt** Rare, Silver Dollar Lake. Floating on open water of ponds at low elevations. *Björk 17670*.

***Lysichiton americanus* Hultén & H. St. John** (Hämet-Ahti 1965a) Common. Swamps and marshes, and around wetlands, low elevations.

***Spirodela polyrhiza* (L.) Schleiden** Uncommon, Millers Pond, Edgewood, marsh near Clearwater Dump. Floating on open water of ponds at low elevations. *Goward 81-907*.

ASPARAGACEAE

***Asparagus officinalis* L.** Rare, Birch Island. Open, dry sites at low elevations, spread by birds passing the seeds after eating the fruits. *Björk 11362*.

***Maianthemum canadense* Desf.** (Hämet-Ahti 1965a) Uncommon, Blue River, Maianth Falls. Cold forests and bogs, and near a waterfall at low elevations. *Goward 88-163, Björk 9164*.

***Maianthemum racemosum* (L.) Link var. *amplexicaule* (Nutt.) LaFrankie** (Hämet-Ahti 1965a) Common and widespread. Forests at low elevations. Syn. *Smilacina racemosa* (L.) Desf. var. *amplexicaulis* (Nutt. ex Baker) S. Wats.

***Maianthemum stellatum* (L.) Link** (Hämet-Ahti 1965a, as both *Smilacina liliacea* and *S. stellata*) Uncommon, Hemp Creek, Murtle Lake. Forests and clearings at low elevations. Syn. *Smilacina stellata* (L.) Desf.

COLCHICACEAE

***Disporum hookeri* (Torr.) G. Nicholson** (Hämet-Ahti 1965a) Occasional. Open forests and clearings, low elevations. *Goward 90-1118*. Syn. *Prosartes hookeri* Torr.

***Disporum trachycarpum* (S. Wats.) Benth. & Hook. f.** Occasional. Open forests and clearings, low elevations. Syn. *Prosartes trachycarpa* S. Wats.

CYPERACEAE

***Carex adusta* Boott** Rare, Natural Bridge. Mossy talus, low elevations. *Björk 21902*. Listed Red (S1) by the BC Conservation Data Centre (2011).

***Carex albonigra* Mack.** Rare, Trophy Mountains. Alpine tundra.

***Carex amplifolia* Boott** Rare, forest near Sabretooth Rapids. Muddy drainage in old-growth forest at low elevations.

Carex aquatilis* Wahl. var. *aquatilis (Hämet-Ahti 1965a, as var. *altior*) Common. Various wetlands, low to high elevations. *Björk 9123, 11491*.

***Carex aquatilis* Wahl. var. *substricta* Kük.** Occasional. Calcareous wetlands at low elevations.

***Carex arcta* Boott** Rare, Edgewood West, marsh near Clearwater Dump. Sylvan pools and marsh at low elevations. *Björk 9741, 17814, 21996*.

***Carex atherodes* Spreng.** Rare, Murtle River. Sedge fringe vegetation of river shoreline at low elevations. *Björk 9691, 9268*.

***Carex aurea* Nutt.** (Hämet-Ahti 1965a) Uncommon, Clearwater Lake, Philip Creek, Placid Lake, Gateway Bog. Wet and dry meadows, sedge-fringe shorelines, and shrub carrs at low elevations. *Goward 79-1370, Björk 9182, 9684, 11475*.

Carex brunnescens* (Pers.) Poir. ssp. *brunnescens (Hämet-Ahti 1965a, as ssp. *alaskana* Kalela) Occasional. Moist forest, on mossy rocks, and in and around wetlands, low elevations. *Goward 84-888, Björk 11398*.

***Carex brunnescens* (Pers.) Poir. ssp. *sphaerostachya* (Tuck.) Kalela** (Hämet-Ahti 1965a). Uncommon, Edgewood, Hemp Creek, Murtle Lake. Occurrence of this subspecies in western North America is apparently not otherwise recognized currently. The authors agree with Hämet-Ahti that it is present in the study area. However, we find it to be uncommon, while Hämet-Ahti indicated that it is abundant.

***Carex buxbaumii* Wahlenb.** (Hämet-Ahti 1965a) Rare, Murtle Lake, Chain Lakes. Calcareous marshes at low elevations.

Carex canescens* L. var. *canescens (Hämet-Ahti 1965a) Occasional. Wetlands at low elevations. *Goward 87-68*.

***Carex canescens* L. var. *disjuncta* (Fern.) Toivonen** Rare, Edgewood. Pond margins at low elevations. *Björk 11636*. This population is the only one known in western North America. It may be disjunct from as far as the Great Lakes region, or it could be of independent origins out of western populations of var. *canescens*. Further study is merited.

***Carex capillaris* L.** Rare, Vavenby. Forest understory and around wetlands, on calcareous substrates, low elevations.

***Carex capitata* L.** Rare, Trophy Mountains. Alpine tundra. *Goward 84-974, 84-986, Björk 12025*.

***Carex chordorrhiza* Ehrh. ex L. f.** (Hämet-Ahti 1965a) Rare, Murtle Lake, Cranberry Lake. Bogs and fens, probably where at least moderately calcareous. *Goward 81-610*.

***Carex comosa* Boott** Rare, reported from Clearwater. Not seen by us. Listed Red (S1) by the BC Conservation Data Centre (2011).

***Carex concinna* R. Br.** Rare, Vavenby. Forest on limestone, low elevations.

***Carex concinnoides* Mack.** Occasional. Forest at low to middle elevations.

***Carex cordillerana* Saarela & B.A. Ford** Rare, Natural Bridge. Cliff base near waterfall. *Carex backii* Boott misapplied.

***Carex crawfordii* Fern.** (Hämet-Ahti 1965a) Common. In and around wetlands at low elevations, also an occasional garden weed. *Goward 84-890, Björk 9246, 9268*.

***Carex cusickii* Mack. ex Piper & Beattie** Uncommon, Edgewood, Ray Farm, Chain Lakes, Gateway Bog. Marshes and pond margins, low elevations. *Goward 88-197, Björk 9382, 11489, 21879*.

***Carex deflexa* Hornem. ssp. *boothii* L.H. Bailey** Occasional. Open forest, rock outcrops and clearings, low elevations.

Carex deflexa* Hornem. ssp. *deflexa (Hämet-Ahti 1965a) Occasional. Open forest and clearings, low elevations.

***Carex deweyana* Schwein.** (Hämet-Ahti 1965a) Uncommon, Hemp Creek. Moist understory of deciduous or mixed forest, low elevations.

***Carex diandra* Schrank** (Hämet-Ahti 1965a) Common. In and around wetlands at low elevations. *Björk 11499*.

***Carex disperma* Dewey** (Hämet-Ahti 1965a) Occasional. Moist sites in forests and around wetlands, low elevations. *Goward 83-778, Björk 9244*.

Carex echinata* Murray ssp. *echinata (Hämet-Ahti 1965a, as *C. cephalantha*) Uncommon, Murtle Lake, Edgewood, Gateway Bog. Bogs and marshes at low elevations. *Björk 11397*. *Carex muricata* L. misapplied.

***Carex exsiccata* L.H. Bailey** (Hämet-Ahti 1965a) Rare, Murtle Lake, near Clearwater Dump. Sylvan pool at low elevations. *Björk 17811*.

***Carex flava* L.** Uncommon. Murtle Lake, Bailey's Chute area. Calcareous river shores, bogs and fens. *Björk 9425, 12110*.

***Carex foenea* Willd.** (Hämet-Ahti 1965a, as *C. aenea*) Uncommon, Hemp Creek, Philip Creek, Natural Bridge. Open sites on coarse soil or mosses over talus, low elevations. *Björk 9122, 21900*. Syn. *Carex aenea* Fern.

Carex garberi* Fern. ssp. *garberi Rare, Edgewood. Moist swales in weedy meadow. *Goward 87-69.*

***Carex gynocrates* Wormsk. ex Dreyer** Rare, Placid Lake. Calcareous fen, low elevations. *Björk 9693*. Syn. *Carex dioica* L. ssp. *gynocrates* (Wormsk. ex Dreyer) Hultén.

***Carex hassei* L.H. Bailey** Rare, Birch Island. Moist aspen grove over limestone, low elevations. *Björk 21975*. *Carex aurea* Nutt. misapplied.

***Carex heleonastes* L.** (Hämet-Ahti 1965a) Murtle Lake, Stevens Lakes. Apparently rare, not seen by us. Listed Blue (S2S3) by the BC Conservation Data Centre (2011).

***Carex hoodii* Boott** Uncommon, Ray Farm, Hemp Creek, Birch Island. Meadows and forest clearings, low to moderately high elevations. *Goward 81-269, 81-322*.

***Carex illota* L.H. Bailey** (Hämet-Ahti 1965a) Occasional. Subalpine meadows. *Goward 81-582, 89-76*.

***Carex interior* L.H. Bailey** Uncommon, Murtle Lake, Ray Farm, Edgewood, Gateway Bog, Foot Lake. Various wetlands at low elevations. *Goward 81-325, 81-575, Björk 9424, 11482.*

***Carex lachenalii* Schkuhr** Uncommon, Trophy Meadows, Blue River. Open, subalpine habitats. *Björk 9161, 11669*.

***Carex laeviculmis* Meinsh.** (Hämet-Ahti 1965a) Uncommon, Murtle Lake, Edgewood West, Hemp Creek Canyonlands, Natural Bridge. Low elevation forest. *Goward 81-167, Björk 21893*.

***Carex lasiocarpa* Ehrh. ssp. *americana* (Fern.) Hultén** (Hämet-Ahti 1965a) Rare, Murtle Lake, Edgewood. Marshes, fens and bogs, low elevations.

Carex lenticularis* Michx. var. *lenticularis (the report of *C. kelloggii* in Hämet-Ahti 1965a may belong here) Rare, Edgewood West. Sylvan pool, low elevations. *Björk 21995*. Listed Red (S2) by the BC Conservation Data Centre (2011).

***Carex lenticularis* Michx. var. *lipocarpa* (T. Holm) L.A. Standley** Occasional. In and around wetlands, low to moderately high elevations. *Goward 81-442, 87-61*.

***Carex leporinella* Mack.** Rare, Philip Creek at bridge. Sandy creek margins, low elevations.

***Carex leptalea* Wahlenb.** (Hämet-Ahti 1965a) Occasional. Around bogs and fens, and in swamps, low elevations. *Björk 11495*.

***Carex leptopoda* Mack.** Occasional. Moist forest understory, low elevations. *Björk 11411*.

***Carex limosa* L.** (Hämet-Ahti 1965a) Uncommon, Murtle Lake, Battle Mountain, Fish Lake, Blue River, Shadow Lake, Chain Lakes. Fens, low elevations. *Goward 81-683, Björk 9132, 9412*.

***Carex livida* (Wahl.) Willd.** Uncommon, Chain Lakes, Placid Lake, Blue River area. Moderately to strongly calcareous fens, low elevations. *Björk 9682, 9162*.

***Carex loliacea* L.** Rare, Placid Lake. Margins of calcareous fen, low elevations. *Björk 9714*.

***Carex luzulina* Olney** Uncommon, Trophy Mountains. Subalpine meadows. *Goward 84-910*.

***Carex macloviana* d'Urv.** Occasional. In and around wetlands, low elevations. *Björk 21949, 21993*.

***Carex macrochaeta* C.A. Meyer** (Hämet-Ahti 1965a) Rare, Battle Mountain. Rocky, open sites at high elevations. Not seen by us.

***Carex magellanica* Lam. ssp. *irrigua* (Wahl.) Hiitonen** (Hämet-Ahti 1965a, as *C. paupercula*) Occasional. Fens, bogs and marshes, low elevations. *Goward 81-416, Björk 9686*. Syn. *C. paupercula* Michx.

***Carex mertensii* J.D. Prescott ex Bong.** (Hämet-Ahti 1965a) Common. Subalpine forest and clearings, less common at lower elevations. *Goward 88-255, Björk 9119*.

***Carex micropoda* C.A. Mey.** (Hämet-Ahti 1965a, as *C. pyrenaica*, but see notes there under) Occasional. Moist, open habitats in the alpine and upper subalpine. *Goward 81-478, 88-219*. Syn. *Carex pyrenaica* Wahl. ssp. *micropoda* (C.A. Mey.) Hultén

***Carex microptera* Mack.** (Hämet-Ahti 1965a, as *C. festivella*) Uncommon, Murtle River, Battle Mountain. Moist sites in meadows and around wetlands, low elevations.

***Carex nardina* Fries** Occasional. Open, rocky sites in the alpine and upper subalpine. *Goward 84-973*, *Björk 12034, 12098*.

***Carex nigricans* C.A. Mey.** (Hämet-Ahti 1965a) Common. Moist, open habitats in the alpine and subalpine. *Goward 81-712, Björk 9210, 21946*.

***Carex pachystachya* Cham. ex Steud.** (Hämet-Ahti 1965a) Occasional. Moist, open habitats, low elevations. *Björk 9184*.

***Carex pauciflora* Lightf.** (Hämet-Ahti 1965a) Occasional. Bogs at low elevations. *Goward 81-684, 83-780, Björk 9262*.

***Carex peckii* Howe** (Hämet-Ahti 1965a) Hemp Creek. Apparently rare, not seen by us.

***Carex phaeocephala* Piper** (Hämet-Ahti 1965a) Occasional. Open sites on well drained soil, alpine and subalpine.

***Carex praeceptorum* Mack.** (Hämet-Ahti 1965a) Uncommon, Battle Mountain, Trophy Mountains. Heaths at alpine and upper subalpine elevations. *Goward 89-78*. Listed Red (S1S3) by the BC Conservation Data Centre (2011).

***Carex prairea* Dewey** Rare, Clearwater. Marshy pond shore at low elevations. *Goward 81-543, 81-574*.

***Carex praticola* Rydb.** Rare, Philip Creek, south end of Clearwater Lake, Vavenby. Open, dry habitat such as lava flows, at low elevations. *Goward 81-303, 88-147, 88-151, Björk 11386*.

***Carex retrorsa* Schwein.** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Edgewood, near Clearwater Dump, Clearwater River. Sylvan pools, marshes and sloughs, low elevations. *Björk 9271, 11635, 17812*.

***Carex rossii* Boott** (Hämet-Ahti 1965a) Common. Open, dry forest, outcrops and clearings, low to high elevations. *Goward 81-554, Björk 11657*.

***Carex rostrata* Stokes** (Hämet-Ahti 1965a) Battle Mountain. Apparently rare, not seen by us.

Carex sartwellii* Dewey var. *sartwellii Rare, south end of Green Mountain. Warm, dry, south-facing slope at low elevations.

***Carex saxatilis* L.** Uncommon, Murtle Lake, Azure Lake, Murtle River. River shore sedge fringes, low elevations. *Goward 81-514, 81-698*.

***Carex scirpoidea* Michx. ssp. *pseudoscirpoidea* (Rydb.) D.A. Dunlop** Uncommon, Trophy Mountains. Open habitats at high elevations.

Carex scirpoidea* Michx. ssp. *scripoidea Rare, Raft Mountain. Various open habitats at high elevations.

***Carex scopulorum* T. Holm var. *prionophylla* (T. Holm) L.A. Standley** Rare, near Clearwater Dump. Sylvan pool, low elevations. *Björk 17806*. Listed Red (S1S2) by the BC Conservation Data Centre (2011).

***Carex sitchensis* Prescott** (Hämet-Ahti 1965a) Occasional. Various acidic wetlands at low elevations. *Goward 81-419, 89-75, Björk 9178, 9154.* Syn. *Carex aquatilis* Wahlenb. var. *dives* (Holm) Kükenth.

***Carex spectabilis* Dewey** (Hämet-Ahti 1965a) Common. Moist, open or forested habitats at high elevations. *Goward 81-711, 84-908, Björk 11653*.

Carex stipata* Muhl. ex Willd. var. *stipata (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Bailey's Chute, Marsh near Clearwater Dump, Edgewood. Marshes, low elevations. *Goward 88-157, Björk 9270*.

***Carex stylosa* C.A. Mey** Uncommon, Philip Lake, Caligata Lake, Trophy Meadows. Moist sites in open subalpine forest. *Björk 9226, 9705, 11652*.

***Carex tahoensis* Smiley** Rare or uncommon, Wavecrest Peak. Alpine tundra. *Goward 81-501*.

***Carex tenera* Dewey** Rare, Hemp Creek. Marshes at low elevations. The form present differs from those in northern BC in having a nodding inflorescence with long gaps between the spikelets, and wider perigynia. Listed Blue (S2S3) by the BC Conservation Data Centre (2011).

***Carex tenuiflora* Wahlenb.** Hämet-Ahti 1965a) Rare, Edgewood, Murtle Lake. Marsh at pond edge at low elevations. The population known to us has disappeared since we found it in 2004.

***Carex trisperma* Dewey** (Hämet-Ahti 1965a) Rare, Murtle Lake, Edgewood West, Blue River, Murtle Lake. Bogs and fens, low elevations. *Björk 9175*.

***Carex utriculata* Boott** (Hämet-Ahti 1965a, as *C. rostrata* var. *utriculata*) Common. Marshes and fens at low elevations. *Goward 81-324, Björk 11501*.

***Carex vaginata* Tausch** Rare, Foot Lake. Margins of a calcareous fen, low elevations. *Goward 81-576*.

***Carex vesicaria* L.** Rare, Azure Lake, Murtle River. Marshes and sedge-fringe vegetation of river shores, low elevations. *Goward 81-401, Björk 9721*.

***Carex viridula* Michx.** Uncommon, Azure Lake, Murtle Lake, Clearwater River. Various moderately calcareous wetlands, but especially along river shores. *Goward 81-697, Björk 9713, 12111*.

Carex canescens x praeceptorum (Hämet-Ahti 1965a). Battle Mountain. Apparently rare, not seen by us.

Carex canescens x tenuiflora (Hämet-Ahti 1965a) Murtle Lake. Apparently rare, not seen by us.

Carex saxatilis* x *rostrata (Hämet-Ahti 1965a) Battle Mountain. Apparently rare, not seen by us.

***Dulichium arundinaceum* (L.) Britt.** Rare, Edgewood West. Marshes at low elevations. *Björk 9707*.

***Eleocharis acicularis* (L.) Roemer & J.A. Schult.** (Hämet-Ahti 1965a) Rare, Stevens Lakes, Murtle Lake. Muddy lake shores at low elevations. *Goward 81-519*.

***Eleocharis compressa* Sullivant var. *acutisquama* (Buckley) S.G. Smith** (Hämet-Ahti 1965a) Hemp Creek. Apparently rare, not seen by us. *Eleocharis tenuis* (Willd.) J.A. Schult. misapplied.

***Eleocharis elliptica* Kunth** Rare, Placid Lake, Gateway Bog. Calcareous fens and bogs, low elevations. *Björk 9679, 11497*. *Eleocharis tenuis* (Willd.) J.A. Schult. misapplied. Listed Blue (S2S3) by the British Columbia Conservation Data Centre (2011).

***Eleocharis erythropoda* Steud.** Occasional. Marshes and shores, low elevations. *Eleocharis palustris* misapplied.

***Eleocharis mamillata* (H. Lindb.) H. Lindb.** Rare, marsh near Clearwater Dump. Marsh at low elevations. *Björk 21913*. *Eleocharis palustris* misapplied.

***Eleocharis palustris* (L.) Roemer & J.A. Schult.** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Murtle Lake, near Clearwater Dump. Marshes and shores, low elevations. *Björk 17813*.

***Eleocharis quinqueflora* (Hartm.) O. Schwartz** (Hämet-Ahti 1965a, as *E. fernaldii*) Rare, Stevens Lakes, Ray Farm. On travertine of mineral spring, low elevations. *Goward 81-268, Björk 17826*.

***Eleocharis uniglumis* (Link) Schultes** Rare, Placid Lake. Calcareous fen, low elevations. *Eleocharis palustris* misapplied.

***Eriophorum angustifolium* Honck.** (Hämet-Ahti 1965a) Occasional. Bogs, fens and marshes, low to high elevations. *Goward 81-296*, *Björk 9125, 9413*.

***Eriophorum chamissonis* C.A. Mey.** (Hämet-Ahti 1965a) Uncommon, Stevens Lakes, Murtle Lake, Edgewood West, Trophy Mountains. Bogs, low elevations. *Goward 83-782*.

***Eriophorum gracile* W.D.J. Koch ex Roth** (Hämet-Ahti 1965a) Uncommon, Murtle Lake, Stevens Lakes, marsh near Clearwater Dump, Edgewood West. Marshes, low elevations. *Björk 9252*.

***Eriophorum viridicarinatum* (Engelm.) Fern.** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Blue River, Gateway Bog. Calcareous bogs and fens, low elevations. *Björk 9157, 11500*.

***Rhynchospora alba* (L.) Vahl** Occasional. Fens, low elevations. *Björk 9824*.

***Schoenoplectus acutus* (Muhl. ex Bigel.) Á. Löve & D. Löve** Rare, Placid Lake, Chain Lakes. Calcareous fens and lake shores, low elevations. *Björk 9675*. Syn. *Scirpus acutus* Muhl.

***Scirpus atrocinctus* Fern.** Uncommon, Blue River area. Sedge-fringe vegetation along river shore, low elevations. *Björk 17818*.

***Scirpus cyperinus* (L.) Kunth** Rare, marsh near Clearwater Dump. Marsh at low elevations. *Björk 9267*. *Scirpus atrocinctus* misapplied in part.

***Scirpus microcarpus* J. Presl & C. Presl** (Hämet-Ahti 1965a) Common. Marshes, fens, and wet soil in forests, low elevations. *Goward 81-306*.

***Trichophorum alpinum* (L.) Pers.** (Hämet-Ahti 1965a, as *Scirpus hudsonianus*) Rare, Murtle Lake, Chain Lakes. Calcareous bogs at low elevations. *Björk 9141*. Syn. *Scirpus hudsonianus* (Michx.) Fern.

***Trichophorum cespitosum* (L.) Schur** (Hämet-Ahti 1965a, as *Scirpus cespitosus*) Common. Moist, open sites at high elevations. *Goward 81-299, Björk 11493, 11498*. Syn. *Scirpus cespitosus* L.

***Trichophorum pumilum* (Vahl) Schinz & Thell.** Rare, Placid Lake. Calcareous fen at low elevations. *Björk 11496*. Listed Blue (S2S3) by the British Columbia Conservation Data Centre (2011). Syn. *Scirpus pumilus* S. Wats.

IRIDACEAE

****Iris* x *germanica* L.** Rare, Birch Island. Persisting where dumped with yard waste, low elevations.

Sisyrinchium montanum* E. Greene var. *montanum (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Birch Island, Edgewood. Meadows, clearings and outcrops. Said by Hämet-Ahti to be naturalized, but the flora area is within the geographical range of the species, and clearly natural populations are present. *Sisyrinchium angustifolium* Mill. misapplied.

JUNCACEAE

***Juncus articulatus* L.** Uncommon, Ray Farm, Clearwater River. Travertine around mineral spring, and river shores at low elevations. *Björk 9697*.

Juncus bufonius* L. var. *bufonius (Hämet-Ahti 1965a) Rare, Murtle River, Ray Farm, Edgewood. On travertine of mineral spring, also in disturbed sites, low elevations. *Goward 81-836, Björk 17822*.

Juncus drummondii* E. Meyer var. *drummondii (Hämet-Ahti 1965a) Common. Various open habitats at high elevations. *Goward 89-69*.

***Juncus effusus* L. var. *gracilis* Hook.** Rare, Placid Lake. Calcareous fen at low elevations. *Björk 9673*.

****Juncus effusus* L. var. *pacificus* Fern. & Wieg.** Rare, south end of Clearwater Lake. Open, moist habitat around a campground, low elevations. *Goward 81-687*.

Juncus ensifolius* Wikstr. var. *ensifolius (Hämet-Ahti 1965a) Occasional. In and around wetlands and moist, disturbed sites in forests, low to middle elevations. *Goward 81-136*.

***Juncus ensifolius* Wikstr. var. *montanus* Buch.** Occasional. In and around wetlands, especially where disturbed. Low elevations. *Goward 81-429*. Syn. *Juncus saximontanus* A. Nels.

***Juncus filiformis* L.** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Stevens Lakes, Battle Mountain, Murtle River, south end of Clearwater Lake. River and lake shores, and in marshes, low elevations. *Goward 83-595, Björk 9726*.

***Juncus interior* Wieg.** Uncommon, Edgewood, Helmcken Falls turnoff. In marshes, and roadside ditches low elevations. *Goward 81-789*.

***Juncus mertensianus* Bong.** (Hämet-Ahti 1965a) Common. Open, moist sites at high elevations. *Goward 81-181, 81-504, 81-713, 89-70*.

***Juncus parryi* Engelm.** (Hämet-Ahti 1965a) Occasional. Open, rocky habitats at high elevations. *Goward 81-179*.

***Juncus stygius* L. ssp. *americanus* Buch.** (Hämet-Ahti 1965a) Murtle Lake. Apparently rare, not seen by us. Listed Blue (S2S3) by the British Columbia Conservation Data Centre (2011).

***Juncus tenuis* Willd.** (Hämet-Ahti 1965a) Occasional. Moist sites in meadows and around wetlands, especially where disturbed. *Goward 88-228*.

***Luzula arcuata* (Wahlenb.) Swartz ssp. *unalaschkensis* (Buch.) Hultén** (Hämet-Ahti 1965a) Occasional. Open, moist habitats in the alpine. *Goward 81-468, 81-667, 84-972, Björk 9344*.

***Luzula fastigiata* E. Meyer** Rare, Blue River area. Old-growth rainforest at low elevations. *Björk 18828*. *Luzula divaricata* S. Wats. misapplied, *Luzula parviflora* (Ehrh.) Desv. misapplied.

***Luzula hitchcockii* Hämet-Ahti** Uncommon, Trophy Mountains, Centre Mountain, Huntley-Buchanan Ridge. Subalpine forests and clearings. *Goward 81-351, 81-397*.

***Luzula multiflora* (Ehrh.) Lej.** Occasional. Forest clearings and on rock outcrops, low elevations.

***Luzula parviflora* (Ehrh.) Desv.** (Hämet-Ahti 1965a) Occasional. Humid forest at low elevations, more common in moist, open subalpine forest and meadows. *Goward 81-178, 81-281, 81-663*.

***Luzula piperi* (Cov.) M.E. Jones** (Hämet-Ahti 1965a) Common. Open subalpine forest. *Goward 90-1214*.

***Luzula spicata* (L.) DC.** (Hämet-Ahti 1965a) Occasional. Open habitats in the alpine and upper subalpine. *Goward 81-716, 84-975, Björk 9227, 21952*.

JUNCAGINACEAE

***Triglochin maritimum* L.** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Shadow Lake, Placid Lake, Chain Lakes. Calcareous bogs and fens, low elevations. *Goward 88-263, Björk 9130, 9381*.

***Triglochin palustre* L.** Uncommon, Foot Lake, Gateway Bog, Placid Lake, Ray Farm. Calcareous bogs and fens, low elevations. *Goward 88-269, Björk 9689, 9698, 11494*.

LILIACEAE

***Clintonia uniflora* (Menzies ex Schultes) Kunth** (Hämet-Ahti 1965a) Common. Forest understory, low to moderately high elevations.

Erythronium grandiflorum* Pursh var. *grandiflorum (Hämet-Ahti 1965a) Common. Subalpine meadows.

***Lilium columbianum* Baker** (Hämet-Ahti 1965a) Common. Forests and clearings, low elevations. *Goward 81-387*.

***Lilium philadelphicum* L.** (Hämet-Ahti 1965a, as *L. montanum*) Blue River. Apparently rare, not seen by us. Syn. *L. montanum* A. Nels.

Streptopus amplexifolius* (L.) DC. var. *amplexifolius (Hämet-Ahti 1965a) Occasional. Humid forest, especially old-growth or along streams, low elevations.

***Streptopus amplexifolius* (L.) DC. var. *chalazatus* Fassett** Uncommon, Placid Lake Trail, Chain Lakes Trail, Clearwater River. Along streams in humid forest, low elevations.

***Streptopus lanceolatus* (Ait.) Reveal var. *curvipes* (Vail) Fassett** (Hämet-Ahti 1965a) Occasional. Forest and meadows, at subalpine elevations. *Goward 88-194*. Syn. *Streptopus roseus* Michx. *ssp. curvipes* (Vail.) Hultén.

***Streptopus streptopoides* (Ledeb.) Frye & Rigg** (Hämet-Ahti 1965a) Blue River. Apparently rare, not seen by us.

MELANTHIACEAE

***Toxicoscordion venenosum* (S. Wats.) Rydb.** Rare, Vavenby. On dry, grassy, south-facing slopes on limestone, low elevations. Syn. *Zigadenus venenosus* S. Wats.

***Veratrum viride* Ait. var. *eschscholtzii* (Roemer & J.A. Schult.) Breit.** (Hämet-Ahti 1965a) Common. Moist sites in the subalpine.

NAJADACEAE

***Najas flexilis* (Willd.) Rost. & Schmidt** Rare, Shadow Lake. Submerged in shallow water of calcareous lake, low elevations. *Björk 17803*.

ORCHIDACEAE

Calypso bulbosa* (L.) Oakes var. *bulbosa (Hämet-Ahti 1965a) Common. Forests, low elevations.

Corallorhiza maculata* (Raf.) Raf. var. *maculata Occasional. Forests, low to middle elevations. *Goward 94-30*.

***Corallorhiza maculata* (Raf.) Raf. var. *occidentalis* (Lindl.) Ames** (Hämet-Ahti 1965a, as var. *punicea*) Occasional. Forests, low elevations.

***Corallorhiza striata* Lindl.** Occasional. Forests, low elevations.

***Corallorhiza trifida* Chat.** Occasional. Forests, low elevations.

***Cypripedium montanum* Dougl. ex Lindl.** Rare, Edgewood West, south park entrance. Forests and clearings, low elevations.

***Cypripedium parviflorum* Salisb.** Rare, Placid Lake. Forest at margins of calcareous wetlands, low elevations. *Bjork 9671*.

***Cypripedium passerinum* Richards** (Hämet-Ahti 1965a) Rare, Clearwater Lake, Murtle Lake. Moist, open or lightly forested habitats on calcareous soil.

***Goodyera oblongifolia* Raf.** (Hämet-Ahti 1965a) Common. Forests, low to middle elevations.

***Goodyera repens* (L.) R. Br.** (Hämet-Ahti 1965a, as both varieties *repens* and *ophioides*, which differ in degree or presence/absence of white penciling on the leaves) Rare, Hemp Creek, Blue River, Helmcken Falls Trail, Vavenby. Calcareous soils, low elevations. *Goward 87-72*.

Listera cordata* (L.) R. Br. var. *cordata (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Stevens Lakes, Murtle Lake, Stevens Lakes, south end of Clearwater Lake. Moist sites in forests, low elevations. *Goward 83-594*.

***Listera cordata* (L.) R. Br. var. *nephrophylla* (Rydb.) Hultén** (Hämet-Ahti 1965a) Occasional, Moist sites in forests and around wetlands, low elevations.

***Piperia elongata* Rydb.** Rare, Pyramid Mountain. Forest clearings on pumice slope, low elevations. *Björk 9719, 9720a*. *Habenaria unalascensis* (Spreng.) S. Wats. misapplied.

***Piperia unalascensis* (Spreng.) Rydb.** Occasional. Forests and clearings, low elevations. *Goward 88-145, Björk 9169, 9312b.* Syn. *Habenaria unalascensis* (Spreng.) S. Wats.

***Platanthera aquilonis* Sheviak** Occasional. In and around wetlands, shrub carrs and moist swales in meadows, low elevations. *Björk 11481*. *Platanthera hyperborea* (L.) Lindl. (*Habenaria hyperborea*) misapplied.

Platanthera dilatata* (Pursh) Lindl. var. *dilatata (Hämet-Ahti 1965a) Occasional. Various moist, open sites, low to high elevations. *Björk 9264, 11668*. Syn. *Habenaria dilatata* (Pursh) Hook. var. *dilatata*.

***Platanthera huronensis* (Nutt.) Lindl.** Uncommon, Edgewood, Gateway Bog. Marshes, shrub carrs and fens, low elevations. *Björk 9179, 11477, 11479, 11480*. *Platanthera hyperborea* (L.) Lindl. (*Habenaria hyperborea*) misapplied.

***Platanthera obtusata* (Banks ex Pursh) Lindl.** Rare, Gateway Bog. Moderately to strongly calcareous bogs and fens, low elevations. Syn. *Habenaria obtusata* (Banks ex Pursh) Richards.

***Platanthera orbiculata* (Pursh) Lindl.** (Hämet-Ahti 1965a) Occasional. Forests under a partial or pure deciduous canopy. Syn. *Habenaria orbiculata* (Pursh) Torr.

***Platanthera stricta* Lindl.** (Hämet-Ahti 1965a, as *Habenaria saccata*) Common. Open and forested, moist habitats, low to (especially) high elevations. *Goward 81-596, 88-187, Björk 11692*. Syn. *Habenaria saccata* E. Greene, *H. stricta* (Lind.) Rydb.

***Spiranthes romanzoffiana* Cham.** (Hämet-Ahti 1965a) Uncommon, Stevens Lakes, Edgewood, Clearwater River, Murtle River, Stevens Lakes. Open sites in and around wetlands and along river shores, low elevations.

POACEAE

***Achnatherum nelsonii* (Scribn.) Barkworth ssp. *dorei* (Barkworth & J. Maze) Barkworth** Rare, Vavenby, Birch Island. Open, dry, south-facing slopes, low elevations. *Björk 21978*. Syn. *Stipa nelsonii* Scribn. *var. dorei* (Barkworth & Maze) Dorn.

***Achnatherum richardsonii* (Link) Barkworth** Rare, Birch Island. Open, dry, south-facing slopes, low elevations. *Björk 21978*. Syn. *Stipa richardsonii* Link

****Agrostis capillaris* L.** Uncommon, Edgewood, south end of Clearwater Lake. Moist, disturbed sites, low elevations.

***Agrostis exarata* Trin.** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Clearwater River, Murtle River, Murtle Lake. Shores of lakes and rivers, low elevations.

****Agrostis gigantea* Roth** (Hämet-Ahti 1965a) Occasional. Moderately or heavily disturbed sites, mostly on moist soil. *Goward 81-202*. *Agrostis stolonifera* L. misapplied.

***Agrostis idahoensis* Nash** (Hämet-Ahti 1965a) Battle Mountain. Apparently rare, not seen by us. Hämet-Ahti describes the habitat as "on bare mull in pits made by ground squirrels".

***Agrostis scabra* Willd.** (Hämet-Ahti 1965a) Common. Various open or lightly forested habitats, especially in and around wetlands, low to (rarely) high elevations.

***Agrostis variabilis* Rydb.** Uncommon, Trophy Mountains. Open subalpine and alpine habitats. *Goward 81-662*, *Björk 12095*.

Alopecurus aequalis* Sobol. var. *aequalis (Hämet-Ahti 1965a) Occasional. Shores of lakes and rivers, and in sylvan pools, low elevations. *Goward 86-174, Björk 9248, 12103, 17816*.

****Anthoxanthum odoratum* L.** (Hämet-Ahti 1965a) Rare, Battle Mountain Road. Along roadsides, low elevations. *Björk 21994*.

****Bromus aleutensis* Trin. ex Griseb.** Rare, Edgewood. Garden weed at low elevations.

***Bromus carinatus* Hook. & Arn. sensu lato** (Hämet-Ahti 1965a, as *B. marginata*) Rare, Hemp Creek, Vavenby, Natural Bridge, Birch Island. Open, dry, south-facing slopes on loamy soil, low elevations. *Björk 11387, 11395, 21897, 21977*.

***Bromus ciliatus* L.** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Murtle River, Blue River, Edgewood West. Forest clearings. *Björk 9314b*.

****Bromus inermis* Leyss.** (Hämet-Ahti 1965a) Common. Pastures and hayfields, less common in other disturbed habitats. *Goward 83-671, 86-185*.

***Bromus porteri* (Coulter) Nash** Rare, Grouse Lake Notch. Rock outcrops at middle elevations. *Björk 17775*. *Bromus anomalus* Rupr. ex E. Fourn. misapplied.

***Bromus richardsonii* Link** Uncommon, Whitehorse Bluffs. Open, dry forest and rock outcrops, low elevations. *Goward 81-375*. *Bromus ciliatus* L. misapplied.

****Bromus tectorum* L.** (Hämet-Ahti 1965a) Rare, Hemp Creek, Edgewood. Waif in open, dry, disturbed habitats.

***Bromus vulgaris* (Hook.) Shear** Occasional, Edgewood, Edgewood West, Birch Island. Open, moist habitat at low to high elevations.

Calamagrostis canadensis* (Michx.) P. Beauv. var. *canadensis (Hämet-Ahti 1965a) Common. Various open or lightly forested, moist habitats, low to high elevations.

***Calamagrostis canadensis* (Michx.) P. Beauv. var. *langsdorfii* (Link) Inman** Common. Marshes, shrub carrs and fens, low elevations.

***Calamagrostis purpurascens* R. Br.** Rare, Vavenby. On lightly shaded or open limestone outcrops at low elevations.

***Calamagrostis rubescens* Buckl.** Occasional. Open, dry forest, low to middle elevations. *Björk 9174*.

***Calamagrostis stricta* (Timm) Koehler ssp. *inexpansa* (A. Gray) C.W. Greene** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Placid Lake, Chain Lakes, Foot Lake. Calcareous wetlands, low elevations. *Goward 83-654, Björk 9677*.

***Cinna latifolia* (Trevir. ex Göpp.) Griseb.** (Hämet-Ahti 1965a) Occasional. Moist soil in forests, low to high elevations. *Björk 9692*.

****Dactylis glomerata* L.** (Hämet-Ahti 1965a) Occasional, Disturbed open sites and spreading into forests mostly along trails, low elevations. *Goward 81-816*.

***Danthonia intermedia* Vasey** (Hämet-Ahti 1965a) Uncommon, Murtle Lake, Stevens Lakes, Battle Mountain, Fish Lake Hill, Raft Mountain. Various open, moist to dry habitats, middle to high elevations.

***Danthonia spicata* (L.) P. Beauv. ex Roemer & J.A. Schult.** (Hämet-Ahti 1965a) Common. Open, dry forest and clearings, low elevations. *Goward 81-312, 81-505, Björk 9166, 9314a, 11360*.

Deschampsia cespitosa* (L.) P. Beauv. ssp. *cespitosa (Hämet-Ahti 1965a) Occasional. Shorelines, where moderately to strongly calcareous. *Goward 81-428, 81-506, 81-695*.

***Deschampsia elongata* (Hook.) Munro** Uncommon, Clearwater River Road, Murtle Lake. Mostly disturbed sites in forests, low elevations. *Goward 81-150, Björk 12022*.

****Echinochloa crus-galli* (L.) P. Beauv.** Rare, Clearwater. Waif in disturbed sites, low elevations. *Goward 82-1520*.

Elymus elymoides* (Raf.) Swezey ssp. *elymoides Rare, Birch Island. Open, dry, south-facing slopes at low elevations. Syn. *Sitaneon histrix* (Nutt.) J.G. Sm.

Elymus glaucus* Buckl. ssp. *glaucus (Hämet-Ahti 1965a) Common. Various open and forested habitats at low elevations. *Goward 83-670, Björk 9192, 21970*.

***Elymus hirsutus* Presl** Rare, Azure Lake. Shorelines and forest clearings, low elevations. *Goward 81-386*.

****Elymus repens* (L.) Gould** (Hämet-Ahti 1965a) Occasional. Disturbed habitats, low elevations. *Goward 83-666*. Syn. *Agropyron repens* (L.) Beauv.

***Elymus trachycaulis* (Link) Gould ssp. *subsecundus* (Link) Gould** Occasional. Open forest and clearings, low elevations. *Björk 9314c, 21976*. *Agropyron caninum* (L.) Beauv. (*Elymus caninus*) misapplied.

Elymus trachycaulis* (Link) Gould ssp. *trachycaulis (Hämet-Ahti 1965a) Common. Open, dry forest and clearings, low elevations. *Goward 81-497*. *Agropyron caninum* (L.) Beauv. (*Elymus caninus*) misapplied.

****Eremopyrum triticeum* (Gaertn.) Nevski** Rare, Clearwater. Waif of disturbed sites. Syn. *Agropyron triticeum* Gaertn.

***Festuca brachyphylla* J.A. Schult. ex J.A. Schult. & J.H. Schult.** (Hämet-Ahti 1965a) Occasional. Open, rocky, alpine and upper subalpine habitats. *Goward 81-196, 81-718, Björk 12031*.

***Festuca idahoensis* Elmer** Rare, Vavenby. Open, dry, south-facing slopes at low elevations. *Björk 11433*.

***Festuca occidentalis* Hook.** (Hämet-Ahti 1965a) Common. Open, dry forest and clearings at low to middle elevations. *Goward 83-596, Björk 9313, 11375*.

Festuca rubra* L. ssp. *rubra (Hämet-Ahti 1965a) Occasional. Pastures and along roadsides, low elevations. *Goward 80-48, Björk 11417*.

***Festuca saximontana* Rydb. var. *saximontana* sensu lato** Rare, Birch Island. Open, dry, south-facing slopes at low elevations. *Björk 21974*.

***Festuca saximontana* Rydb. var. *purpusiana* (St.-Yves) Fred. & Pavlik** (Hämet-Ahti 1965a) Occasional. Open, dry habitats at high elevations. *Goward 94-677*.

***Festuca subulata* Trinart** (Hämet-Ahti 1965a) Rare, Hemp Creek. Along creeks and in moist sites in forests, low elevations.

***Glyceria borealis* (Nash) Batchelder** Uncommon, Alice Lake, Edgewood. Marshes and pond shores, low elevations. *Goward 81-214, 86-172*.

***Glyceria elata* (Nash ex Rydb.) M.E. Jones** (Hämet-Ahti 1965a) Occasional. Moist sites in forests and along wetland margins, low elevations. *Björk 9266*.

Glyceria grandis* S. Wats. ex A. Gray var. *grandis (Hämet-Ahti 1965a) Occasional. Moist sites in forests and in marshes, low elevations. *Goward 83-674*.

***Glyceria striata* (Lam.) A.S. Hitchc.** (Hämet-Ahti 1965a, including both varieties *striata* and *stricta*) Occasional. Marshes and wet sites in forests, low elevations. *Goward 81-137*.

***Hierochloe alpina* (Swartz) Roemer & J.A. Schult.** (Hämet-Ahti 1965a) Rare, Battle Mountain, Raft Mountain. Alpine tundra, on moderately to strongly calcareous soil. *Björk 9391*.

***Hierochloe hirta* (Schrank) Borbás ssp. *arctica* (J. Presl) G. Weim.** (Hämet-Ahti 1965a, as *H. odorata*) Rare, Hemp Creek, Murtle Lake, Stevens Lakes, Bailey's Chute. Sedge-fringe vegetation of lake and river shores, low elevations. *Goward 81-151, Björk 12114*. *Hierochloe odorata* (L.) Beauv. misapplied.

****Holcus lanatus* L.** (Hämet-Ahti 1965a) Rare, Murtle Lake. Disturbed habitats at low elevations. Perhaps no longer extant, not seen by us.

Hordeum jubatum* L. var. *jubatum (Hämet-Ahti 1965a) Rare, Hemp Creek, Clearwater. Open, disturbed habitats at low elevations.

***Koeleria macrantha* (Ledeb.) J.A. Schult.** Rare, Vavenby, Whitehorse Bluffs, Birch Island. Open, dry, south-facing slopes at low elevations. *Goward 83-765*.

****Leymus cinereus* (Scribn. & Merr.) Á. Löve** Rare, north end of Clearwater. A single plant on a roadside, low elevation. Syn. *Elymus cinereus* Scribn. & Merr.

***Leymus innovatus* (Beal) Pilger** (Hämet-Ahti 1965a) Blue River. Apparently rare, not seen by us. Syn. *Elymus innovatus* Beal.

***Lolium perenne* L.** Uncommon, Clearwater, Helmcken Falls Lodge, south park entrance, Birch Island. Pastures and other disturbed habitats, low elevations. *Goward 81-337, 83-661*.

***Melica smithii* (Porter) Vasey** Uncommon, Chain Lakes, Gateway Bog area. Moist sites in old-growth forests, low elevations. *Björk 11484*.

***Muhlenbergia filiformis* (Thurb. ex S. Wats.) Rydb.** Rare, Ray Farm. On travertine around mineral springs, low elevations. *Goward 81-927, Björk 9699, 17824*. Listed Red (S1) by the British Columbia Conservation Data Centre (2011).

***Muhlenbergia glomerata* (Willd.) Trin.** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Placid Lake, Gateway Bog. Calcareous fens and bogs, low elevations. *Björk 9676, 11485*. Listed Blue (S3) by the British Columbia Conservation Data Centre (2011).

***Oryzopsis asperifolia* Michx.** (Hämet-Ahti 1965a) Common. Deciduous and mixed deciduous-conifer forests, low elevations. *Goward 81-108, 81-111, 81-278*.

***Panicum miliaceum* L.** Rare, Edgewood, Clearwater Dump. Waif in disturbed habitats, low elevations. *Goward 82-1523, Björk 9982*.

***Phalaris arundinacea* L.** (Hämet-Ahti 1965a) Common. Disturbed wetlands, low elevations. *Goward 81-129, 81-336, 81-696*.

***Phleum alpinum* L.** (Hämet-Ahti 1965a) Occasional. Moist sites at high elevations, rare at low elevations. *Goward 83-781*.

***Phleum pratense* L.** (Hämet-Ahti 1965a) Common. Pastures and hay fields, less common in other disturbed habitats, low to middle elevations.

***Piptatherum micranthum* (Trin. & Rupr.) Barkworth** Rare, Second Canyon, Natural Bridge, Shadden. Cliffs ledges, where lightly shaded, low elevations. *Goward 93-29*. Syn. *Oryzopsis micrantha* (Trin. & Rupr.) Thunb.

***Piptatherum pungens* (Torr. ex Spreng.) Dorn** (Hämet-Ahti 1965a) Common. Forests and clearings, low elevations. *Goward 90-1125, Björk 9309*. Syn. *Oryzopsis pungens* (Torr.) A.S. Hitchc.

Poa alpina* L. ssp. *alpina (Hämet-Ahti 1965a) Occasional. Open habitats at high elevations. *Goward 81-195, 81-480, Björk 12030*.

***Poa annua* L.** (Hämet-Ahti 1965a) Occasional. Weed in disturbed habitats, especially on moist soil. *Goward 81-105.*

Poa arctica* R. Br. ssp. *arctica (Douglas et al. 2002) Northern portions of Wells Gray Park. Perhaps rare, not seen by us.

***Poa arctica* R. Br. ssp. *grayana* (Vasey) Á. Löve, D. Löve & B.M. Kapoor** Occasional. Open, dry habitats at high elevations, rare at middle elevations. *Goward 89-82*, *Goward 89-82*.

****Poa compressa* L.** (Hämet-Ahti 1965a) Occasional. Disturbed and wild vegetation. *Goward 91-871, Björk 9170, 11415, 11384*.

***Poa cusickii* Vasey** (Hämet-Ahti 1965a, no subspecies given) Battle Mountain. Apparently rare, not seen by us.

***Poa epilis* Scribn.** (Hämet-Ahti 1965a) Uncommon, Battle Mountain, Trophy Mountains. Open, dry to moist sites, subalpine and alpine. *Goward 81-451, Björk 12100*. Syn. *P. cusickii* ssp. *epilis* (Scribn.) W.A. Weber.

***Poa fendleriana* (Steud.) Vasey ssp. *longiligula* (Scribn. & T. Williams) Soreng** Rare, Birch Island. Open, dry forest at low elevations. *Björk 21971*.

***Poa gracillima* Vasey** (Hämet-Ahti 1965a) Battle Mountain. Apparently rare, not seen by us. *Poa secunda* J. Presl misapplied.

***Poa interior* Rydb.** Uncommon, Clearwater Lake, Natural Bridge, Whitehorse Bluffs, Vavenby. On cliffs and rock outcrops, low elevations. *Goward 81-163, 81-300, 83-612, Björk 17779, 11374, 21899*. Syn. *Poa nemoralis* L. ssp. *interior* (Rydb.) W.A. Weber.

***Poa juncifolia* Scribn.** Rare, Vavenby. On open, dry, south-facing slopes at low elevations. Syn. *Poa secunda* J. Presl ssp. *juncifolia* (Scribn.) Soreng.

***Poa leptocoma* Trin.** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Battle Mountain, Trophy Meadows. Moist sites and subalpine meadows, low and moderately high elevations. *Björk 11654, 11681*.

***Poa lettermanii* Vasey** (Douglas et al. 2002) Near Clearwater. Apparently rare, not seen by us.

***Poa palustris* L. Native form** Occasional. Calcareous fens and bogs, low elevations. More study is needed to understand the species of the *P. palustris* complex in western North America, as well as other species complexes in this very difficult genus.

****Poa palustris* L. Nonnative form** (Hämet-Ahti 1965a) Common. Moist, mostly disturbed sites, low elevations.

***Poa paucispicula* Scribn. & G. Merr.** Uncommon, Trophy Mountains. In moist, open, subalpine and alpine habitats. *Goward 81-469, 88-217*. Syn. *Poa leptocoma* ssp. *paucispicula* (Scribn. & G. Merr.) Tzvelev.

***Poa pratensis* L. ssp. *agassizensis* (B. Boivin & D. Löve) R.L. Taylor & J.F. Macbr.** (Hämet-Ahti 1965a) Rare, Hemp Creek, Whitehorse Bluffs. Open, dry, south-facing slopes at low elevations. *Goward 83-611*.

***Poa pratensis* L. ssp. *angustifolia* (L.) Lej.** (Hämet-Ahti 1965a) Hemp Creek. Apparently rare, not seen by us.

Poa pratensis* L. ssp. *pratensis (Hämet-Ahti 1965a) Common. Mostly in disturbed habitats, low to middle elevations.

***Poa scabrella* (Thurber) Benth.** Rare, Whitehorse Bluffs. On rock outcrops at low to middle elevations. *Goward 81-113b. Poa secunda* J. Presl misapplied.

***Poa trivialis* L.** (Hämet-Ahti 1965a) Rare, Hemp Creek. Moist, disturbed habitats at low elevations.

***Poa wheeleri* Vasey** Uncommon, Birch Island, Hemp Creek Canyonlands, First Canyon. Open, dry forest at low elevations. Syn. *Poa nervosa* (Hook.) Vasey var. *wheeleri* (Vasey) C.L. Hitchc.

Poa sp nov. Rare, Shadden. On seepy cliffs at low elevations. Plants stoloniferous, leaf sheaths closed about half their lengths, panicles with an erect central rachis, but the branches drooping, lemmas cobwebby at the base, lanate along the nerves and scabrous between the nerves to the tip, anthers about 1.2 mm long, functional, florets functionally bisexual. Vaguely similar to *P. leptocoma* and *P. reflexa*, but stoloniferous and with three-nerved (rather than 1-nerved) lower glumes. Also similar to the coastal *P. laxiflora*, but with stolons rather than rhizomes, and the anthers shorter. Only the second population known to us.

***Podagrostis humilis* (Vasey) Björkman** (Hämet-Ahti 1965a, as *Agrostis thurberiana*) Occasional. Open, moist to dry, alpine and subalpine habitats. *Björk 12095*. Syn. *Agrostis humilis* Vasey, *Agrostis thurberiana* A.S. Hitchc.

***Pseudoroegneria spicata* (Pursh) Á. Löve** Uncommon, Spahats Falls, Helmcken Falls, Vavenby, Birch Island, Whitehorse Bluffs. Open, dry, south-facing slopes and cliff ledges, low elevations. *Goward 93-30, Björk 11371, 11434, 11457*. Syn. *Agropyron spicatum* (Pursh) Scribn. & Smith

***Schedonorus pratensis* (Huds.) P. Beauv.** (Hämet-Ahti 1965a) Uncommon, Murtle River, Spahats Overlook. Moist, disturbed habitats, low elevations. Syn. *Lolium pratense* (Huds.) Darbyshire, *Festuca pratensis* Huds.

***Schizachne purpurascens* (Torr.) Swallen** (Hämet-Ahti 1965a) Rare, Hemp Creek, Flat Iron Trail. Open and lightly forested habitats, low elevations.

***Setaria viridis* (L.) P. Beauv.** Rare, Edgewood, Clearwater. Waif in disturbed habitats, low elevations. *Goward 81-842, Goward 82-1504, Björk 14940*.

***Thinopyrum intermedium* (Host) Barkw. & D.R. Dewey** Rare, Vavenby. Roadsides, low elevations. *Björk 11361*. Syn. *Agropyron intermedium* (Host) Beauv.

***Torreyochloa pallida* (Torr.) Church var. *pauciflora* (J. Presl) J.I. Davis** (Hämet-Ahti 1965a) Occasional. Wet, open or lightly forested habitats, mostly at edges of open water, low elevations.

Goward 81-399, 83-653, Björk 11488. Syn. *Torreyochloa pauciflora* (J. Presl) Church, *Puccinellia pauciflora* (J. Presl) Munz

***Trisetum canescens* Buckl.** Rare, Ray Farm. Forest clearings, low elevations. *Goward 83-677*.

***Trisetum cernuum* Trin.** Uncommon, south end of Clearwater Lake, Bailey's Chute. Forest clearings and open forest understory, *Goward 81-343, 83-597*, *Björk 12105*.

***Trisetum spicatum* Rupr.** (Hämet-Ahti 1965a, including subspecies *alaskanum* and *molle*) Common. Open, dry subalpine and alpine habitats, rare in rocky habitats at low elevations. *Goward 81-438, 81-492, 81-503, 88-258, Björk 11665, 12026*.

***Vahlodea atropurpurea* (Wahl.) Fries ex Hartm.** (Hämet-Ahti 1965a, see taxonomic notes therein; this species merits further taxonomic research in western North America) Common. Forest, meadows and heath, subalpine and lower alpine elevations. *Goward 81-437, 81-449, 81-661, 89-71, Björk 9717, 11674*. Syn. *Deschampsia atropurpurea* (Wahl.) Scheele

***Vulpia octoflora* (Walter) Rydb.** Rare, Vavenby. Dry, open limestone outcrops on south-facing slopes, low elevations. Syn. *Festuca octoflora* Walt.

****Zizania palustris* L. var. *interior* (Fassett) Dore** Rare, Edgewood. Emergent in shallow water of a pond, low elevations. *Björk 9732*. Introduced intentionally to encourage waterfowl. Potentially weedy, but its local increase has been slow and sporadic.

POTAMOGETONACEAE

***Potamogeton alpinus* Balbis** Rare, Alice Lake, Edgewood. Aquatic, in ponds at low elevations. *Goward 81-213, Björk 9695, 9737, 9739*.

***Potamogeton amplifolius* Tuckerm.** Rare, Silver Dollar Lake. Aquatic in ponds at low elevations.

***Potamogeton epihydrus* Raf.** Occasional. Ponds and lakes, low elevations. *Björk 17804*.

Potamogeton foliosus* Raf. ssp. *foliosus Rare, Edgewood. Aquatic in ponds and lakes, low elevations. *Goward 88-231*.

***Potamogeton friesii* Rupr.** (Douglas et al. 2002) Near Clearwater. Apparently rare, not seen by us.

***Potamogeton gramineus* L.** Occasional. Aquatic in ponds and lakes, low elevations. *Björk 9727*.

***Potamogeton illinoensis* Morong** Rare, Placid Lake. Aquatic in calcareous lake, low elevations.

***Potamogeton natans* L.** Occasional. Aquatic in ponds and lakes, low elevations. *Goward 81-212, Björk 9738*.

***Potamogeton obtusifolius* Mertens & W.D.J. Koch** Rare, Alice Lake, Silver Dollar Lake. Aquatic in calcareous lakes and ponds, low elevations. *Björk 9700, 17802*.

***Potamogeton perfoliatus* L.** Rare, Mahood Lake. Submerged in shoreline water of lake. *Goward 81-475*. Listed Blue (S2S3) by the British Columbia Conservation Data Centre (2011).

***Potamogeton praelongus* Wulf.** Rare, Shadow Lake. Submerged in lake, low elevation. *Goward 81-737*.

***Potamogeton pusillus* L. ssp. *tenuissimus* (Mertens & W.D.J. Koch) R.R. Haynes** Occasional. Aquatic in ponds and lakes, low elevations. *Björk 9200, 9734.*

***Potamogeton richardsonii* (A. Bennett) Rydb.** (Douglas et al. 2002) Near Mahood Lake. Apparently rare, not seen by us.

***Stuckenia filiformis* (Pers.) Börner ssp. *occidentalis* (J.W. Robbins) Haynes, D.H. Les & M. Král** Uncommon, Edgewood, Placid Lake. Aquatic in lakes and ponds at low elevations. *Björk 9680*. Syn. *Potamogeton filiformis* Pers.

SCHEUCHZERIACEAE

***Scheuchzeria palustris* L. var. *americana* (Fern.) Hultén** (Hämet-Ahti 1965a) Uncommon, Murtle Lake, Shadow Bog, Chain Lakes, Edgewood West. Marshes, fens, bogs and sylvan pools, low elevations. *Goward 81-685, 88-262*, *Björk 9133*.

SPARGANIACEAE

***Sparganium angustifolium* Michx.** Uncommon, Murtle Lake, Edgewood. Submerged or stranded in lakes, ponds and sylvan pools, low elevations. *Goward 81-706*.

***Sparganium emersum* Rehm.** Rare, Edgewood. Emergent in lakes and ponds, low elevations. *Goward 88-211, Björk 9733*.

***Sparganium eurycarpum* Engelm.** Rare, marsh near Clearwater Dump. Emergent in marsh, low elevations.

***Sparganium hyperboreum* Beurl. ex Laest.** Uncommon, Edgewood West. Aquatic or stranded, ponds and sylvan pools, low elevations.

***Sparganium natans* L.** Uncommon, Edgewood, Azure Lake. Aquatic or stranded, ponds and lakes, low elevations. *Goward 81-404, 88-212, Björk 9201*.

TOFIELDIACEAE

***Triantha glutinosa* (Michx.) Baker** (Hämet-Ahti 1965a, as *Tofieldia intermedia*) Occasional. Bogs and fens, low to high elevations, especially where calcareous. *Björk 9140, 9379*. Syn. *Tofieldia glutinosa* (Michx.) Pers., *T. intermedia* Rydb.

***Triantha occidentalis* (S. Wats.) R.R. Gates** (Hämet-Ahti 1965a) Murtle Lake, Stevens Lakes. Apparently rare, not seen by us. *Tofieldia occidentalis* S. Wats.

TYPHACEAE

***Typha latifolia* L.** (Hämet-Ahti 1965a) Uncommon, Hemp Creek, Cougar Creek, Trout Creek, Edgewood. Marshes and pond shores at low elevations.

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APPENDIX I

Localities of observations in the flora area. See also Figure and Hämet-Ahti (1965a) for maps.

Collection localities for Leena Hämet-Ahti in 1961:

HEMIBOREAL ZONE

11: 51.6489°N 120.0682°W - Clearwater Station

LOWER OROBOREAL ZONE

1: 51.8765°N 120.0202°W - Outside the park boundary at the south entrance, c. 2 mi. SE of Hemp Creek Ranger Station, on Battle Mtn. Trail.
2: 51.9427°N 120.0672°W - Outside the park boundary at the south entrance, the vicinity of Hemp Creek Ranger Station
3: 51.9464°N 120.0857°W - On Clearwater Lake Road, c. 1 - 1.5 mi. NW of Hemp Creek Ranger Station
4: 51.9640°N 120.1279°W - C. 5 mi. WSW of Mahood Lake, by Dawson and Mushbowl Falls
5: 51.9540°N 120.1768°W - C. 3 - 4 mi. WSW of Mahood Lake, on Helmcken Falls Trail and above the falls
6: 52.0032°N 120.0219°W - C. 6 mi. NE of Hemp Creek Ranger Station, on Murtle Lake Trail
7: 52.0547°N 119.9474°W - C. 10 mi. NE of Hemp Creek Ranger Station, by the Stillwater cabin
8: 52.1411°N 120.1921°W - Southern end of Clearwater Lake, by the patrolman's cabin
9: 52.3590°N 120.2105°W - Southern shore of Azure Lake, c. 3 mi. E of the western end
10: 52.3759°N 119.9940°W - Rainbow Falls at the mouth of Angus Horne Creek
12: 51.8999°N 119.3163°W - Messiter Station
13: 52.1010°N 119.3110°W - Blue River Station
14: 52.0876°N 119.3603°W - C. 2 mi. SW of Blue River Station
15: 52.7626°N 119.2665°W - Canoe Creek
16: 52.8136°N 119.2758°W - Valemount, Jackman, Cedarside

MIDDLE OROBOREAL ZONE

17: 52.1058°N 119.8296°W - SW end of Murtle Lake, c. 0.5 mi. S of Diamond Lake
18: 52.1115°N 119.8239°W - SW end of Murtle Lake, east side of Diamond Lake
19: 52.1394°N 119.8243°W - W end of Murtle Lake, 0.5 mi. N of the mouth of File Creek
20: 52.1395°N 119.8034°W - N shore of the western arm of Murtle Lake, c. 0.5 mi. E of mouth of Anderson Creek
21: 52.1210°N 119.7304°W - N shore of the western arm of Murtle Lake, foot of Ramsay Mtn.
22: 52.1582°N 119.6864°W - S shore of the northern arm of Murtle Lake, c. 6.5 mi. S of the mouth of Vachon Creek

23: 52.2480°N 119.6827°W - W shore of the northern arm of Murtle Lake, c. 0.5 mi. NE of the mouth of Vachon Creek
24: 52.2622°N 119.6475°W - N end of Murtle Lake, up Murtle River
25: 52.0738°N 119.6142°W - SE end of Murtle Lake, the mouth of Snookwa Creek and the end of Blue River Trail
26: 52.0997°N 119.7055°W - S shore of western arm of Murtle Lake, by patrolman's cabin
27: 52.1148°N 119.7384°W - S shore of the western arm of Murtle Lake, c. 1.5 mi. W of patrolman's cabin, on the bay and cape and a little island opposite to Ramsay Mtn.

UPPER OROBOREAL ZONE

28: 51.9425°N 119.7846°W - Southern and eastern shore of the southernmost of Stevens Lakes
29: 51.9659°N 119.7781°W - The northern end of the southernmost of Stevens Lakes
30: 51.9805°N 119.7489°W - C. 1.5 - 2 mi. NE of the southernmost of Stevens Lakes
31: 52.0013°N 119.5082°W - Fish Lake Hill, 10 - 11 mi. SW of Blue River Station

HEMIOROARCTIC ZONE

32: 51.8988°N 119.8876°W - S slope of Battle Mtn., c. 0.5 mi. S of Fight Lake, Caribou Meadows
33: 51.9238°N 119.8066°W - E slope of Battle Mtn., c. 1 mi. SW of the southernmost of Stevens Lakes
34: 51.9075°N 119.8856°W - S slope of Battle Mtn., Fight Lake Meadow
35: 51.9236°N 119.8567°W - S slope of Battle Mtn., ""52 Ridge"" and and Bowl Valley
36: 51.9850°N 119.5148°W - Fish Lake Hill, 11 - 12 mi. SW of Blue River Station

LOWER OROARCTIC ZONE

37: 51.9466°N 119.8693°W - S slopes of the highest peak and the SW peak of Battle Mountain
38: 51.9521°N 119.8661°W - Summits of the highest peak and the SW peak of Battle Mountain

Collection localities for Curtis Björk and Trevor Goward between 1976 and 2010:

HEMIBOREAL ZONE

40: 51.6087°N 120.1089°W – Blackpool
41: 51.6294°N 120.0809°W - North Thompson Regional Park
42: 51.6502°N 120.0497°W – Clearwater
42: 51.6394°N 120.0310°W - Clearwater Railyard
42: 51.6557°N 120.0287°W - Miller’s Pond
43: 51.6504°N 119.9712°W - Raft Canyon
44: 51.6129°N 119.9156°W - Birch Island
45: 51.5931°N 119.7487°W – Vavenby
46: 51.7033°N 120.0351°W - The Kettle

46: 51.7372°N 120.0257°W - Clearwater River I (at Spahats, including Sabretooth Rapids)
47: 51.8419°N 120.0634°W - Clearwater River II (at Hemp Creek)
48: 51.7231°N 120.0201°W - Natural Bridge
49: 51.7781°N 120.0226°W – Writing-on-Stone
50: 51.8765°N 120.0425°W - Hemp Creek Canyonlands I
51: 51.9155°N 120.1929°W - Clearwater River III (at Mahood)
52: 51.9010°N 120.1148°W - Whitehorse Bluffs
53: 51.9152°N 120.2181°W - Sylvia Falls
54: 52.8837°N 120.5254°W - Mahood Lake

LOWER OROBOREAL ZONE

55: 51.7075°N 120.0216°W - Clearwater Dump
55: 51.7293°N 120.0263°W – Eye-of-the-Needle
56: 51.7365°N 120.0131°W - Spahats Falls
57: 51.7637°N 120.0070°W - First Canyon
58: 51.7508°N 120.0069°W – Shadden
58: 51.7695°N 120.0080°W - Second Canyon
59: 51.7874°N 120.0118°W - Third Canyon
60: 51.8021°N 120.0196°W - Old prison camp
61: 51.8350°N 120.0498°W - Moul Falls
62: 51.8689°N 120.0221°W – Edgewood
62: 51.8680°N 120.0257°W - Edgewood West
62: 51.8728°N 120.0189°W - Philip Creek
62: 51.8765°N 120.0139°W - Battle Mountain Road
62: 51.8883°N 120.0238°W - Battle Creek
63: 51.8505°N 120.0602°W - hb 50 Hemp Creek Canyonlands II
64: 51.8624°N 119.9853°W - Table Mountain I
65: 51.8934°N 120.0312°W - Silver Dollar Lake
66: 51.9015°N 120.0120°W - Nakiska Ranch area
67: 51.9473°N 120.0160°W - Bee Farm
68: 51.9070°N 120.0351°W - Mailbox Ridge
69: 51.8796°N 120.0544°W - Flat Irons
70: 51.9405°N 120.0539°W - Helmcken Falls Lodge area
71: 51.9425°N 120.0730°W - Gateway Bog
72: 51.9207°N 120.0707°W - Foot Lake
73: 51.9709°N 120.1042°W - Majerus Farm
74: 51.9650°N 120.1259°W - Dawson Falls
75: 51.9639°N 120.1306°W – Mushbowl
76: 51.9920°N 120.0118°W - McLeod Hill
77: 51.9557°N 120.1822°W - Helmcken Falls
78: 51.9691°N 120.1385°W - Cougar Creek
79: 51.9831°N 120.1063°W - Murtle River near base of Pyramid Mountain

79: 52.9939°N 120.1068°W - Pyramid Mountain
80: 52.0037°N 120.1489°W – Redsprings
81: 52.0461°N 120.1649°W - The Horseshoe
82: 52.0572°N 120.1548°W - Ray Farm
82: 52.0626°N 120.1709°W - Alice Lake
83: 52.1011°N 120.1869°W - Shadow Lake
84: 52.0705°N 120.1871°W - Bailey's Chute
84: 52.0729°N 120.1953°W - Maianth Falls
88: 52.1236°N 120.1612°W - Chain Lakes
89: 52.1402°N 120.1924°W - Clearwater Lake
90: 52.3696°N 120.2077°W - Azure Lake I (west end)
91: 52.3864°N 120.0814°W - Azure Lake II (middle)
92: 52.3808°N 120.9834°W - Rainbow Falls
94: 51.7832°N 119.3227°W – Avola
95: 52.1087°N 119.3065°W - Blue River
96: 52.0900°N 119.3569°W - Murtle Lake Road (lower)
124: 52.5331°N 120.3190°W - Hobson Lake (slopes above)

MIDDLE OROBOREAL ZONE

97: 51.7524°N 119.9257°W - Silvertip Falls
98: 51.8517°N 119.9738°W - Grouse Creek Notch pond
98: 51.8530°N 119.9696°W - Grouse Creek Notch rock outcrop
98: 51.8497°N 119.9661°W - Grouse Lake
99: 51.8716°N 119.9205°W - Philip Lake
100: 52.0710°N 119.6193°W - Murtle Lake I (east end)
101: 52.1206°N 119.7513°W - Murtle Lake II (middle)
102: 52.1239°N 119.8268°W - Murtle Lake III (west end)
103: 52.1871°N 119.9101°W - Kostal Lake Lava Flows
104: 52.1750°N 119.9689°W - Kostal Lake
104: 52.1745°N 119.9486°W - Kostal Volcano

UPPER OROBORAL ZONE

105: 51.7455°N 119.8371°W - Caligata Lake
106: 51.7703°N 119.9406°W - Trophy Mountains I
107: 52.1952°N 119.3099°W - Cook Lake

HEMIOROARCTIC ZONE

108: 51.7212°N 119.8723°W - Raft Mountain
109: 51.7727°N 119.9322°W - Trophy Mountains II
110: 51.8516°N 119.8896°W - Table Mountain II
111: 51.9243°N 119.8912°W - Battle Mountain I

112: 52.1946°N 119.5704°W - Wavecrest Peak
113: 52.1446°N 119.7277°W - Central Mountain
114: 52.2970°N 120.1588°W - Trumpeter Mountain
115: 52.4024°N 120.2247°W - Huntley-Buchanan Ridge

LOWER OROARCTIC ZONE

116: 51.7276°N 119.8594°W - Raft Mountain II
117: 51.8054°N 119.9160°W - Trophy Mountain III
119: 51.8431°N 119.8512°W - Table Mountain III
120: 51.9516°N 119.8745°W - Battle Mountain II

MIDDLE OROARCTIC ZONE

121: 51.8024°N 119.8944°W - Trophy Mountain IV
122: 52.4309°N 120.1855°W - Alabaster Ridge

UPPER OROARCTIC ZONE

123: 52.4412°N 120.1965°W - Garnet Peak