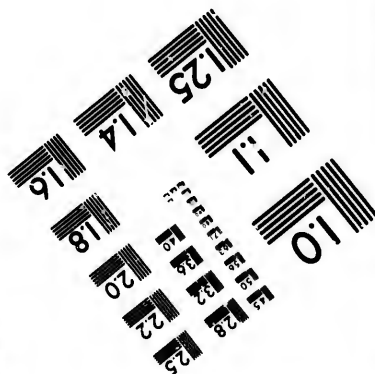
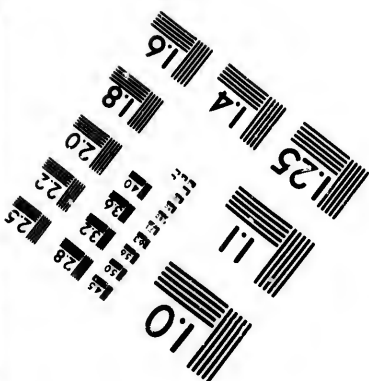
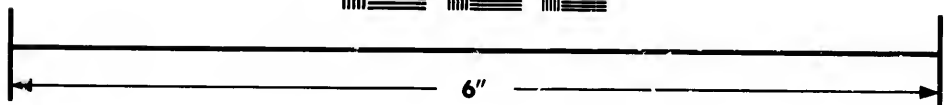
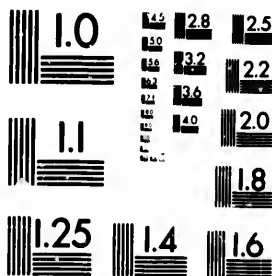


**IMAGE EVALUATION
TEST TARGET (MT-3)**



**Photographic
Sciences
Corporation**

23 WEST MAIN STREET
WEBSTER, N.Y. 14580
(716) 872-4503

1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0

**CIHM/ICMH
Microfiche
Series.**

**CIHM/ICMH
Collection de
microfiches.**



Canadian Institute for Historical Microreproductions / Institut canadien de microreproductions historiques

10

© 1982

Technical and Bibliographic Notes/Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- Coloured covers/
Couverture de couleur
- Covers damaged/
Couverture endommagée
- Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée
- Cover title missing/
Le titre de couverture manque
- Coloured maps/
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur
- Bound with other material/
Relié avec d'autres documents
- Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure
- Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.
- Additional comments:/
Commentaires supplémentaires:

- Coloured pages/
Pages de couleur
- Pages damaged/
Pages endommagées
- Pages restored and/or laminated/
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées
- Pages detached/
Pages détachées
- Showthrough/
Transparence
- Quality of print varies/
Qualité inégale de l'impression
- Includes supplementary material/
Comprend du matériel supplémentaire
- Only edition available/
Seule édition disponible
- Pages wholly or partially obscured by errata slips, tissues, etc., have been refilmed to ensure the best possible image/
Les pages totalement ou partiellement obscurcies par un feuillet d'errata, une pelure, etc., ont été filmées à nouveau de façon à obtenir la meilleure image possible.

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	12X	14X	16X	18X	20X	22X	24X	26X	28X	30X	32X
					✓						

The copy filmed here has been reproduced thanks to the generosity of:

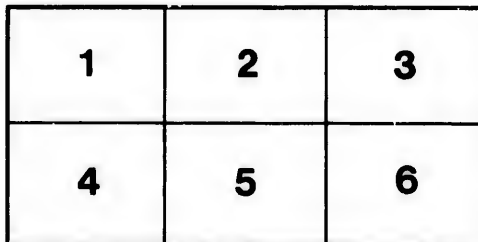
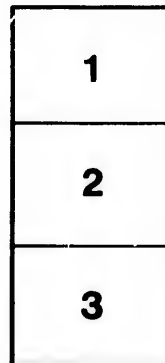
Library,
Geological Survey of Canada

The images appearing here are the best quality possible considering the condition and legibility of the original copy and in keeping with the filming contract specifications.

Original copies in printed paper covers are filmed beginning with the front cover and ending on the last page with a printed or illustrated impression, or the back cover when appropriate. All other original copies are filmed beginning on the first page with a printed or illustrated impression, and ending on the last page with a printed or illustrated impression.

The last recorded frame on each microfiche shall contain the symbol \rightarrow (meaning "CONTINUED"), or the symbol ∇ (meaning "END"), whichever applies.

Maps, plates, charts, etc., may be filmed at different reduction ratios. Those too large to be entirely included in one exposure are filmed beginning in the upper left hand corner, left to right and top to bottom, as many frames as required. The following diagrams illustrate the method:



L'exemplaire filmé fut reproduit grâce à la générosité de:

Bibliothèque,
Commission Géologique du Canada

Les images suivantes ont été reproduites avec le plus grand soin, compte tenu de la condition et de la netteté de l'exemplaire filmé, et en conformité avec les conditions du contrat de filage.

Les exemplaires originaux dont la couverture en papier est imprimée sont filmés en commençant par le premier plat et en terminant soit par la dernière page qui comporte une empreinte d'impression ou d'illustration, soit par le second plat, selon le cas. Tous les autres exemplaires originaux sont filmés en commençant par la première page qui comporte une empreinte d'impression ou d'illustration et en terminant par la dernière page qui comporte une telle empreinte.

Un des symboles suivants apparaîtra sur la dernière image de chaque microfiche, selon le cas: le symbole \rightarrow signifie "A SUIVRE", le symbole ∇ signifie "FIN".

Les cartes, planches, tableaux, etc., peuvent être filmés à des taux de réduction différents. Lorsque le document est trop grand pour être reproduit en un seul cliché, il est filmé à partir de l'angle supérieur gauche, de gauche à droite, et de haut en bas, en prenant le nombre d'images nécessaire. Les diagrammes suivants illustrent la méthode.

ails
du
odifier
une
nage

rate
o

elure,
à

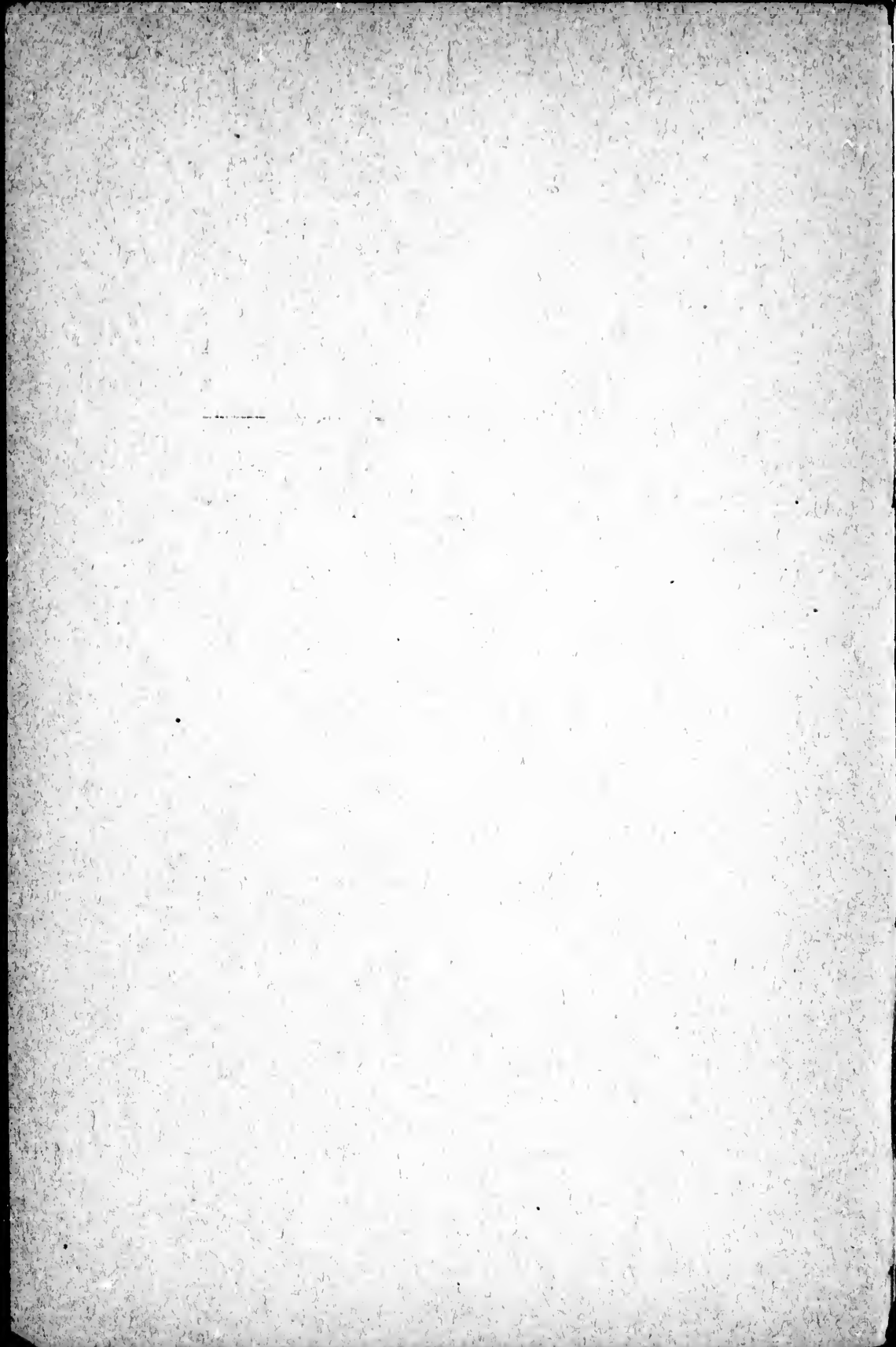
**Contributions from the Herbarium of the
Geological Survey of Canada.**

(By Permission of the Director.)

By JAMES M. MACOUN,
Curator of the Herbarium.

IV.

Reprinted from the Canadian Record of Science, January, 1895.



Contributions from the Herbarium of the
Geological Survey of Canada.

(By Permission of the Director.)

By JAMES M. MACOUN,
Curator of the Herbarium.

— IV.

Reprinted from the Canadian Record of Science, January, 1895.

Contributions to Canadian Botany.

By JAS. M. MACOUN.

IV.

VIOLA BLANDA, Willd., var. AMENA (Le C.) B.S.P.

Seldom separated from the species by Canadian collectors. North Bay, Ont. (*Dr. and Mrs. Britton and Miss Millie Timmerman.*) Ottawa, Ont. (*James Fleleher.*) Wingham, Ont. (*J. A. Morton.*) The var. *palustriformis*, Gray, we consider but a larger form of the species under which we include our large stoloniferous specimens that are not certainly referable to var. *amena*. They are from Edmonton, Ont. (*Jas. White.*) Wingham, Ont. (*J. A. Morton.*) Ottawa, Ont. (*J. M. Macoun.*)

VIOLA CANADENSIS, Linn.

Our most northern specimens of this species are from the Athabasca River. (*Miss E. Taylor.*)

VIOLA PALUSTRIS, Linn.

Between Lake Athabasca and Chesterfield Inlet in Lat. $61^{\circ} 35'$, Long. $103^{\circ} 30'$. (*Jas. W. Tyrrell.*) Northern limit in Canada as shown by our specimens.

VIOLA SELKIRKII, Pursh.

Battle Harbor, Fox Cove, Labrador, 1892. (*Rev. A. Waghorne.*) Northern limit in Canada.

POLYGALA VERTICILLATA, Linn.

Sandy soil at Griswold, Man. (W. A. Burman.) Only station west of Ontario.¹

DIANTHUS ARMERIA, Linn.

On rocks, Victoria Arm, Vancouver Island. Naturalized and spreading. In fruit July 21st, 1893. (John Macoun.) Not before recorded west of Ontario in Canada or Michigan in U.S.

DIANTHUS BARBATUS, Linn.

Escaped from cultivation and naturalized at Hot Springs. Kootanie Lake, B.C., 1890. (Jas. M. Macoun.)

SAPONARIA VACCARIA, Linn.

A weed in gardens at Kamloops, B.C. Roadsides, Nelson, Kootanie Lake, B.C.; Cameron Lake, Vancouver Island. (John Macoun.) Not before recorded west of the Columbia River.

SILENE ARMERIA, Linn.

Spontaneous in gardens at Rupert House, James Bay. (Jas. M. Macoun.) Our most northern record.

SILENE CUCUBALUS, Wibel.

Naturalized near Spray Falls, Banff, Rocky Mountains. (John Macoun.) Not before recorded west of Ontario.

SILENE DOUGLASHI, Hook., var. MACOUNII, Robinson, Proc. Amer. Acad. xxviii, 144.

Lychnis elata, Macoun, Cat. Can. Plants, Vol. I, p. 69.

Silene multicaulis, Macoun, Cat. Can. Plants, Vol. I, p. 494.

S. Macounii, Wats., Proc. Amer. Acad. xxvi, 124.

Our herbarium specimens of this variety are from Mt. Aylmer, Rocky Mts., alt. 6,800 ft.; Lake Louise, Rocky Mts.; Silver City, Rocky Mts.; Kicking Horse Lake, Rocky Mts., alt. 7,000 ft.; mountains north of Griffin Lake, B.C., alt. 6,500 ft. (John Macoun.) Mt. Queest, Shus-

¹ The Geographical limits given in these papers refer to Canada only.

wap Lake, B.C., alt. 6,000 ft.; Avalanche Mt., Selkirk Mts., B.C., alt. 7,000 ft. (*Jas. M. Macoun.*) Western Summit of North Kootanie Pass, Rocky Mts.; South of Tulameen River, B.C., alt. 6,000 ft.. (*Dr. G. M. Dawson.*) A part of the specimens referred to this variety are perhaps intermediate between it and the next.

SILENE DOUGLASHII, Hook, var. **VISCIDA**, Robinson, Proc. Amer. Acad. xxvii, 145.

On slopes of high mountains at Kicking Horse Lake, Rocky Mts. (*John Macoun.*)

SILENE DOUGLASHII, Hook., var. **MULTICAULIS**, Robinson.
S. multicaulis, Macoun, Cat. Can. Plants, Vol. II., p. 309.
Stump Lake, South of Kamloops, B.C. (*John Macoun.*)

SILENE GALLICA, Linn.

Common at Oak Bay, Goldstream and Victoria Arm, Vancouver Island. (*John Macoun.*) Introduced.

SILENE NOCTIFLORA, Linn.

A weed in gardens at Rupert's House, James Bay. (*Jas. M. Macoun.*) In waste places at Revelstoke, B.C., and Cedar Hill, Vancouver Island. (*John Macoun.*) Not before recorded from west of Winnipeg.

LYCHNIS AFFINIS, Vahl.

Between Lake Athabasca and Chesterfield Inlet. Lat. 63° 27', Long. 102°, 1893. (*Jas. W. Tyrrell.*) Cape Prince of Wales, Hudson Strait. (*Dr. R. Bell.*)

LYCHNIS ELATA, Wats.

Our only specimens of this species are from Avalanche Mt., Selkirk Mts., B.C., alt. 7,000 ft. (*Jas. M. Macoun.*)

LYCHNIS TAYLORÆ, Robinson, Proc. Amer. Acad. xxviii, 150.

Very slender 1 to 1½ feet high, puberulent, nearly smooth below, glandular above; stem erect, bearing 3 to 4 pairs of leaves and two or three long, slender, almost filiform 1 to 3 flowered branches; leaves thin, lance-linear, acute or

attenuate both ways, finely ciliate, and pubescent upon the single nerve beneath, otherwise glabrate, 2 to 2½ inches in length; flowers terminal or subterminal on the branches; calyx ovate, not much inflated, about 4 lines long, in anthesis but two lines in diameter with green nerves interlacing above; the teeth obtuse, with broad green membranous ciliate margins; petals 1½ times the length of the calyx; the blade obovate, 1½ lines long, considerably broader than the slender auricled claw, appendages lance-oblong.

Peel's River, Mackenzie River Delta, 1892. (*Miss E. Taylor.*)

LYCHNIS TRIFLORA, R. Br. var. *DAWSONI*, Robinson, Proc. Amer. Acad. xxviii, 149.

Calyx with principal nerves double or triple, joined by interlacing veinlets; the intermediate nerves beneath the sinuses inconspicuous or wanting; petals very narrow; the blade oblong, bifid, hardly to be distinguished from the narrow claw.

Gravel banks, Dease River, 100 miles north-east of Dease Lake. Lat. 59°, B.C., 1887. (*Dr. G. M. Dawson.*)

CLAYTONIA CHAMISSONIS, Esch.

Growing at high-water mark at Comox, Vancouver Island, 1893. (*John Macoun*, Herb. No. 29.)¹ These are our first authentic specimens of this species.

CLAYTONIA PARVIFOLIA, Moç.

Damp rocks, Sproat, Columbia River, B.C.; Griffin Lake, B.C.; Agassiz, B.C. (*John Macoun.*) Not before recorded between Selkirk Mts. and Vancouver Island.

OPUNTIA FRAGILIS, Haw.

This plant, of which specimens were collected by Mr. A. C. Lawson in 1884 on islands in the Lake of the Woods, was found again in 1894 by Prof. A. P. Coleman on Red Pine

¹ Whenever herbarium numbers are given, they are the numbers under which specimens have been distributed from the herbarium of the Geological Survey of Canada.

Island, Rainy Lake, just within Canadian territory. It covered about a square rod of the eastern end of the island and grew half-buried in lichens. The Indians with Prof. Coleman did not know of its occurrence elsewhere in that region.

GALIUM PALUSTRE, L. var. *MINUS*, Lge.

A comparison of specimens collected by the Rev. A. Waghorne at Long Point, Labrador, with Greenland plants shows that what was at first considered a form of *G. trijidum* is in fact *G. palustre*, var. *minus*. New to Canada.

VERNONIA NOVEBORACENSIS, Willd.

The plant from Essex Centre, Ont., referred to this species, Macoun, Cat. Can. Plants, Vol. I., p. 206, proves to be *V. altissima*, Nutt. Specimens collected by Prof. Macoun in thickets at Pelee Island, Lake Erie, 1892, are *V. noveboracensis*. We have seen no other Canadian specimens of this species.

SERIOCARPUS RICHIDUS, Lindl.

In open thickets Mount Finlayson and Cedar Hill, near Victoria, V. I. and Nanaimo, Vancouver Island, 1887. Oak Bay, near Victoria, V. I., Herb. No. 451. (*John Macoun.*) Collected in 1887 but not recorded.

HELIOPSIS SCABRA, Dunal.

In thickets. Kicking Horse River, Rocky Mts., alt. 4,000 ft., 1890. (*Jas. M. Macoun.*) Woods, Revelstoke, Columbia River, B.C. (*John Macoun.*) Probably introduced from Manitoba by the C. P. Ry. Not before recorded west of Manitoba.

MADIA GLOMERATA, Hook.

Dry ground at Revelstoke, Columbia River, B.C., 1890. (*John Macoun.*) Not before recorded west of Alberta.

MADIA SATIVA, Molina, var. *RACEMOSA*, Gray.

On dry banks, two miles from mouth of Kootanie River, B.C., 1890. (*John Macoun.*) Not before recorded from interior of British Columbia.

MADIA SATIVA, Mol., var. *CONGESTA*, Gray.

Specimens (Herb. No. 466) collected by Prof. Macoun at Beacon Hill, Victoria, Vancouver Island, Aug. 7th, 1893, and referred by him to this variety have been submitted to Dr. Robinson, who says, "a form showing characters of var. *congesta* (as to inflorescence) and var. *racemosa* (as to leaves and pubescence.)"

HEMIZONELLA DURANDI, Gray.

Hillsides at Sproat, Columbia River, B.C., 1890. (*John Macoun.*) New to Canada.

COTULA AUSTRALIS, Hook., f.

Ballast heaps at Nanaimo, Vancouver Island, 1893. (*John Macoun*, Herb. No. 476.) New to Canada.

ARTEMISIA RICHARDSONIANA, Bess.

Mount Rapho, Lat. 56° 13', Long. 131° 36', alt. 3,800 ft., July, 1894. (*Otto Klotz* and *H. W. E. Canavan*, Herb. No. 4,191.)

ARNICA LATIFOLIA, Bong. var. *VISCIDULA*, Gray.

Woods at Roger's Pass, Selkirk Mts., B.C., alt. 4,500 ft., 1890. (*John Macoun.*) New to Canada.

CENTAUREA PANICULATA, L.

Dry waysides, Victoria, Vancouver Island, 1893. (*John Macoun*, Herb. No. 552.) New to Canada.

CASSIOPE STELLERIANA, DC.

Mt. Rapho, Lat. 56° 13', Long. 131° 36'. Alt. 3,800 ft. In flower July 10th, 1894. (*Otto Klotz* and *H. W. E. Canavan*, Herb. No. 4,195.) First Canadian record.

PRIMULA CUNEIFOLIA, Ledeb.

Mt. Rapho, Lat. 56° 13', Long. 131° 36'. Alt. 3,800 ft. In flower July 10th, 1894. (*Otto Klotz* and *H. W. E. Canavan*, Herb. 4,192.) New to Canada.

COLLINSIA VERNA, Nutt.

In woods near Plover Mills, Ont. In great abundance in

one locality but not found elsewhere. Collected by R. Elliott, May 22nd, 1894. New to Canada.

PEDICULARIS PEDICELLATA, Bunge.

Mt. Head, Lat. 56° 05', Long. 131° 08'. Alt. 4,200 ft. (Otto Klotz and H. W. E. Canavan, Herb. No. 4,196.) Only authentic Canadian station.

UTRICULARIA RESUPINATA, B. D. Green.

Abundant on sand and mud both in shallow and gently flowing water, Phipps Lake, Long Reach, Kings Co., N.B., July 13th-20th, 1886. (C. H. Livingstone). Only Canadian station, though a plant believed to be this species was found by Prof. Macoun in Victoria Co., Ont., in 1868.

AMARANTUS, Linn.

Our herbarium specimens of this genus have been examined by Messrs. Uline and Bray who have either confirmed our determinations or made necessary corrections that are included in the following notes.

A. RETROFLEXUS, LINN.

Specimens collected by Prof. Macoun at Agassiz, B.C., and referred here are intermediate between *A. Powellii* and *A. retroflexus*.

A. HYBRIDUS, Linn.

References under *A. paniculatus* and *A. hypochondriacus*, Macoun, Cat. Can. Plants, Vol. I, p. 396, are, so far as our herbarium specimens are concerned, *A. hybridus*.

A. PANICULATUS, Linn.

Waste places, Sicamous, B.C., 1889. (John Macoun.) Our only specimens of this species.

A. GRÆCIZANS, Linn.

A. albus, L.; Macoun, Cat. Can. Plants, Vol. I, p. 397.

This species is well distributed throughout British North America. Specimens collected by the borders of saline ponds near Kamloops, B.C., by Jas. M. Macoun are near *A. carneus*, Greene.

A. BLITOIDES, Wat.

London, Ont. (*Millman.*) Port Colborne, Ont. (*John Macoun.*) Point Edward, St. Clair River, Ont. (*Jas. M. Macoun.*)

POLYGONUM.

All our herbarium specimens of this genus have been examined by Prof. John K. Small, who has made several important changes in our determinations. He had not our herbarium sheets at the time his revision of the *Polygonaceae* was published so that the distribution of the Canadian species of *Polygonum* as given below will greatly extend the range of many North American species. I follow Prof. Small's arrangement of the species throughout.

(1.) *P. VIVIPARUM*, Linn.

Throughout Canada. Our most northern specimens are from Lat. 64° 26', Long. 100° 45', 1893. (*Jas. W. Tyrrell.*) and Great Bear Lake River. Lat. 65°, 1892. (*Miss E. Taylor.*)

(2.) *P. PERSICARIA*, Linn.

From Prince Edward Island to Vancouver Island. Abundant throughout the settled parts of Canada.

(3.) *P. CAREYI*, Olney.

Wet sandy banks, Moon River, Muskoka. Ont., 1878. (*Burgess.*) The only Canadian station.

(4.) *P. hydropperoides*, Michx.

We have this species from but one locality, Belleville, Ont. Many of the references given by Prof. Macoun (*Cat. Can. Plants*, Vol. I, p. 411), probably refer to other species. This plant is certainly not of as general distribution in Canada as is supposed, or our herbarium would contain specimens from more stations than one.

Of this species and var. *strigosum* Prof. Small writes, "*P. hydropperoides*, as well as the var. *strigosum*, has an almost invariable character which it seems, has never been recorded. The stem or branches always produce, at the dis-

tance of three-fourths of an inch or less above the angle of branching, a node with a leaf and ocrea, thus making an internode several times shorter than normal length."

Var. *strigosum*, Small.

In ditches at Gatineau Point near Hull, Que. (*John Macoun*.) In water near St. Patrick's Bridge, Ottawa, Ont. (*Jas. M. Macoun*, Herb. No. 1503.)

(5.) *P. HYDROPIPER*, L.

From New Brunswick to Pacific Coast.

(6.) *P. PUNCTATUM*, Ell.

P. acre, Macoun, Cat. Can. Plants, Vol. I., p. 411.

Not rare in Eastern Canada. Agassiz, B.C., and Kamloops, B.C. (*John Macoun*.) Not before recorded west of Ontario.

(7.) *P. PENNSYLVANICUM*, L.

Common from Nova Scotia to Western Ontario.

(8.) *P. LAPATHIFOLIUM*, L.

Common from the Atlantic to the Pacific. Prof. Small thinks this species has been introduced wherever found. While this may be so in most cases, we have specimens from remote regions that are without doubt indigenous.

Var. *incanum*, Koch.

From Ontario to the Pacific.

(9.) *P. AMPHIBIUM*, L.

Tadousac, Que. (*Northrop*.) Wingham, Ont. (*J. A. Morton*.) Hastings Co., Ont.; Long Portage, Nipigon River, Ont.; Tail Creek, N.W.T.; near Victoria, Vancouver Island. (*John Macoun*.) Near Pincher Creek, Alberta. (*Dr. G. M. Dawson*.)

(10.) *P. EMERSUM*, (Michx.) Britt.

Most of the references under *P. Muhlenbergii*, Macoun, Cat. Can. Plants, Vol. I., p. 410, and Vol. II., p. 353, go here. Our herbarium specimens are from Wingham, Ont.

(*J. A. Morton.*) Leamy's Lake, Hull, Que.; Tail Creek, N.W.T. (*John Macoun.*) Indian Head, Assa. (*W. Spreadborough.*) Short Creek, Souris River, Man.; Belly River, Alberta. (*Dr. G. M. Dawson.*) "Arctic North America," no locality. (*Dr. Richardson.*)

(11.) *P. HARTWRIGHTII*, Gray,

Salt Lake, Anticosti, Que.; Elziver, Hastings Co., Ont.; Vermillion Lakes, near Banff, Rocky Mts. (Herb. No. 1,481.); Revelstoke, B.C.; Kamloops, B.C. (*John Macoun.*) Near York Factory, Hudson Bay. (*Dr. R. Bell.*) London, Ont. (*Burgess.*) Muskeg Island, Lake Winnipeg. (*Jas. M. Macoun.*)

(12.) *P. Orientale*, L.

Ottawa, Ont. (*Dr. A. R. C. Selwyn.*) London, Ont. (*Burgess.*)

(13.) *P. ALPINUM*, All.

Peel River, Mackenzie River Delta, 1892, (*Miss E. Taylor.*) The references under *P. polymorphum*, Macoun, Cat. Can. Plants, Vol. I., p. 412, probably all go with this species or its var. *lapathifolium*.

(14.) *P. AVICULARE*, L.

From Ontario to Vancouver Island.

VAR. *BOREALIS*, Lange.

Specimens collected on the East Main River, Hudson Bay, by A. H. D. Ross, in 1892, when compared with specimens from Greenland seem certainly referable here.

(15.) *P. LITTORALE*, Link.

P. erectum, Macoun, Cat. Can. Plants, Vol. I., p. 407 in part.

Thunder Bay, Lake Superior. (*N. L. Britton.*) Castle Mountain, Rocky Mts.; Banff, Rocky Mts. Herb. No. 1,487; near Devil's Lake, Rocky Mts., Herb. No. 1,486. (*John Macoun.*) Walsh, Assa. (*J. M. Macoun.*)

(16) *P. RAYI*, Bab.

P. maritimum, Macoun, Cat. Can. Plants, Vol. I., p. 408.

Turner's Head, Labrador. (*Rev. A. Waghorne.*) Brackley Point, P.E.I.; Jupiter River, Anticosti, Que.; Qualicum and Point Holmes, Comox, Vancouver Island. Herb. No. 1505. (*John Macoun.*) Bass River, N.B. (*Fowler.*) We do not believe, that this plant, "wherever found," in Canada, has been introduced. Prof. Small found among our specimens no representatives of *P. maritimum*, and as our specimens of *P. Rayi* are from widely separated and remote localities on the Atlantic and Pacific coasts, it seems probable that we have but one species in Canada, and that it is, at least in part, indigenous.

(17.) *P. PARONYCHIA*, J. & S.

Beacon Hill, Vancouver Island. (*John Macoun. C. F. Newcombe.*)

(18.) *P. ERECTUM*, L.

Our only specimens of this species are from Winnipeg, Man.; Banff, Rocky Mts. Herb. No. 1,485. (*John Macoun.*)

Other specimens referred here by Prof. Macoun, Cat. Can. Plants, Vol. I., p. 407, are now included under other species.

(19.) *P. RAMOSISSIMUM*, Michx.

Petitcodiac, N.B. (*J. Britain.*) Rat Creek, Man.; Hand Hills, N.W.T.; South of Battleford, N.W.T. (*John Macoun.*)

(20.) *P. DOUGLASII*, Greene.

P. tenue, Macoun, Cat. Can. Plants, Vol. I, p. 468.

Not rare from Ontario to British Columbia. We have apparently no *P. tenue* in Canada.

Prof. Small says of this species, "*P. Douglasii* can be distinguished from its relative *P. tenue* at a glance, and is beautifully distinct, as Prof. Greene has pointed out, by its one-ribbed leaf in place of the three-ribbed of *P. tenue*, and the much longer, narrower and pedicelled, drooping fruit, instead of the short, thick, sessile, erect fruit of that plant."

(21.) *P. AUSTINÆ*, Greene.

South Kootanie Pass, Rocky Mts., 1883. (*Dr. G. M. Dawson.*) Near the glacier at the head of Lake Louise, Rocky Mts. Alt. 7,500 ft. (*John Macoun.*) Dr. Dawson's specimens were collected a year before Mrs. Austin's, and were named *P. tenuis*, Michx., var. *latifolium*, Eng., by Prof. Macoun.

(22.) *P. SPERGULARIFORME*, Meisn.

P. coarctatum, Dougl.

From the Columbia River at Sproat, B.C., to Vancouver Island.

(23.) *P. MINIMUM*, Wats.

South Kootanie Pass, Rocky Mts. (*Dr. G. M. Dawson.*) Roger's Pass, Selkirk Mts., B.C.; Griffin's Lake, B.C. (*John Macoun.*)

(24.) *P. INTERMEDIUM*, Nutt.

Summit of Mt. Mark, Vancouver Island. (*John Macoun.*)

(25.) *P. IMBRICATUM*, Nutt.

Hand Hills and Cypress Hills, Alberta. (*John Macoun.*)

(26.) *P. CONVOLVULUS*, L.

Common in fields and waste places from the Atlantic to the Pacific.

(27.) *P. SCANDENS*, L.

P. dumetorum, L., var. *scandens*, Gray.

From Nova Scotia to the Cypress Hills, Alberta.

(28.) *P. CILINODE*, Michx.

In pine woods and thickets from Nova Scotia to the Peace River, Athabasca.

(29.) *P. SAGITTATUM*, L.

From Prince Edward Island to the Saskatchewan.

(30.) *P. ARIFOLIUM*.

From Nova Scotia to Ontario.

(31.) *P. VIRGINIANUM*, Linn.

All our specimens of this species were collected in Ontario. Reported from Nova Scotia and Quebec.

POLYGONELLA ARTICULATA, Meisn.

Polygonum articulatum, Willd; Macoun, Cat. Can. Plants Vol. I., p. 409.

Sand dunes, Point Aux Pins, Lake Superior, 1869. (*John Macoun.*) Specimens collected by Dr. Richardson, and labelled "Arctic North America," are probably from the same locality.

