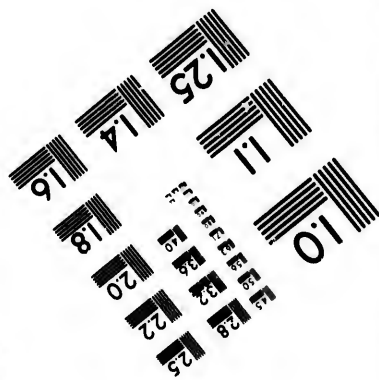
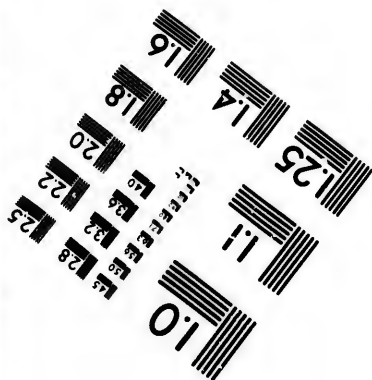
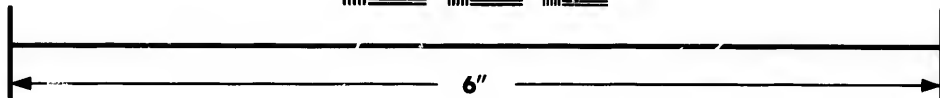
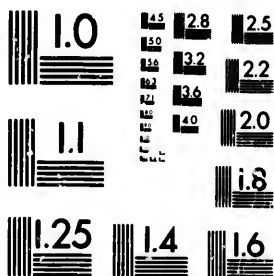


**IMAGE EVALUATION  
TEST TARGET (MT-3)**



**Photographic  
Sciences  
Corporation**

23 WEST MAIN STREET  
WEBSTER, N.Y. 14590  
(716) 8. 2-4503

28  
25  
22  
20  
8

**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  
distortion 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	14X	18X	22X	26X	30X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X

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

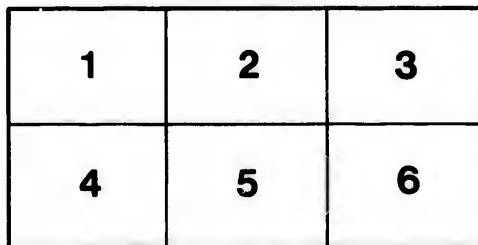
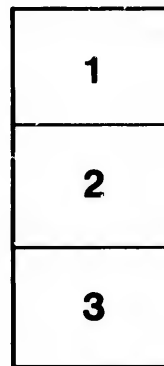
Library,  
Geological Survey of Canada

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  $\nabla$  (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 filmage.

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  $\nabla$  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  
mage

rate  
o  
elure,  
à

1082B.8(2)

3785

---

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

(By Permission of the Director.)

By JAMES M. MACOUN,  
*Curator of the Herbarium.*

L

*"Reprinted from the Canadian Record of Science, January, 1894."*

---



---

Contributions from the Herbarium of the  
Geological Survey of Canada.

(By Permission of the Director.)

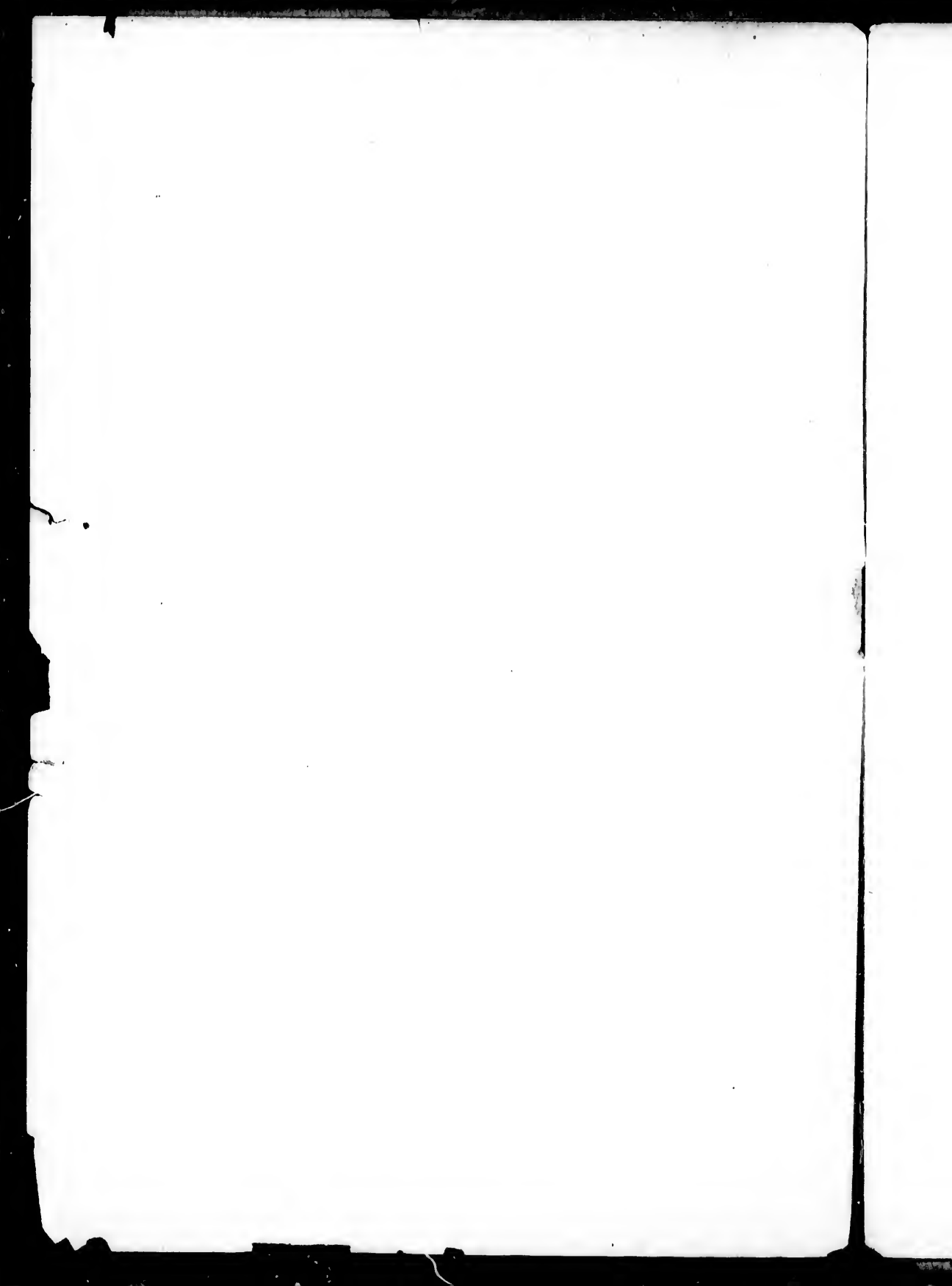
By JAMES M. MACOUN,  
*Curator of the Herbarium.*

I.

*" Reprinted from the Canadian Record of Science, January, 1894."*

---

8785





## Contributions to Canadian Botany.

By JAS. M. MACOUN.

### I.

Since the publication in 1890 of Part V. of Prof. John Macoun's Catalogue of Canadian Plants the geographical range of many species has been extended, many additional species have been added to the Flora of Canada and not a few species and varieties have been discovered that have proved new to science.

A record of these later discoveries has been kept by the writer and it is proposed in these papers to publish such notes as it is thought will prove of general interest to botanists.

This plan will exclude such facts as are of local interest only. That a plant common in various parts of Ontario, for example, should have been found in another part in which it was not known to grow, will not be considered of sufficient general interest to be recorded here but when the plant is quite new to the country, of extreme rarity, or of very restricted distribution new stations for it will be considered worthy of record and when possible its habitat, mode of growth etc., will also be given.

Descriptions of new species will also be published, and where recent revisions of genera or orders have made noteworthy changes in the nomenclature of Canadian plants, corrections will be made in the work already done.

*ACONITUM COLUMBIANUM*, Nutt.

This beautiful aconite was first collected in Canada by Mr. Jas. McEvoy between Stump and Chaperon Lakes South of Kamloops, B. C. Mr. McEvoy describes it as growing in rich soil in open spaces between thickets and as being frequently found three feet in height. It was afterwards noted by Mr. McEvoy in several localities between the Spullamaheen or Shuswap River and where it was first found by him.

*BRASSENIA PELTATA*, Pursh.

Common in Eastern Canada; collected in Langford Lake, Vancouver Island and in 1893 in Stanley Park, Vancouver, B. C., not before recorded from Western Canada.

*CARDAMINE BELLIDIFOLIA*, Linn.

Until 1890 this little cress had not been collected in Canada since the time of Franklin's Second Journey when it was found in the Rocky Mountains by Drummond and the arctic regions by Dr. Richardson. In 1890 it was discovered by the writer on Avalanche Mt. near Roger's Pass in the Selkirk Mountains, B. C., at 7,500 ft. altitude. But five specimens in all were found, none of them exceeding an inch in height. They were growing in mud close to a rock over which water continually trickled. A few specimens of this species were also found by Prof. Macoun on Mt. Aylmer, Devil's Lake, Rocky Mts. in 1891, alt. 8000 ft.

*LEPIDIUM OXYCARPUM*, T. & G.

Specimens of a reduced form of this plant were collected in 1893 by Prof. Macoun at Cadboro Bay near Victoria Van. Island. New to Canada.

*THYSANOCARPUS PUSILLUS*, Hook.

Common in parts of Vancouver Island but not found in Brit. Columbia until 1890 when it was collected at Sprout on the Columbia River by Prof. Macoun.

*CLAYTONIA CORDIFOLIA*, Wat.

Found by Prof. Macoun at an attitude of 5000 ft. on the mountains near Warm Springs, Kootanie Lake, B. C. New to Canada.

*ELATINE AMERICANA*, AFD.

In his catalogue of Canadian Plants Prof. Macoun gives but one station for this species--Long Lake in Assinaboin. During the past four years it has been found in widely separated localities so that we may now safely say that though of local occurrence it ranges in Canada from the Atlantic to the Pacific. New stations for this species are Tadousac Lake, Que. (*Geo. G. Kennedy.*) Hull, Que., and Alberni, Vancouver Island. (*John Macoun.*) Port Sandfield, Muskoka, Ont. (*Dr. and Mrs. Britton and Miss Timmerman.*)

*ASTRAGALUS LEUCOPSIS*, Torr.

One clump of this plant was found by Prof. Macoun near Nanaimo, Van. Island in 1893. The seed was doubtless brought from California in ballast.

*LUDWIGIA ALTERNIFOLIA*, L.

Collected by Mr. Alex. Wherry of Windsor, Ont. in 1893. Mr. Wherry writes:—"It is found in low rich, swampy ground generally meadows and pastures, about 2 miles west of Sandwich, Ont.; also within half mile of Windsor, Ont. Quite common in these places but not met with elsewhere by me."

This species is credited to Canada in Torrey & Gray's Flora and in Hooker's Flora but no localities are mentioned. Both this and the next species are common in Michigan and that they have been so recently found on the Canadian side of the Detroit River in a region that has been well

botanized may go to show that they are extending their limits.

LUDWIGIA POLYCARPA, Short & Peter.

Found by Prof. Macoun in 1891, growing in ditches and along the railway track near Amherstburg, Ont.

GRINDELIA SQUARROSA, Duval.

This common prairie plant has become naturalized in the vicinity of Skead's Mills near Ottawa, Ont., where it was found by Mr. Wm. Scott in 1890, the seed having been doubtless brought from the west either in grain or attached to cars of the Canadian Pacific Railway.

APLOPAPPUS LYALLII, Gray.

This plant is probably to be found on most of the higher mountains in British Columbia but was overlooked until 1890, when it was collected in the Gold Range by Mr. Jas. McEvoy and by the writer on a high mountain near Kicking Horse Lake in the Rocky Mountains.

That it was not collected before, is I believe to be attributed to its close resemblance to a form of *Solidago multiradiata* var. *scopulorum*, Gray, Common on all the mountains in British Columbia with which it was growing when found by me. With it *Aplopappus Brandegei* also grew and it was while collecting specimens of this plant that I noticed what appeared to be two forms of the *Solidago* referred to, but one of which proved on examination to be *A. Lyallii*.

This species was again found by Prof. Macoun in August, 1891, in abundance on the mountains around Lake Agnes, near Laggan, Rocky Mountains.

ASTER STENOMERES, Gray.

Until 1890 confined, so far as known, to Idaho and Montana. In that year young plants were found by Prof. Macoun on a mountain near the Columbia River at Sproat, B. C., they were brought to camp, placed in water and at the end of a week were in full bloom.

**ARNICA PARRYI**, Gray.

Collected first at Kicking Horse Lake in the Rocky Mountains by Prof. Macoun in 1885, but referred to *A. foliosa*. Aguin collected at the same place in 1890, and correctly determined and afterwards in 1891 at Lake Agnes and Lake Louise near Laggan, Rocky Mountains. New to Canada.

**HEMICARPIA SUBSQUARROSA**, Nees.

This minute sedge was found in 1891 by Prof. Macoun growing in damp sandy soil near Amherstburg, Ont. New to Canada.

---

