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THE OTTAWA NATURALIST.

VOL. XII. OTTAWA, DECEMBER, 1898. NO. 9.

CONTRIBUTIONS TO CANADIAN BOTANY.*

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

XII.

RANUNCULUS INAMŒNUS. 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 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, I, p. 41.

Dentaria tenella, Macoun, Cat. Can. Plants, vol. I, 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, ¼ 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 1½ lines wide, abruptly acutish, the stigma sessile ; valves with 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. Lemmoni*, 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 PRÆALTA, Greene, Pittonia, 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, ½ to ¾ 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 ½ 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 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).

LESQUERELLA ARCTICA (DC.) S. Wats.

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

Athabasca River near Lac Brulè, 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 GRAMINEA, 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 specis 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. I, p. 70, in part, and vol. I, 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. I, 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. I, p. 60, in part, and vol. I, 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. McCalla.*)

GERANIUM PRATENSE, L.

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

CEANOTHUS VELUTINUS, Dougl., Macoun, Cat. Can. Plants, vol. I, pp. 96 and 503.

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

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

CEANOTHUS VELUTINUS, Dougl. var. LÆVIGATUS, 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. Stuvei, 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. palustor 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. Dearness*) 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. Oregonum* 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, Pittonia, 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 ; involucres 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, Vaucouver 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 PRÆALTUM, 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. uva-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.

PLAGIOBOTHRYS 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 hispid hairs ; nutlets rather more than ¾ 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 murications, 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. McCalla.*) 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 Herriott.*) 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.

Ammophila 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.) Sweezy.

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

NOTES ON THE BIRDS OF KING'S CO., NOVA SCOTIA.

By HAROLD TUFTS, Esq., Wolfville, King's Co., N.S.

Urinator imber (*Gunn*). LOON.

Fairly common, breeding on the Gaspereau Lakes. They are often left behind the shad seines by the falling tide, and being unable to rise from the ground are then easily taken by the fishermen. When brought to bay in this position they make a good fight before yielding and are really quite dangerous to tackle unless a gun be used against them.

Larus marinus (*Linn*) BLACK-BACKED GULL.

Common except in January and February. Two sets of eggs taken last May (1898) at the Gaspereau Lakes, are now in the museum at Ottawa There are many islands in the lakes, but only two or three of the smallest of these are used as nesting

sites. One island, upon which were two nests, was not more than 15 yards long by 10 wide, and at its highest point not more than 4 feet above the surface of the water. The birds left the nest when the canoe was several hundred yards distant, and settled in the water about 200 yards away, from which position they quietly watched the destruction of their nests, the only note of remonstrance being an occassional "kuc," "kuc."

Larus argentatus smithsonianus (*Coues.*) HERRING GULL.

Common except in mid-winter. Nests in large numbers at Cape Split.

Larus philadelphia (*Ord*) BONAPARTE'S GULL.

Occasionally seen during the latter part of September, during some heavy gale.

Oceandroma leucorhoa (*Vieill*). LEACH'S PETREL.

Occasionally observed in October in Minas Basin.

Phalacrocorax carbo (*Linn*) CORMORANT.

Observed occasionally in Minas Basin in spring and fall.

Merganser americanus (*Cass.*) AMERICAN MERGANSER.

Not common. Most frequently seen in winter and spring.

Merganser serrator (*Linn.*) RED BREASTED MERGANSER.

More common than the preceding species. Breeds here.

Anas obscura (*Gmel.*) BLACK DUCK.

Very common throughout the year. They nest in all suitable places in the county.

Anas carolinensis (*Gmel.*) GREEN-WINGED TEAL.

Fairly common during the fall mirgration. They are found mostly at the mouths of the streams emptying into Minas Basin. Towards evening they fly into the fresh water pools and sluggish streams with sedgy borders.

Anas discors (*Linn.*) BLUE WINGED TEAL.

Less common than the preceding species.

Dafila acuta (*Linn.*) PINTAIL.

Transitory and uncommon. Observed about the mouth of the Cornwallis River in September and October.

Aythya marila nearctica (*Stejn*) SCAUP DUCK.
Transitory and rare.

Aythya affinis (*Eyt.*) LESSER SCAUP DUCK.
Rare fall migrant.

Branta canadensis (*Linn.*) CANADA GOOSE.
Often quite common during the spring migration from March till the middle of May. Are less common during the fall.

Branta bernicla (*Linn.*) BRANT.
A rare migrant.

Botaurus lentiginosus (*Montag.*) BITTERN.
Fairly common from May to October. They nest in June.

Ardea herodias (*Linn.*) GREAT BLUE HERON.
Common from May till October. Last May a small heronry was found in a birch grove near one of the Gaspereau Lakes. The nests, to the number of five within the space of an acre, were inacessible, owing to the great size and nature of the trees selected for the nests.

Nycticorax nycticorax naevius (*Bodd.*) BLACK-CROWNED NIGHT HERON.
Uncommon. Shot one immature specimen October 22nd, 1898.

Porzana carolina (*Linn.*) SORA.
Fairly common, but rarely seen owing to their retiring habits.

Porzana noveboracensis (*Gm'l*) YELLOW RAIL.
One specimen taken near the mouth of the Cornwallis River, on Sept. 19th, 1895, is the only one that has come under my observation.

Crymophilus fulicarius (*Linn.*) RED PHALAROPE.
One taken in a small fresh water pond on the Grand Pre, October 17th, 1898, during a strong north gale.

Gallinula galeata (*Licht.*) FLORIDA GALLINULE.
One example was taken during the last week of September, 1898, on the Canard River.

Philohela minor (*Gmel.*) WOODCOCK.

Common from May till November. Nests in suitable localities.

Gallinago delicata (*Ord.*) WILSON'S SNIPE.

Common from May till November. Several of these birds spend each winter about a series of sheltered springs which remain open during the entire year and keep the ground soft even in the most severe winter weather.

Macorhamphus griseus (*Gmel.*) DOWITCHER.

A rare fall migrant.

Tringa canutus (*Linn.*) KNOT.

Rather rare fall migrant, passing here in August and September.

Tringa maculata (*Vieill*) PECTORAL SANDPIPER.

Common fall migrant. They frequent the salt marshes, but never the mud flats or the beach.

Tringa fuscicollis (*Vieill.*) WHITE RUMPED SANDPIPER.

Fairly common during the fall migration which occurs in September and October. They frequent the beach and salt marsh.

Tringa minutilla (*Vieill.*) LEAST SANDPIPER.

Abundant during the migrations, especially the autumn. Going northward they pass this locality in late April and early May. On the southward journey they are common from the middle of July till October. They frequent the mud flats and salt marshes.

Tringa alpina pacifica (*Coues.*) RED BACKED SANDPIPER.

A rather uncommon autumn migrant. Observed on the Long Island beach during September.

Ereunetes pusillus (*Linn.*) SEMI PALMATED SANDPIPER.

Very abundant during the migration. At the height of the fall migration, about August 15th, they are found in myriads on the sand beaches along Minas Basin. By the 1st of October all but a few scattered ones have moved southward.

Calidris arenaria (*Linn.*) SANDERLING.

Fairly common on the sand beaches during the autumn migration, from the middle of September till November.

Totanus melanoleucus (*Gmel.*) GREATER YELLOW LEGS.

Fairly common during the migrations. They pass here going north about the first of May and going south from the middle of July till November. About the middle of last June one was observed here.

Totanus flavipes (*Gmel.*) LESSER YELLOW-LEGS.

Not quite so common as the preceding, and are not seen so late in the fall.

Totanus solitarius (*Wils.*) SOLITARY SANDPIPER.

Quite common from the first of August till October. They frequent small ponds and puddles with soft muddy borders.

Bartramia longicauda (*Bechst.*) BARTRAMIAN SANDPIPER.

Rare. Several were observed on the Grand Pre, September, 1896.

Actitis macularia (*Linn.*) SPOTTED SANDPIPER.

Abundant from the middle of May till September. Frequent the shores of rapid streams and upland ponds.

Numenius hudsonicus (*Lath.*) HUDSONION CURLEW.

Rare fall migrant. Observed in early September.

Charadrius squatarola (*Linn.*) BLACK-BREASTED PLOVER.

A fairly common autumn migrant. August till November.

Charadrius dominicus (*Mull.*) GOLDEN PLOVER.

A few years ago this bird was very common during the fall migration. But the last few years they seem to have decreased rapidly. Not more than one is observed to-day, for every 20 that could be seen six or eight years ago. They frequent the salt marsh, sand beach and upland pasture.

Ægialitis semipalmata (*Bonap.*) SEMI-PALMATED PLOVER.

Quite common on the sand beaches from the middle of July till October. Do not nest here.

Arenaria interpres (*Linn.*) TURNSTONE.

Observed during August and early September on the sand beach at Long Island, in small numbers.

Somateria dresseri (*Sharpe.*) AMERICAN EIDER.

Large flocks are often observed during November and December in Minas Basin.

Oidemia americana (*Sw* and *Rich.*) AMERICAN SCOTER.

Large flocks make their appearance in October in Minas Basin.

Oidemia deglandi (*Bonap.*) WHITE-WINGED SCOTER.

Observed in Minas Basin from April till December. When moulting in July and August they are unable to fly and are then caught behind the seines, by the falling tide.

ORNITHOLOGY.

Edited by W. T. MACOUN.

ROBIN.—One specimen seen by Mrs. R. D. Brown, Ottawa East, on Nov. 23rd, it remained on the ridge-board of an out-building for more than half an hour, notwithstanding a clapping of hands of which it took no notice. One specimen was seen at the Experimental Farm on Nov. 21st.

PRAIRIE HORNED LARK.—Four birds seen at Experimental Farm on Nov. 22nd.

HENSLOW'S SPARROW (*Coturniclus Henslowi*).

By W. E. SAUNDERS, London, Ont.

Near the mouth of the Thames River, where it empties into Lake St. Clair, I had the good fortune to collect a specimen of Henslow's Sparrow on May 24th, 1898, being the first one recorded in Canada. The bird was in the grass on the low flats, near, but not in, the marshy places. While pursuing this specimen, which proved to be a female, we heard the syllables

"tseè-leêp" repeated at rather long intervals and without any musical tone whatever. A subsequent visit disclosed the author of these notes to be the male, of which several were heard and one secured on June 12th.

Near Sarnia there has been a small colony of Short-billed Marsh Wrens, and on July 2nd I had from 4 to 7.30 a.m. in which to visit them. Unfortunately their grounds have been ploughed and set in timothy, but what was my surprise to catch the note of the Henslow's Sparrow, here also. The place was thoroughly hunted, and but two males were secured. The females were doubtless on the nests and were not seen.

At both places, the habits of these birds combined in every way to make them exceedingly inconspicuous and the easiest of all birds to pass by. Their song, if it may be called such, has been described, and no more of it was heard; the chirp is a weak sparrow-chirp. The bird is small and not very confiding, seldom alights higher than three feet from the ground, on a weed-stalk, and when on the ground is usually invisible. What wonder then, that he has been missed? Nevertheless, after finding it so far apart—nearly 40 miles—I doubt if there are many suitable localities in the western counties where it is not found.

The Dickcissel and the Orchard Oriole breed commonly there each year; the Yellow-breasted Chat and Cardinal Red-bird, are to be found by the earnest searcher and the Lark Finch occurs not infrequently; while at London, only 75 miles east, these birds are only casual, if found at all.

GEOLOGICAL SURVEY OF CANADA, (G. M. Dawson, C.M.G., LL.D., F.R.S., etc. Director). *Annual Report*, (new series) Vol. IX, Reports A, F, I, L, H, R, S, (1896), No. 655. Ottawa, 1898. Published by authority of Parliament.

This volume of reports and maps of investigations and surveys by the staff of the Geological Survey Department is the ninth of the new series of Annual Reports published by the survey, and forms No. 658 of the list of publications already issued by this useful and important branch of the service. It comprises 816 pages, and is accompanied by five maps and twenty plates, besides a number of figures and diagrams in the text. It opens with a "Summary report of the Department for the year 1896," by the director, in which is given the preliminary results of the year's investigations in British Columbia, North-west Territories and Keewatin, in Ontario, Quebec, the Labrador Peninsula and Nova Scotia.

The following Reports are also included in the volume:

TYRRELL, J. B.—*Report of the Doobaunt, Kazan and Ferguson Rivers and the North-west Coast of Hudson Bay*, 193 pages. Appendix I. *Chippeweyan names of places*, 4 pages Appendix II. *Vocabulary of words used by the tribe of inland Eskimos inhabiting the banks of Kazan and Ferguson rivers*, 9 pages. Appendix III.—*Plants* (exclusive of algæ and fungi). 14 pages. An interesting historical sketch, the description of routes travelled in 1894, the physical geography geographical summary and resources of that hitherto almost unknown territory are presented and discussed in an able and interesting, as well as practical and systematic manner, so as to make the report a most useful and indispensable guide to anyone entering the region described. The cuts illustrating this report are most interesting, and include two showing extensive herds of the Barren-Ground Caribou on the shore of Carey Lake.

BELL, ROBERT.—*Report on the Geology of the French River sheet, Ontario*, 29 pages. Describes the Archæan rocks of the sheet, the Huronian and Laurentian, the greenstones, arkose, clay slates and slate-conglomerates, the Huronian limestones; also the Cambro-Silurian areas included within the sheet, besides a dissertation on the surface geology of the region, closing with a chapter on the Economic Minerals kown to date. A geological map accompanies the report.

LOW, A. P.—*Report of a traverse of the northern part of the Labrador Peninsula from Richmond Gulf to Ungava Bay*; 43 pages. Describes the routes taken and the geographical as well as topographical features of the country, together with an interesting résumé of the various superficial deposits occurring in this region with special reference to the period of glaciation. Mr. Low's report is also accompanied by a map.

BAILY, L. W.—*Report on the geology of South-west Nova Scotia*, 154 pages. Contains the following: (*a*) Physical features and surface deposits, (*b*) Cambrian System, granites, (*c*) Silurian, Devonian and associate rocks, (*d*) Economic Minerals, (*e*) Appendix, giving list of glacial striæ. This report includes numerous lists of fossil organic remains from the Silurian and Devonian marine beds of the Nictaux-Torbrook iron-ore basin.

HOFFMANN, G. C.—*Report of the section on Chemistry and Mineralogy*, 53 pages. I. Coals and lignites. II. Miscellaneous Mineralogy. III. Mineralogical notes. IV. Rocks. V. Limestones (analyses). VI. Gold and silver assays from Nova Scotia, New Brunswick, Quebec, N.W. Terr., Ontario and Labrador. VII. Nickel and Cobalt. VIII. Natural waters. IX. Miscellaneous examinations. This report is of great value to the country.

INGALL, E. D.—*Section of Mineral Statistics and Mines*, 1896, 169 pages.—Gives the most reliable information and figures on the output and value of the ores and minerals of Canada.

This volume is made complete by the presence of an index for reference to subjects, places and economic resources mentioned in the text.

PROGRAMME OF SOIRÉES, 1898-1899.*

1898.

Dec. 14.—Meeting for the Exhibition of Specimens and Conversation.
"Inaugural Address," by Prof. John Macoun, M.A., F.L.S.
"*Notes on some Local Violets*," by Mr. James M. Macoun.
Report of the Botanical Branch.—Discussion.

1899.

Jan. 10.—Meeting for Exhibition of Specimens and Conversation.
"*The Minerals of the Ottawa Valley*," by R. W. Ells, LL.D., F.R.S.C.
"*Notes on an herbivorous Deinosaur from the Cretaceous of Western Canada*," by Lawrence M. Lambe, F.G.S.
Report of the Geological Branch.—Discussion.

Jan. 24.—CONVERSAZIONE AND MICROSCOPICAL SOIRÉE in the Assembly Hall of the NORMAL SCHOOL. Microscopical objects will be exhibited either under microscopes or projected on a screen, and several five-minute addresses will be delivered on specimens exhibited.

Feb. 7.—Meeting for Exhibition of Specimens and Conversation.
"*Some Native Herbaceous Perennials worthy of Cultivation*," by Mr. W. T. Macoun.
"*On the Burrowing Habits of Cambarus—the Cray-fish*, by H. M. Ami, M.A., F.G.S.
"*Notes on Fresh-water Polyzoa* by Mr. Walter S. Odell.
Report of the Ornithological Branch.—Discussion.

Feb 21.—Meeting for Exhibition of Specimens and Conversation.
"*The Archæology of Lake Deschenes*," by Mr. T. W. E. Sowter.
"*Extra Limital Insects Found at Ottawa*," by W. H. Harrington, F.R.S.C.
Report of the Entomological Branch.- Discussion.

Mar. 7.—Meeting for Exhibition of Specimens and Conversation.
"*Life-history of the Salmon*," by Prof. E. E. Prince, B.A., F.L.S.
"*Natural History in Art*," by Prof. James Mavor, Toronto University.
(Both papers illustrated by lime-light views.)
Report of the Zoological Branch.—Discussion.

Mar. 14.—The Annual Meeting for the reception and adoption of Reports from the Council, election of Officers, etc.

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*To be held on **Tuesday** evenings at **8 o'clock** in the Lecture Hall of the **Y. M. C. A.**, corner of Queen and O'Connor Streets, Ottawa, with the exception of the **Conversazione** on **Jan. 24th**, which will be held in the Assembly Hall of the **Normal School. Admission FREE.**

N.B.-At each meeting, various objects belonging to different departments of science will be exhibited, and at any meeting short papers may be read by members of the Club upon any Natural History subject, due notice of the same having been previously given to any member of the Soirée Committee.