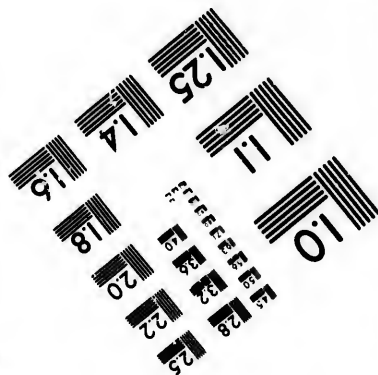
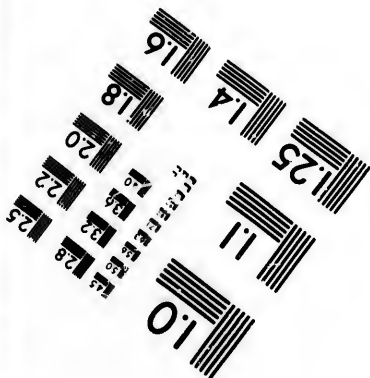
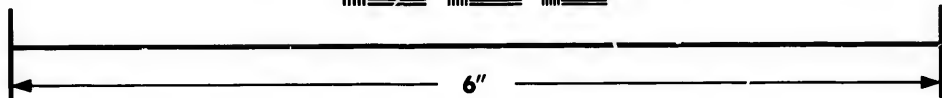
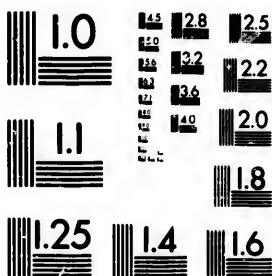


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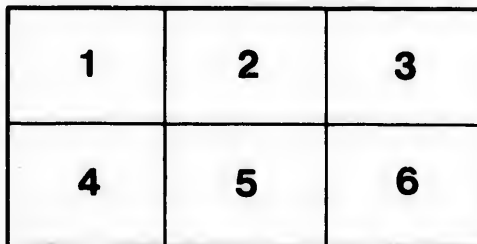
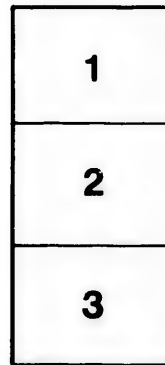
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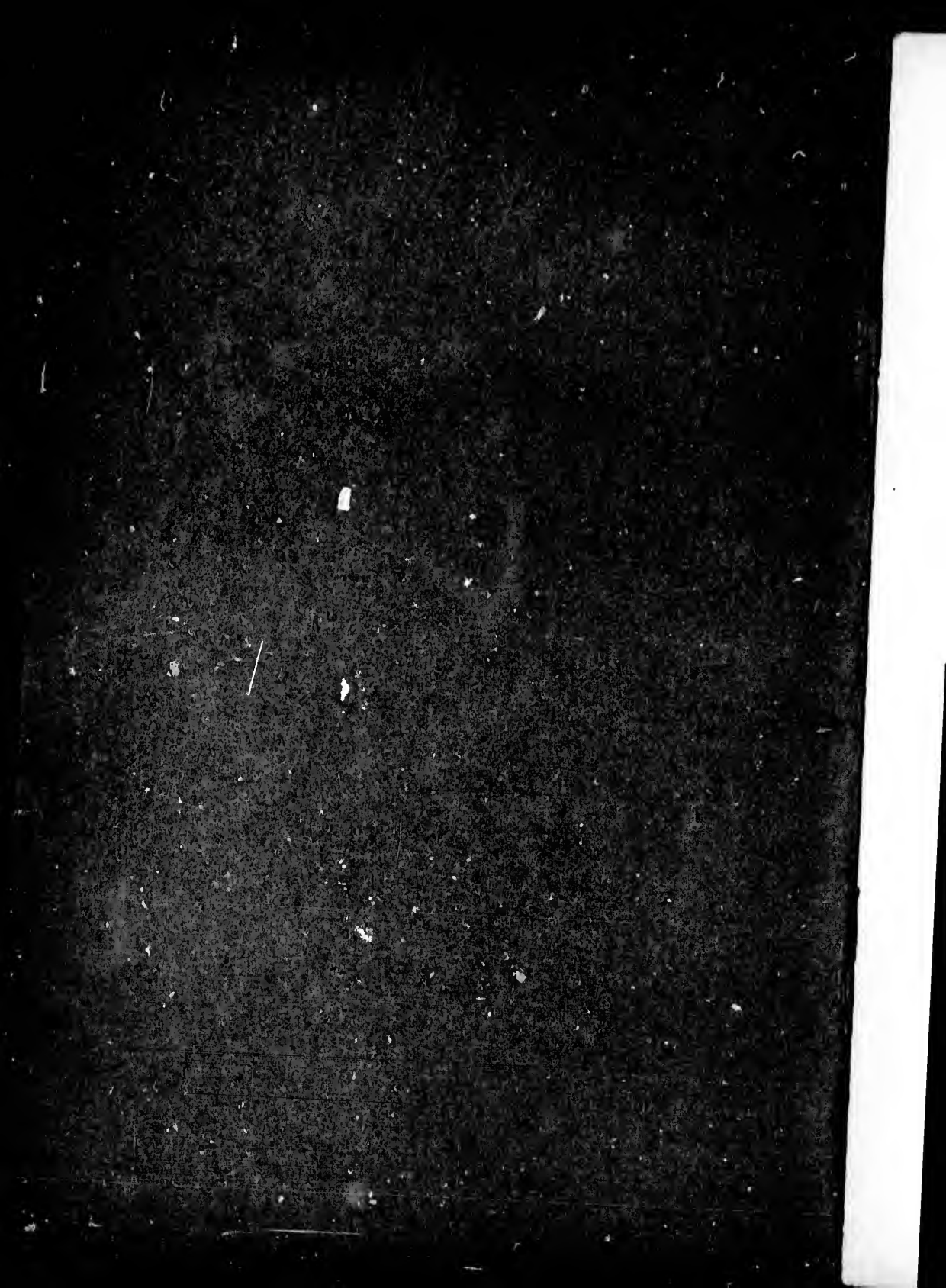
BY

JAMES M. MACOUN,

Assist. Naturalist, Geological Survey of Canada.

XII

Reprinted from THE OTTAWA NATURALIST, Vol. XII, No. 9, pp. 161-172, Dec. 1898.



CONTRIBUTIONS TO CANADIAN BOTANY.*

By JAMES M. MACOUN,
Assist. Naturalist Geol. Survey of Canada.

XII.

RANUNCULUS INAMGENUS. Greene, Pittonia III, p. 91.

Green, and appearing as if glabrous, but sparsely hairy, the
the stoutish stems 6 to 12 inches high; radical short-petiolate

ERRATA.

P. 161, line 11, for "Jumping Pond" read "Jumping Pound."

P. 162, line 18, for "glabrous and glabrous" read "glabrous and
glaucous."

P. 164, for "POLYGALA VERTICELLATA" read "POLYGALA VERTI-
CILLATA."

P. 165, line 4, for "spicis" read "species."

P. 165, line 16, for "*nardifolia*" read "*nardifolia*."

P. 166, for "ANTHYLLUS" read "ANTHYLLIS."

P. 167, line 7, for "*intermedius*" read "*intermedia*. Wat.:"

P. 169, line 2, for "Vaucouver" read "Vancouver."

Pp. 169 and 170, for "uva-ursi" read "Uva-ursi"

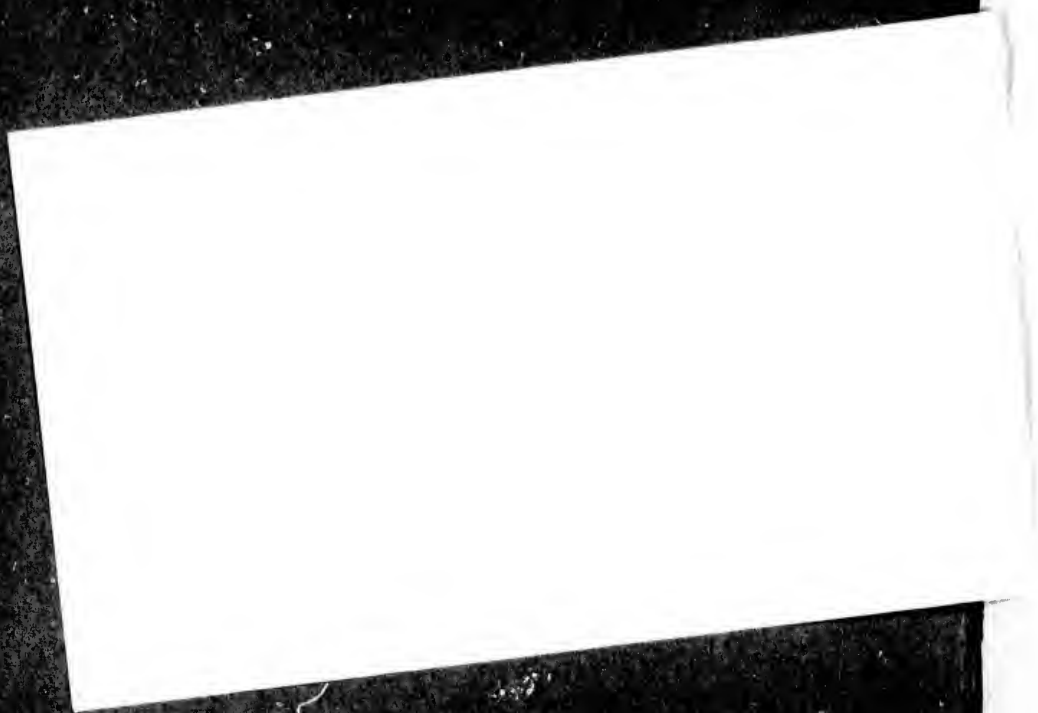
NASTURTIUM SYLVESTRE, R. Br.

Naturalized along the road in front of Ball's Mills, Lincoln
Co., Ont. (*W. C. McCalla*.) New to Canada.

CARDAMINE ANGULATA, Hook.

Spring House Cove, Dawson Harbour, Queen Charlotte
Islands, B.C., June 26th, 1897. (*Dr. C. F. Newcombe*.) New to

*Parts I-XI of these contributions appeared in the "Canadian Record of Science"
during the years 1894-98.



CONTRIBUTIONS TO CANADIAN BOTANY.*

By JAMES M. MACOUN.
Assist. Naturalist Geol. Survey of Canada.

XII.

RANUNCULUS INAMENUS. Greene, Pittonia III, p. 91.

Green, and appearing as if glabrous, but sparsely hairy, the stoutish stems 6 to 12 inches high; radical short-petiolate leaves obovate-flabelliform, at summit either crenate-toothed or 3-lobed, the cauline usually quite sessile and once or twice ternately divided into oblanceolate segments; peduncles short and slender, often 3 to 5 together and subumbellate; corolla 3 to 5 lines broad, the 5 petals obovate-oblong; head of small pubescent achenes ovoid or short-cylindraceous, the linear receptacle white-hispid.

Banff, Rocky Mountains, 1891; from several localities in the foot-hills, i.e., Jumping Pond Creek, Herb. No. 18,039; Bragg's Creek, Elbow River, Herb. Nos. 18,037 and 18,038, and Moose River, Elbow River, Herb. No. 18,040. (*John Macoun.*)

An excellent species well separated from all forms of *R. affinis* to which it has at various times been referred.

AQUILEGIA FLAVESCENS, Wats.

Not rare on mountain-sides on both sides of the summit at Yellow Head Pass, Rocky Mountains, Lat. 52° 50', 1898. (*W. Spreadborough.*) Northern limit.

NASTURTIUM SYLVESTRE, R. Br.

Naturalized along the road in front of Ball's Mills, Lincoln Co., Ont. (*W. C. McCalla.*) New to Canada.

CARDAMINE ANGULATA, Hook.

Spring House Cove, Dawson Harbour, Queen Charlotte Islands, B.C., June 26th, 1897. (*Dr. C. F. Newcombe.*) New to

*Parts I-XI of these contributions appeared in the "Canadian Record of Science" during the years 1894-98.

Canada. Collected on the banks of the Columbia by Douglas and Scouler, and in many parts of Oregon and Washington in recent years, but never on Vancouver Island or the B. C. coast, where it doubtless occurs.

DENTARIA CALIFORNICA, Nutt.

Cardamine angulata, Macoun, Cat. Can. Plants, vol. 1, p. 41.

Dentaria tenella, Macoun, Cat. Can. Plants, vol. 1, p. 39.

Common on Vancouver Island.

DENTARIA GEMINATA, Wats.

Rich woods, Burnaby Lake, near New Westminster, B.C., 1889. (*J. M. Macoun*.) New to Canada. Agrees in every respect with specimens collected in the upper valley of the Nesqually River, Washington, by Mr. O. J. Allen.

ARABIS DREPANOLOBA, Greene, Pittonia, vol. III, p. 306.

Prennial, the several stout decumbent stems 8 to 12 inches high; herbage seemingly glabrous and glabrous, but the small oblanceolate lowest leaves sparsely stellate hairy; the oblong sessile auriculate cauline ones like all the remaining parts of the plant glabrous; corollas red, $\frac{1}{4}$ inch long or more; fruiting raceme 2-5 inches long, the broad spreading and slightly falcate-recurved pods 2 inches long including the short pedicel, about $1\frac{1}{2}$ lines wide, abruptly acutish, the stigma sessile; valves with a manifest nerve at base only; seeds in two rows under each valve, flat, obovoid, narrowly winged.

Collected in August, 1891, by Prof. John Macoun at Devil's Lake, Banff, Alberta, and distributed as *A. Lemmonii*, to which it is indeed related, yet easily distinguishable by its larger dimensions, much less pubescent lower leaves, and especially by its pods, which are twice as broad and with two rows of seeds.

ARABIS NUTTALLII, Robinson.

High dry slopes of mountains at Crow's Nest Pass, Rocky Mountains, alt. 7000 ft., Aug. 2nd, 1897. Herb. No. 18,162. (*John Macoun*.) New to Canada. The habitat of this plant is stated by Dr. Robinson to be "chiefly on low grounds in [mountain] valleys." The habitat as given by Nuttall "lofty dry hills,"

seems the better one. Nuttall's description of the root "thick crowned with vestiges of former leaves and stems," well describes Prof. Macoun's specimens.

ALLIARIA OFFICINALIS, Andrz.

Sisymbrium Alliaria, Scop. Can. Rec. of Science, Nov., 1894.

Alliaria Alliaria, (L.) Britt.

At the Cove, Quebec, Que. (*Mrs. Brodie*.) Not before recorded from province of Quebec.

SISYMBRIUM ALTISSIMUM, L.

S. Sinapistrum, Crantz.

Ballast heaps, North Sydney, Cape Breton Island, N.S., 1898. (*John Macoun*.) Not before recorded from Nova Scotia. Okanagan Landing, B.C. (*J. R. Anderson*.) Western limit.

CONRINGIA PERFOLIATA, L.

Erysimum Orientale, R. Br. Can. Rec. of Science, Nov., 1894.

Now represented in our herbarium from many localities in the North-west and from Snelgrove, Ont. (*Jas. White*.) and Stamford, Ont. (*R. Cameron*.)

PARRYA MACROCARPA, R. Br.

Summit of Father Mt. alt. 6,000 ft. Yukon District, July 3rd, 1898. (*J. B. Tyrrell*.) Not before collected in that region.

DRABA HIRTA, L.

Crevices of rocks, Big Intervale, Margaree, Cape Breton Island, N.S., 1898. (*John Macoun*.) Not before recorded from Nova Scotia. Northern Labrador. (*A. P. Low*.)

DRABA PREALTA, Greene, Pitonia, vol. III, p. 306.

Annual, very erect and strict, mostly quite simple, 10 to 15 inches high, subcinereous throughout, even to the pods, with short stellate hairs; rosulate basal leaves oblong-lanceolate, $\frac{1}{2}$ to $\frac{3}{4}$ inch long, entire, or with two or three pairs of sharp teeth, the two or three cauline similar; flowers white; the loose fruiting raceme often 5 or 6 inches long, the almost lanceolate pods $\frac{1}{2}$ inch long or more, erect on ascending pedicels nearly as long,

acute, rather turgid, not contorted, a channel-like depression marking the line of the mid-vein from its base to near the middle.

This is a plant which by its annual root and large size would be taken for a relation of *D. nemorosa*, but for its very strict habit, narrow leaves and white flowers. Common everywhere in the Rocky Mountains between 4,500 ft. and 6,000 altitude. Our herbarium specimens are from Banff, Rocky Mountains, 1891 (type locality); Kicking Horse Pass, Rocky Mountains, 1885; Crow's Nest Pass, Rocky Mountains, 1897. Herb. No. 18,136. (*John Macoun.*) Yellowhead Pass, Rocky Mts., 1898. (W. Spreadborough).

LESQUERRELLA ARCTICA (DC.) S. Wats.

Vesicaria arctica, Rich. : Macoun, Cat. Can. Plants, vol. 1, pp. 54, 490.

Athabasca River near Lac Brulé, northern Alberta, July, 1898. (W. Spreadborough.) Specimens collected by Mr. Spreadborough do not differ in any respect from those collected by Drummond in the same latitude and distributed from the British Museum as *Physaria didymocarpa*.

EUTREMA EDWARDSII, R. Br.

Northern Labrador, 1897. (*A. P. Low.*) Not before recorded from Labrador.

DIPLOTAXIS TENUIFOLIA, DC.

Bank of the new Welland Canal north of St. Catherines, Ont. (*W. C. McCalla.*) Not recorded west of Nova Scotia.

MYAGRUM PERFOLIATUM, L.

On Gallow's Hill, Quebec, Que. (*Mrs. Brodie.*) Introduced from Europe. Not before recorded from Canada.

POLYGALA VERTICELLATA, L.

On the open prairie on the ridge near the Insane Asylum, Brandon, Man., 1896. Herb. No. 12,336. (*John Macoun.*) Recorded from but one other locality in Manitoba.

STELLARIA GR M. NEA, L.

Near Niagara, Ont. (*R. Cameron.*) Western limit in Canada.

ARENARIA ARCTICA, Stev.

A single specimen of this species was collected in Northern Labrador by Mr. A. P. Low in 1897. According to Dr. Robinson this species is confined to Alaska and adjacent coasts and our other herbarium specimens are all from that region, but there can be no doubt about the identity of Mr. Low's plant.

ARENARIA CAPILLARIS, Poir., var. FORMOSA, Regel.

A. capillaris, var. *nardifolia*, Macoun, Cat. Can. Plants, Vol. 1, p. 70, in part, and vol. 1, p. 496.

Common in the Rocky Mountains and British Columbia. All our specimens with the exception of those from Sproat, B.C., are this variety. The specimens collected at Sproat are much larger, with larger flowers (petals more than twice the length of the calyx), and much longer spreading pedicels. The whole plant is glabrous, but is not certainly referable to either *A. capillaris* or the var. *nardifolia*.

HYPERICUM NUDICAULE, Walt.

H. Sarothra, Michx. Macoun, Cat. Can. Plants, vol. 1, p. 85.

In sandy fields at Sandwich, Ont. Herb. No. 18,317 (*John Macoun*.) This is the only Canadian locality from which we have specimens of this plant.

HELIANTHEMUM CANADENSE, Michx.

Our only specimens of this species are from Rice Lake Plains, Ont.; Sandwich, Ont. (*John Macoun*.); and Niagara Falls, Ont. (*R. Cameron*.)

HELIANTHEMUM MAJUS, B. S. P.

H. Canadense, Macoun, Cat. Can. Plants, vol. 1, p. 60, in part, and vol. 1, p. 492.

Apparently more widely distributed than the last in Canada. Our specimens are from Kingston, N.S. (*John Macoun*.); London, Ont. (*Dr. Burgess*); High Park, Toronto, Ont. (*Jas. White*); Lake of the Woods, Ont. (*Dr. G. M. Dawson*).

LECHEA INTERMEDIA, Leggett.

All the references under *L. minor*, Macoun, Cat. Can. Plants,

vol. I, p. 61, are *L. intermedia* as far as they are covered by our herbarium specimens. We have no Canadian specimens of *L. minor*.

LECHEA JUNIPERINA, Bicknell.

First collected by Dr. C. A. Hamilton in 1891 on dry sterile roadsides, south of Mahone Bay, N.S., and in adjacent pastures, more particularly along the Fauxbourg road. New to Canada.

ANODA LAVATEROIDES, Medick.

In cultivated grounds at St. Catherines, Ont. (*W. C. McCulla*.)

GERANIUM PRATENSE, L.

In fields at Quebec, Que. (*Mrs. Brodie*.) Only other Canadian record is from New Brunswick.

CEANOETHUS VELUTINUS, Dougl., Macoun, Cat. Can. Plants, vol. 1, pp. 96 and 503.

C. velutinus var. *laevigatus*, T. and G.; Macoun, Cat. Can. Plants, vol. 1, pp. 96, in part, and 504.

Common in the Rocky Mountains and throughout British Columbia. All the references under var. *laevigatus* in Macoun's catalogue with the exception of Menzies' from Nootka go here.

CEANOETHUS VELUTINUS, Dougl. var. LAEVIGATUS. T. and G.

Our only specimens of this plant were collected by Prof. Macoun in 1887 at Horne Lake, Vancouver Island, not far from Nootka, where it was first collected by Menzies.

RHAMNUS FRANGULA, L.

In a thicket in North London, Ont., 12 to 15 feet high and 3 to 5 inches thick at base. Collected by Mr. J. Dearness, July 1st, 1898. Well naturalized. Not before recorded.

TRIFOLIUM INVOLUCRATUM, Willd.

West coast of Queen Charlotte Islands, 1897. (*Dr. C. F. Newcombe*.) Northern limit.

ANTHYLLUS VULNERARIA, L.

First noticed in clover fields about New Durham, Oxford

Co., Ont., in the summer of 1897, and again in 1898. Communicated by Dr. T. J. W. Burgess.

LESPEDEZA VIRGINICA (L.) Britt.

In thickets at Leamington, Ont., 1892. (*John Macoun.*)
New to Canada.

LESPEDEZA FRUTESCENS, Britt.

L. Stuevei, var. *intermedius*, Gray. Man. Ed. VI. p. 147.

L. reticulata, Macoun, Cat. Can. Plants, vol. I, pp. 119 and 511.

Not rare in sandy woods and thickets from Niagara to Sarnia.

LATHYRUS MYRTIFOLIUS, Muhl

L. paluster var. *myrtifolius*, Gr.; Macoun, Cat. Can. Plants, vol. I, p. 122.

In thickets at Brandon. Man. Herb. No. 12,528. 1896. (*John Macoun.*) Western limit.

PRUNUS AVIUM, L.

Along a creek bank west of Niagara-on-the-Lake, Ont. (*J. Peavness.*) Not before recorded in Canada.

SPIRÆA LOBATA, Jacq.

Escaped from cultivation and naturalized at Boylston, N.S. (*Dr. C. A. Hamilton.*) Not before recorded in Canada.

SPIRÆA SORBIFOLIA, L.

Along roadsides near Baddeck, Cape Breton Island, N.S., 1898. (*John Macoun.*) Escaped from cultivation, but not before recorded as well naturalized.

POTENTILLA NEMORALIS, Nestler; Macoun, Cat. Can. Plants, vol. I, p. 142.

Discovered many years ago at Ste. Ann's, Cape Breton Island, N.S., by Dr. Lawson. Collected in 1898 by Prof. Macoun between Ste. Ann's and Baddeck Bay, Cape Breton Island.

RIBES FLORIDUM, L'Her.; Macoun, Cat. Can. Plants, vol. I, p. 163

Collections of recent years have shown this species to be more widely distributed west of Manitoba than was supposed.

We have it from Old Wives Creek, Assa., and Medicine Hat, Assa. (*John Macoun.*) Maple Creek, Assa. (*J. M. Macoun.*) and Ste. Anne, west of Edmonton, Alta. (*W. Spreadborough.*)

SEDUM DIVERGENS, Wat.

Mountains at Yellow Head Lake, Rocky Mountains, Alt. 6,000 ft. July 17th. 1898. (*W. Spreadborough.*) Not before recorded from Canada though some Vancouver Island references to *S. Oreganum* may be this species.

EPILOBIUM LUTEUM, Pursh.

By springs on the mountain side, west of Henry House, Athabasca River, Lat 53°, Alberta. Alt. 5,500. Aug. 30th, 1898. (*W. Spreadborough.*) Not before collected on east side of Rocky Mountains, and not so far north anywhere in Canada.

ANGELICA SYLVESTRIS, L.

Meadows and old fields at Louisburg, Cape Breton Island, N.S. 1898. (*John Macoun.*) Probably introduced by the French in the 17th Century. Not before recorded.

SCABIOSA SUCCISA, L.

In an old field at the head of the bay at Louisburg, Cape Breton Island, N.S. 1898. (*John Macoun.*) Probably introduced by the French in the 17th Century.

GRINDELIA MACROPHYLLA, Greene, *Pattonia*, vol. III, p. 297.

Stout erect herbaceous, 3 feet high, corymbosely branched at summit, wholly glabrous, or with a few scattered short hairs on the pedunculiform branches; leaves thinnish, the radical a foot long or more, lanceolate, scarcely petiolate, incisely serrate; the cauline oblong or spatulate oblong, 2-4 inches long, sessile and clasping by a broad base, coarsely serrate, or the uppermost reduced and entire; involucre large, hemispherical, scarcely glutinous, their narrow bracts with a long slender spreading acumination; rays many, an inch long or more.

Described from specimens collected by Dr. Edw. L. Greene from the margin of a tide-water swamp near Vancouver, B.C., in July, 1890. Represented in the herbarium of the Geological

Survey by specimens collected by Prof. Macoun at Barclay Sound, Vancouver Island, 1887, and Burrard Inlet, near Vancouver, B.C., 1889.

BIDENS CHRYSANTHEMOIDES, Michx.

Beautiful specimens of this species were collected in Lincoln Co., Ont., Sept. 16th, 1897, by Mr. W. C. McCalla.

CENTAUREA SOLSTITIALIS, L.

Collected on a farm about 8 miles S.E. of London, Ont. Communicated by Mr. J. Dearness.

CREPIS TECTORUM, L.

On lawns, introduced at Wingham, Ont., 1897. (*J. A. Morton.*) Common in Woodland Cemetery, London, 1897 (*J. Dearness.*) Not before recorded in Canada.

HIERACIUM P. EALTUM, Vill.

Don Valley, near Toronto, Ont., 1894. Covering about half an acre of the C. P. Ry. embankment. (*W. Scott.*) New to Canada.

LOBELIA SPICATA, Lam.

Well established at Holland Cove, entrance to Charlottetown Harbour, Prince Edward Island. (*L. W. Watson.*)

ARCTOSTAPHYLOS MEDIA, Greene, Pittonia, vol. II, p. 171.

Near the Nanaimo River, Vancouver Island (*J. R. Anderson.*) Not before collected in Canada, and known only from Washington and the above locality. Mr. Piper who collected the specimens from which the species was described wrote of the plant as seen by him: "It is found sparingly on dry gravelly ground in Mason County, where both *A. tomentosa* and *A. uva-ursi* are very abundant, and always in a position to indicate a hybrid origin. It is found most commonly in beds of *A. uva-ursi* with plenty of *A. tomentosa* near by, and is easily distinguished from *A. uva-ursi* by its larger size, merely procumbent (not prostrate) habit, and paler foliage." (Pittonia, vol. II p. 171.) Mr. Anderson sends me the following note on the specimens collected by him: "Regarding the *Arctostaphylos*, Mr. Piper's description of

occurrence coincides exactly in every respect with mine, and from the fact of finding it surrounded by quantities of *A. tomentosa* and *A. wva-ursi*, I was also lead to believe it might be a hybrid." This note was written in 1897; in 1898 Mr. Anderson collected and sent to the herbarium of the Geological Survey a fine series of specimens, which clearly show that *A. media* is a hybrid.

ASCLEPIAS TUBEROSA, L.

Tarr Island, River St. Lawrence and below Rockport, Leeds Co., Ont. (*Rev. C. J. Young.*) Eastern limit in Canada.

GENTIANA FRIGIDA, Hænke.

Above the tree line, alt. 5,000 ft., Nishing River, Lat, 62°, Yukon District. Aug. 22nd, 1898. (*J. B. Tyrrell.*) Not before recorded from Canada. This plant differs in several important respects from Behring Sea specimens, agreeing more nearly with specimens from Colorado.

PHLOX RICHARDSONII, Hook.

Mountains by Selkirk Trail, west of Aishihik Lake, Yukon District, Sept. 7th, 1898. (*J. B. Tyrrell.*) Only known before from Arctic sea-coast.

PHACELIA PURSHII, Buckley.

Growing among clover at the Central Experimental Farm, Ottawa, Ont. (*Wm. T. Macoun.*) Introduced from the United States. Not before recorded in Canada.

PLAGIOBOTHRYUS ECHINATUS, Greene, Pittonia, vol. III, p. 262.

Habit of *P. tenellus* and of the same size, rather more branching, the branches strict, densely spicate at summit; the usual pubescence augmented by sparse spreading and rather rigid hairs; nutlets rather more than $\frac{3}{4}$ line long, whitish, distinctly carinate on the back at least toward the apex, the transverse rugosities few, slender and indistinct, merely indicating the lines of numerous well elevated and sharp incurvations, the whole back thus appearing somewhat regularly echinate.

Cedar Hill, Vancouver Island, 16th May, 1887. (*John Macoun.*)

LINARIA MINOR, Desf.

Along the G. T. Ry., near the Cove Bridge, west of London, Ont., June, 1898. (*J. A. Balkwill.*) Only one other Canadian record—St. John, N.B.

COLLINSIA VERNA, Nutt. ; Can. Rec. Sc., Jan, 1895.

In woods between Putnam and Ingersoll, Ont., 1896. (*J. Dearness.*) Second Canadian record.

MIMULUS MOSCHATUS, Dougl.

By a brook on the farm of Mr. Peter Cavanagh, Middle Settlement of Barney's River, Pictou Co., N.S. (*Miss Maria Cavanagh.*) Not before recorded from Nova Scotia. Though probably introduced or adventitious, the conditions under which it is growing make it appear possible that this species is indigenous in Nova Scotia. It is at any rate well naturalized. Miss Cavanagh writes . "I have seen it growing there for four or five years. Previous to that time I had no opportunity of examining the brook. It grows luxuriantly and in great abundance in an elevated region along the ridge of the watershed between the rivers flowing north and south. The place is too cold for plum trees."

STACHYS GERMANICA, L.

Well established near Guelph, Ont. Collected in two widely separated localities near that town. 1897. (*J. C. McCulla.*) New to Canada.

AMARANTUS CHLOROSTACHYS, Willd.

North of Leamington, Essex Co., Ont., 1892. (*J. Dearness.*) Not before recorded in Canada.

CHENOPODIUM VULVARIA, L.

Plentiful around waste heaps and along roadsides at Galt, Ont. (*William Herriatt.*) Probably introduced in foreign merchandise. New to Canada.

ACALYPHA VIRGINICA, L.

Among small stones and grass along roadsides at Clearland, N.S. (*Dr. C. A. Hamilton.*) Not recorded east of Quebec.

LARIX LYALLII, Parlat.

Mr. Walter D. Wilcox found this tree in 1898 on Mt. Hector, about 11 miles from Laggan, Rocky Mts. This station extends the limit of *P. Lyallii* some 3 or 4 miles further north than it was known to occur. Mr. Wilcox was also on the mountains at Glacier Lake, head of Saskatchewan River, and at the source of the Athabasca, but did not see this larch, so that its northern limit may now be considered to be definitely fixed.

CALAMOVILFA LONGIFOLIA, (Hook.) Hack.

Amnophila longifolia, Benth. and Hook. ; Macoun, Cat. Can. Plants, vol. IV, p. 208.

Not rare on sandy ground in the northern part of Lambton Co. and southern part of Huron Co., Ont. (*J. Dearness*.) Eastern limit in Canada.

ELYMUS ELYMOIDES, (Raf.) Swezey.

One specimen collected by Prof. Macoun in 1897 on the side of a mountain at Crow Nest Pass, Rocky Mts. New to Canada.

