

MARA MEADOWS ECOLOGICAL RESERVE #42

Addendum #2 (1989)

A number of additions to the list of vascular plants identified from Mara Meadows were made during visits in 1989, including one new record for B.C. Additionally, the two survey transects established in 1984 were resurveyed on their 5-year anniversary.

1. Vascular Plants

Additions and an amendment to the report of 1984 and addendum of 1985 are as follows:-

Boraginaceae

Myosotis sylvatica GF Hoffmann - common zone 1d

Grossulariaceae

Ribes viscosissimum Pursh - uncommon zone 1d

← Ranunculaceae

Ranunculus gmelinii de Candolle - uncommon zone 9

Salicaceae

Salix fragilis L - rare zone 1d. this introduced species has spread in settled areas by rooting of branches carried by water. There is no flowing water where the few trees were located at Mara and it appears to be one of the few cases of seed dispersal.

Santaliniaceae

Geocaulon lividum (Richardson) Fernald - scattered zone 6a

Violaceae

Viola macloskyi Lloyd - frequent zones 1c, 1d

Cyperaceae

Carex cusickii Mackenzie - uncommon zone 4b

" *flava* L - common " 4a

" *lenticularis* Michx - scattered " 4a

" *leptalea* Wahl - " " 4a

" *livida* (Wahl) Willd - uncommon " 4a

" *paupercula* Michx - scattered " 4a

Rhynchospora capillacea Torr - uncommon " 4a new B.C.
record confirmed by Dr. A. Ceska.

Orchidaceae

Listera cordata (L) R. Brown - uncommon zone 1d

Poaceae

Calamagrostis inexpansa A. Gray - scattered zone 10

Muhlenbergia glomerata (Willd) Trin - carried in original report as *M. racemosa* on basis of preference by specialist at provincial museum; it should be altered to present name.

2. Birds

Two Horned owl fledged young were perched on a low tree just about on the SW corner of the reserve on 11th June and can safely be added to the list of fauna. A nest of Common snipe carried 4 eggs on the same date.

3. Water Gauges

Those put in place in 1984 were of white plastic pipe which the constant exposure to sun and fluctuating temperature is deteriorating in condition. They should be replaced by a less susceptible material. The southern gauge has been attacked by an animal and displaced from its position. At that location it was measuring water depth which is controlled by the main outlet dam at the road so does not really perform a useful purpose. A better location for a replacement would be at the SW corner of the main meadow to monitor the Violet Creek outlet.

The two markers of the survey transects are also of plastic pipe and should be replaced.

4. Survey Transects

It is usual for these to show vegetation coverage by a percentage figure. This has been done where the mass of growing material is ample but in some cases this is not the most instructive technique. For instance, if a dwarf birch covered 10% of a block on an initial survey and covered 20% at the time of a later survey, all that has been learned is that it is thriving and increasing in size. However, if the original one birch covering 10% is found at a later date to have become three birch covering 20% it is apparent that the block is being invaded and converted to a more shrubby condition. For this reason some of the reported figures are for the actual number of stems.

Transect #1

Block 1 *Cornus sericeus* 1 10%, *Thuja plicata* 1 10%, *Betula glandulosum* 9 20%, *Ledum glandulosum* <5%, *Typha latifolia* 5 <5%, *Carex leptalea* 5%, *Scirpus lacustris* 3, *Carex interior* 5%, *Menyanthes trifoliata* <5%, *Rubus pubescens* 5%, *Vaccinium oxycoccus* 15%, *Smilacina stellata* 1, *Tomenthypnum nitens* 60%

Block 2 *B.glandulosum* 5%, *T.plicata* 7½%, *S.lacustris* 3, *V.oxy-*
coccus 15%, *R.pubescens* 20%, *Aster borealis* 10%, *C.flava* 2
<5%, *S.stellata* 3 <5%, *Prunella vulgaris* 4 <5%, *C.interior* 10%,
c.leptalea <5%.

- Block 3 *L.glandulosum* 2-5%, *S.lacustris* 8-15%, *P.fimbriata* 7%, *T.latifolia* 1, *A.borealis* 3-5%, *C.flava* 20%, *P.vulgaris* 7%, *M.trifoliata* <5%, *R.pubescens* 10%, *Eleocharis* sp. 7½%, *Zygadenus elegans* 1-5%, *T.nitens* 5%, *Drepanocladus revolvens* 15%.
- Block 4 *B.glandulosa* 20%, *A.borealis* <5%, *S.lacustris* 4-5%, *P.fimbriata* 10%, *V.oxycoccus* <5%, *R.pubescens* 10%, *C.flava* 25%, *C.buxbaumii* 2-5%, *Senecio pauperculus* 1-5%, *C.leptalea* <5%, *Eleocharis* sp. 10%.
- Block 5 *B.glandulosa* 20%, *M.trifoliata* <5%, *P.fimbriata* 5%, *S.lacustris* 5-5%, *Trichophorum caespitosum* 15%, *Eleocharis* sp. 10%, *A.borealis* 2-5%, *S.stellata* 5%, *P.vulgaris* <5%, *C.flava* 10%, *V.oxycoccus* 5%, *T.nitens* 30%, *D.revolvens* 10%.
- Block 6 *B.glandulosa* 10%, *S.lacustris* 2-5%, *P.fimbriata* <5%, *M.trifoliata* <5%, *Viola nephrophylla* <5%, *C.flava* <5%, *Eleocharis* sp. 50%, *T.caespitosum* 10%, *S.pauperculus* <5%.
- Block 7 *B.glandulosa* 1-5%, *Z.elegans* <5%, *V.nephrophylla* 5%, *P.fimbriata* <5%, *T.caespitosum* 70%, *M.trifoliata* <5%, *A.borealis* <5%, *Lobelia kalmii* <5%, *Muhlenbergia glomerata* <5%, *T.nitens* 15%, *D.revolvens* 50%.
- Block 8 *B.glandulosa* 2-5%, *S.lacustris* 3-5%, *P.fimbriata* <5%, *M.trifoliata* <5%, *L.kalmii* <5%, *M.glomerata* <5%, *T.caespitosum* 70%, *Eleocharis* sp. 5%, *T.nitens* 20%, *D.revolvens* 25%.
- Block 9 *B.glandulosa* 1-5%, *S.lacustris* 4-5%, *M.trifoliata* <5%, *C.buxbaumii* 10%, *T.caespitosum* 10%, *Eleocharis* sp. 15%, *D.revolvens* 60%.
- Block 10 *B.glandulosa* 2-5%, *S.pauperculus* <5%, *M.trifoliata* <5%, *A.borealis* <5%, *T.caespitosum* 80%, *Eleocharis* sp. 10%, *T.nitens* 20%, *D.revolvens* 20%.
- Block 11 *B.glandulosa* 3-10%, *S.lacustris* 3-5%, *A.borealis* <5%, *C.buxbaumii* <5%, *T.caespitosum* 30%, *Eleocharis* sp. 40%, *T.nitens* 20%, *D.revolvens* 15%.
- Block 12 *B.glandulosa* 20%, *S.lacustris* 1-5%, *C.buxbaumii* <5%, *S.pauperculus* <5%, *Drosera anglica* <5%, *Eleocharis* sp. 35%, *T.caespitosum* 15%, *Rhynchospora capillacea* <5%, *T.nitens* 25%, *D.revolvens* 20%.
- Block 13 *S.lacustris* 3, *L.kalmii* <5%, *A.borealis* <5%, *D.anglica* 5%, *Eleocharis* sp. 10%, *T.caespitosum* 20%, *R.capillacea* 25%, *T.nitens* 25%, *D.revolvens* 20%.
- Block 14 *D.anglica* 15%, *S.lacustris* 3-5%, *M.trifoliata* <5%, *R.capillacea* 85%, *C.buxbaumii* <5%, *Eleocharis* sp. 15%, *T.caespitosum* 5%, *Utricularia intermedia* <5%, *D.revolvens* 10%.
- Block 15 *Triglochin maritima* 1-5%, *M.trifoliata* <5%, *C.buxbaumii* <5%, *R.capillacea* 75%, *D.anglica* 5%, *Eleocharis* sp. <5%, *D.revolvens* 20%.
- Transect 2
- Block 1 *B.glandulosa* 1-5%, *L.glandulosum* 15%, *Empetrum nigrum* 20%, *M.trifoliata* 7½%, *V.oxycoccus* 10%, *Carex lasiocarpa* 5%, *Mimulus guttatus* <5%, *Sphagnum warnstorffii* 70%.
- Block 2 *B.glandulosa* 10%, *S.lacustris* 4, *C.lasiocarpa* 5%, *L.glandulosum* 5%, *E.nigrum* <5%, *V.oxycoccus* 15%, *M.trifoliata* 15%, *S.pauperculus* <5%, *S.warnstorffii* 75%.
- Block 3 *B.glandulosa* 25%, *L.glandulosum* <5%, *S.lacustris* 6, *Z.elegans* 2-5%, *V.oxycoccus* 20%, *C.lasiocarpa* 15%, *M.trifoliata* 15%, *T.nitens* 15%, *S.warnstorffii* 50%.

Block 4 B.glandulosa 15%,M.trifoliata 15%,A.borealis<5%,C.interi
 <5%,C.lasiocarpa 10%,V.oxycoccus 10%,T.nitens 40%

Block 5 B.glandulosa 40%,S.lacustris 3<5%,C.lasiocarpa 40%,
 A.borealis 5%,Eriophyllum viridi-carinatum<5%,T.caespitosum 10%,
 M.trifoliata<5%,Carex gynocrates 5%,V.oxycoccus 20%,T.nitens
 20%,S.warnstorffii 65%

Block 6 B.glandulosa 45%,M.trifoliata 5%,T.caespitosum 60%,
 C.interior<5%,C.lasiocarpa<5%,T.nitens 30%,S.warnstorffii 7½%

Block 7 3<5%,Eleocharis sp.<5%,T.caespitosum 90%,T.nitens 90%
 S.lacustris 3<5%,P.fimbriata<5%,D.anglica<5%,A.borealis<5%
 L.kalmii 1<5%

Block 8 S.lacustris 1<5%,T.maritima 3 5%,T.caespitosum 95%,
 Eleocharis sp.<5%,D.anglica 7½%

Block 9 S.lacustris 1,T.caespitosum 80%,T.maritimum 5<5%,
 D.anglica 15%,U.intermedia 5%

Block 10 S.lacustris 3,T.caespitosum 60%,T.maritima 5%,D.anglica
 20%,T.nitens 60%

Block 11 S.lacustris 2,T.caespitosum 10%,T.maritimum<5%,
 D.anglica 5%,Eleocharis sp.20%,T.nitens 60%,D.revolvans 5%,
 U.intermedia<5%

Block 12 S.lacustris 1,T.caespitosum 25%,T.maritimum<5%,D.anglica
 10%,Eleocharis sp. 30%,T.nitens 70%

Block 13 T.caespitosum 15%,Eleocharis sp.10%,T.maritima 5%,
 D.anglica 15%,U.intermedia<5%,T.nitens 70%

Block 14 S.lacustris 3,Eleocharis sp.30%,T.caespitosum 15%,
 D.anglica 15%,T.nitens 35%,D.revolvans 10%

Block 15 S.lacustris 5,Eleocharis sp. 15%,T.caespitosum 5%,
 D.anglica<5%,U.intermedia 10%,D.revolvans 25%

Insufficient moss samples were taken in both transects for
 satisfactory sampling purposes.

Where the ditch cuts between the two treed areas referred
 to in the 1984 report as "southern islands" the amount of diffuse
 Dwarf birch appears to be increasing. Ox-eye daisy is becoming
 very noticeable along the edge of the ditch in this area where
 it is slightly raised above the general level of the meadow.
 Little was seen in the meadow 5 years ago and a survey transect
 would be useful here to monitor progress.

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 March 1990

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