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Appendix 1

List of species

The taxa are arranged in the alphabetical order. Nomenclature follows Ignatov et al. (2006) and Konstantinova et al. (2009) with some updates from the recent literature and amendments of the author citation. Each species is annotated with a brief review of its ecology including accompanying species. Nomenclature follows Ignatov et al. (2006) with some updates from recent literature; nomenclature of vascular plants follows Matveyeva and Zanokha, 2015. For rare species coordinates and dates of collection(s) are provided.

Liverworts

- *Blepharostoma trichophyllum* var. *brevirete* Bryhn & Kaal. – In *Saxifraga*-lichen-moss patches or *Saxifraga* - *Papaver radicatum* - *Oxyria digyna* communities, on fine gravelly or clayish ground mixed with gravel on dry slopes and flattened surfaces. In pure mats or together with *Cephaloziella varians*, *Gymnomitrion concinnatum*, *Lophozia ventricosa*, *Lophoziopsis polaris*, *Mesoptychia heterocolpos* var. *harpanthoides*, *Schljakovianthus* cf. *quadrilobus*.

- *Cephaloziella varians* (Gottsche) Steph. (sensu *Cephaloziella arctica* Bryhn & Douin) –I n moss- or *Saxifraga* and moss dominated patches, including those with some *Papaver radicatum* and *Cerastium regelii*, grass-moss patch with *Phippsia algida*, in low coastal terraces, river terraces and gentle slopes to watercourses, on fine soil, gravelly and clayish ground, often at edges of polygons, on flat surfaces or gentle slopes. One of the most common taxa in the collection. As admixture to mosses or together with several hepatic taxa, including *Blepharostoma trichophyllum* var. *brevirete*, *Jungermannia pumila*, *Lophozia ventricosa*, *Lophoziopsis polaris*, *Marchantia alpestris*, *Mesoptychia heterocolpos* var. *harpanthoides*, *Neoorthocaulis* cf. *hyperboreus*, *Radula prolifera*, *Scapania degenii*, *S. simmonsii*, *Schistochilopsis hyperarctica, Sphenolobus minutus*, *Tetralophozia setiformis*, *Trilophozia quinquedentata*.

• *Gymnomitrion concinnatum* (Lightf.) Corda – In *Saxifraga* and moss dominated patches with *Papaver radicatum* and *Oxyria digyna* along old trail. Together with *Blepharostoma trichophyllum* var. *brevirete*, *Lophozia ventricosa*, *Schljakovianthus* cf. *quadrilobus*; 76°56.899′N 68°28.108′E /07.08.2016/.

• *Jungermannia pumila* With. – On clayish and gravelly ground on gentle slope. Together with *Mesoptychia heterocolpos* var. *harpanthoides*, *Cephaloziella varians*, *Scapania zemliae*, *Blepharostoma trichophyllum* var. *brevirete;* 76°55.23′N 68°28.01′E /17.08.2015/.

• *Lophozia ventricosa* (Dicks.) Dumort. – In *Dianthus* & moss dominated community with admixture of *Saxifraga* and lichens, on flattened surfaces or *Saxifraga*-moss patches with *Papaver radicatum* and *Oxyria digyna* on gentle slopes. Mostly with *Blepharostoma trichophyllum* var. *brevirete*, *Cephaloziella varians*, *Gymnomitrion concinnatum*, *Neoorthocaulis* cf. *hyperboreus*, *Schljakovia kunzeana*, *Schljakovianthus* cf. *quadrilobus*, *Sphenolobus minutus*, *Tetralophozia setiformis*, *Trilophozia quinquedentata*. NB: all identifications of this species were made with some doubts since no oil bodies were observed in dry material – this feature is very valuable to distinguish Arctic phenotypes of closely related species.

• *Lophoziopsis excisa* (Dicks.) Konstant. & Vilnet – In snowbed habitat on gentle slope, on fine soil with *Scapania zemliae*; 76°55.5633′N 68°04.387′E /29.08.2015/.

• *Lophoziopsis polaris* (R.M. Schust.) Konstant. & Vilnet – In *Saxifraga* and moss- and herb & lichen & moss dominated communities along lake shore and on subhorizontal terraces; in herb & moss dominated community with *Saxifraga oppositifolia*, *Cerastium regelii*, *Poa* sp., *Papaver radicatum* on gentle slope to sea. Over mosses often with several hepatics such as *Cephaloziella varians*, *Lophozia ventricosa*, *Marchantia alpestris*, *Neoorthocaulis* cf. *hyperboreus*, *Scapania degenii*, *Scapania hyperborea*, *Schljakovianthus quadrilobus*, *Tetralophozia setiformis*, *Trilophozia quinquedentata*.

• *Lophoziopsis propagulifera* (Gott.) Konstant. & Vilnet – On clayish ground in moist hollow on low sea terrace, among mosses; 76°57.188′N 68°19.733′E /16.09.2015/. NB: the relationships of this taxon with *L. jurensis* remain unclear.

• *Marchantia alpestris* (Nees) Burgeff – In moist *Saxifraga* and moss dominated community on low lake shore, with *Cephaloziella varians*, *Lophoziopsis polaris;* 76°57.096′N 68°32.38′E /05.07.2016/.

• *Mesoptychia heterocolpos* var. *harpanthoides* (Bryhn & Kaal.) L. Söderstr. & Váňa – In willow- and *Saxifraga,* moss and lichen dominated open community on gentle slopes; on more or less dry gravelly and clayish ground. As an admixture to mosses, often with *Blepharostoma trichophyllum* var. *brevirete*, *Cephaloziella varians*, *Jungermannia pumila*, *Scapania degenii*, *S. hyperborea*, *S. zemliae*, *Schljakovianthus quadrilobus, Trilophozia quinquedentata*.

• *Neoorthocaulis* cf. *hyperboreus* (R.M. Schust.) L. Söderstr., De Roo & Hedd. – In dwarf willow and moss-, *Deschampsia* and moss-, *Dianthus,* moss and lichen dominated aggregations on montane terraces, in herb and moss dominated aggregations in small hollows. In pure mats, as admixture to mosses and together with some hepatics, including *Cephaloziella varians*, *Lophozia ventricosa*, *Lophoziopsis polaris*, *Scapania degenii*, *Schljakovia kunzeana*, *Sphenolobus minutus*, *Tetralophozia setiformis*, *Trilophozia quinquedentata*. The identifications are made with some doubts since cell size and leaf features of depauperate plants intergrade to *Schljakovianthus quadrilobus*.

• *Radula prolifera* Arnell – On rather dry clayish ground on gentle slope, with *Cephaloziella varians*, *Mesoptychia heterocolpos* var. *harpanthoides*, *Trilophozia quinquedentata;* 76°55.23′N 68°28.01′E /17.08.2015/.

• *Scapania cuspiduligera* (Nees) Mull. Frib. – On moist to merely dry clayish ground on gentle slope, between herb & moss dominated patches. In pure mats or with *Scapania hyperborea*.

• *Scapania degenii* Schiffn. ex Müll. Frib. – In *Cerastium regelii* and moss dominated patches in hollow of temporary watercourse on gentle slope; in *Saxifraga* and moss dominated communities on gentle slopes; in *Dianthu,s* moss and lichen dominated patches on coastal terrace; moist to merely dry shale, gravel and clayish soil on plane surfaces or gently slopes. In pure mats, as admixture to mosses, often with *Cephaloziella varians*, *Lophozia ventricosa*, *Mesoptychia heterocolpos* var. *harpanthoides*, *Neoorthocaulis* cf. *hyperboreus*, *Schljakovianthus quadrilobus*, *Tetralophozia setiformis*.

• *Scapania hyperborea* Joerg. – On rather dry fine soil, shale and gravel on gentle slopes, within loose herb dominated communities or moss patches. In pure mats or with *Lophoziopsis polaris*, *Mesoptychia heterocolpos* var. *harpanthoides*, *Scapania cuspiduligera*, *Schljakovianthus quadrilobus*.

• *Scapania obcordata* (Berggr.) S. W. Arnell – On moist gravelly ground in flat surface of large polygon, in pure mats; 76°52.053′N 68°26.747′E /01.09.2015/.

• *Scapania simmonsii* Bryhn & Kaal. – On dry gravelly ground in polygons and shale in smoothened watersheds; on loose moss patches with *Saxifraga oppositifolia* on wavy surface of the high terrace; in *Saxifraga*-moss patches on gentle slope. In pure mats or with *Cephaloziella* cf. *varians*, *Sphenolobus minutus*, *Trilophozia quinquedentata*.

• *Scapania zemliae* S.W. Arnell – On fine soil and gravelly ground on gentle inetrfluvial slopes; also in snowbed habitats. In pure mats or with *Blepharostoma trichophyllum* var. *brevirete*, *Cephaloziella varians*, *Jungermannia pumila*, *Lophoziopsis excisa*, *Mesoptychia heterocolpos* var. *harpanthoides*, *Schistochilopsis hyperarctica*, *Schljakovianthus quadrilobus*.

• *Schistochilopsis hyperarctica* (R.M. Schust.) Konstant. – On dry gentle gravelly slope with *Cephaloziella varians*, *Scapania zemliae;* 76°56.973′N 68°20.958′E /22.08.2015/.

• *Schljakovia kunzeana* (Huebener) Konstant. & Vilnet – In willow and moss dominated community on smoothened terrace; with *Lophozia ventricosa*, *Neoorthocaulis* cf. *hyperboreus*, *Trilophozia quinquedentata;* 76°57.072′N 68°14.263′E /14.07.2016/.

• *Schljakovianthus quadrilobus* (Lindb.) Konstant. & Vilnet (including var. *glareosus* (Jørg.) Konstant. & Vilnet) – In *Cerastium regelii* and moss dominated patches with in small hollow of temporary watercourse; mostly in herb and moss- and *Saxifraga* and moss dominated on gentle slopes and terraces. In pure mats, as admixture to mosses, often with *Cephaloziella varians*, *Lophoziopsis polaris*, *Mesoptychia heterocolpos* var. *harpanthoides*, *Scapania degenii*, *Scapania hyperborea*, *Scapania zemliae*, *Trilophozia quinquedentata*.

• *Sphenolobus minutus* (Schreb.) Berggr. – *Saxifraga* and moss- and willow and moss dominated patches on gentle slopes or montane terraces with *Cephaloziella* cf. *varians*, *Neoorthocaulis* cf. *hyperboreus*, *Scapania simmonsii*, *Schljakovia kunzeana*, *Trilophozia quinquedentata*.

• *Tetralophozia setiformis* (Ehrh.) Schljakov – In *Dianthus,* moss and lichen dominated aggregation and gravelly barrens on terraces; among mosses or with *Cephaloziella varians*, *Lophozia ventricosa*, *Lophoziopsis polaris*, *Neoorthocaulis* cf. *hyperboreus*, *Scapania degenii*, *Trilophozia quinquedentata*.

• *Trilophozia quinquedentata* (Huds.) Bakalin – In herb and moss- and willow and moss dominated patches on gentle slopes or smoothened surfaces of the terraces, on dry gravel mixed with clayish ground. In pure mats, as admixture to mosses or with several hepatics, including *Cephaloziella varians*, *Lophozia ventricosa*, *Lophoziopsis polaris*, *Mesoptychia heterocolpos* var. *harpanthoides Neoorthocaulis* cf. *hyperboreus*, *Radula prolifera*, *Scapania degenii*, *S. simmonsi*, *Schljakovia kunzeana*, *Schljakovianthus* cf. *quadrilobus*, *Sphenolobus minutus*, *Tetralophozia setiformis*.

Mosses

• *Amblystegium serpens* (Hedw.) Schimp. – Low seacoast, herb & moss dominated community on rather dry place, with *Cerastium regelii*, *Papaver polare, Drepanocladus polygamus, Flexitrichum flexicaule, Hylocomium splendens, Sanionia orthothecioides, Syntrichia ruralis;* 76°57.128′N 68°31.178′E /10.07.2016/.

• *Andreaea rupestris* Hedw. – Vekhov & Kuliev, 1998; Plateaus, montane terraces, rocky ridges, etc. on bare surface and and in crevices of non-calcareous boulders and stones; S+.

- *Aulacomnium palustre* (Hedw.) Schwägr. – The species was found by Vekhov and Kuliev (1998) in vicinity of Inostrantsev Bay where sandstone outcrops, but has not been found in our collections.
- *A. turgidum* (Wahlenb.) Schwägr. – Vekhov & Kuliev, 1998; this species occurs in spots of tundra-like vegetation on marine terraces with *Deschampsia, Hylocomium splendens, Dicranum elongatum, Campylium stellatum*, *Flexitrichum gracile, Orthothecium chryseon, Polytrichum* spp., *Pseudocalliergon* spp., etc. as well as near snow beds, in open aggregations with *Racomitrium, Niphotrichum, Hymenoloma* and in coastal communities, usually intermixed with other mosses.
- *Bartramia ithyphylla* Brid. – Vekhov & Kuliev, 1998; lowlands, on marine terraces, and dry W-facing slope, with *Flexitrichum flexicaule, Hymenoloma crispulum Racomitrium lanuginosum, Sanionia uncinata;* 76°51.882′N 68°42.29′E /29.08.2015/.
- *Blindia acuta* (Hedw.) Bruch & Schimp. – Vekhov & Kuliev, 1998; Shoulder of the antiplanation terrace with polygonal microrelief on the plateau slope, open herb and moss dominating aggregation, with *Brachythecium cirrosum*, *Flexitrichum flexicaule, Polytrichastrum alpinum*, *Schistidium frigidum, Syntrichia ruralis*, *Stereodon revolutus;* 76°53.997′N 68°18.713′E; /02.08.2015/.
- *Brachytheciastrum collinum* (Schleich. ex Müll. Hal.) Ignatov & Huttunen – On gentle slopes, terraces and plateau summit areas up to 246 m a.s.l., in herb-moss-lichen and herb-moss dominated communities on dry gravelly ground, with *Papaver radicarum, Saxifraga oppositifolia, Draba* sp., *Flexitrichum flexicaule, Niphotrichum ericoides, Schistidium sordidum, Stereodon procerrimus, Syntrichia ruralis,* and *Schistidium abrupticostatum*.
- *B. trachypodium* (Brid.) Ignatov & Huttunen – On well drained rocky ground up to 242 m a.s.l., in moss- and moss and lichen dominated aggregations, as admixture to *Brachythecium cirrosum, Distichium capillaceum, Flexitrichum flexicaule, Niphotrichum* spp., *Stereodon revolutus, Syntrichia ruralis*, etc.
- *Brachythecium albicans* (Hedw.) Schimp. – The species was found by Vekhov and Kuliev (1998) in upper coastal terraces, but has not been found in our collections.
- *B. cirrosum* (Schwägr.) Schimp. – This species is especially widespread in plain coastal areas, mostly in rather close communities, on moist loamy and gravelly ground, as an admixture in polydominant tufts with *Campylium stellatum, Flexitrichum* spp*., Orthothecium* spp., *Polytrichastrum alpinum, Stereodon revolutus, Syntrichia ruralis,* etc.
- *B. coruscum* I. Hagen – Vekhov & Kuliev, 1998; on rather steep W-faced interfluvial slope, as an admixture in moss carpets; 76°52.307′N 68°23.787′E /24.08.2015/; drained place on the plateau summit area at ca 242 m. alt, with *Campylium stellatum, Flexitrichum flexicaule, Oncophorus wahlenbergii, Orthothecium chryseon, Sanionia uncinata;* 76°56.48′N 68°04.00′E

/30.08.2015/.

- *B. mildeanum* (Schimp.) Schimp. – Upper part of S-faced slope; open *Cerastium regelii*, *Saxifraga oppositifolia* and bryophyte dominated community, with *Aulacomnium turgidum, Bryum pseudotriquetrum, Campylium stellatum, Dicranum laevidens, Distichium capillaceum, Flexitrichum gracile, Oncophorus virens* and other mosses; 76°56.881′N 68°26.961′E /24.06.2016/.
- *B. turgidum* (Hartm.) Kindb. – Vekhov & Kuliev, 1998; sparsely occurs in different moss- and moss and lichen dominated communities along the coast, rivulets and on elevated plain surfaces, mostly with *Campylium stellatum, Flexitrichum flexicaule, Orthothecium chryseon, Pseudocalliergon brevifolium, Sanionia uncinata*, etc.
- *Bryoerythrophyllum recurvirostrum* (Hedw.) P.C. Chen – Vekhov & Kuliev, 1998; mostly along the coast and on marine terraces, in pioneer moss aggregations with *Saxifraga oppositifolia, Brachythecium cirrosum, Bryum pseudotriquetrum, Campylium stellatum, Distichium, Flexitrichum* spp*., Encalypta* spp*., Oncophorus virens, Orthothecium chryseon,* etc.; 76°56.884′N 68°24.798′E; 76°56.991′N 68°23.499′E. /26.06.2016; 07.08.2016/.
- *B*. cf. *rubrum* (Jur. ex Geh.) P.C. Chen – In coastal lowland, in *Deschampsia* and moss dominated community in wet environments, with *Brachythecium cirrosum, Bryum pseudotriquetrum, Campylium stellatum, Distichium capillaceum, Flexitrichum gracile, Isopterygiopsis pulchella, Orthothecium* spp., *Philonotis tomentella, Pseudocalliergon* spp; 76°57.544′N 68°19.665′E /30.06.2016/. First Arctic collection of *Bryoerythrophyllum rubrum* was made in Byrranga Range, Taimyr Peninsula, but the identification was based on nuclear ITS sequences (Fedosov and Ignatova 2008). Morphologically it resembles *B. ferruginascens* or poorly developed *B. recurvirostrum*, but differs from the latter in having leaves gradually narrowed distally. One more distinctive trait of *B. rubrum*, dioicous sexual condition lacks in the specimen. The specimen, revealed in studied collection is identical with the one from Byrranga, thus we provisionally refer it to *B. rubrum.*
- *Bryum* cf. *amblyodon* Müll. Hal. – This species was reported by Vekhov and Kuliev (1998), but specimen(s) absent in MHA; this species has not been found in our collections.
- *B. arcticum* (R. Br.) Bruch & Schimp. – In seasonally flooded hollow near seashore, *Cerastium regelii* dominated aggregation, with *Brachythecium cirrosum, Ceratodon purpureus, Flexitrichum flexicaule, Niphotrichum* spp., *Polytrichastrum alpinum, Sereodon revolutus*, *Timmia norvegica*; 76°56.348′N 68°30.181′E; /29.06.2016/.
- *B. argenteum* Hedw. – The species was reported by Vekhov and Kuliev (1998), but specimen(s) absent in MHA; this species has not been found in our collections.
- *B. calophyllum* R. Br. – Vekhov & Kuliev, 1998; on plateau and ridge slopes in carpets of bryophytes and open herb aggregations, on moist loamy - crushed stone ground with *Aulacomnium*

turgidum, Campylium stellatum, Oncophorus virens, Orthothecium chryseon, Sanionia uncinata, Scorpidium cossonii.

- *B. cryophilum* Mårtensson – Twice collected in hollows of rivulets with *Phippsia algida, Cerastium regelii, Draba corymbosa, Bryum rutilans, Campylium stellatum, Distichium capillaceum, Orthothecium chryseon,* and *Pseudocalliergon brevifolium*; 76°54,914′N 68°21,165′E; 76°54,626′N 68°31,925′E; /19.07.2016; 02.08.2016/.
- *B. cyclophyllum* (Schwägr.) Bruch & Schimp. – In wet conditions, along the rivulets, lake shores and in places with late snow malting, from lowland areas along coast to montane terraces and plateau summit areas up to 195 m. alt., forms extensive pure tufts or grows in open *Phippsia, Deschampsia, Oxyria* etc. dominated aggregations with *Bryum pseudotriquetrum, Campylium stellatum, Cinclidium arcticum, Pogonatum urnigerum, Pohlia drummondii, Polytrichastrum* spp., etc.
- *B. neodamense* Itzigs. – In lowlands near sea- and lake coasts in *Deschampsia* and moss and *Cerastium regelii* & moss dominated communities, with *B. pseudotriquetrum, Calliergon richardsonii, Campylium stellatum, Cinclidium latifolium, Pseudocalliergon brevifolium*.
- *B. pallens* Sw. ex anon. – Both, in coastal lowlands and plateau on moist to wet ground, mostly intermixed with *Campylium stellatum, Hymenoloma crispulum, Niphotrichum ericoides, Orthothecium chryseon, O. strictum, Pohlia cruda, Scorpidium cossonii, Warnstorfia sarmentosa*, etc.
- *B. pseudotriquetrum* (Hedw.) P. Gaertn., B. Mey. & Scherb. – Vekhov & Kuliev, 1998; widespread in lowlands and in hollows on gentle slopes, does not occur on well drained plain rocky surfaces of plateau and terraces. This species usually occurs in *Deschampsia* and moss dominated communities, with *Brachythecium cirrosum, Campylium stellatum, Cinclidium* spp., *Distichium capillaceum, Flexitrichum gracile, Orthothecium chryseon, Polytrichastrum* spp., *Sanionia uncinata*, etc.
- *B. rutilans* Brid. – In coastal lowland and slopes up to 198 m a.s.l., in places with late snow malting in open grass (*Poa, Phippsia*) & moss dominated aggregations with *Flexitrichum flexicaule, Hymenoloma crispulum, Orthothecium chryseon, Polytrichastrum alpinum, Sanionia uncinata*.
- *Bucklandiella microcarpa* (Hedw.) Bednarek-Ochyra & Ochyra – Ellis et al. (2017); in rock field with scattered *Cerastium regelii* and *Saxifraga cernua* individuals; on rock with *Dicranum schljakovii, Hymenoloma crispulum, Pohlia cruda, Polytrichum juniperinum, Racomitrium lanuginosum*; 76°51.957' N 68°33.14' E /30.07.2016/.
- *Calliergon giganteum* (Schimp.) Kindb. – In *Deschampsia* and moss patches in coastal terraces on wet clayish ground on flattened surfaces; with *Cinclidium subrotundum, Cratoneuron*

filicinum, Orthothecium chryseon, Scorpidium cossonii, S. revolvens, etc.

- *C. richardsonii* (Mitt.) Kindb. – Vekhov & Kuliev, 1998; in coastal lowlands in hummocky *Deschampsia* and moss dominated communities with *Campylium stellatum, Distichium capillaceum, Cinclidium* spp., *Orthothecium chryseon, Polytrichastrum alpinum, Scorpidium revolvens*; 76°56.879′N 68°29.249′E; 76°55.374′N 68°21.815′E; /15.07.2016, 24.06.2016/.
- *Campyliadelphus chrysophyllus* (Brid.) R.S. Chopra – On lowland seashore in aggregation of *Saxifraga oppositifolia, Cerastium regelii, Papaver polare* and mosses, *Bryum* spp., *Pohlia cruda, Sanionia uncinata, S. orthothecioides*; large pure carpet 76°57.693′N 68°19.668′E; /30.06.2016/.
- *Campylium* cf. *laxifolium* Engelmark & Hedenäs – Lowland coastal area, lake shore, in *Deschampsia* and moss dominated community, with *Bryum cyclophyllum, B. pseudotriquetrum, Campylium stellatum, Distichium capillaceum, Rhizomnium andrewsianum, Scorpidium revolvens*; 76°57.052′N 68°31.415′E; /05.07.2016/. In most respects the specimen corresponds to *C. laxifolium*, but no antheridium have been found. Since in leaf shape and arrangement plants do not fit to any other species of the genus and sexual condition is often imperfectly developed in Arctic collections, we provisionally referred them to *C. laxifolium*.
- *C. longicuspis* (Lindb. & Arnell) Hedenäs – Ellis et al. (2017); between Elisabeth Cape and Loshkina Cape, in *Cerastium regelii* and moss dominated community, on moist soil with *Orthothecium chryseon, Distichium capillaceum, Pseudocalliergon brevifolium*, etc.; high seashore near meteorological station, *Saxifraga*-moss patches on dry slope; brook bank with polygonal microrelief, grass & moss dominated community with *Oxyria digyna* and *Cerastium regelii*. Russian Harbour field station (76°11.766′N, 62°35.194′E), gentle gravelly slope with scattered *Saxifraga oppositifolia*, *S. caespitosa* and mosses.
- *C. stellatum* (Hedw.) C.E.O. Jensen – Vekhov & Kuliev, 1998; widespread on coastal terraces, foothills plateau slopes and depressions between hills, up to 115 m a.s.l., in moss-, moss & lichen-, moss & *Deschampsia*- and *Phippsia*-dominated communities.
- *Catoscopium nigritum* (Hedw.) Brid. – In hummocky *Deschampsia* and moss dominated community in foothill area, on wet ground; with *Calliergon richardsonii, Cinclidium arcticum, C. latifolium, Distichium capillaceum, Orthothecium chryseon, Pseudocalliergon angustifolium, Scorpidium revolvens, Timmia sibirica*; 76°56,879′N 68°29,249′E /24.06.2016/.
- *Ceratodon heterophyllus* Kindb. – At base of steep eroded coastal slope, open *Saxifraga* and moss dominated community with *Cochlearia groenlandica* and *Sanionia uncinata*; 76°57,544′N 68°19,65′E. /30.06.2016/.
- *C. purpureus* (Hedw.) Brid. – Vekhov & Kuliev, 1998; in moss and *Deschampsia* and moss- dominated communities, common species in disturbed places around houses, on rubbish, etc.

with *Bryum* spp., *Distichium capillaceum, Flexitrichum flexicaule, Pohlia cruda, Polytrichastrum alpinum, Sanionia uncinata*.

- *Cinclidium arcticum* (Bruch & Schimp.) Schimp. – Vekhov & Kuliev, 1998; on boggy higher coastal terraces and lake shores in *Deschampsia* and moss- and *Saxifraga* and moss-dominated communities with *Bryum pseudotriquetrum, Campylium stellatum, Philonotis tomentella, Sanionia uncinata, Scorpidium revolvens, Warnstorfia sarmentosa*.
- *C. latifolium* Lindb. – In hollow on gentle slope, in *Cerastium regelii* and moss dominated community, with *Bryum* cf. *neodamense, B. pseudotriquetrum, Campylium stellatum, Flexitrichum flexicaule, Pseudocalliergon bervifolius*; on a lake shore, in *Deschampsia* and moss dominated community, with *Calliergon richardsonii, Catoscopium nigritum, Cinclidium arcticum, Distichium capillaceum, Orthothecium chryseon, Pseudocalliergon brevifolium, Scorpidium revolvens*, etc.; 76°56.993′N 68°31.88′E; 76°56.879′N 68°29.249′E; /24.06.2016/.
- *C. subrotundum* Lindb. – Coastal lowland, in wet depressions with moss- and *Deschampsia* and moss dominated communities with *Aulacomnium turgidum, Bryum cryophilum, Calliergon giganteum, Scorpidium revolvens, Campylium stellatum, Orthothecium chryseon*.
- *Conostomum tetragonum* (Hedw.) Lindb. – Once collected in upper part of rather dry rocky slope in *Saxifraga,* moss and lichen dominated aggregation with *Flexitrichum flexicaule, Hymenoloma crispulum, Pohlia cruda, Polytrichastrum alpinum, Racomitrium lanuginosum, Sanionia uncinata, Schistidium papillosum;* 76°56.88′N 68°25.267′E /1.07.2016/.
- *Cratoneuron curvicaule* (Jur.) G. Roth – Mostly in coastal lowlands along rivulets in open bryophyte aggregations on moist to wet clayish and gravelly ground with *Bryum* spp., *Campylium stellatum, Distichium capillaceum, Orthothecium chryseon, Pseudocalliergon* spp., *Scorpidium cossonii*.
- *Cratoneuron filicinum* (Hedw.) Spruce – Vekhov & Kuliev, 1998; in moist environments, as pioneer on moist to wet clayish and gravelly ground and in moss or *Deschampsia*-moss patches, along seashore and coastal terrace, on eroded slopes and rocky plateau slopes below snow beds where fine soil accumulates (up to 189 m a.s.l.) with *Bryum* spp., *Campylium stellatum, Orthothecium cryseon, Pseudocalliergon brevifolium, P. turgescens*, etc.
- *Dichodontium pellucidum* (Hedw.) Schimp. – Serebryanikova Cape (76°57.544′N 68°19.65′E), at base of steep coastal slope, *Saxifraga, Cochlearia groenlandica* and pioneer moss dominated aggregation on eroded moist loamy ground, with *Cratoneuron filicinum, Didymodon* cf. *icmadophilus, Encalypta procera, Flexitrichum flexicaule, Orthothecium* spp., *Pseudocalliergon* spp. /30.06.2016/.
- *Dicranum acutifolium* (Lindb. & Arnell) C.E.O. Jensen – Once collected in patch of tundra-like vegetation in upper part of gentle slope to river valley, with *Campylium stellatum,*

Hylocomiu splendens, Tomentypnum nitens, Orthothecium chryseon, Flexitrichum gracile, Hypnum cupressiforme, Stereodon spp., *Niphotrichum panschii*, etc.; 76°57.072′N 68°14.263′E /14.07.2016/.

- *D. bonjeanii* De Not. – The species was reported by Vekhov and Kuliev (1998, but specimen(s) absent in MHA; this species has not been found in our collections.
- *D. elongatum* Schleich. ex Schwägr. – Spot of tundra-like willow and moss dominated vegetation on coastal terrace, with *Aulacomnium turgidum*, *Campylium stellatum*, *Flexitrichum gracile, Hylocomium splendens, Orthothecium chryseon, Polytrichum hyperboreum, Pseudocalliergon* spp., etc.; moss and lichen dominated community on gentle exposed slope, with *Campylium stellatum, Flexitrichum gracile, Hymenoloma crispulum, Racomitrium lanuginosum, Stereodon bambergeri;* 76°54.237′N 68°36.207′E; 76°57.101′N 68°21.354′E /17.08.2015, 15.07.2016/.
- *D. groenlandicum* Brid. – On plane spots in *Luzula,* lichen and moss dominated and *Papaver polare* & *Cerastium regelii* & moss dominated communities with *Racomitrium lanuginosum, Sanionia uncinata, Brachythecium turgidum, Campylium stellatum, Flexitrichum flexicaule, Orthohecium chryseon, Polytrichum juniperinum,* etc.; 76°55.827′N 68°19.419′E; 76°54.155′N 68°35.068′E /25.07.2016; 30.07.2016/.
- *D. laevidens* R.S. Williams – In spot of *Salix polaris* dominated tundra-like vegetation near Mon Cape; in open *Cerastium regelii, Saxifraga oppositifolia* and moss dominated aggregation near Mavrikija Cape; with *Aulacomnium turgidum, Brachythecium* cf. *mildeanum, Bryum pseudotriquetrum, Campylium stellatum, Polytrichastrum alpinum, Pseudocalliergon brevifolium, Scorpidium cossonii, Tomentypnum nitens*, etc.; 76°56.881′N 68°26.961′E; 76°51.932′N 68°48.978′E; /24.06.2016; 02.08.2016/.
- *D. schljakovii* Ignatova & Tubanova – In places with rather dense vegetation cover in moss & lichen dominated polydominant communities with *Flexitrichum flexicaule, F. gracile, Hymenoloma crispulum, Racomitrium lanuginosum, Hylocomium splendens, Niphotrichum panschii, Orthothecium strictum*, etc.
- *Didymodon asperifolius* (Mitt.) H.A. Crum, Steere & L.E. Anderson – Vekhov & Kuliev, 1998; In foothill areas, in polydominant moss communities with sparse *Deschampsia, Papaver radicatum, Draba* sp., *Saxifraga oppositifolia* plants in rather dry gravelly ground together with *Brachythecium cirrosum, Eurhynchiastrum pulchellum, Flexitrichum flexicaule, Orthothecium chryseon, Pseudocalliergon brevifolium, Pseudoleskeella rupestris, Schistidium* spp., *Stereodon* spp., *Syntrichia ruralis, Tortella tortuosa* 76°52.725′N 68°42.03′E; 76°57.303′N 68°15.424′E /28.08.2015; 16.07.2016/.
- *D. icmadophilus* (Schimp ex Müll. Hal.) R.H. Zander – Serebryanikova Cape, at base of steep coastal slope, pioneer moss aggregation with scattered individuals of *Saxifraga* and

Cochlearia groenlandica on eroded moist loamy and gravelly ground, with *Cratoneuron filicinum, Dichodontium pellucidum, Encalypta procera, Flexitrichum* spp., *Orthothecium* spp., *Pseudocalliergon* spp.; 76°57.544′N 68°19.65′E /30.06.2016/.

- *Distichium capillaceum* (Hedw.) Bruch & Schimp. – Vekhov & Kuliev, 1998; widespread in lower altitudes, up to 115 m a.s.l., on various ground, mostly in moss-, *Deschampsia* and moss, *Phippsia algida* and moss dominated communities with *Flexitrichum* spp*., Orthothecium* spp*., Stereodon* spp*., Niphotrichum* spp*., Racomitrium lanuginosum,* etc.
- *Drepanium recurvatum* (Lindb. & Arnell) G. Roth – In foothill plains and coastal terraces in lichen and moss dominated aggregation on gravelly ground, with *Flexitrichum* spp*., Distichium capillaceum, Racomitrium lanuginosum, Schistidium abrupticostatum*.
- *Drepanocladus aduncus* (Hedw.) Warnst. – Vekhov & Kuliev, 1998; lowland seashore at Serebryanikova Cape, open *Saxifraga oppositifolia, Cerastium regelii* and *Papaver polare* dominated aggregation on dry plain place, with *Campyliadelphus chrysophyllus, Flexitrichum flexicaule, Stereodon bambergeri, S. procerrimus, Syntrichia ruralis*; 76°57.693′N 68°19.668′E /30.06.2016/.
- *D. polygamus* (Schimp.) Hedenäs – In coastal and foothill plains in damp depressions in lichen & moss-, hepatic and moss- and moss dominated aggregations on filesoil and loamy ground with *Flexitrichum flexicaule, Hylocomium splendens* spp. *obtusifolium, Hymenoloma crispulum, Racomitrium lanuginosum, Sanionia* spp., *Syntrichia ruralis*, etc.
- *D. sordidus* (Müll. Hal.) Hedenäs – In coastal plain, in open aggregation of vascular plants and mosses on clayish ground, with *Flexitrichum* spp*., Campylium stellatum, Orthothecium chryseon, Pseudocalliergon brevifolium, Sanionia uncinata, Scorpidium cossonii;* 76°54.945′N 68°29.988′E /15.09.2015/.
- *Encalypta alpina* Sm. – In plain interfluvials and marine terraces in open *Saxifraga oppositifolia, Cerastium regelii* and moss dominated aggregations on dry gravelly ground, with other calciphiles such as *Brachythecium cirrosum, Bryoerythrophyllum recurvirostrum, Bryum pseudotriquetrum, Campylium stellatum, Cratoneuron filicinum, Distichium capillaceum, Flexitrichum* spp., *Isopterygiopsis pulchella, Myurella* spp., *Oncophorus virens, Orthothecium* spp., etc.
- *E. procera* Bruch – Vekhov & Kuliev, 1998; on interfluvials in places with schist gravelly ground in polydominant moss aggregations with *Bryoerythrophyllum recurvirostrum*, *Bryum* spp., *Flexitrichum* spp., *Orthothecium* spp., *Schistidium papillosum, Stereodon* spp., etc.; once collected on moist clayish ground at base of steep eroded coastal slope with *Cratoneuron* spp*., Dichodontium pellucidum, Philonotis tomentella,* etc.
- *Eurhynchiastrum pulchellum* – coastal plains, in open saxifrage and moss dominating

aggregations on dry dravely and loamy ground with *Brachythecium cirrosum, Didymodon asperifolius, Eurhynchiastrum pulchellum, Flexitrichum flexicaule, Orthothecium chryseon, Pseudocalliergon brevifolium, Schistidium* spp., *Stereodon* spp., *Syntrichia ruralis, Tortella tortuosa* 76°54.945′N 68°29.988′E; 76°56.997′N 68°15.799′E /15.09.2015; 16.07.2016/.

- *Flexitrichum flexicaule* (Schwägr.) Ignatov & Fedosov – Vekhov & Kuliev, 1998; widespread throughout the area excepting montane ecotopes, mostly limited by lower belt, on different kinds of ground and in different plant communities and aggregations.
- *F. gracile* (Mitt.) Ignatov & Fedosov – This species is somewhat rarer, than the previous one and occurs mostly in rather close moss communities, while *F. flexicaule* often grows as a pioneer.
- *Grimmia elatior* Bruch ex Bals.-Criv. & De Not. – Vekhov & Kuliev, 1998; rocky hollow on high seashore of Kara Sea, aggregation of scattered *Oxyria digyna, Cerastium regelii, Papaver radicatum* individuals and mosses, *Hymenoloma crispulum, Polytrichastrum alpinum, Pseudocalliergon* spp*., Racomitrium lanuginosum, Sanionia uncinata, Schistidium papillosum, Stereodon revolutus*, *Syntrichia ruralis*; 76°54.653′N 68°32.292′E /02.08.2016/.
- *G.* cf. *longirostris* Hook. – Interfluvial area, on dry gravelly ground in scattered moss carpets, with *Stereodon hamulosus*; 76°56.777′N 68°10.143′E /23.08.2015/.
- *Hamatocaulis vernicosus* (Mitt.) Hedenäs – In moist depression on high seashore, in *Deschampsia* and moss dominated community; saxifrage and moss dominated aggregation on gentle interfluvial slope; in both cases with *Bryum pseudotriquetrum, Campylium stellatum, Flexitrichum gracile, Orthothecium chryseon, Pseudocalliergon brevifolium, P. turgescens*; 76°57.107′N 68°21.416′E; 76°57.05′N 68°30.991′E /15.07.2016, 16.07.2016/.
- *Hygroamblystegium varium* (Hedw.) Mönk. – 7 (I); I. Lowland gravelly seashore, ruderal moss dominating aggregation with scattered vasculars (*Papaver radicatum, Saxifraga cernua, Cochlearia groenlandica*); with *Bryum* sp., *Ceratodon purpureus, Flexitrichum flexicaule*; 76°56.997′N 68°15.799′E /06.07.2016/.
- *Hygrohypnella polaris* (Lindb.) Ignatov & Ignatova – Vekhov & Kuliev, 1998; in moist and wet environments in places with late snow melting, most common at bases of steep terrace slopes with *Brachythecium cirrosum, Bryum cyclophyllum, Hymenoloma crispulum, Niphotrichum* spp., *Polytrichastrum* spp., *Sanionia uncinata, Schistidium papillosum, S. platyphyllum, Stereodon revolutus*.
- *Hylocomium splendens* (Hedw.) Schimp. – Vekhov & Kuliev, 1998; in interfluvials of lower altitudinal belt in tundra-like lichen and moss- and moss dominated communities under intermidiate moisture conditions with *Aulacomnium turgidum, Campylium stellatum, Dicranum* spp., *Flexitrichum* spp., *Niphotrichum* spp., *Orthothecium chryseon*, *Racomitrium lanuginosum*,

Sanionia uncinata, etc.

- *Hymenoloma crispulum* (Hedw.) Ochyra – Vekhov & Kuliev, 1998; widespread throughout the area up to 262 m a.s.l. on boulders, placers and other kinds of rocky ground, mostly in pure tufts.
- *Hypnum cupressiforme* Hedw. – Vekhov & Kuliev, 1998; on coastal terrace and ridge slopes on rocky ground in rather dry conditions, in polydominant bryophyte communities with with *Campylium stellatum, Flexitrichum* spp., *Niphotrichum panschii, Orthothecium chryseon, Stereodon revolutus, Syntrichia ruralis*.
- *Isopterygiopsis pulchella* (Hedw.) Z. Iwats.– Vekhov & Kuliev, 1998; twice collected in coastal and interfluvial plains, in open *Saxifraga oppositifolia* and moss dominated aggregations on dry gravelly ground, with *Niphotrichum* spp*., Campylium stellatum, Encalypta alpina, Flexitrichum* spp., *Orthothecium* spp., *Schistidium* spp., *Stereodon bambergeri, Timmia norvegica*, etc.; 76°56.374′N 68°30.038′E; 76°57.231′N 68°14.089′E /29.06.2016; 06.08.2016/.
- *Kiaeria glacialis* (Berggr.) I. Hagen – In coastal plains and plateau in herb and moss dominated aggregations on dry gravelly ground with *Flexitrichum* spp., *Cratoneuron filicinum*, *Hymenoloma crispulum, Orthothecium chryseon, Pohlia cruda, Polytrichum juniperinum*, *Pseudocalliergon turgescens*.
- *Loeskypnum badium* (Hartm.) H.K.G. Paul – Plain interfluvial, in open *Saxifraga oppositifolia, Cerastium regelii* and moss dominated aggregations on dry gravelly ground, with *Bryum pseudotriquetrum, Campylium stellatum, Encalypta alpina, Flexitrichum* spp., *Orthothecium* spp., *Schistidium papillosum*, *Stereodon bambergeri, Timmia norvegica*, etc., few plants; 76°57.231′N 68°14.089′E /06.08.2016/.
- *Meesia triquetra* (Jolycl.) Ångstr. – In wet places on plateau summit areas up to 217 m a.s.l. in herb and moss dominated aggregations with *Bryum cyclophyllum*, *Calliergon giganteum*, *Cinclidium subrotundum*, *Scorpidium revolvens, Pseudocalliergon turgescens*.
- *Mnium lycopodioides* Schwägr. – 3 (I); I. On marine terrace in open *Saxifraga oppositifolia, Cerastium regelii* and moss dominated aggregations on gravelly ground, with *Brachythecium cirrosum, Bryoerythrophyllum recurvirostrum, Campylium stellatum, Distichium capillaceum, Encalypta alpina, Flexitrichum* spp., *Myurella* spp., *Orthothecium* spp., etc., few plants; 76°56.884′N 68°24.798′E /26.06.2016/.
- *Myurella julacea* (Schwägr.) Schimp. – Vekhov & Kuliev, 1998; on well drained rocky ground, in moss- and moss and lichen dominated aggregations, as admixture to *Brachythecium cirrosum, Dicranum* spp., *Distichium capillaceum, Flexitrichum flexicaule, Niphotrichum* spp., *Stereodon revolutus, Syntrichia ruralis*, etc.
- *M. tenerrima* (Brid.) Lindb. – In marine terrace in open *Saxifraga oppositifolia* and moss

dominated aggregations on dry gravelly ground, with *Brachythecium cirrosum, Bryoerythrophyllum recurvirostrum, Bryum pseudotriquetrum, Campylium stellatum, Cratoneuron filicinum, Encalypta alpina, Oncophorus virens, Orthothecium* spp., etc.; 76°56.884′N 68°24.798′E /26.06.2016/.

- *Niphotrichum ericoides* (Brid.) Bednarek-Ochyra & Ochyra – Throughout the area; especially abundant in open aggregations on dry placer slopes.
- *N. panschii* (Müll.Hal.) Bednarek-Ochyra & Ochyra – Throughout the area, mostly with the previous species, *Hymenoloma crispulum* and *Racomirium lanuginosum* in open aggregations on rocky slopes.
- *Oncophorus virens* (Hedw.) Brid. – In coastal plain, terraces and plateau in herb and moss dominated aggregations and communities in different moisture conditions, mostly with *Campylium stellatum, Flexitrichum* spp*., Pseudocalliergon brevifolium, Racomitrium lanuginosum, Sanionia uncinata*.
- *O. wahlenbergii* Brid. – Vekhov & Kuliev, 1998; in coastal plain in moss- and *Deschampsia* and moss dominated communities in moist to wet conditions, with *Brachythecium cirrosum, Campylium stellatum, Flexitrichum flexicaule, Pseudocalliergon brevifolium, Tomentypnum nitens*, etc.
- *Orthothecium chryseon* (Schwägr.) Schimp. – Vekhov & Kuliev, 1998; throughout the area; most abundant (up to 40% of coverage) in moderately wet moss dominated aggregations along brooks and in rich minerotrophic fens.
- *O. strictum* Lorentz – Vekhov & Kuliev, 1998; mostly in coastal plain in herb and moss dominated aggregations in rather dry environments, as an admixture in polydominant moss carpets with *Bryum* spp., *Campylium stellatum, Distichium capillaceum, Flexitrichum* spp*., Orthothecium chryseon*, etc.
- *Philonotis tomentella* – Vekhov & Kuliev, 1998; in damp spots on coastal plains and along brooks on plateau slopes in moss- and *Deschampsia* and moss dominated communities in polydominant moss carpets with *Bryum cyclophyllum, B. pseudotriquetrum, Campylium stellatum, Flexitrichum gracile. Orthothecium chryseon, Sanionia uncinata*, etc.
- *Platyhypnum alpestre* (Hedw.) Ochyra – High seashore, in moist *Cerastium regelii*, *Phippsia algida* and ruderal moss dominated community, on boulder; 76°56.106′N 68°24.512′E /07.08.2016/.
- *Pleurozium schreberi* (Brid.) Mitt. – Vekhov & Kuliev, 1998; on slope of plateau in place under wetting influence of snow bed, with *Flexitrichum gracile, Campylium stellatum, Orthothecium chryseon, Sanionia uncinata* in extensive moss carpets; 76°52.092′N 68°30.445′E /01.09.2015/.
- *Plagiomnium curvatulum* (Lindb.) Schljakov – on plains and lower parts of gentle slopes,

in *Deschampsia* and moss and saxifrage and moss dominated communities no damp ground, mostly in places with additional eutrophication with *Bryum pseudotriquetrum, Campylium stellatum, Cinclidium arcticum, Philonotis tomentella, Polytrichastrum alpinum*, etc.

- *Plagiothecium berggrenianum* Frisvoll – Plain high seashore, spot of tundra-like *Salix polaris* and moss dominated vegetation, with *Aulacomnium turgidum, Dicranum elongatum, Flexitrichum gracile, Hylocomium splendens, Polytrichum juniperinum*, etc.; 76°57.072′N 68°21.354′E /15.07.2016/.
- *Pogonatum urnigerum* (Hedw.) P. Beauv. – On finesoil, eroded loamy ground or on placers in open moss dominated aggregations and communities near snow beds, with *Flexitrichum flexicaule, Hymenoloma crispulum, Niphotrichum ericoides, Orthothecium chryseon, Racomitrium lanuginosum, Sanionia uncinata, Stereodon revolutus,* etc.
- *Pohlia andrewsii* A.J. Shaw – Summit area of plateau at ca 247 m a.s.l., among sparse moss (*Pohlia cruda* and *Ceratodon purpureus*) tufts; 76°52.023′N 68°15.912′E /30.08.2015/.
- *P. cruda* (Hedw.) Lindb. – Vekhov & Kuliev, 1998; Throughout the altitudinal range in polydominant moss dominated aggregations and communities on various ground; not rare, but never dominates; mostly with *Distichium capillaceum, Flexitrichum flexicaule, Racomitrium lanuginosum, Polytrichastrum alpinum, Sanionia uncinata*, etc.
- *P. drummondii* (Müll. Hal.) A.L. Andrews – Vekhov & Kuliev, 1998; in moist places both in plateau and foothill areas, in open *Phippsia* and moss- and saxifrage and moss dominated aggregations, on loamy and rocky ground, with *Flexitrichum flexicaule, Hygrohypnella polaris, Hymenoloma crispulum, Niphotrichum ericoides, Orthothecium chryseon, Philonotis tomentella, Polytrichastrum* spp., *Schistidium abrupticostatum, S. papillosum,* etc.
- *P.* cf. *filum* (Schimp.) Mårtensson – The species was found by Vekhov & Kuliev (1998) on the seashore with extensive accumulation of drift wood; the specimen absents in MHA. Our collections, previously referred to this species were reidentified.
- *P. nutans* (Hedw.) Lindb. – Mostly in rocky ecotopes on plateau summit and slopes up to 204 m a.s.l. With *Niphotrichum* spp., *Pogonatum urnigerum*, *Polytrichastrum* spp., *Sanionia uncinata*, etc.; once collected in *Deschampsia* and moss dominated community on damp plain, with *Bryum* cf. *neodamense, Calliergon richardsonii, Campylium stellatum, Orthothecium chryseon, Sanionia uncinata, Scorpidium revolvens.*
- *P. wahlenbergii* (F. Weber & D. Mohr) A.L. Andrews – The species was found by Vekhov & Kuliev (1998) on flattened surfaces on higher marine terraces (the specimen in MHA was studied, the identification was confirmed), but has not been found in our collections.
- *Polytrichastrum alpinum* (Hedw.) G.L. Sm. – Vekhov & Kuliev, 1998; widespread throughout the area and in moist and wet environments often abundant; this species inhabits wide

range of ecotopes, but in most cases occurs as an admixture.

- *P. fragile* (Bryhn) Schljakov – Foothill area near Mavrikija Cape, open aggregation of *Cerastium regelii,* saxifrage and mosses, with *Aulacomnium turgidum, Brachythecium* cf. *mildeanum, Bryum pseudotriquetrum, Campylium stellatum, Dicranum laevidens, Oncophorus* spp., *Orthothecium chryseon, Scorpidium cossonii*, etc.; 76°56.881′N 68°26.961′E /24.06.2016/.
- *P. septentrionale* (Sw.) G.L. Sm. – On gentle N-facing slopes in open herb and moss dominated aggregations with *Distichium capillaceum, Flexitrichum flexicaule, Orthothecium chryseon, Racomitrium lanuginosum, Schistidium papillosum, Stereodon revolutus, Syntrichia ruralis, Timmia comate, Tomentypnum nitens.*
- *Polytrichum hyperboreum* R. Br. – In the spot of tundra-like willow & moss dominated vegetation on coastal terrace, with *Aulacomnium turgidum*, *Campylium stellatum*, *Dicranum elongatum, Flexitrichum gracile, Hylocomium splendens, Orthothecium chryseon, Pseudocalliergon* spp., *Sanionia uncinata,* etc.; 76°57.101′N 68°21.354′E /15.07.2016/.
- *Polytrichum jensenii* I. Hagen – One collection from foothill interfluvial, *Saxifraga* and moss dominated aggregation, with *Brachythecium cirrosum, Bryum* cf. *rutilans, Flexitrichum flexicaule, Orthothecium chryseon, Pohlia* spp., *Sanionia uncinata*; 76°57.456′N 68°13.962′E /14.07.2016/.
- *Polytrichum juniperinum* Hedw. – Mostly on plateau and montane terraces, as an admixture in moss dominated aggregations and communities, with *Dicranum* spp., *Niphotrichum* spp., *Polytrichastrum alpinum, Racomitrium lanuginosum, Stereodon revolutus,* etc.
- *Pseudocalliergon angustifolium* Hedenäs – In wet environments at lower elevations, mostly in minerotrophic fens occupied by *Deschampsia* and moss dominated communities and aggregations with *Orthothecium chryseon, Philonotis tomentella, Cinclidium* spp., *Catoscopium nigritum, Flexitrichum gracile, Distichium capillaceum,* etc.
- *P. brevifolium* (Lindb.) Hedenäs – Vekhov & Kuliev, 1998; widespread on coastal and foothill plains and on plateau slopes in dump *Deschampsia* and moss-, *Cerastium* and moss- and lichen and moss dominated communities, mostly on loamy ground; one of the dominant species, often growing with *Bryum pseudotriquetrum, Campylium stellatum, Distichium capillaceum, Flexitrichum gracile, Orthothecium chryseon,* etc.
- *P. turgescens* (T. Jensen) Loeske – Vekhov & Kuliev, 1998; widespread in wide range of ecotopes from pebbly coastal terraces to plateau slopes at ca 235 m a.s.l., but never common; more often in *Deschampsia* and moss- and moss dominated aggregations with *Bryum pseudotriquetrum, Campylium stellatum, Distichium capillaceum, Flexitrichum gracile, Orthothecium chryseon, Pseudocalliergon brevifolium,* etc.
- *Pseudoleskeella rupestris* (Berggr.) Hedenäs & L. Söderstr. – Foothill area, in

polydominant moss community with sparse *Papaver radicatum, Draba* sp., *Saxifraga oppositifolia, Cerastium regelii* plants in rather dry gravelly ground; with *Brachythecium cirrosum, Didymodon asperifolius, Eurhynchiastrum pulchellum, Flexitrichum flexicaule, Orthothecium chryseon, Pseudocalliergon brevifolium, Schistidium* spp., *Stereodon* spp., *Syntrichia ruralis, Tortella tortuosa* 76°57.303′N 68°15.424′E /16.07.2016/.

- *Racomitrium lanuginosum* (Hedw.) Brid. – Vekhov & Kuliev, 1998; widespread, especially in rocky ecotopes of upper altitudinal belt, form pure covers on boulders and gravelly ground or grows in moss- and lichen and moss dominated aggregations with *Niphotrichum* spp., *Pohlia* spp., *Polytrichastum alpinum, Sanionia uncinata, Stereodon revolutus,* etc.
- *Rhizomnium andrewsianum* (Steere) T.J. Kop. – Twice collected in coastal plains on damp lake shores in *Deschampsia* and moss and *Saxifraga* and moss dominated communities with *Bryum pseudotriquetrum, Campylium stellatum, Cinclidium arcticum, Scopidium* spp., etc.; 76°57.141′N 68°27.827′E; 76°57.052′N 68°32.858′E /05.07.2016/.
- *Sanionia nivalis* Hedenäs – Plateau summit area at ca 245 m a.s.l., moist plain spot, in extensive carpets with coverage ca 8% on gravelly ground 76°52.196′N 68°18.544′E /30.08.2015/.
- *Sanionia orthothecioides* (Lindb.) Loeske – Lowland seashore, open lichen and moss- and saxifrage, *Papaver polare* and moss dominated aggergation on gravelly ground, with *Drepanocladus polygamus, Flexitrichum flexicaule, Hylocomium splendens, Hymenoloma crispulum, Racomitrium lanuginosum, Sanionia uncinata*, *Syntrichia ruralis*, etc.; 76°57.132′N 68°31.144′E; 76°56.89′N 68°24.817′E /10.06.2016; 10.07.2016/.
- *S. uncinata* (Hedw.) Loeske – Vekhov & Kuliev, 1998; Widespread throughout the altitudinal range, from marine terraces to plateau, up to 262 m a.s.l.; mostly in moss-dominated communities, lichen and moss- and herb and moss dominated aggregations with *Campylium stellatum, Flexitrichum flexicaule, Stereodon revolutus, Syntrichia ruralis*, etc.
- *Schistidium abrupticostatum* (Bryhn) Ignatova & H.H. Blom – From marine terraces to plateau, mostly in moss dominated and lichen and moss dominated aggregation, with sparse individuals of *Cerastium regelii, Papaver polare, Saxifraga cespitosa, S. oppositifolia*. On dry or damp gravelly ground, with *Hymenoloma crispulum, Niphotrichum ericoides, Polytrichastrum alpinum, Sanionia uncinata, Schistidium papillosum, S. frigidum, Stereodon revolutus*, *Warnstorfia sarmentosa*.
- *S. frigidum* H.H. Blom – Mostly in upper belt on rocky slopes of plateau and ridges, plateau summits and terraces in open aggregations of saxicolous mosses on various rocky ground and on finesoil, with *Hymenoloma crispulum, Racomitrium lanuginosum, S. papillosum, Stereodon revolutus*, etc.
- *S. holmenianum* Steere & Brassard – Mostly in upper belt in herb and moss dominated

aggregations, on various rocky ground and on finesoil, most often with *Niphotrichum ericoides, Orthothecium chryseon, Pseudocalliergon brevifolium, Stereodon revolutus*.

- *S. papillosum* Culm. – Throughout the area in places with rocky and gravelly ground in various moisture conditions, most often with *Flexitrichum* spp., *Niphotrichum ericoides, N. panschii, Racomitrium lanuginosum, Sanionia uncinata, Stereodon bambergeri, S. revolutus.*
- *S. platyphyllum* – In lower altitudinal belt, mostly along the seashore and in brooks in *Phippsia algida* and *Saxifraga cernua* dominated aggregations on boulders; 76°57.492′N 68°11.319′E; 76°51.863′N 68°24,84′E /30.07.2016; 01.08.2016/.
- *S. sordidum* I. Hagen – Plain seashore and gentle slope, in saxicolous moss aggregations with *Papaver polare*, *Saxifraga oppositifolia*, *Draba* sp. on gravelly ground, with *Hygrohypnella polaris, Niphotrichum* spp., *Syntrichia ruralis;* 76°56.374′N 68°30.038′E; 76°56.683′N 68°24.865′E /29.06.2016; 01.07.2016/.
- **S.* sp. Among other *Schistidium* specimens, two were found problematic to identify due to unusual combination of leaves rounded distally, slightly crenulate, like in *Didymodon subandreaeoides* (Kindb.) R.H.Zander, and shorth rectangular proximal leaf cells with slightly sinuose longitudinal cell walls, which indicate that the specimens represent the family Grimmiaceae, most likely the genus *Schistidium*. Lack of capsules does not allow further discussion over it's morphological affinities, thus these specimens were omitted for a while and are not included in the numerical account.
- *Scorpidium cossonii* (Schimp.) Hedenäs – Vekhov & Kuliev, 1998; from marine terraces up to plateau at 242 m a.s.l. in various communities and aggregations on moist to damp loamy and loamy-gravelly ground with *Flexitrichum gracile, Orthothecium chryseon, Pseudocalliergon* spp., etc.
- *S. revolvens* (Sw. ex anon.) Rubers – Vekhov & Kuliev, 1998; throughout the area from coastal plain and lowland areas to plateau (up to 235 m a.s.l.); especially abundant in *Deschampsia* and moss dominated communities in damp places or along brooks both on finesoil and gravelly ground as well as on rocks, with *Bryum pseudotriquetrum, Campylium stellatum, Flexitrichum gracile, Oncophorus* spp., *Orthothecium chryseon, Pseudocalliergon* spp., *Warnstorfia sarmentosa*, etc.
- *Seligeria polaris* Berggr. – Single collection from foothill plain, on shaded flagstone; 76°54.348′N 68°24.848′E; /16.08.2015/.
- *Stereodon bambergeri* (Schimp.) Lindb. – Vekhov & Kuliev, 1998; widespread from coastal areas to upper parts of plateau slopes, mostly in well drained, though not dry environments in lichen and moss dominated aggregations on loamy-gravelly ground with *Distichium capillaceum, Flexitrichum flexicaule, Racomitrium lanuginosum, Schistidium* spp., *S. revolutus, Timmia*

norvegica, etc.

- *S. hamulosus* (Schimp.) Lindb. – On terrace below snow bed, in moss carpets on gravelly-loamy ground with *Flexitrichum flexicaule*, *Grimmia* cf. *longirostris;* 76°54.982′N 68°19.143′E; /09.09.2015/.
- *S. procerrimus* (Molendo) Bauer – Sparse, from marine terraces to plateau summit areas, in open lichen and moss dominated aggregations on dry gravelly ground with *Flexitrichum flexicaule, Orthothecium chryseon, Racomitrium lanuginosum, Schistidium papillosum, Stereodon bambergeri, Timmia norvegica, Syntrichia ruralis,* etc.
- *S. revolutus* Mitt. – Vekhov & Kuliev, 1998; widespread on coastal plain and foothill area, in herb and moss and lichen and moss aggregations and communities in pure carpets or mixed with *Distichium capillaceum, Flexitrichum* spp., *Niphotrichum* spp., *Orthothecium* spp*., Racomitrium lanuginosum, Schistidium papillosum*, *Syntrichia ruralis,* etc.
- *S. vaucheri* (Lesq.) Lindb. ex Broth. – Vekhov & Kuliev, 1998; Carlsena Cape, high seashore, saxifrage and moss dominated aggregation, on moist gravelly ground with *Brachytheciastrum trachypodium, Brachythecium cirrosum, Campylium stellatum, Flexitrichum flexicaule, Orthothecium strictum, Racomitrium lanuginosum, Stereodon* spp*., Syntrichia ruralis, Timmia norvegica*; 76°59.307′N 67°39.044′E /09.08.2016/.
- *Syntrichia ruralis* (Hedw.) F. Weber & D. Mohr – Vekhov & Kuliev, 1998; in various herb and moss and lichen and moss dominated aggregations on gravelly and rocky ground, mostly with *Brachythecium cirrosum, Hylocomium splendens, Distichium capillaceum, Flexitrichum* spp., *Niphotrichum ericoides, Schistidium* spp., *Stereodon* spp., *Timmia norvegica,* etc.
- *Timmia austriaca* Hedw. – The species was found by Vekhov & Kuliev (1998) on seashore in spot with drift wood accumulation and on flattened surfaces of marine terraces, but specimens absent in MHA; we have not found it in our collections.
- *T. norvegica* J.E. Zetterst. – Vekhov & Kuliev, 1998; widespread in foothill areas, mostly on dry gravelly surfaces of terraces in polydominant moss carpets. Mostly with calciphyles *Bryoerythrophyllum recurvirostrum, Distichium capillaceum, Encalypta* spp., *Flexitrichum* spp*., Myurella julacea, Orthothecium* spp*., Stereodon* spp*., Syntrichia ruralis*, etc.
- *T. sibirica* Lindb. & Arnell – Gentle foothill slope, moist hollow, in *Deschampsia* and moss dominated community, on gravelly ground with *Calliergon richardsonii, Catoscopium nigritum, Cinclidium* spp., *Distichium capillaceum, Phylonotis tomentella, Scorpidium revolvens,* etc.; 76°56.879′N 68°29.249′E /24.06.2016/.
- *Tomentypnum nitens* (Hedw.) Loeske – Vekhov & Kuliev, 1998; in damp places on slopes of marine terraces, in hollows on slopes of interfluvials, mostly in lichen and moss-, *Deschampsia* and moss and moss dominated aggregations, most often with *Flexitrichum flexicaule, Racomitrium*

lnuginosum, Sanionia uncinata, Schistidium papillosum, Stereodon revolutus, Syntrichia ruralis, Timmia norvegica, etc.

- *Tortella arctica* (Arnell) Crundw. and Nyholm – Single collection from plain interfluvial, in open *Saxifraga oppositifolia,* and *Cerastium regelii* and moss dominated aggregations on dry gravelly ground, with *Bryum pseudotriquetrum, Campylium stellatum, Encalypta alpina, Flexitrichum* spp., *Orthothecium* spp., *Schistidium* spp., *Stereodon bambergeri, Timmia norvegica*, etc.; 76°57.231′N 68°14.089′E /06.08.2016/.
- *T. tortuosa* (Hedw.) Limpr. – Vekhov & Kuliev, 1998; foothill area, in polydominant moss communities with sparse *Papaver radicatum, Draba* sp., *Saxifraga oppositifolia, Cerastium regelii* plants in rather dry gravelly ground together with *Brachythecium cirrosum, Didymodon asperifolius, Eurhynchiastrum pulchellum, Flexitrichum flexicaule, Orthothecium chryseon, Pseudocalliergon brevifolium, Pseudoleskeella rupestris, Schistidium* spp., *Stereodon* spp., *Syntrichia ruralis;* 76°57.303′N 68°15.424′E; 76°57.231′N 68°14.089′E /16.07.2016; 06.08.2016/.
- *Tortula hoppeana* (Schultz) Ochyra – The species was found by Vekhov & Kuliev (1998) on flattened surfaces on higher marine terraces, but specimen absents in MHA; we have not found it in our collections.
- *T. mucronifolia* Schwägr. – On gentle rocky slope in foothill area, in *Papaver radicatum*, *Draba corymbosa* and moss dominated aggregation, with *Flexitrichum flexicaule, Isopterygiopsis pulchella, Niphotrichum ericoides, Orthothecium chryseon, Racomitrium lanuginosum, Stereodon revolutus, Syntrichia ruralis*; 76°54.731′N 68°21.759′E /19.07.2016/.
- *Warnstorfia exannulata* (Schimp.) Loeske – In *Oxyria digyna*, *Cerastium regelii*, lichen and moss dominated community on moist ground near brook, with *Campylium longicuspis* and *Sanionia uncinata*, near water; 76°54.846′N 68°28.08′E /27.07.2016/.
- *W. fluitans* (Hedw.) Loeske – Plain spot with polygonal microrelief, herb, *Papaver polare, Cerastium regelii,* lichen and moss dominated aggregation on loamy-gravelly ground, with *Brachythecium turgidum, Campylium stellatum, Flexitrichum flexicaule, Philonotis tomentella, Sanionia uncinata,* etc.*,* in wet depression; 76°55.827′N 68°19.419′E /25.07.2016/.
- *W. pseudostraminea* (Müll. Hal.) Tuom. & T.J.Kop. – The species was found by Vekhov and Kuliev (1998) on gentle slopes of coastal terraces with watercourses, but specimen(s) absent in MHA; and the species has not been found in our collections.
- *W. sarmentosa* (Wahlenb.) Hedenäs – Vekhov & Kuliev, 1998; not rare throughout the area, more abundant in coastal area, though reach at least 254 m a.s.l. on plateau summit area, sparsely occurs on ridges and montane terraces; mostly in extensive moss carpets in *Deschampsia* and moss dominated communities, mostly with *Bryum pseudoreiquetrum, Campylium stellatum, Cinclidium arcticum, Polytrichastrum alpinum, Sanionia uncinata, Scorpidium revolvens*.

Excluded species

Schistidium strictum (Turner) Loeske ex Mårtensson was reported for many regions of Russian Arctic (cf. Afonina and Czernyadjeva 1995) and by Vekhov and Kuliev (1998), but further revision showed that *S. strictum* does not occur in Russia and all specimens were referred to other species, mostly *S. papillosum* (Ignatov et al. 2006, 2017, Ignatova et al. 2010). In particular, the later species is widespread in vicinity of Zhelanija Cape.

Doubtful records

- *Barbilophozia lycopodioides* (Wallr.) Loeske – The species was reported by Vekhov and Kuliev (1998), but specimen(s) absent in MHA; this species has not been found in our collections. According to Potemkin and Matveeva (2015), the species is absent in the polar desert region.
- *Dicranum angustum* Lindb. – The species was reported by Vekhov and Kuliev (1998), but specimen(s) absent in MHA; this species has not been found in our collections. Revision of Arctic specimens, previously referred to *D. angustum* showed, that in fact they represent *D. laevidens* (Ignatova 2005), which occurs in our collections. Apparently, Vekhov and Kuliev also dealt with the latter species.
- *D. spadiceum* J.E.Zetterst. – The species was found by Vekhov and Kuliev (1998), but specimen(s) absents in MHA; this species has not been found in our collections. In our opinion, their collection might represent *D. schljakovii*, which was recently segregated from *D. spadiceum* s.l. (Ignatova et al. 2015), and seems to be more common in high latitudes though both species are known to occur in Arctic.
- *Didymodon rigidulus* Hedw. – The species was found by Vekhov and Kuliev (1998) in on flattened surfaces on higher marine terraces, but has not been found in our collections. The specimen(s) absents in MHA. For a long time *D. rigidulus* was considered in a broader sence, including *D. icmadophilus*, most revisited Arctic collection originally identified as *D. rigidulus* were referred to the latter species.
- *Kiaeria starkei* (F. Weber & D. Mohr) I. Hagen – The species was found by Vekhov and Kuliev (1998) on flattened surfaces of upper coastal terraces, but specimen(s) are absent in MHA and it also has not been found in our collections. This species has not been reported from High Arctic, although from south regions of the Arctic it is known from few localities. Without sporophytes this species can be confused with poorly developed arctic plants of *Hymenoloma, Kiaeria glacialis* or *Dicranum.*
- *Lophozia sudetica* (Nees ex Huebener) Grolle – The species was reported by Vekhov and

Kuliev (1998), but the identification was made by specialist in mosses; specimen(s) absent in MHA; this species has not been found in our collections.

- *Polytrichastrum sexangulare* (Flörke ex Brid.) G.L. Sm. – The species was found by Vekhov and Kuliev (1998), but has not been found in our collections. In our opinion, this collection more likely represents *P. septentrionale*, which occurs in the studied area and is often confused with *P. sexangulare,* but occurrence of the latter species seems to be possible as well.

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