Annotated Checklists of Bryophytes and Lichens
Cape Prince of Wales, Alaska, U.S.A.

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Location of the study area on the tip of the Seward Peninsula on the west coast of Alaska.

Cape Prince of Wales, from Cape Mountain
Photo by Tass Kelso

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INTRODUCTION

In June 1978, I had the good fortune to spend two weeks at Cape Prince of Wales on the western tip of Alaska's Seward Peninsula where my husband had a research project studying bird migrations across the Bering Strait. I stayed in the village of Wales, and while there I made a small collection of lichens and bryophytes. I realized a study of the lichens and bryophytes of this remote area would be valuable as there had been no recent surveys. I returned the following year (1979) and spent a month adding to my collection, followed by a two-month stay in 1980.

The Cape Prince of Wales bryophyte checklist contains 160 species, comprised of 149 mosses and 21 liverworts. The lichen checklist contains 193 species of lichens. Species are listed in alphabetical order by genus; family names are included for each bryophyte genus. Nomenclature does not follow one system, as specimens were identified over 30 years; commonly used synonyms are included in square brackets [ ]. Information on habitat and location within the study area is included. Additionally, for the lichen list, information on worldwide distribution is often included, as well as notes on the collection history for selected species. Lastly, collection numbers of voucher specimens deposited at the University of Colorado Herbarium (COLO) are listed. In the collection numbers, FB stands for Flock bryophyte, and FL stands for Flock lichen.

Some of the more common locations of collections include the village of Wales, on the Bering Strait coast; Cape Mountain, the igneous mountain dominating the study area; Razorback, a rocky hill on the north side of Cape Mountain behind the village, Tin City, a radar station on the Bering Sea coast several miles southeast of the village of Wales; Neeluk, a limestone ridge about one mile northeast of the village; and the airstrip, one mile northwest of the village.

Geologic map with the study area indicated by the red boundary and shaded area. Note the sharp demarcation between the acidic granite (Kg, orange) of Cape Mountain, and the calcareous limestone (Ml, blue-gray) north of Village Creek. (Detail of Geologic Map of the Teller Quadrangle, Western Seward Peninsula, Alaska, by C.L. Sainsbury, 1972. USGS Miscellaneous Geologic Investigations, Map I-685.)

DESCRIPTION OF THE STUDY AREA

By T. Kelso, Colorado College

For centuries, the Bering Strait has provided one of the most compelling geographic boundaries on the globe. Explorers and scientists alike have found this tantalizing passage-less than 80 km wide, and on a clear day, carrying a view where continents appear touchably close- to hold a fascination for all it symbolizes about connection and separation. Once the Pleistocene core of the broad Beringian Land Bridge, only a thin, stormy, strip of ocean now divides the continent of Asia from North America, Russia from the United States, and, as poet Yevgeni Yevtushenko described, the "divided twins" of the remote and rugged Chukotsk Peninsula of the Russian Far East from the Seward Peninsula of Alaska.

For the geography of the ice-ages, Chukotka and the Seward Peninsula were long a biological unit, a route of biotic exchange between Asia and North America. Since the demise of the glacial era, in the revised geography of the past 20,000 years, this bridge became a filter, an isolating boundary that for some species at least, has become an insurmountable barrier. Geographic barriers, whether mountain ranges, oceanic straits, or continental glaciers, that impede biotic interchange become in their own way promoters of diversity as separated populations diverge into their own evolutionary trajectories.

Today's Beringian biota, represented by Yevtushenko's divided twins of Chukotka and the Seward Peninsula, offers rich opportunities to understand the biological connections and separations that the Bering Strait has facilitated as bridge and barrier.

On the western tip of Alaska's Seward Peninsula, Cape Prince of Wales (65^0 35' N, 168^0 W) represents the closest point of the North American continent to Asia. During the late Quaternary glaciations, the area held little ice cover, and the mountainous tip, now called Cape Mountain, would have been a high point over the Beringian plain. Today, this tip of North America is inhabited by the small Iñupiaq village of Wales, and a rich biota of native plant and animal species that thrive in spite of a climate rigorous by any human standard. Summer temperatures range from freezing to only slightly over 10 degrees Centigrade. Cloudy and windy conditions prevail, with moisture coming primarily in the form of rain in the late summer and fall. The Strait has been generally open for much of the winter, although shore ice can narrow the passage even more. Because of the strong winds, snow deposits become deep in some areas, lasting well into the summer, or are nonexistent in others where it is scoured from the landscape. The Cape landscape is one of contrasts: highland to lowland, wet to dry, flat to vertical.

For all the climatic rigor of Cape Prince of Wales, its diverse topography provides habitats for a biota of exceptional richness. Highlands here range from the 800 m high Cape Mountain, composed of intrusive Cretaceous granite and basalt, to low carbonate ridges of complex Mississippian limestone. The lowlands include coastal dunes, backshores and tidal marshes, and tundra wetlands of marshes, bogs, and freshwater thaw ponds. Thousands of years of human habitation have added disturbance zones where ruderal and adventive species thrive. Sea cliffs, ravines, boulder fields, solifluction terraces, and mesic meadows are all additional components of the vegetation matrix. Extensive studies of the vascular flora of this area have shown it represents a distinct phytogeographic zone of the Seward Peninsula, one with strong Asiatic affinities and high levels of endemic plants. These affinities have no doubt been shaped as much by historical connection and more recent separation, as they have been by present day climatic similarities.

Kelso, S. Range extensions of vascular plants from the Seward Peninsula, Northwest Alaska. Rhodora 85: 371-379.

Kelso, S. 1989. Vascular flora and phytogeography of Cape Prince of Wales, Seward Peninsula, Alaska. Can. J. Bot. 67:3248-3259.

Ickert-Bond, S, D.F. Murray, and E. DeChaine. 2009. Contrasting patterns of plant distribution in Beringia. Alaska Park Science 8: 26-32.

ANNOTATED CHECKLIST OF BRYOPHYTES

MOSSES

Abietinella – Thuidiaceae

Abietinella abietina (Hedwig) Fleischer. Growing on grassy mound with *Lobaria*, low wet area behind village of Wales school and slumping soil on rocky face of Neeluk. Also among sedges and *Dryas*, southwest slope across from Village Creek opposite Razorback. FB-382, FB-769.

Amblystegium – Amblystegiaceae

Amblystegium serpens (Hedwig) Schimper. Alongside rock below water tower. FB-539.

Amblystegium varium (Hedwig) Lindberg. With *Ranunculus*, late-lying snow bank above shore of Bering Strait. FB-722.

Andreaea – Andreaeaceae

Andreaea rupestris Hedwig. Abundant. On rock in late-lying snowbanks as well as exposed ridgetops, on grassy slopes, seepage areas, in rivulets and solifluction terraces. FB-193, FB-282, FB-283, FB-284, FB-285, FB-288, FB-291, FB-650.

Arctoa – Dicranaceae

Arctoa fulvella (Dickson) Bruch & Schimper. Rocky slopes of Cape Mountain, on bare soil, disturbed sites, and on grassy mounds. FB-318, FB-319, FB-320, FB-492, FB-689, FB-701.

Aulacomnium – Aulacomniaceae

*Aulacomnium acuminatum (*Lindberg & H. Arnell) Kindberg. Grassy slope mixed with *Aulacomnium turgidum.* FB-250.

Aulacomnium palustre (Hedwig) Schwaegrichen. Abundant. Wet, sandy areas, on grassy mounds, or among sedges. One collection mixed with *Aulacomnium turgidum.* FB-194, FB-245, FB-246, FB-248.

Aulacomnium turgidum (Wahlenberg) Schwaegrichen**.** Wet habitats such as seepage areas, solifluction terraces and mounds, often among grasses, sedges and *Aulacomnium palustre* or *Aulacomnium acuminatum.* It tolerates (even prefers) highly calcareous sites. It is an Arctic species and is considered rare throughout its range. FB-242, FB-243, FB-244.

Bartramia – Bartramiaceae

Bartramia ithyphylla Bridel. Abundant. In or alongside rivulets or in depressions. FB-195, FB-303, FB-304, FB-804.

Brachythecium – Brachytheciaceae

Brachythecium albicans (Hedwig) Bruch & Schimper. Abundant and widespread in varied habitats, including rocky, sandy, grassy, calcareous, and acidic. FB-526, FB-552, FB-582, FB-613, FB-621, FB-643, FB-651, FB-765, FB-787.

Brachythecium cirrosum (Schwaegrichen) Schimper. [Syn.: *Cirriphyllum cirrosum* (Schwaegrichen ex Schultes) Grout]. Top of Neeluk limestone knob. FB-696.

Brachythecium erythrorrhizon Bruch & Schimper. On rock on limestone outcrop of Neeluk. FB-616.

Brachythecium salebrosum (Weber & Mohr) Bruch & Schimper. With grasses and *Eriophorum*, low area near beach road and ponds. FB-681.

Brachythecium trachypodium (Bridel) Bruch & Schimper. In deep crevice with seepage, Puvik limestone knob. FB-642.

Brachythecium turgidum (C.J. Hartman) Kindberg. With sedges, grasses and willows, sandy soil and in melt stream below snowfield. FB-506, FB-515, FB-547.

***Bryum* – also see *Ptychostomum* – Bryaceae**

Bryum calobryoides J.R. Spence. On driftwood trunk. FB-767.

***Bucklandiella* – Grimmiaceae**

Bucklandiella affinis (Weber & Mohr) Bednarck-Ochyra & Ochyra. Dry pool with lichens *Siphula ceratites* and *Cladonia* on rocky flanks of Cape Mountain near Razorback. FB-223.

Bucklandiella heterosticha (Hedwig) Bednarck-Ochyra & Ochyra. Dry pool with lichens *Siphula ceratites* and *Cladonia* on rocky flanks of Cape Mountain near Razorback. FB-223a.

Bucklandiella sudetica (Funck) Bednarck-Ochyra & Ochyra. Dry area of Neeluk limestone knob and forming cushions over granitic south-facing slope of Neeluk. FB-450, FB-695.

***Calliergon* – Amblystegiaceae**

Calliergon giganteum (Schimper) Kindberg var. *giganteum***.** Forming mats in standing water or among grasses and sedges in very wet areas, behind village school. FB-198, FB-402, FB-724.

Calliergon richardsonii (Mitten) Kindberg. Wet areas, among grasses near sand dunes north of air strip and near trail to Cape Mountain. FB-483, FB-489.

Calliergon stramineum [See syn.: *Straminergon stramineum*]

***Calliergonella* – Hypnaceae**

Calliergonella lindbergii (Mitten) Hedenäs. On boulder in boulder field, Village Creek on rocky flank of Razorback. FB-592.

***Campylium* – Campyliaceae**

Campylium chrysophyllum (Bridel) J. Lange. On wet sand near shore of Lopp Lagoon north of reindeer corral, and near winter trail to Tin City. FB-665.

Campylium halleri (Hedwig) Lindberg. Flat, dry rocky area near area of slate, near end of Neeluk outcrop. FB-698.

Campylium stellatum (Hedwig) C. Jensen. On sand near airstrip, among grasses, in crevice of boulders, and north-facing bank of Village Creek. FB-200, FB-487, FB-556, FB-578, FB-639, FB-652.

***Catoscopium* – Catoscopiaceae**

Catoscopium nigritum (Hedwig) Bridel. Wet, mossy-grassy slope above Village Creek behind Razorback. Sporophytes present. FB-440.

***Ceratodon* – Ditrichaceae**

Ceratodon purpureus (Hedwig) Bridel. Abundant. Disturbed sites where gravel was removed for road; also on shale-limestone slope, sand and mud. FB-371, FB-372, FB-417, FB-535, FB-558, FB-617, FB-623, FB-761.

Cinclidium – Mniaceae

Cinclidium arcticum Bruch & Schimper. On small sandy mound, near sand dunes north of village. FB-774.

Cinclidium latifolium Lindberg. Mixed with *Meesia triquetra* in wet area between Navy-Coast Guard site and airstrip. FB-423.

Cinclidium stygium Swartz. Low wet areas among grasses, sedges, and *Meesia triquetra.* FB-410, FB-460, FB-674, FB-764.

Cinclidium subrotundum Lindberg. Near ponds among grasses and sedges. FB-392, FB-452, FB-628, FB-781.

Climacium – Climaciaceae

Climacium dendroides (Hedwig) Weber & Mohr. Abundant. Among willows and sedges, lower flanks of Cape Mountain. FB-203, FB-258.

Codriophorus – Grimmiaceae

Codriophorus fascicularis (Hedwig) Bednarek-Ochyra & Ochyra. [Syn.: *Racomitrium fasciculare* (Hedwig) Bridel]. Side of dried pool on Cape Mountain; on mud or on rocks, among boulders. FB-313, FB-314, FB-315.

Conostomum – Bartramiaceae

Conostomum tetragonum (Hedwig) Lindberg. On dry north-facing slopes of Cape Mountain near Village Creek; top of Neeluk limestone knob overlooking backside of Tin City. FB-697, FB-782.

Cratoneuron – Amblystegiaceae

Cratoneuron filicinum (Hedwig) Spruce. In deep crevice with seepage, Puvik limestone knob. FB-644.

Cynodontum – Dicranaceae

Cynodontum alpestre (Wahlenberg) Milde. Rocky, grassy area below Razorback. FB-204.

Cynodontum strumiferum (Hedwig) Lindberg. Boulder field on Cape Mountain. FB-201.

Dicranella – Dicranaceae

Dicranella cerviculata (Hedwig) Schimper. Growing on side of small hummock. Low, wet area behind village of Wales. FB-502.

Dicranella crispa (Hedwig) Schimper [Syn. *Anisothecium vaginale* (Withering) Loeske]. Growing among grasses and sedges, lower slope below Razorback. FB-475.

Dicranella schreberiana (Hedwig) H.A. Crum & L.E. Anderson [Syn. *Anisothecium schreberianum* (Hedwig) Dixon]. On sandy soil among sedges, between beach and ponds north of village. FB-551.

Dicranoweisia – Dicranaceae

Dicranoweisia crispula (Hedwig) Lindberg *ex* Milde. Forming cushion on rock; also near late-lying snow bank, among sedges in wet area of small ponds and mounds. FB-443, FB-514, FB-581, FB-777, FB-783.

Dicranum – Dicranaceae

Dicranum elongatum Schleicher *ex* Schwaegrichen. On mounds and slopes with grasses, sedges, and other mosses. FB-206, FB-466, FB-470, FB-480, FB-561, FB-648, FB-712, FB-717, FB-773.

Dicranum groenlandicum Bridel. Widespread. Among grasses and other mosses in wet areas and on slopes of Cape Mountain and near Razorback. FB-468, FB-471, FB-477, FB-562, FB-589, FB-618, FB-647, FB-662, FB-708, FB-710, FB-711.

Dicranum scoparium Hedwig. In grassy areas on slopes and hummocks; among *Salix, Empetrum,* or lichens. Also, under overhanging rocks. FB-474, FB-538, FB-590, FB-596, FB-629, FB-635.

Dicranum spadiceum Zetterstedt [Syn.: *Dicranum angustum* Lindberg]. Growing among *Salix*, lower flanks of Cape Mountain FB-205.

Didymodon – Pottiaceae

Didymodon asperifolius (Mitten) Crum. Low wet area near road to Village Creek, on wet soil of ice ridge. FB-768.

***Distichium* – Ditrichaceae**

Distichium capillaceum (Hedwig) Bruch & Schimper. Growing in rock crevice of limestone knob. Also on wet soil near ice lens and road to Village Creek. FB-405, FB-449, FB-559, FB-608, FB-614, FB-658, FB-685.

Distichium inclinatum (Hedwig) Bruch & Schimper. Growing with lichen *Solarina spongiosa* on black humus. Top of north-facing bank on Village Creek below Razorback. FB-580.

***Ditrichum* – Ditrichaceae**

Ditrichum flexicaule (Schwaegrichen.) Hampe. Dense turf on south-facing slope of Neeluk among *Dryas.* Calcareous substrate. FB-461, FB-645.

Ditrichum gracile (Mitten) O. Kuntze. In crevice of limestone outcrop of Neeluk, below Razorback, lower flanks of Cape Mountain including near shore just above snow banks, and north-facing bank of Village Creek. FB-572, FB-579, FB-597, FB-615.

***Drepanocladus* – Amblystegiaceae**

Drepanocladus aduncus (Hedwig) Warnstorf. In wet sites or standing water among sedges and grasses. FB-528, FB-669, FB-702.

***Encalypta* – Encalyptaceae**

Encalypta rhaptocarpa Schwaegrichen. Growing on shale-limestone, Neeluk knob overlooking Lopp Lagoon. FB-369, FB-370.

***Eurhynchium* – Brachytheciaceae**

Eurhynchium pulchellum (Hedwig) Jennings. In cave-like shelter of rock outcrops. Cape Mountain, other side of Village Creek across from Razorback. FB-600.

***Funaria* – Funariaceae**

Funaria arctica (Berggren) Kindberg. Growing on sand dunes among grasses north of airstrip. On rock in Village Creek across from Razorback.FB-516, FB-576.

Funaria microstoma Schimper. Small plant growing on gravel and soil among grasses. Disturbed area near Razorback and bridge over Village Creek. FB-453.

***Grimmia* – Grimmiaceae**

Grimmia incurva Schwaegrichen. On rock across Village Creek near Razorback. FB-594.

Grimmia torquata Hornschuch *ex* Greville. Ridgetop of Cape Mountain, underhang of rock outcrop. FB-387.

Hylocomium – Hylocomiaceae

Hylocomium splendens (Hedwig) Schimper. Wet and dry sites mixed with grasses, sedges, willows, and other mosses (*Tomenthypnum nitens* and *Drepanocladus revolvens)* FB-211, FB-494, FB-495, FB-611, FB-612, FB-661, FB-692.

Hypnum – Hypnaceae

Hypnum bambergeri Schimper. On hummock among grasses near beach dunes; slumping soil on rocky face of Neeluk; bank of Village Creek and wet slope above Village Creek. FB-486, FB-499, FB-610, FB-659.

Hypnum hamulosum Schimper. Growing among rocks with lichen *Nephroma*, below trail to Cape Mountain FB-496.

Kiaeria – Dicranaceae

Kiaeria falcata (Hedwig) I. Hagen. Upper slope back of Village. FB-620.

Kiaeria glacialis (Berggren) Hagen. Among grasses and sedges on slope of Neeluk. FB-207.

Leptobryum – Meesiaceae

Leptobryum pyriforme (Hedwig) Wilson. On sandy soil or gravel. FB-241, FB-427, FB-553, FB-694.

Limprichtia see *Scorpidium*

Loeskypnum – Amblystegiaceae

Loeskypnum badium (Hartman) Paul. [Syn.: *Drepanocladus badius* (Hartman) G. Roth]. Low, wet area between airstrip and pond, among sedges and *Eriophorum.* FB-673, FB-805.

Meesia – Meesiaceae

Meesia triquetra (Richter) Ångstrom. Low, wet flat area near bridge. Mixed with *Cinclidium stygium* in wet area between Navy-Coast Guard site and airstrip. Also among sedges in wet area near small ponds and mounds. FB-212, FB-424, FB-442, FB-574.

Meesia uliginosa Hedwig. Grassy, mossy slope above Village Creek, backside of Razorback, and low, wet areas near gravel road and Razorback. FB-409, FB-672, FB-676.

Mnium – Mniaceae

Mnium thompsonii Schimper. Top of limestone boulder of Neeluk outcrop, and underside of rocky ledge at ridgetop of Cape Mountain. Mixed with *Orthotrichum pylaisii, Encalypta rhaptocarpum* and *Schistidium apocarpum.* FB-455, FB-456.

Myurella – Thuidiaceae

Myurella tenerrima (Bridel) Lindberg. Growing on limestone rock with *Orthotrichum pylaisii.* Razorback. An Arctic and northern boreal species of moist, calcareous habitat, infrequent in fens, rock crevices, and tundra meadows. FB-766.

Oncophorus – Dicranaceae

Oncophorus virens (Hedwig) Bridel. Dry rocky area, grassy slope with willows. FB-397.

Oncophorus wahlenbergii. Bridel. Wet areas, abundant. Low wet area back of beach sand dunes north of air strip and grassy slope above Village Creek. FB-213, FB-394, FB-803.

***Orthothecium* – Hypnaceae**

Orthothecium chryseum (Schwaegrichen ex Schultes) Bruch & Schimper. Grassy slope above Village Creek and back side of Razorback. FB-790.

***Orthotrichum* – Orthotrichaceae**

Orthotrichum pylaisii Bridel. Grassy and rocky areas, including limestone boulder on Neeluk knob. FB-214, FB-326, FB-327, FB-328, FB-330, FB-334.

***Paludella* – Meesiaceae**

Paludella squarrosa (Hedwig) Bridel. Among grasses and *Eriophorum* in low, wet area near Lopp Lagoon and trail to Tin City, north of reindeer corral. FB-438.

***Paraleucobryum* – Dicranaceae**

Paraleucobryum enerve (Thedin) Loeske. Wet seepage area with the lichens *Thamnolia* and *Siphula,* slope below trail to Cape Mountain. FB-439.

***Philonotis* – Bartramiaceae**

Philonotis fontana (Hedwig) Bridel. Near rivulet in late-lying snow bank at Bering Strait and on wet sand near shore of Lopp Lagoon. FB-666, FB-716.

***Plagiomnium* – Mniaceae**

Plagiomnium ellipticum (Bridel) T. Koponen. Among other mosses and *Salix* on lower flank of Cape Mountain along shore of Bering Strait. Also on low mound among sedges, and limestone outcrop of Neeluk. FB-457, FB-459, FB-776.

Plagiomnium medium (Bruch & Schimper) Koponen ssp. *curvatulum* (Kindberg) Koponen. Moist solifluction slopes behind village school. FB-215.

***Pogonatum* – Polytrichaceae**

Pogonatum dentatum (Bridel) Bridel. Disturbed ground of digging mounds along Bering Strait shore and area where gravel was removed for road. FB-340, FB-360, FB-366.

***Pohlia* – Bryaceae**

Pohlia cruda (Hedwig) Lindberg. Widespread. On mounds with sedges and grasses; also low, wet areas and mud. FB-498, FB-522, FB-523, FB-525, FB-527, FB-531, FB-534, FB-693, FB-770, FB-775, FB-788.

Pohlia cf. *crudoides* (Sullivant & Lesquereux) Brotherus. Bordering animal burrow, side of bank, Cape Mountain facing Strait. FB-791.

Pohlia nutans (Hedwig) Lindberg. Widespread. Growing among sedges in low wet areas and on sand dunes, also disturbed areas. FB-497, FB-517, FB-521, FB-554, FB-772.

Pohlia proligera (Lindberg) *ex* Limpricht) Lindberg *ex* H. Arnell. Grassy flank of Cape Mountain. FB-216.

Pohlia wahlenbergii (Weber & Mohr) Andrews. On side of little rivulet in wet swale, between Lopp Lagoon and back side of Neeluk. FB-778.

***Polytrichastrum* – Polytrichaceae**

Polytrichastrum alpinum (Hedwig) G.L. Smith. Abundant. Late-lying snowbed, disturbed area of digging mounds near shore of Bering Strait, among grasses and sedges, mixed with *Polytrichum hyperboreum*

in moist depressions. Also wet sand near shore of Lopp Lagoon. FB-217, FB-347, FB-349, FB-352, FB-353, FB-354, FB-357, FB-667.

***Polytrichum* – Polytrichaceae**

Polytrichum hyperboreum R. Brown. Abundant. Various habitats: wet, dry sandy soil, disturbed sites, mixed with *Polytrichastrum alpinum* and *Psilopilum cavifolium.* FB-339, FB-343, FB-344, FB-345.

Polytrichum jensenii I. Hagen. Low wet site on mound behind village school. FB-338.

Polytrichum juniperinum Hedwig. Disturbed areas of solifluction terrace, frost-action, and site where gravel was removed for road. FB-218, FB-219, FB-359.

Polytrichum piliferum Schreb. *ex* Hedwig. On soil over rock. FB-337.

Polytrichum strictum Bridel. Wet areas and grassy hummocks mixed with *Dicranum.* FB-220, FB-341, FB-342.

***Pseudocalliergon* – Amblystegiaceae**

Pseudocalliergon brevifolium (Lindberg) Hedenas [Syn.: *Drepanocladus brevifolius* (Lindberg) Warnstorf]. Near water alongside gravel runway of airport. FB-786.

Pseudocalliergon trifarium (Weber & Mohr) Loeske [Syn.: *Calliergon trifarium* Weber & Mohr]. Near seepage areas, rivulets, and ponds of Village Creek, fellfield of Cape Mountain, and between airport and Razorback. FB-660, FB-678, FB-700, FB-730.

Pseudocalliergon turgescens (T. Jensen) Loeske [Syn.: *Scorpidium turgescens* (T. Jensen) Loeske]. Near airport in low, wet areas alongside the gravel runway. FB-759, FB-785.

***Pseudostereodon* – Hypnaceae**

*Pseudostereodon procerrimus (*Molendo) Fleischer [Syn.: *Hypnum procerrimum* Molendo]. Slumping soil on rocky face of Neeluk, calcareous. FB-792.

***Psilopilum* – Polytrichaceae**

Psilopilum cavifolium (Wilson) Hagen. Disturbed sites: digging site and where gravel was removed for road. FB-361, FB-363.

Psilopilum laevigatum (Wahlenberg) Lindberg. Abundant. Disturbed areas. Mixed with *Ceratodon purpureus, Pogonatum dentatum,* or *Psilopilum cavifolium* in some areas. FB-221, FB-356, FB-362, FB-364.

***Ptilium* – Hypnaceae**

Ptilium crista-castrensis (Hedwig*)* De Notaris. Usually wet sites, also rocky areas. FB-222, FB-296, FB-297, FB-298, FB-564.

***Ptychostomum* – Bryaceae**

Ptychostomum arcticum (R. Brown) J. Spence. [Syn.: *Bryum arcticum* R. Brown]. In gravel bank near airport runway, on sand north of airstrip, in crevice of limestone, slope below rocky flanks of Razorback, and wet areas growing among grasses and sedges. FB-518, FB-519, FB-530, FB-584, FB-626, FB-655, FB-687, FB-793, FB-794, FB-798.

Ptychostomum creberrimum (Taylor) J. Spence. [Syn: *Bryum creberrimum* Taylor]. Among sedges on sandy soil between beach and ponds or along shore of ponds. Also in crevice of limestone.FB-548, FB-677, FB-686, FB-758.

Ptychostomum cryophilum (Mårtensson) J. Spence [Syn.: *Bryum cryophilum* Mårtensson]. Growing on seepage areas along Bering Strait near beach and sand dunes, sometimes submerged; also muddy disturbed areas. FB-197, FB-305, FB-408, FB-430, FB-431, FB-432, FB-479.

Ptychostomum cyclophyllum (Schwaegrichen) J. Spence. [Syn.: *Bryum cyclophyllum* (Schwaegrichen) Bruch & Schimper]. Among sedges on wet sandy soil between beach and ponds north of village. FB-555.

Ptychostomum imbricatulum (Müll. Hal.) D.T. Holyoak & N. Pederson. Growing on mound in moist habitat behind school, mixed with *Leptobryum pyriforme.* FB-444.

Ptychostomum pallescens (Schleicher ex Schwaegrichen) J. Spence [Syn.: *Bryum pallescens* Schleicher ex Schwaegrichen]. Disturbed areas, along shore of pond near airport, and along little rivulet in wet swale between Lopp Lagoon and back side of Neeluk. FB-780, FB-796, FB-797, FB-800, FB-801, FB-802.

Ptychostomum pseudotriquetrum (Hedwig) Spence and Ramsay [Syn.: *Bryum pseudotriquetrum* (Hedwig) Gaertner, Meyer & Scherber]. Forming mat on wet sand alongside small pond, north side of Village Creek across from Razorback. FB-414, FB-550.

Ptychostomum salinum (I. Hagen ex Limpricht) J. Spence. [Syn.: *Bryum salinum* I. Hagen ex Limpricht]. Among sedges or grass clump on sandy soil near pond shore and between beach and ponds. FB-549, FB-771.

Ptychostomum weigelii (Sprengel) J. Spence. [Syn.: *Bryum weigelii* Sprengel]. Wet area along gravel runway, and near little rivulet in wet swale between Lopp Lagoon and back side of Neeluk. FB-779, FB-799.

Ptychostomum wrightii (Sullivant) Spence. [Syn.: *Bryum wrightii* Sullivant & Lesquereux]. Dry uplands on shale. FB-306, FB-307.

Racomitrium **– also see** ***Bucklandiella and Codriophorus***

Racomitrium lanuginosum (Hedwig) Bridel. Abundant on rock, small mounds, mixed with *Dryas, Salix,* and *Diplophyllum.* FB-224, FB-309, FB-310, FB-311, FB-312.

Rhizomnium **– Mniaceae**

Rhizomnium andrewsianum (Steere) Koponen. In rock crevice, top ridge of Cape Mountain. FB-607.

Rhizomnium magnifolium (Horik) Koponen. Near Lopp Lagoon in wet area among deep grasses. FB-390, FB-454.

Rhizomnium pseudopunctatum (Bruch & Schimper.) Koponen. Along stream near village of Wales water tower. FB-458.

Rhytidiadelphus **– Hylocomiaceae**

Rhytidiadelphus triquetrus (Hedwig) Warnstorf. Grassy slopes of Cape Mountain and Razorback, and moist rocky area, with *Salix, Cassiope* and *Dryas*. FB-322, FB-323, FB-709.

Rhytidiadelphus triquetrus (Hedwig) Warnstorf var. *beringianus* (Cardot & Theriot) Grout. Depression at base of boulders, fellfield of Neeluk facing Razorback. FB-225.

Rhytidium – Rhytidiaceae

Rhytidium rugosum (Hedwig) Kindberg. Seepage areas on rocky flanks of Razorback and Cape Mountain, and south-facing limestone bank of Neeluk. FB-226, FB-324, FB-325, FB-784.

Sanionia – Amblystegiaceae

Sanionia uncinata (Hedwig) Loeske. Wet, seepage area on Cape Mountain fellfield and lower slopes of Cape Mountain among *Carex, Salix,* and *Sphagnum;* also shore of Bering Strait near digging mounds; sandy, rocky, wet, and disturbed sites. FB-209, FB-464, FB-529, FB-532, FB-546, FB-568, FB-585, FB-630, FB- 640, FB-684, FB-688, FB-705, FB-707 FB-719, FB-760.

Schistidium – Grimmiaceae

Schistidium agassizii Sullivant & Lesquereux. Exposed surface of Puvik limestone knob. FB-332.

Schistidium atrichum (Müller Hal.) W.A. Weber. On rock near Razorback and limestone boulder of Neeluk. Mixed with *Orthotrichum pylaisii*. FB-329, FB-331, FB-333.

Schistidium confertum (Funck) Bruch & Schimper. Limestone outcrops of Neeluk and halfway between Razorback and Air Force Radar Dome. FB-237, FB-428.

Schistidium gracile (Roehl.) Limpricht. In rock crevice of limestone outcrop halfway between Razorback and Air Force Radar Dome. FB-316.

Schistidium maritimum (Turner ex R. Scott) Bruch & Schimper. On rock with *Dicranoweisia.* Late-lying snow bank near shore of Bering Strait at village of Wales digging mounds. FB-393.

Scorpidium – Amblystegiaceae

Scorpidium cossonii Hedenäs. [Syn.: *Limprichtia cossonii* (Schimper) L.E. Anderson, H.A. Crum & W. R. Buck]. Low, flat wet areas; wet, grassy slopes above Village Creek; on rocks on the lower flanks of Cape Mountain; and damp ledge of Puvik limestone knob. FB-421, FB-422, FB-500, FB-560, FB-566, FB-595, FB-646, FB-690, FB-729.

Scorpidium revolvens (Swartz ex Anonymo) Rubers. [Syn.: *Limprichtia revolvens* (Swartz) Loeske]. Wet or rocky areas among grasses and sedges, lower flank of Cape Mountain; also along shore of Bering Strait and in low, wet area back of shore dunes north of airstrip. FB-208, FB-599, FB-675.

Seligeria – Seligeriaceae

Seligeria polaris Berggren. Scarce. In deep crevice with seepage, Puvik limestone knob. A circumpolar species of arctic Alaska, arctic Canada, and Greenland. FB-762.

Sphagnum – Sphagnaceae

Sphagnum angustifolium (Warnstorf) Jensen. Wet area, below upper rocky outcrop of Razorback above gravel road with *Sphagnum, Salix,* and monkhood. FB-742.

Sphagnum balticum (Russow) Jensen. Among grasses and mosses on lower slope below Razorback. FB-747.

Sphagnum fuscum (Schimper) Klinggräff. Among grasses and sedges below Razorback and above gravel road. FB-738.

Sphagnum lenense H. Lindberg ex L.I. Savicz. Among grasses and sedges below Razorback and above gravel road. FB-739.

Sphagnum lindbergii Schimper. Among grasses and mosses on lower slope below Razorback. FB-755, FB-748.

Sphagnum orientale Savicz-Ljubitskaya. Among grasses and mosses on lower slope below Razorback. Mixed in with FB-747.

Sphagnum rubellum Wilson. Among grasses and sedges below Razorback, and on top of Cape Mountain. FB-732, FB-734, FB-746, FB-756.

Sphagnum squarrosum Crome. Wet areas (solifluction terraces, base of boulders with other species of *Sphagnum*), and in standing water with sedges. FB-731, FB-735, FB-740, FB-751, FB-752.

Sphagnum subfulvum Sjors. Alongside small pool, moist tundra slopes near village of Wales water tower. FB-229.

Sphagnum subsecundum Nees. On solifluction terrace on Cape Mountain near Razorback. FB-231.

Sphagnum tescorum (Berggren) Flatberg. Abundant and widespread in moist to wet habitats including rocky slopes, grassy areas, with common associates *Salix*, *Diapensia* and *Dryas*. FB-230, FB-627, FB-733, FB-736, FB-737, FB-741, FB-743, FB-744, FB-745, FB-749, FB-750, FB-753, FB-754.

Sphagnum warnstorfii Russow. Lower slopes of Razorback near village of Wales. FB-232.

Splachnum **– Splachnaceae**

Splachnum species usually found growing on animal dung, decaying animal remains, or other highly organic substrates.

Splachnum vasculosum Hedwig. Low, wet areas (one site mixed with *Splachnum wormskjoldii*). FB-240, FB-269

Splachnum wormskioldii Hornemann [Syn.: *Aplodon wormskioldii* (Hornemann) R. Brown]. Wet areas on highly organic soil, sometimes growing with *Tetraplodon* or *Splachnum vasculosum*. FB-210, FB-267, FB-268, FB-273.

Straminergon **– Amblystegiaceae**

Straminergon stramineum (Bridel) Hedenäs [Syn.: *Calliergon stramineum* (Bridel) Kindberg]. Seepage areas below boulders or snowfields. FB-199, FB-504, FB-565.

Syntrichia **– Pottiaceae**

Syntrichia norvegica Weber & Mohr. On gravel at base of limestone face of Neeluk, and south-facing bank of Village Creek. FB-236, FB-656.

Syntrichia ruralis (Hedwig) Weber & Mohr. In crevice on limestone outcrop on Neeluk. FB-239, FB-795.

Tayloria **– Splachnaceae**

Tayloria lingulata (Dickson) Lindberg. Soil bank near Lopp Lagoon north of reindeer corral. FB-385.

Tetraplodon **– Splachnaceae**

Tetraplodon mnioides (Hedwig) Bruch & Schimper. On animal fur, bone, or pellets, and highly organic soil. Abundant. FB-234, FB-270, FB-272, FB-274, FB-275, FB-277, FB-279, FB-375.

Tetraplodon pallidus Hagen. On highly organic soil and small animal bones. FB-373, FB-374.

***Timmia* – Timmiaceae**

Timmia austriaca Hedwig. Among sedges on wet, sandy soil between beach and ponds north of village of Wales. FB-404.

***Tomenthypnum* – Brachytheciaceae**

Tomenthypnum nitens (Hedwig) Loeske. Among sedges and grasses on low, flat site above Village Creek; among *Salix* on slope of Neeluk. FB-416, FB-557, FB-638, FB-657.

***Tortella* – Pottiaceae**

Tortella fragilis (Hooker *ex* Drumm.) Limpricht. Late-lying snow site on lower flanks of Razorback above Village Creek. FB-235.

Tortella tortuosa (Hedwig) Limpricht. In crevice of limestone outcrop of Neeluk and sheltered by rock overhang. In area of deep snow, but not late-lying snow. FB-238, FB-419, FB-663.

Tortula* – see *Syntrichia

***Warnstorfia* – Amblystegiaceae**

Warnstorfia exannulata (Schimper) Loeske. Low, wet area near water pump at Village Creek. FB-668.

Warnstorfia sarmentosa (Wahlenberg) Hedenäs. Low wet area north of village and in melt stream below snowfield, lower rocky slope of Cape Mountain. FB-505, FB-636.

LIVERWORTS

***Anastrophyllum* – Epigonanthaceae**

Anastrophyllum minutum (Cranz) Schuster. Wet grassy areas on Cape Mountain. FB-622, FB-763.

Anastrophyllum sp. FB-536. On mud, wet area between school and south end of village.

***Aneura* – Aneuraceae**

Aneura pinguis (L.) Dumortier. [Syn: *Riccardia pinguis* (L.) Gray]. Low, wet area near Razorback – Navy site. FB-632.

***Anthelia* – Ptilidiaceae**

Anthelia julacea (L.) Dumortier. Occurs in oceanic climates. Wet area among sedges and mosses, slope below rocky flanks of Cape Mountain near Razorback. FB-563, FB-704.

***Asterella* – Grimaldiaceae**

Asterella gracilis (F. Weber) Underwood. FB-609. Face of rocky cliff of Neeluk.

***Blepharostoma* – Blepharostomaceae**

Blepharostoma trichophyllum (L.) Dumortier**.** Moist habitats. FB-383, FB-384, FB-533, FB-587.

Blepharostoma trichophyllum ssp*. brevirete* (Bryhn et Kaalaas in Bryhn) R.M. Schuster. In deep crevice with seepage, Puvik limestone knob. FB-757.

Chandonanthus* – see *Tetralophozia

***Cladopodiella* – Trigonanthaceae**

Cladopodiella fluitans (Nees in Funck) H. Bruch in Kalliola. Wet, grassy area on bench below Razorback. In bogs and mires forming pure carpets or scattered among other bryophytes. Male plants are more common than female plants. FB-789.

***Diplophyllum* – Scapaniaceae**

Diplophyllum taxifolium (Wahlenberg) Du Mortier. Rocky crevices on slopes and terraces of Cape Mountain, sometimes growing with *Carex* or *Empetrum* and mixed with *Bartramia ithyphylla*. FB-263, FB-509, FB-544, FB-545, FB-604, FB-606, FB-619, FB-649, FB-713, FB-727.

***Gymnomitrion (Gymnomitrium)* – Marsupellaceae**

Gymnomitrion corallioides Nees. Growing with *Andreaea rupestris* on vertical face of rock or on soil. Overlooking Air Force Radar Dome. FB-335, FB-726.

***Lophozia* – Epigonanthaceae**

Lophozia attenuata (Martius) Dumortier. Rivulet wet area, lower slope of dry, rocky slope above old trail to Cape Mountain FB-482.

Lophozia cf. *wenzelii* (Nees) Stephani. Near rivulet in late-lying snow bank at Bering Strait near digging mounds. FB-714.

***Mannia* – Grimaldiaceae**

Mannia sibirica (K. Mueller) Frye & Clark. Disturbed area below Lee's Trading Post, Tin City. FB-703.

***Marchantia* – Marchantiaceae**

Marchantia alpestris Nees. Pioneer plant in area where gravel was removed to build a local road. Along shore of Bering Strait, disturbed sites, wet sand, and low, wet areas growing among sedges. FB-520, FB-537, FB-542, FB-573, FB-598, FB-644, FB-679, FB-699, FB-723.

Marchantia polymorpha L. Pioneer plant in area where gravel was removed to build a local road. Among sedges in low, wet area behind school, near beach dunes, and in gravel pit. FB-680, FB-683, FB-721.

***Marsupella* – Marsupellaceae**

Marsupella arctica (Berggren) Bryhn & Kaalaas. Wet, grassy area on bench below Razorback. FB-513.

Marsupella spiniloba Schuster & Damsholt. On soil among grasses on slope below Razorback. FB-511, FB-463.

***Pleurocladula* – Trigonanthaceae**

Pleurocladula albescens (Hooker) Grolle. Late-lying snow bank along Bering Strait at digging mounds. FB-706.

***Ptilidium* – Ptilidiaceae**

Ptilidium ciliare (L.) Hampe. Wet areas among grasses and *Tetraplodon mnioides*. FB-398.

***Scapania* – Scapanaceae**

Scapania curta (Martius) Dumortier. Near rivulets in late-lying snow bank at Bering Strait near digging mounds, and in disturbed area below Razorback. FB-508, FB-624, FB-715.

Scapania plicata (Lindberg) Potemkin [Syn.: *Macrodiplophyllum plicatum* (Lindberg) Perss.]. Growing in rock crevices on upper flank of Razorback, upper grassy slope of Cape Mountain below snowfield, also wet bench above village water tower. FB-478, FB-543, FB-571, FB-583, FB-586, FB-588, FB-593.

***Tetralophozia* – Epigonanthaceae**

Tetralophozia setiformis (Ehrhart) Schlakov. [Syn.: *Chandonanthus setiformis* (Ehrhart) Lindberg]. On rock, flank of Razorback and on low hummock in wet area. FB-380, FB-381, FB-379, FB-570, FB-637.

***Tritomaria* – Epigonanthaceae**

Tritomaria scitula (Taylor) Joergensen. Side of bank, Cape Mountain facing strait. FB-605.

ANNOTATED CHECKLIST OF LICHENS

Compiled ca. 1995

Species names with * could not be located in the collection in 2010 when this manuscript was being prepared for publication. Some may be on loan or annotated to different names.

Abrothallus

Abrothallus bertianus De Not. Growing over *Parmelia omphalodes.* Worldwide distribution, but this is the first report for Alaska. It has probably been overlooked. FL-2058.

Acarospora

**Acarospora veronensis* A. Massal. On rock, dry bank of limestone ridge. FL-1014, FL-1015.

Alectoria

Alectoria nigricans (Ach.) Nyl. [Syn.: *Gowardia nigricans* (Ach.) P. Halonen, L. Myllys, S. Velmala, & H. Hyvärinen]. On soil, raised mound in low, wet tundra. FL-709.

**Alectoria ochroleuca* (Hoffm.) A. Massal. Drier soil surfaces. FL-809.

Allantoparmelia

Allantoparmelia alpicola (Th.Fr.) Essl. Fellfield of granitic Cape Mountain as well as limestone ridges. FL-2001, FL-2007.

Amandinea

Amandinea punctata (Hoffm.) Coppins & Scheid. *in* Scheid. [Syn.: *Buellia punctata*]. On driftwood near Bering Strait shore. FL-981.

Amygdalaria

Amygdalaria panaeola (Ach.) Hertel & Brodo *in* Brodo & Hertel. On rock, limestone ridges, and Cape Mountain. FL-861, FL-865, FL-991, FL-1000.

Amygdalaria pelobotryon (Walhenb. in Ach.) Norman. On rock, Cape Mountain. FL-895.

Arctocetraria

Arctocetraria andrejevii (Oxner) Kärnefelt. [Syn.: *Cetraria andrejevii* Oxner.] Common. Low, wet tundra near village of Wales and Lopp Lagoon and dry mountains of Cape Mountain. Wide amphi-Beringian distribution. FL-584, FL-738.

Arctoparmelia

Arctoparmelia centrifuga (L.) Hale. Common. On granitic rock of Cape Mountain, soil, dead mosses in moist tundra, and limestone ridge. Circumpolar, arctic-alpine. FL-647, FL-2000, FL-2036.

Asahinea

Asahinea chrysantha (Tuck.) Culb. & C. Culb. On soil and vegetation of Cape Mountain. Circumpolar, arctic-alpine. FL-652, FL-734.

Aspicilia

Aspicilia disserpens (Zahlbr.) Räsänen *in* Huuck. Saxicolous on limestone ridges. FL-910, FL-1047.

Bacidia

Bacidia bagliettoana (Massal. & DeNot *in* Massal.) Jatta. On soil, limestone ridge. FL-921.

Bacidia subfuscula (Nyl.) Th. Fr. [Syn.: *Lecania subfuscula* (Nyl.) S. Ekman].On reindeer bone near reindeer corral. FL-943.

Baeomyces

Baeomyces placophyllus Ach. Sandy soil and soil-plant detritus of moist tundra. FL-866, FL-956 .

Biatora

Biatora sphaeroides (Dickson) Korber [Syn.: *Mycobilimbia pilularis* (Körber) Hafellner & Türk]. On old timbers, soil, mosses. Moist tundra. FL-896, FL-994.

Biatora subduplex (Nyl.) Printzen. On driftwood along shoreline, *Salix* twigs, soil and mosses. FL-954, FL-1052, FL-1067.

Brodoa

Brodoa oroarctica (Krog) Goward. On rock of limestone ridges and granitic Cape Mountain. FL-608, FL-849, FL-851.

Bryocaulon

Bryocaulon divergens (Ach.) Kärnefelt. On rock and soil of limestone ridges and granitic Cape Mountain. FL-598, FL-1026.

Bryoria

Bryoria chalybeiformis (L.) Brodo & D. Hawksw. On old timbers. FL-674.

Buellia

Buellia disciformis (Fr.) Mudd. [Syn.: *Hafellia disciformis* (Fr.) Marbach & H. Mayrhofer]. On *Salix* twigs. FL-1059.

Caloplaca

Caloplaca ammiospilla (Wahlenb. *in* Ach.) H. Olivier. On *Salix* twigs and moss. Circumpolar, arctic-alpine distribution. FL-2032.

Caloplaca cerina (Ehrh.) Th. Fr. Abundant. On reindeer and whale bone. FL-899, FL-944, FL-989.

Caloplaca epiphyta Lynge [Syn.: *Caloplaca xanthostigmoidea* (Räsänen) Zahlbr.]. New to Alaska. On moss mat over rock. FL-2025.

Caloplaca holocarpa (Hoffm. *ex* Ach.) A.E. Wade. Not abundant. On whale bone and old timbers. Circumpolar. FL-946, FL-968.

Caloplaca tetraspora (Nyl.) H. Olivier. On *Ochrolechia* over moss. Area of deep snow cover on limestone ridge. Circumpolar, arctic-alpine. FL-2026.

Caloplaca vitellinula (Nyl.) H. Olivier. Not abundant. On whale bone near beach. Circumpolar, arctic-alpine. FL-949, FL-1005, FL-1006, FL-2033.

Candelariella

Candelariella aurella (Hoffm.) Zahlbr. On whale bone. Near bridge to village of Wales. FL, 897, FL-2034.

Candelariella vitellina (Hoffm.) Müll. Arg. On limestone ridges and whalebone. FL-898, FL-951, FL-969, FL-1048.

Cetraria

Cetraria commixta (Nyl.) Th. Fr. [Syn.: *Melanelia commixta* (Nyl.) Thell]. Common. On rock of limestone ridges and granitic boulders of Cape Mountain. Circumpolar, arctic-alpine. FL-654, FL-1094, FL-1097. Determined by John W. Thomson.

Cetraria ericetorum Opiz. subsp. *reticulata* (Räsänen) Kärnefelt. South-facing slope of limestone ridge and moist slope of Cape Mountain behind village of Wales. FL-592.

Cetraria hepatizon (Ach.) Vainio [Syn.: *Melanelia hepatizon* (Ach.) Thell]. On rock. Boulder field on slopes of Cape Mountain near Village Creek and village of Wales. Circumpolar, arctic-alpine. FL-587, FL-1025, FL-1095, FL-1096.

Cetraria islandica (L.) Ach. subsp. *islandica*. Wet and dry tundra, lower flank of Cape Mountain near village of Wales, and south-facing slope of limestone ridge above Village Creek. FL-673, FL-1099.

Cetraria kamczatica Savicz. Depression, wet tundra behind village of Wales. It was formerly considered to have a limited amphi-Beringian distribution (between the Kolyma River in Russia and the Mackenzie River in Canada) by Kärnefelt (1979), but in 1993, Kärnefelt reported it as occurring as far east as the Taimyr Peninsula indicating a wider amphi-Beringian distribution. FL-710.

Cetraria laevigata Rass. Abundant. Moist tundra near village of Wales and on slopes of Cape Mountain. With *Masonhalea richardsonii* in hollows of disturbed area below Lee's Trading Post, Tin City. Very wide amphi-Beringian distribution, reaching almost to Scandinavian Peninsula (Kärnefelt 1979). FL-588, FL-2023.

Cetraria nigricans (Nyl.) Kärnefelt. On limestone ridge forming divide for Lopp Lagoon drainage and Village Creek drainage. Circumpolar, arctic-alpine. FL-589, FL-2024.

Cetrariella

C*etrariella delisei* (Bory *ex* Schaer.) Kärnefelt & Thell. Common. Moist soil at base of boulder on Razorback and area of late-lying snow of limestone ridge near divide between Village Creek and Lopp Lagoon drainage. Circumpolar, arctic-alpine. FL-586, FL-594, FL-2031.

Cetrariella fastigiata (Del. *ex* Nyl. *in* Nord.) Kärnefelt & Thell. Moist areas on lower slope of Cape Mountain near shoreline and boulder field below Razorback. Circumpolar, arctic-alpine. FL-593.

Cetrelia

Cetrelia alaskana (C. Culb. & Culb.) Culb. & C. Culb. On soil-plant mat among plants on granitic Cape Mountain. Amphi-Beringian. FL-595.

Cladonia

Cladonia amaurocraea (Flarke) Schaerer. Moist tundra of Cape Mountain. FL-695. Determined by John W. Thomson.

Cladonia arbuscula subsp. *beringiana* Ahti [Syn.: *Cladina arbuscula* (Wallr.) Hale & Culb. subsp. *beringiana* (Ahti) N.S.Golubk.]. FL-684. Among *Empetrum* and lichens between large boulders of Razorback above gravel road.

Cladonia bellidiflora (Ach.) Schaerer. On soil mats over rocks or on mounds. Cape Mountain. FL-707, FL-1058.

Cladonia cariosa (Ach.) Sprengel. On thin layer of soil over rock with other plants. FL-698.

Cladonia coccifera (L.) Willd. Moist tundra, on soil-plant mat over rocks of Cape Mountain. FL-687, FL-690, FL-694, FL-705, FL-1056.

Cladonia crispata (Ach.) Flotow. On thin layer of soil over rocks. Cape Mountain. FL-678.

Cladonia decorticata (Florke) Sprengel. Limestone ridge and Cape Mountain boulder field. FL-702.

Cladonia deformis (L.) Hoffm. Moist tundra, among mosses, and on soil over rocks of Cape Mountain. FL-677, FL-689.

Cladonia ecmocyna Leighton. Late-lying snowbed along Bering Strait shore. FL-679.

Cladonia gracilis (L.) Willd. Among plants and rocks, Cape Mountain. FL-692.

Cladonia maxima (Asah.) Ahti. Late-lying snowbed along Bering Strait shore. FL-681.

Cladonia mitis Sandst. [Syn.: *Cladina mitis* (Sandst.) Hustich]. Moist tundra. Among mosses along rivulet, lower moist tundra slopes of Cape Mountain near shoreline of strait in sight of village of Wales. FL-691.

Cladonia pleurota (Florke) Schaerer. On mosses, sides of low banks, and plant mats over rocks. Near village water tower. Determined by John W. Thomson. Moist tundra. FL-696.

Cladonia rangiferina (L.) F. H. Wigg [Syn.: *Cladina rangiferina* (L.) Nyl.]. Drier hummock tops among rocks and vegetation of Cape Mountain. Determined by John W. Thomson. FL-682.

Cladonia stellaris (Opiz) Pouzar & Vězda [Syn.: *Cladina stellaris* (Opiz) Brodo]. Solifluction terrace, boulder fields of Cape Mountain. Verified by John W. Thomson. FL-704.

Cladonia stricta (Nyl.) Nyl. Among plants, limestone outcrop. FL-708. Determined by John W. Thomson.

Cladonia subfurcata (Nyl.) Arnold. Moist tundra and among large boulders near shoreline of Cape Mountain. Determined by John W. Thomson. FL-699.

Cladonia uncialis (L.) Weber *ex* F.H. Wigg. Moist tundra. Cape Mountain. Determined by John W. Thomson. FL-685.

Clauzadea

Clauzadea monticola (Ach. *ex* Schaerer) Hafellner & Bellemere *in* Hafellner. On rock, limestone ridge. Identified by John W. Thomson. FL-973.

Collema

Collema undulatum Laurer ex Flotow. On rock with *Melanelia stygia* , rocky slope above Village Creek. Verified by John W. Thomson. FL-596.

Dactylina

Dactylina arctica (Richardson) Nyl. Drier portion of solifluction lobe behind school building, south-facing bank of Village Creek, and moist slope above village of Wales water tower. Circumpolar, arctic-alpine. FL-599.

Dactylina beringica C.D. Bird & J.W.Thomson. More abundant than *Dactylina arctica.* Mostly growing in protected areas among mosses, liverworts, and vascular plants and in or near late-lying snowbeds. Generally considered to have a wide amphi-Beringian distribution. FL-600.

Ephebe

Ephebe hispidula (Ach.) Horwood. On rock, middle flank of Cape Mountain. FL-908.

Euopsis

Euopsis granatina (Sommerf.) Nyl. On rock, fellfield of Cape Mountain. FL-911.

Euopsis pulvinata (Schaerer) Vainio. On rock, fellfield of ridge top near overlook to Tin City Air Force Radar Dome. FL-916.

Evernia

Evernia perfragilis Llano. On thin layer of soil over rock, limestone ridge. Verified by John W. Thomson. FL-603.

Farnoldia

Farnoldia jurana (Schaerer) Hertel. On rock, late-lying snowbed and dry uplands of limestone ridges. FL-926.

Flavocetraria

Flavocetraria cucullata (Bellardi) Kärnefelt & Thell [Syn: *Cetraria cucullata* (Bellardi) Ach.]. Wet tundra, among vascular plants, mosses, and *Nephroma arctica*. FL-585, FL-1055.

Flavocetraria nivalis (L.) Kärnefelt & Thell [Syn.: *Cetraria nivalis* (L.) Ach.]. Among rocks, boulder field near old village water tower. Among *Empetrum, Salix, Dryas*. Lower flanks of Cape Mountain near shore of strait in sight of village of Wales. FL-590, FL-743.

Hypogymnia

**Hypogymnia subobscura* (Vainio) Poelt. On limestone ridge overlooking reindeer corral and Razorback, and soil-plant detritus mound in wet area behind beach sand dunes north of airstrip. Circumpolar, arctic-alpine. FL-609, FL-2054.

Lecania

Lecania disceptans (Nyl.) Lynge? On rock, limestone ridge. Growing over *Xanthoria sorediata.* First known from the Ernst Almquist collection at Port Clarence, Alaska and Sinus Konyambay, Sibiria Septentrionalis on the Vega Expedition in 1879 (as *Lecanora disceptans* Nyl.). Compares favorably with the description in Handbook of the Lichens of the U.S.S.R. (Kopaczevskaja, Makarevicz, Oxner, and Rassadina 1971) and with the two syntypes deposited in the Swedish Museum of Natural History, Stockholm. The type collection was from similar rock and was also associated with *Xanthoria sorediata.* Reported for Canada by Thomson and Scotter (1992). This collection is believed to be the third report of this species in the world. FL-985, FL-1071, FL-1072. These specimens out for verification.

Lecanora

Lecanora aleutica H. Magn. *in* Hedrick. Coastal rocks near base of Cape Mountain. Brodo (1984) reported this species for the Aleutian Islands, Little Diomede Island in the Bering Strait, and the Alaskan coast of Chukchi Sea near Point Hope and Cape Dyer. FL-845, FL-846.

Lecanora atrosulphurea (Wahlenb.) Ach. Not abundant. On rock or small stones. Lower flanks of Cape Mountain near village and on small stones in frost boil. FL-903, FL-979.

Lecanora behringii Nyl. Abundant. On old reindeer and whale bone. Near village of Wales and reindeer corral. FL-945, FL-950, FL-995.

Lecanora circumborealis Brodo & Vitik. On weathered lumber, near village of Wales. Circumboreal. Verified by I.M. Brodo. FL-1073.

Lecanora epibryon (Ach.) Ach. On plant detritus and humic soil. Limestone ridges. FL-965, FL-970.

Lecanora hagenii (Ach.) Ach. On whale bone. Near village of Wales. FL-901.

Lecanora orae-frigidae Sant. On weathered lumber and driftwood near shore of Bering Strait. The distribution of this maritime species was mapped by Brodo & Vanska (1984): coastal, arctic-boreal

in northern hemisphere. Listed for the first time in Alaska on Attu Island in the Aleutians by Talbot et al. (1991). This is thought to be the second record for Alaska. FL-1004, FL-1061, FL-1081.

Lecanora polytropa (Hoffm.) Rabenh. On large boulder, S-facing slope of limestone ridge above Village Creek. FL-1046.

Lecanora straminea Wahlenb. ex Ach. Rare. On rock (ornithocoprophilous). Arctic oceanic distribution (Santesson 1993). FL-2056.

Lecanora symmicta (Ach.) Ach. On *Salix* twigs and weathered lumber. FL-914.

Lecidea

Lecidea caesioatra Schaerer [Syn.: *Frutidella caesioatra* (Schaerer) Kalb]. Growing over liverworts. FL-637.

Lecidea lapicida (Ach.) Ach. On limestone ridge near divide between Lopp Lagoon and Village Creek. FL-972.

Lecidella

Lecidella euphorea (Florke) Hertel *in* D. Hawksw., James & Coppins. On old timber. Late-lying snowbed along Bering Strait shoreline south of village of Wales. FL-1033.

Lecidella stigmatea (Ach.) Hertel & Leuckert. On rock, on limestone ridges and Cape Mountain. FL-1045, FL-1070.

Lecidoma

**Lecidoma demissum* (Rutstr.) G. Schneider & Hertel *in* Hertel. On soil, rocky ridge top of Cape Mountain. FL-975.

Leciophysma

Leciophysma finmarkicum Th. Fr. On dead *Salix* stems. Along shore of Bering Strait near village of Wales. FL-1037.

Lithographa

Lithographa tesserata (DC) Nyl. Saxicolous, limestone ridge near divide between Lopp Lagoon and Village Creek. Flock (1989) reported this collection as the first record of the taxon for Continental North America. However, earlier Sirois et al. (1988) had reported this genus and species as a new record for Mount Albert, Gaspesie, Quebec, Canada. This, however, is the first record of the genus and species for Alaska and the Canadian Arctic (Flock 1989). The species was reported previously for the Arctic of the U.S.S.R. by Kopaczevskaja et al. (1977) and by Alstrup for the Narssaq District of Greenland (1979). It also occurs in Europe. FL-927.

Lobaria

Lobaria linita (Ach.) Rabenh. Abundant. Among lichens, mosses and grasses on mesic tundra on Cape Mountain and limestone ridges. Circumpolar, arctic-alpine. FL-613.

Lopadium

Lopadium coralloideum (Nyl.) Lynge. On humic soil over rock. Cape Mountain. Circumpolar, arctic-subalpine-alpine. FL-904.

Lopadium pezizoideum (Ach.) Korber. On mosses with *Ochrolechia.* Lower flanks of Cape Mountain. Circumpolar, arctic-alpine. FL-1034.

Masonhalea

Masonhalea richardsonii (Hook.) Kärnefelt. Found unattached on tundra, disturbed area below Lee's Trading Post, Tin City on Cape Prince of Wales. Northern amphi-Beringian species radiating out from northern Alaska and easternmost Siberia (Russian Far East) (Kärnefelt 1977). FL-614.

Megaspora

Megaspora verrucosa (Ach.) Hafellner & V. Wirth *in* V. Wirth [Syn.: *Pachyospora verrucosa* (Ach.) Massal.]. On soil crust. Limestone ridge. FL-1053.

Melanelia

Melanelia stygia (L.) Essl. [Syn.: *Parmelia stygia* (L.) Ach.]. On rock with *Collema undulatum.* Rocky slope above Village Creek, Cape Mountain. FL-615.

Micarea

**Micarea incrassata* Hedl. [Syn.: *Micarea assimilata* (Nyl.) Coppins]. On soil among sedges and *Dryas.* South-facing slope of limestone ridge. FL-1043.

Mycobilimbia

Mycobilimbia berengeriana (A. Massal.) Hafellner & V. Wirth [Syn.: *Lecidea berengeriana* (A. Massal.) Nyl.]. Wet, north-facing bank of Village Creek near Razorback, on soil. FL-1038.

Mycobilimbia lobulata (Sommerf.) Hafellner *in* V. Wirth. On soil crust with *Rinodina turfacea* . Wet tundra near beach sand dunes and above Village Creek. FL-953, FL-1043, FL-1054.

Mycobilimbia sabuletorum (Schreb.) Hafellner. On mosses, on low mound behind village of Wales. FL-952.

Mycoblastus

Mycoblastus affinis (Schaerer) Schauer. On old timbers, driftwood, rock, and thin soil layer over rock. Cape Mountain. FL-1079.

Mycoblastus sanguinarius (L.) Norman. On old timbers, driftwood, and rock near shore of Bering Strait and Cape Mountain. Circumpolar, arctic and boreal. FL-869, FL-871, FL-873, FL-1062.

Nephroma

Nephroma arcticum (L.) Torss. Ridge top of Cape Mountain, sheltered among mosses, *Salix,* and rocks. FL-616.

Ochrolechia

Ochrolechia frigida (Swartz) Lynge. Abundant. Terricolous, on living and dying lichens, bryophytes, and vascular plants. Also on thin soil layer overlying rocks and one collection on weathered wood. Limestone ridges as well as Cape Mountain. Circumpolar, arctic-subarctic-alpine. Verseghy (1962) reports it for the subantarctic. FL-1028, FL-1031, FL-1032, FL-1077, FL-1083, FL-1086, FL-1088, FL-1090, FL-2016, FL-2020, FL-2021, FL-2022, FL-2039, FL-2040, FL-2041, FL-2042, FL-2043, FL-2044, FL-2045.

Ochrolechia grimmiae Lynge. Rare. On moss, disturbed site, village of Wales. Circumpolar, arctic. FL-1082.

Ochrolechia gyalectina (Nyl.) Zahlbr. On humic soil among grasses, mounds near small ponds close to gravel road between airstrip and Razorback. Considered to be common and occur on calcareous tundra soil, wood, spruce bark, and rocks (Ahti et al 1973). First collected at Port Clarence, Alaska on the Vega Expedition in 1879. Circumpolar, arctic-alpine (Bird et al. 1981). FL-2038.

Ochrolechia subplicans (Nyl.) Brodo subsp. *subplicans*. On rock, middle flanks of Cape Mountain near trail along Bering Strait, dry slope near trail to Tin City near summit of Cape Mountain above village of Wales, and limestone outcrop. First collected at St. Lawrence Island on Vega Expedition in 1879. Other reported collections are from the American side of the Bering Strait. FL-1060, FL-2018, FL-2019, FL-2030.

Ophioparma

Ophioparma lapponica (Räsänen) Hafellner & R.W. Rogers [Syn.: *Haematomma lapponica* Räs]. On rock. Fellfield and boulder fields of Cape Mountain. FL-842.

Pannaria

Pannaria pezizoides (Weber) Trevisan [Syn.: *Protopannaria pezizoides* (Weber) P. M. Jørg. & S. Ekman]. On soil. Late-lying snowbank, frost boils, bare wet soil. Cape Mountain. FL-617, FL-935.

Parmelia

Parmelia omphalodes (L.) Ach. Saxicolous, on thin soil layer over rock, and on wood of abandoned house. Circumpolar, arctic-boreal. FL-620, FL-2008, FL-2009.

Parmelia saxatilis (L.) Ach. Saxicolous. Cape Mountain. FL-2010.

Parmelia skultii Hale [Syn.: *Parmelia omphalodes* (L.) Ach. subsp. *glacialis* Skult]. Saxicolous. Moist tundra between village of Wales water tower and trail to Cape Mountain. FL-619.

Parmeliopsis

**Parmeliopsis ambigua* (Wulfen *in* Jacq.) Nyl. On old timbers. FL-621.

Peltigera

Peltigera leucophlebia (Nyl.) Gyelnik. Moist tundra of Cape Mountain on soil and among mosses, grasses, sedges, and *Empetrum.* Circumpolar, arctic to temperate. FL-622.

Peltigera membranacea (Ach.) Nyl. Wet tundra of Cape Mountain, near ponds inland of beach sand dunes, and mounds behind village of Wales. Circumpolar temperate to boreal with oceanic tendencies (Thomson 1984). FL-623, FL-753, FL-772, FL-774, FL-775.

Peltigera scabrosa Th. Fr. Among mosses and grasses in snowbeds and wet tundra of Cape Mountain and around village of Wales. FL-624.

Pertusaria

Pertusaria alaskensis Erichsen. On rock and thin layer of soil over rock. Near gravel road below Razorback and middle and lower flanks of Cape Mountain near Bering Strait shore. Predominantly saxicolous, infrequently on humic material or plant detritus (Dibben 1980). High arctic, trans-Beringian known primarily from Alaska. FL-1074, FL-1076, FL-2014, FL-2053.

Pertusaria bryontha (Ach.) Nyl. Growing over mosses (also less frequently on rocks according to Dibben 1980), rocky slope above Village Creek. Circum-arctic and widespread throughout alpine areas of Europe. FL-881, FL-2051.

Pertusaria coriacea (Th. Fr.) Th. Fr. On plant detritus, south-facing slope of limestone ridge north of Village Creek. May also grow on humic soil (Thomson 1979) and on rocks (Dibben 1980). Circum-arctic. FL-2015.

Pertusaria dactylina (Ach.) Nyl. Abundant. On soil, driftwood, mosses, and dead plants. Limestone ridges and Cape Mountain. Widespread throughout arctic tundra and in northern alpine regions. FL-882, FL-884, FL-885, FL-1050, FL-1051, FL-2052.

Pertusaria glomerata (Ach.) Schaerer. On thin layer of soil over rock, Cape Mountain and Razorback as well as limestone ridge. Reported as widespread throughout arctic tundra. FL-887, FL-888, FL-2049, FL-2050.

Pertusaria oculata (Dickson) Th. Fr. On plant detritus and soil overlying rock. Dibben (1980) reports only on noncalcareous substrates but found on limestone outcrops at Cape Prince of Wales as well as on noncalcareous substrates on Cape Mountain, and Razorback. Circumpolar and central-eastern European Alps (Dibben 1980). FL-889, FL-890, FL-1035, FL-1049.

Pertusaria panyrga (Ach.) Massal. On driftwood, light soil cover over rock, and plant detritus. Limestone ridges, Cape Mountain, and village of Wales near shore of Bering Strait. FL-879, FL-1036, FL-1063, FL-1078, FL-2017, FL-2047, FL-2048.

Pertusaria subobducens Nyl. On dead moss, fellfield on Cape Mountain. Mixed with *Pertusaria dactylina.* First described from Konyam Bay, Siberia during the Vega Expedition in 1879. Widespread throughout arctic tundra. FL-893.

Phaeophyscia

Phaeophyscia sciastra (Ach.) Moberg. On whalebone with *Lecanora behringii* and *Caloplaca spp.* FL-1098.

Phytoconis

Phytoconis viridis (Ach.) Redhead & Kuyper [Syns.: *Lichenomphalia hudsoniana* (H. S. Jenn.) Redhead, Lutzoni, Moncalvo & Vilgalys, *Coriscium viride* (Ach.) Vaino]. Among bryophytes (especially *Dicranum elongatum* and *Cephalozia leucantha*). Cape Mountain and low area back of village of Wales. FL-597, FL-765, FL-766.

Pilophorus

Phlophorus cereolus (Ach.) Th. Fr. Not abundant. Saxicolous, growing with *Porpidia thomsonii*, dry slopes of Cape Mountain. Central Europe, Scandinavia, Greenland, Newfoundland, New York, Minnesota, and Azores (Thomson 1984). FL-805, FL-2003.

Pilophorus dovrensis (Nyl.) Timdal, Hertel & Rambold. Rare. On rock, Cape Mountain along the Bering Strait, dry slope with *Cladonia* and *Cassiope*. Only three prior collections for Alaska: Port Clarence collection of the 1879 Vega Expedition (as *Lecidea dovrensis),* and 2 collections of Thomson et al. (1958) in the Pt. Barrow region and Colville River near Umiat (as *Lecidea pallida).* Hertel & Rambold (1988) show it to be found north of the 60th parallel in areas with an oceanic climate. FL-2055.

Pilophorus robustus Th. Fr. More abundant than species above. Saxicolous on dry rocky slopes of Cape Mountain. Circumpolar, arctic. FL-625, FL-744, FL-745, FL-838, FL-940.

Placopsis

Placopsis gelida (L.) Lindsay [Syn.: *Lecanora gelida* (L.) Ach.]. Along banks of Village Creek. Late-lying snowbed. Cape Mountain. FL-860.

Placynthium

Placynthium asperellum (Ach.) Trevisan. On rock. Limestone ridges and Cape Mountain. Dry areas as well as areas of deep snow cover. FL-626, FL-854, FL-1007, FL-2011.

Placynthium nigrum (Hudson) Gray. On rock. Limestone ridges. FL-610, FL-1008, FL-1010.

Polyblastia

Polyblastia cucurbitula W. Thomson & B.M. Murray. Saxicolous. Limestone ridge. FL-1044.

Polyblastia theleodes (Sommerf.) Th. Fr. Saxicolous. Limestone ridge. FL-1069.

Polychidium

Polychidium muscicola (Swartz) Gray. On granitic rock, slope of Neeluk. Determined by John W. Thomson. FL-656.

Porpidia

Porpidia flavocaerulescens (Hornem.) Hertel & A.J. Schwab *in* Hertel [Syn.: *Porpidea flavicunda* (Ach.) Gowan]. Abundant. Saxicolous. Stone ridges and granitic Cape Mountain. FL-855, FL-856, FL-858, FL-925, FL-997.

Porpidia speirea (Ach.) Krempelh. Saxicolous. Wet tundra. FL-1001.

Porpidia thomsonii Gowan. Saxicolous. In late-lying snowbeds, frost boils, and dry flanks of Cape Mountain. FL-947, FL-980.

Porpidia zeoroides (Anzi) Knoph & Hertel *in* Hertel. Saxicolous. Limestone ridge. FL-2006.

Protoblastenia

Protoblastenia calva (Dickson) Zahlbr. On rock. Cape Mountain. FL-977

Protoblastenia rupestris (Scop.) J. Steiner. On rock. Dry upland and fellfields of limestone outcrop. FL-915, FL-1066

Protoparmelia

Protoparmelia badia (Hoffm.) Hafellner. On rock. Boulder fields of Cape Mountain. FL-912.

Pseudephebe

Pseudephebe pubescens (L.) M. Choisy. On rock. Dry, upper slopes of limestone outcrop and Cape Mountain. FL-676, FL-688, FL-1013.

Psora

Psora himalayana (Church. Bab.) Timdal. On thin layer of soil over cliff face. Limestone outcrop. Widely distributed in boreal and arctic-alpine areas in northwestern North America and Asia. Also collected in European Russian (Timdal 1986). FL-618. Determined by E. Timdal.

Psoroma

Psoroma hypnorum (Vahl) Gray. On soil and among mosses. Moist tundra. FL-933, FL-934.

Ramalina

Ramalina almquistii Vainio. On boulders. Cape Mountain. FL-604, FL-606.

Ramalina scoparia Vainio. On rock. Limestone ridge and Cape Mountain. FL-605, FL-852.

Rhizocarpon

Rhizocarpon chioneum (Norman) Th. Fr. On rock. Limestone ridges. FL-877, FL-907.

Rhizocarpon copelandii (Korber) Th. Fr. On rock. Cape Mountain boulder field, above village of Wales and limestone ridge overlooking Lopp Lagoon and backside of Tin City. FL-1017, FL-2004.

Rhizocarpon eupetraeum (Nyl.) Arnold. On rock, boulder field near village of Wales water tower and south-facing slope of limestone ridge above Village Creek. FL-1075.

Rhizocarpon geographicum (L.) DC.? On rock. Razorback and late-lying snowbed of limestone ridge above reindeer corral. FL-1020, FL-1023. These specimens out for verification.

Rhizocarpon inarense (Vainio) Vainio. On rock. Fellfield of Cape Mountain facing Bering Strait. FL-1019.

Rhizocarpon superficiale (Schaerer) Vainio. On top of flat rock. Wet slope of Cape Mountain above village of Wales. FL-1016.

Rinodina

Rinodina roscida (Sommerf.) Arnold. Grassy, rock slope above Village Creek. On soil-plant detritus with *Lecanora epibron*. FL-1041. Determined by John W. Thomson.

Rinodina turfacea (Wahlenb.) Körber. Wet, highly organic soil and among sedges. Cape Mountain ridge tops, boulder fields, and frost-action tundra. FL-924, FL-929, FL-993, FL-1064.

Ropalospora

Ropalospora lugubris (Sommerf.) Poelt *in* Hertel [Syn: *Bacidia lugubris* (Sommerf.) Zahlbr.]. On rock. Lower flanks of Cape Mountain behind village of Wales near Razorback and summit of south-facing slope of limestone ridge above Village Creek overlooking back side of Tin City and Lopp Lagoon. FL-920, FL-964.

Siphula

Siphula ceratites (Wahlenb.) Fr. Common on cold seepages and in depressions on highly organic soil. Cape Mountain ridge tops, boulder fields, and frost-action tundra. A circumpolar, high arctic species. FL-634, FL-718.

Solorina

Solorina bispora Nyl. Not abundant. On soil, wet banks of Village Creek, the dividing line between limestone ridges and Cape Mountain. Circumpolar, arctic-alpine. FL-651, FL-781, FL-792.

Solorina crocea (L.) Ach. Not abundant. On sandy soil, soil over rocks in late-lying snowfield, and soil-moss mat along banks of Village Creek. Circumpolar, arctic-alpine. FL-764, FL-839.

**Solorina octospora* (Arnold) Arnold. On soil, slumping bank of Village Creek on backside of Cape Mountain. Probably circumpolar, arctic-alpine. A rarely collected species (Thomson 1984). FL-630.

Solorina saccata (L.) Ach. Not abundant. On wet, humic soil banks of Village Creek below Razorback. Circumpolar, high arctic-temperate (Gilbert 1975). FL-631, FL-841.

Solorina spongiosa (Ach.) Anzi. Not abundant. On moist humic soil, moist tundra near reindeer corral, and on grassy mound behind Wales school house. Probably circumpolar, arctic-alpine (Thomson 1984). FL-790, FL-840.

Sphaerophorus

**Sphaerophorus fragilis* (L.) Pers. On rock, on Razorback and lower slope of Cape Mountain behind village of Wales. Circumpolar, arctic-alpine and occasionally in boreal zone (Tibell 1975). FL-633, FL-816.

Sphaerophorus globosus (Huds.) Vainio. On rock near soil line in seepage area, on dry, rocky slope of Cape Mountain, and boulder field near ridge top of Razorback. Circumpolar, arctic-alpine. In Europe, most frequent in areas with oceanic climate. FL-635, FL-2037.

Spilonema

Spilonema revertens Nyl. Growing with the alga *Trentepohlia* on rock and soil in late-lying snowbeds. Limestone ridges at divide between Lopp Lagoon and Village Creek. Circumpolar and subalpine boreal in Northern Hemisphere. FL-2011.

Sporastatia

Sporastatia polyspora (Nyl.) Grummann. Saxicolous. Limestone outcrop overlooking backside of Tin City on Cape Mountain. FL-918.

Stereocaulon

Stereocaulon alpinum Laurer *ex* Funck. On soil, rock, with *Dryas* and lichen mats. Late-lying snowbank along shore of Bering Strait, seepage area of Cape Mountain, among grasses near reindeer corral, and on slopes of limestone ridges. Circumpolar, arctic-alpine. FL-663, FL-668, FL-2067, FL-2068, FL-2069.

Stereocaulon apocalypticum Nyl. Saxicolous, limestone outcrop near divide between Lopp Lagoon and Village Creek drainage. Amphi-Beringian (Thomson 1984). FL-675, FL-741.

Stereocaulon arcticum Lynge. On consolidated sand along shore of Bering Strait in area of small ponds south of Lopp Lagoon. Arctic-boreal circumpolar distribution (Thomson 1984). FL-2072.

Stereocaulon arenarium (Savicz) Lamb. On thin layer of soil over rocks. Limestone ridge overlooking Lopp Lagoon and back side of Tin City. Arctic to subarctic, Greenland westward to Kamchatka (Thomson 1984). FL-671, FL-672.

Stereocaulon botryosum Ach. On rock and soil over rock. Limestone ridge near divide between Lopp Lagoon and Village Creek drainage, boulder fields near ridge top of Cape Mountain, and lower flanks of Cape Mountain near shore of Bering Strait. Circumpolar, arctic-alpine or subalpine. FL-657, FL-659, FL-661.

Stereocaulon glareosum (Savicz) H.Magn. On rock, limestone outcrops, and on soil - moss mat of late-lying snowbank along Bering Strait shoreline near village of Wales. Boreal-arctic, subalpine-alpine, circumpolar. FL-662, FL-961, FL- 2063.

Stereocaulon grande (Magn.) Magn. Difficult to separate from *Stereocaulon alpinum* and considered by some to be the same species. On *Dryas* mat. Boreal, low arctic. Circumpolar. FL-2062, FL-2071.

Stereocaulon intermedium (Savicz) H. Magn. Firmly attached to rocks, rocky slopes of Cape Mountain facing Bering Strait, near summit along trail to Tin City, and side branch of Village Creek. A Beringian bilateral radiant reported from Japan and Kamtchatka in Asia and Alaska and British Columbia in North America (Thomson 1984). FL-2065, FL-2066, FL-2073.

Stereocaulon paschale (L.) Hoffm. On soil among *Cladonia* and *Empetrum.* Cape Mountain near Razorback. FL-665, FL-667, FL-2070.

Stereocaulon rivulorum H. Magn. On soil among mosses and *Dryas* on limestone ridge, north side of Village Creek. Circumpolar, arctic and alpine regions. FL-2074.

Stereocaulon vesuvianum Pers. Saxicolous, fellfield of Cape Mountain overlooking Tin City radar dome. Widely distributed in both hemispheres, especially in volcanic areas. FL-2064.

Thamnolia

Thamnolia subuliformis (Ehrh.) Culb. Abundant. Among plants on soil in sheltered depressions, wet low areas near shore to base of Cape Mountain, and one collection on dry limestone uplands. Arctic-alpine worldwide. FL-636.

Thamnolia vermicularis (Swartz) Ach. *ex* Schaerer. Less abundant than *T. subuliformis.* On soil. Moist and dry tundra flats near village of Wales. Circumpolar, arctic-alpine. FL-2028.

Thelidium

Thelidium pyrenophorum (Ach.) Mudd. Saxicolous. Saddle between Village Creek and Lopp Lagoon. Limestone ridge. FL-922.

Trapelia

Trapelia coarctata (Sm.) M. Choisy *in* Werner. Saxicolous, late-lying snowbed along shore of Bering Strait near village of Wales. Worldwide. Listed for Chukotka, U.S.S.R. by Oxner (1968). FL-967.

Tremolecia

Tremolecia atrata (Ach.) Hertel. Not abundant. Limestone ridge overlooking Cape Mountain and backside of Tin City. Bipolar, worldwide (see distribution map, Hertel 1977). FL-917, FL-2061.

Umbilicaria

**Umbilicaria angulata* Tuck. On granitic boulders, lower flank of Cape Mountain close to Bering Strait shoreline near monument just south of village of Wales. Endemic to western North America from southern California to Alaska. FL-642.

Umbilicaria arctica (Ach.) Nyl. On rock. Limestone ridges and boulder fields of Cape Mountain. Considered by Llano (1950) and Dahl &Krog (1973) to be nitrophilous, reaching best development on or near bird roosts. Circumpolar, high arctic-alpine. FL-638, FL-796, FL-808.

Umbilicaria cylindrica (L.) Delise *ex* Duby [Syn.: *Umbilicaria neocylindrica* Wei]. On rock. Limestone ridge near divide between Lopp Lagoon drainage and Village Creek drainage and on south-facing bank of Village Creek. Circumpolar, arctic-alpine. FL-639, FL-832.

Umbilicaria deusta (L.) Baumg. [Syn.: *Umbilicaria flocculosa* (Wulf in Jacq.) Hoffm.]. On granitic rock. Late-lying snowbed near Bering Strait shore and ravine near old water tower village of Wales. Circumpolar, arctic. First reported from Bering Strait region by Tuckerman (1882). FL-640, FL-795.

Umbilicaria hyperborea (Ach.) Hoff. var. *radiculata* (J.E. Zetterst) Hasselrot [Syn.: *Umbilicaria exasperata* Hoffm.]. Common. On rock. Limestone ridges, boulder fields, and rocky slopes of Cape Mountain. High arctic to temperate, circumpolar. FL-641, FL-643, FL-811, FL-830.

Umbilicaria proboscidea (L.) Schrader [Syn.: *Umbilicaria neoproboscidea* Wei]. Abundant. On rock. Limestone ridges at divide between Lopp Lagoon drainage and Village Creek drainage, boulder fields, and ridge tops of Cape Mountain. Circumpolar, arctic-alpine, montane. FL-644, FL-797, FL-798, FL-800, FL-834, FL-835, FL-836.

Umbilicaria torrefacta (Lightf.) Schrader. Abundant. On rock. Limestone ridges and rocks near reindeer corral. Also boulder fields, fellfields, and dry, rocky slopes of Cape Mountain. Circumpolar, arctic-boreal, alpine montane. Bird and Marsh (1973) report that the species is rare on limestone. FL-645, FL-818.

Umbilicaria vellea (L.) Ach. On rock. Cape Mountain: Three Maidens and Razorback on granite walls and along seepage lines. Circumpolar and wide-ranging arctic-alpine species in North America and Europe. In more southern regions of North America it is replaced by *U. americana*, which differs in the lower cortex soon turning shiny black whereas in *U. vellea* the lower cortex remains light for a long time before turning black. Also a difference in rhizomorphs between the species (Poelt & Nash 1993). FL-646.

Verrucaria

Verrucaria devergens Nyl. Limestone ridge and Cape Mountain along Village Creek. FL-931, FL-976.

Vulpicida

Vulpicida tilesii (Ach.) J.E. Mattsson & M.J. Lai [Syn.: *Cetraria tilesii* Ach.]. On soil of dry uplands of limestone ridge. Asiatic-North American arctic-alpine. FL-591, FL-2027.

Xanthoria

Xanthoria candelaria (L.) Th. Fr. On boards of old building and on rock on lower slopes of Cape Mountain and ridge top near Razorback. Often on bird-animal perches. FL-649, FL-863, FL-2029.

**Xanthoria elegans* var. *splendens* (Darbish) M.S. Christ. *ex* Poelt [Syn.: *Caloplaca splendens* (Darb.) Zahlbr.]. On bird perch rocks of limestone ridges. FL-650, FL-803.

Xanthoria sorediata (Vainio) Poelt [Syn.: Caloplaca sorediata (Vainio) Du Rietz]. On rock. Exposed surfaces of limestone ridges. Listed in Thomson & Ahti (1994). FL-957, FL-986.

Xylographa

Xylographa opegraphella Nyl. *ex* Rothr. On driftwood, late-lying snowbank along shore of Bering Strait, wooden posts near reindeer corral, and boards of old house near village of Wales. FL-876, FL-2005.

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