

FEBRUARY, 1903.

VOL. XVI, No. II

THE OTTAWA NATURALIST.

Published by the Ottawa Field-Naturalists' Club.

CONTENTS.

	PAGE
1. Contributions to Canadian Botany XVI, by James M. Macoun	211
2. Mud Puppies, by W. Hague Harrington	223
3. The Cow-bird in Winter, by John Macoun	225
4. Prairie Horned Lark Nest in New Brunswick, by W. H. Moore	226
5. Correspondence	227
6. Soirées	228
7. Review	230

(ISSUED FEBRUARY 2, 1903.)

OTTAWA CANADA.
OTTAWA PRINTING COMPANY (LIMITED).
3 & 5 MOSGROVE ST.

MASSON'S Popular Priced Shoes R. MASSON 22 Sparks St.

JAMES OGILVY,

Bookseller, Stationer and Publisher.
87 Sparks Street

WM. STRACHAN,
Importer and Dealer in
**Shelf and Heavy Hardware, Stoves,
Tinware, Paint, &c.**
Corner Queen and Bridge Streets,
OTTAWA. Phone 623

R. A. McCORMICK,
Prescription Druggist,
75 Sparks Street.

A. G. PITTAWAY,
...**PHOTOGRAPHER,**
58 Sparks St. OTTAWA.

Phone 159. Ottawa.

James W. Woods,

Headquarters
for....

**Camping Outfits, Tents, Kit Bags,
Blankets, Clothing. etc.**

See us about your NEW AWNING.

Special attention paid to Letter Orders

SEND FOR CATALOGUE.

64-66 Queen St.

R. H. WRIGHT,
Rose Grower and Florist,
AYLMER EAST.
Store—63 Sparks Street, Ottawa.

HENRY BIRKS & SONS,
Manufacturing Gold and Silversmiths
DIAMOND MERCHANTS.
Phillips' Square, Montreal
and 57 & 59 Sparks Street, Ottawa.

For neat printing
CO TO....
Ottawa Printing Co., Ltd.
3 & 5 Mosgrove St.,
OTTAWA.

C. STRATTON,
Wholesale and Retail Grocer, &c.
Corner Sparks and Lyon Sts.
TEL. 664.

**Ketchum & Co., SPORTING 104 and 106
GOODS BANK STREET.**

KODAKS - TOPLEY - KODAKS

THE OTTAWA NATURALIST.

VOL. XVI. OTTAWA, FEBRUARY, 1903. No. 11.

CONTRIBUTIONS TO CANADIAN BOTANY.¹

By JAMES M. MACOUN, Assistant Naturalist, Geological Survey of Canada.

XVI.

ANEMONE RIPARIA, Fernald.

In maple woods, Tilsonburg, Ont. 1901. No. 33,561²;
at Nepean Point, Ottawa, Ont., and Aylmer, Que., June,
1902. (*John Macoun.*) First Ontario records.

RANUNCULUS INTERTEXTUS, Greene, Ott. Nat., vol. xvi, p. 33.

A common Rocky Mountain species until recently referred
to *R. natans*.

RANUNCULUS HIRTIPES, Greene, Ott. Nat., vol. xvi, p. 32.

Near Sandwich, Ont., 5th June, 1901. No. 33,582.
(*John Macoun.*) The type station.

RANUNCULUS CARDIOPETALUS, Greene, Ott. Nat., vol. xvi, p. 32.

At the Whirlpool Rapids, Niagara, Ont., 21st May,
1901. No. 33,581. (*John Macoun*) The type station.

ERYSIMUM ORIENTALE, R. Br.

Greenwood, B.C. (*Miss Mary L. Wilson.*) Not recorded
from British Columbia.

SOPHIA INTERMEDIA, Rydb.

Sandy soil at the end of Pelee Point, Lake Erie, 1901.
No. 33,857. (*John Macoun.*) Eastern limit.³

¹ Published by permission of the Acting Director of the Geological Survey of Canada.

² These numbers are those under which specimens have been distributed from the Herbarium of the Geological Survey of Canada.

³ The Geological limits given in these papers refer to Canada only.

DRABA VERNA, L.

Along the railway at St. David's, Niagara, Ont., 1901.
No. 33,832. (*Macoun.*) New to Ontario.

CAMELINA MICROCARPA, Andrz.

Of much the same range in Canada as *C. sativa*, from which it is separated by its shorter and generally smaller pods. *C. microcarpa* is pubescent, at least below, while *C. sativa* is glabrous or nearly so.

SMELOWSKIA CALYCINA, C. A. Meyer.

Mt. Cheam, north of Chilliwack River, B.C., alt. 7000 ft.
(*J. R. Anderson, Dr. Jas. Fletcher, J. M. Macoun.*) Not recorded west of Rocky Mountains south of Alaska.

LUNARIA ANNUA, L.

On "the island" (1891) and at Queen Victoria Park,
Niagara Falls, Ont., 1901. (*John Macoun.*)

VIOLA SAGITTATA, Ait.

Abundant in woods at Sandwich, Ont., 1901. No. 33,915.
(*John Macoun.*) The only Canadian specimens we have seen, all the others so named proving to be *V. dentata*. See note in Part XIII of these contributions.

STELLARIA GRAMINEA, L.

On an island in the Chilliwack River, B.C., 1901. (*J. M. Macoun.*) Not before recorded from the west

STELLARIA NEGLECTA, Whe.

In woods at Queenston Heights, Ont. No. 34,055
(*John Macoun.*) Not recorded from Ontario.

ALTHÆA ROSEUS, Cav.

Very abundant and well established along roadsides near
Niagara and at Tilsonburg, Ont., 1901. (*John Macoun.*)

MALVA ALCEA, L.

Roadside between Southampton and Owen Sound, Ont.,
1901 (*John Macoun.*) Probably common in Ontario but confounded with *M. moschata*.

LINUM MEDIUM, L.

Queenston Heights, Ont., 1901. (*John Macoun.*)

OXALIS CYMOsa, Small.

At Amherstburgh and Windsor, Ont., 1901. (*John Macoun.*) Recorded from Ontario in Britton's Manual.

ILEX BRONXENSIS, Britton.

I. verticellata var. *tenuifolia*, Torr.; Macoun Cat. Can. Plants, vol. II, p. 315.

London, Ont. (*Thos. Burgess.*) Sandwich, Ont., 1890; Beech Ridge, 4 miles east of Leamington, Ont., 1901. No. 34, 128. (*John Macoun.*)

CEANOTHUS OVATUS, Desf., var. PUBESCENS, T. & G.

Pelee Point, Lake Erie. (*John Macoun.*) Very common around Sarnia and Point Edward, Lake Huron, where it has been collected by J. Dearness, 1889; C. K. Dodge, 1894; and Prof. Macoun, 1901. The ferrugineous pubescence of the leaf veins very conspicuous, especially in mature specimens, is omitted from the description in Britton's Manual. Probably a good species.

PARTHENOCEISSUS QUINQUEFOLIA, (L.) Planch, var. LACINIATA, Planch.

In thickets at Winnipeg and Morden, Man. (*John Macoun.*) All western references to *Ampelopsis quinquefolia* are probably this species.

MEIBOMIA SESSILIFOLIA, (Torr.) Kuntze.

In woods at Sandwich, Ont., 1901. No. 34, 204. (*John Macoun.*) New to Canada.

ERVUM LENS, L.

Fruiting in the Grand Trunk Railway yard at Niagara Falls, Ont., 1901. (*John Macoun.*)

RUBUS PACIFICUS.

R. nivalis, How. II, Flora N. W. America, p. 184.

This plant was collected by Mr. W. B. Anderson at Comox, Vancouver Island, in 1899. The description in Hooker's Flora can not possibly apply to the species described in Howell's Flora, and the name *Rubus Pacificus* is

proposed as a substitute. Again collected in 1901 in the same place by Dr. James Fletcher and J. R. Anderson.

POTENTILLA PUMILA, Poir.

Sandy woods, Tilsonburg, Ont. No. 34,428. (*John Macoun.*) New to Canada.

MALUS RIVULARIS, Rœm.

From Sumas Lake up the Chilliwack Valley to the east end of Chilliwack Lake. Nos. 34,368-72. 1901. (*J. M. Macoun.*) Eastern limit.

PYRUS COMMUNIS, L.

Common in thickets and woods around Queenston Heights and Niagara, Ont., 1901. (*John Macoun.*)

SORBUS OCCIDENTALIS, Greene.

A common species on the mountains bordering the Chilliwack Valley, east to the Skagit Range. Generally at between 5,000 and 6,000 feet altitude, but found as low as 3,500 and as high as 6,500. Its favorite habitat is on the tops of ridges, and it was found in no other situation in 1901 no matter what the altitude. (*J. M. Macoun.*) New to Canada.

CRATÆGUS DOUGLASHII, Lindl.

Along the Abitibi River between the outlet of Lake Abitibi and the mouth of Black River, N. E. Ontario in 1901, and in 1902 at Birch Bark Portage, about 100 miles below Black River. (*W. J. Wilson.*) Eastern limit.

CRATÆGUS OCCIDENTALIS, Britt.

The common *Cratægus* in the province of Assiniboia. Our specimens are from Wood Mountain, Old Wives' Creek, Medicine Hat and Milk River.

SAXIFRAGA HYPNOIDES, L.

S. cæspitosa, Macoun, Cat. Can. Plants, vol. 1, p. 150 in part.

Rocky cliffs along the sea-shore above Albour Brook, between the Madeline River and St. Anne des Monts, Gaspé, Que., 1882. (*Macoun.*) New to America.

SAXIFRAGA TOLMÆI, T. & G.

The range of this species in Canada is extended by the following references: Mountain summits opposite Vancouver, B.C. (*T. Henry.*) North of Ch'illi-wack River, south slope of Cheam Range, B.C. alt. 7,000 feet. No. 34,948; Tami Hy Mountain, Chilli-wack Valley, B.C. No. 34,949. (*J. M. Macoun.*)

HEMIEVA VIOLACEA, Wheelock.

Near Kaslo, B.C., 1901. (*Miss Ethel Blackman.*) New to Canada.

MITELLA TRIFIDA, Graham.

Alpine slopes, Mount Arrowsmith, Vancouver Island, 1887. (*John Macoun.*) Same locality, 1901. (*J. R. Anderson* and *Dr. James Fletcher.*) Common between 4,500 and 5,500 feet altitude in the Chilli-wack Valley, B.C. Nos. 34,864 and 34,865. (*J. M. Macoun.*)

MITELLA BREWERI, Gray.

Mountains at Chilli-wack Lake, B.C. No. 34,866. (*J. M. Macoun.*) Western limit.

MITELLA OVALIS, Greene.

Damp places, Goldstream, Vancouver Island, 1887. No. 8,497. (*John Macoun.*) Our only Canadian specimen.

MITELLA CAULESCENS, Nutt.

A common plant in woods throughout the Chilli-wack Valley, B.C. Nos. 34,860, 34,861 and 34,863. (*J. M. Macoun.*) Our first Canadian specimens.

MITELLA PENTANDRA, Hook.

Alpine woods, Mt. Arrowsmith, Vancouver Island, 1887. (*John Macoun.*) Same locality, 1901. (*J. R. Anderson* and *Dr. James Fletcher.*)

ONAGRA OAKESIANA, Britton.

Gaspé, Gulf of St. Lawrence; near London, Ont.; Port Colborne, Ont., No. 44,465; Southampton, Ont., No. 44,464. (*John Macoun.*) Seldom separated from *O. biennis.*

EPILOBIUM LUTEUM, Pursh.

Collected by Cowley in the Cariboo District, B.C., in 1870 but not recorded. This was the first time it was collected in Canada. Common on mountains in the Chilliwack Valley, B.C. (*J. M. Macoun.*)

TILLÆA VAILLANTII, Willd.

Tracadie Beach, Prince Edward Island, 1901. (*J. R. Churchill.*) Collected at Mt. Stewart, P.E.I., by Prof. Macoun in 1888 and recorded in Part v. of these papers as *Tillæa simplex*, Nutt.

SEDUM FRIGIDUM, Rydb., Bull. Torr. Bot. Club, vol. 28, p. 282.

All the western references to *Sedum Rhodiola* in Macoun's Catalogue of Canadian plants go here. Dr. Rydberg is hardly correct in describing this species as "an arctic-alpine" plant as it is abundantly represented in our herbarium by specimens from near sea level in British Columbia and the warmer parts of Alaska.

SAMBUCUS MELANOCARPA, A. Gray.

Crow Nest Pass, Rocky Mts. No. 20,591. (*John Macoun.*) Eastern limit.

EUPATORIUM RYDBERGII, Britt.

Near Brandon, Man. No. 13,934. (*John Macoun.*)
Along ditches near Chilliwack, B.C. No. 26,486. (*J. M. Macoun.*) Not before recorded from Canada.

ASTER POLYPHYLLUS, Willd.

On Birch Island, Lake Huron, Aug. 26th, 1901. No. 26,359. (*John Macoun.*) New to Canada Determined by Mr. M. L. Fernald.

ERIGERON GORMANI, Greene.

Rocky ledges on Tami Hy Mountain, Chilliwack Valley, B.C. No. 26,461. (*J. M. Macoun.*) Not recorded south of Yukon, but it is probable that much of the Rocky Mountain plant referred to *E. compositus* var. *glabratus* is this species.

ERIGERON ANGUSTIFOLIUS, Heller.

An abundant species on rocky banks of rivulets running into Chilliwack Lake, B.C., always at between 2,500 and 3,500 feet altitude. No. 26,468. (*J. M. Macoun.*)

GALINSOGA PARVIFLORA, Cav.

Roadsides in the northern part of London, Ont., 1902. (*J. Dearness.*) New to Canada.

ARTEMISIA SUKSDORFII, Piper. Bull. Torr. Bot. Club, vol. 28, p. 42.

A. vulgaris var. *Californica*, Macoun, Cat. Can. Plants, vol. 1, p. 258, and No. x of these contributions, p. 275.

A coast species but collected on a gravel bar 12 miles up the Chilliwack Valley, B.C., in 1901 by J. M. Macoun. This point is between 40 and 50 miles from the coast.

ARNICA LANCEOLATA, Nutt.

A. Chamissonis, Macoun, Cat. Can. Plants, vol. 1, p. 261 in part.

From New Brunswick, (*Fowler, Hay, Wetmore*), and Quebec, (*Macoun*) to Lake Superior, (*Dr. R. Bell*)

ARNICA COLUMBIANA, Greene, Pittonia, vol. iv, p. 160.

MacLennan River, Lat. 53°, B.C., July 27th, 1898. No. 19,646. (*W. Spreadborough.*) Among the many specimens of *Arnica* in our herbarium we find none but Spreadborough's to be this species.

ARNICA MACOUNII, Greene, Pittonia, vol. iv, p. 160.

The type of this species was collected by Prof. John Macoun at Comox, Vancouver Island, July 1st, 1893. It is represented in our herbarium by specimens collected by Prof. Macoun at Chinaman's Creek, Alberni Canal, Vancouver Island, August 4th, 1887. The type is in Dr. Greene's herbarium.

ARNICA LONCHOPHYLLA, Greene, Pittonia, vol. iv, p. 164.

Athabasca River, Lat. 53° 30', Alta. June 25th, 1898. No. 19,647. (*W. Spreadborough.*)

ARNICA SUBCORDATA, Greene, Pittonia, vol. iv, p. 173.

Athabasca River and Pembina River, Alta. No. 19,644. (*W. Spreadborough.*)

SENECIO PSEUDOAREUS, Rydb.

In a marsh, east of Chilliwack Lake, B.C. No. 16,682.
(*J. M. Macoun.*)

SENECIO IDAHOENSIS, Rydb.

Shady banks, mouth of Silese Creek, Chilliwack River,
B.C. No. 26,685. (*J. M. Macoun.*)

SILPHIUM TEREBINTHINACEUM, L.

The reference in Part xv of these contributions should
have been credited to J. Dearness instead of to C. K. Dodge.

AGROSERUS GREENII, (A. Gr.) Rydb.

On snow slides, Chilliwack Lake. B.C. No. 26,810. (*J.
M. Macoun.*)

GAYLUSSACIA FRONDOSA, T. & G.

Edmonton, Ont. (*Jas. White*), Lincoln Co., Ont. (*W.
C. McCalla.*) Sarnia, Ont., No. 54,163. (*John Macoun.*) Not
before recorded from Canada. Confounded with *G. resinosa*.

CASSIOPE STELLERIANA, DC.

Near the summit of Mt. Cheam, north of Chilliwack
River, B.C. No. 54,160. (*J. M. Macoun.*) Recorded from
but one other locality in British Columbia.

PTEROSPORA ANDROMEDA, Nutt.

One specimen of this widely distributed but very local
species was collected near the Chilliwack River, B.C., in 1901
by J. M. Macoun.

ALLOTROPA VIRGATA, T. & G.

Very abundant in deep woods at Chilliwack Lake, B.C.,
at between 3,000 and 4,000 feet altitude. No. 54,149. (*J. M.
Macoun.*) Our first specimens from the B. C. mainland.

HYPOPITYS FIMBRIATA, (Gray.)

Woods at about 1,500 ft. altitude, Chilliwack River,
B.C. No. 54,173. (*J. M. Macoun.*) Recorded in Canada
from Vancouver Island only.

PRIMULA AMERICANA, Rydb., Bull. Torr. Bot. Club, vol. 28, p. 500,

P. farinosa is apparently confined to northeast America if it occurs on this continent at all. All the western references to *P. farinosa* in previous Canadian publications should be placed here.

VINCA MINOR, L.

Roadsides at "the whirlpool," Niagara, Ont. (*John Macoun.*)

PHLOX PANICULATA, L.

Railway embankment near Chatham, Ont. (*John Macoun.*)
Well naturalized. Not recorded from Canada.

HYDROPHLLUM OCCIDENTALE, Gr. var. FENDLERI, Gr.

In woods near Chilliwack Lake, at 4,000 ft. altitude.
No. 54,325. (*J. M. Macoun.*)

NEMOPHILA PUSTULATA, Eastwood, Bull. Torr. Bot. Club, vol. 28,
p. 145.

Described from specimens collected by Prof. John Macoun near Victoria, Vancouver Island, and distributed as *N. parviflora* Dougl. under the number 667. This is an abundant species near Victoria and has been distributed from the herbarium of the Geological Survey under the numbers 666, 667, 16,250 and 16,248.

ONOSMODIUM VIRGINIANUM, DC.

The specimens credited to Ontario in Macoun's catalogue of Canadian Plants, vol. 1, p. 343 prove to be *O. Carolinianum*. We have no authentic record of *O. Virginianum* being found in Canada.

ECHINOSPERMUM DEFLEXUM, Lehm.

Mr. M. L. Fernald writes that the only American specimens of true *E. deflexum* in the Gray herbarium are one from Wisconsin, and one collected in waste places at Campbellton, N.B., July 29th, 1876, by R. Chalmers. It was probably introduced from Europe in both places.

CASTILLEIA OREOPALA, Greenman.

Mountain slopes, alt. 6,000 ft., south of Tulameen River, B.C., 1888, (*Dr. G. M. Dawson.*) Mount Cheam, Lower

Fraser River, B.C., 1898, (*J. R. Anderson.*) At an altitude of between 5,500 and 6,000 ft. on nearly all mountains north and south of Chilliwack River, B.C. Nos. 54,434, 54,435, 54,436. Growing generally with *Parnassia fimbriata* and *Leptarrhena pyrolæfolia*. When growing the flowers are bright plum color shading to pink and creamy white. (*J. M. Macoun.*)

CASTILLEIA RUPICOLA, Fernald.

First collected in Canada, by Dr. James Fletcher and Mr. J. R. Anderson on Mt. Cheam, Lower Fraser Valley, B.C. Not rare, generally on inaccessible cliffs, both north and south of the Chilliwack River. Nos. 54,437, 54,441 and 54,438. (*J. M. Macoun.*)

CASTILLEIA ANGUSTIFOLIA, Don. var. BRADBURI, Fernald.

Confounded with *C. miniata* in our herbarium. Parson's Farm and other places near Victoria, Vancouver Island, No. 714; Nanaimo, Vancouver Island, No. 715; Deer Park, Columbia River, B.C., No. 17,277 (*Macoun.*) Thompson River, B.C. (*A. J. Hill.*) North Arm, Burrard Inlet, B.C.; on gravel bars, Chilliwack River, B.C., No. 54,439; north of Chilliwack Lake, B.C., No. 54,440. (*J. M. Macoun.*)

DASYSTOMA FLAVA, Wood.

In woods at Queenston Heights, Ont. This species seems to be confined to the Niagara region where it has been found by several collectors in recent years.

ANYCHIA CANADENSIS, (L.) B. S. P.

Amherstburgh, Ont., 1901. (*John Macoun.*) The specimens referred to *A. dichotoma* in Part x of these contributions are this species.

SALIX PRINOIDES, Pursh.

Below Brock's monument, Queenston Heights, Niagara, Ont., 1901. (*John Macoun.*) New to Canada.

ARCEUTHOBIMUM PUSILLUM, Peck.

On *Picea nigra*, in a bog at Tracadie Beach, Prince Edward Island, July 31st, 1901. (*J. R. Churchill.*) Also collected on P. E. I. by Mr. L. W. Watson.

CYPRIPEDIUM CANDIDUM, Willd.

About three miles from Port Elgin, Ont. (*A. R. Innis*.)
Dr. James Fletcher found large numbers of this plant growing on hummocks on a damp prairie four miles south of Brandon, Man., in the beginning of July, 1899. Mr. Norman Criddle also collected the same plant at Aweme, Man., near the Douglas swamp about 50 miles east of Brandon.

SMILAX ROTUNDIFOLIA, L.

Collected at Lake Annis and at Brazil, Yarmouth Co., N.S., in 1898 and again in 1902 by Mr. J. E. Barteaux. Not before recorded east of Ontario.

STREPTOPUS BREVIPES, Baker.

In deep hemlock woods, Chilliwack River, B.C. No. 34,109. (*J. M. Macoun*.) New to Canada.

STREPTOPUS CURVIPES, Vail., Bull. Torr. Bot. Club, vol. 28, p. 267.

Apparently the commonest species in British Columbia. Easily separable from *S. roseus* by its simple habit and non-geniculate and much shorter peduncles. Our specimens are from Asulcan Glacier, Selkirk Mts., No. 27,646a; Revelstoke, B.C., No. 27,646. (*John Macoun*.) Port Simpson, B.C. (*Jas. McEvoy*.) Cascades on Skagit River, B.C. (*Dr. G. M. Dawson*.) Common in the Chilliwack Valley, B.C. (*J. M. Macoun*.) Specimens of simple habit but with the long geniculate peduncles of *S. roseus* were collected on Queest Creek, Shuswap Lake, B.C., by J. M. Macoun July 27th, 1889.

VAGNERA BRACHYPETALA, Rydb., Bull. Torr. Bot. Club, vol. 28, p. 268.

Described from specimens collected near the Asulcan Glacier in 1897 by Mrs. Cornelius Van Brunt. A common species in British Columbia, especially on Vancouver Island. Distinguished by its short petals and purple fruit.

BRODIAEA LACTEA, Wat.

Rocky bank 5 miles from Chilliwack, B.C. No. 54,041. 1901. (*J. M. Macoun*.)

CAMASSIA LEICHTLINII, Wat.

Fields and meadows at Chilliwack, B.C. No. 54,061.
(*J. M. Macoun.*) Not recorded from mainland in B.C.

LILIUM UMBELLATUM, Pursh.

A common species from Winnipeg, Man., to the Rocky Mountains, seldom separated from *L. Philadelphicum*. Collected by Prof. Macoun in 1901 at Johnstone's Harbour, Lake Huron. No. 54,059 Eastern limit.

ERYTHRONIUM PROPULLANS, Gray.

This species is recorded in Part IV of Macoun's catalogue of Canadian Plants as having been found in Elgin Co. No specimens were collected and later investigations have forced us to the conclusion that the plant noted was *E. albidum*.

LLOYDIA SEROTINA, Reich.

Bare mountain tops, alt. 6,500 ft., Chilliwack Lake, B.C. No. 54,068. and at alt. 6,000 ft., Tami Hy. Mt., Chilliwack River, B.C. No. 54,070, 1901. (*J. M. Macoun.*) Not recorded from British Columbia.

JUNCUS DUDLEYI, Weigand.

The greater number of our specimens under *J. tenuis* prove to be this species. It ranges from Ontario to B.C.

SCLERIA VERTICILLATA, Muhl.

Abundant on Toronto Island, Ont. No. 34,588 (*John Macoun.*) Known before only from Presqu'île Pt., Lake Ontario.

SCLERIA TRIGLOMERATA, Michx.

Walpole Island, Lambton Co., Ont. (*C. K. Dodge.*) Sandwich, Ont. No. 34,590. (*John Macoun.*) Only other record, London, Ont.

ELECHARIS OLIVACEA, Torr.

Near Galt, Ont. 1902. (*W. Herriot.*) Our only Canadian specimens.

CAREX TYPHINOIDES, Schwein.

Collected in several localities in the vicinity of Ottawa, Ont., but always referred to *C. squarrosa*. Our specimens are

from Hull, Que., Buckingham, Que., and Duck Island near Ottawa.

CAREX LUPULIFORMIS, Sartwell.

Near Galt, Ont. 1902. (*W. Herriott.*) New to Canada.

SETARIA VERTICILLATA, Beauv.

On Carling street, London, Ont., 1902. (*J. Dearness.*)

Other specimens in our herbarium which have been referred here prove to be not this species, which is probably not of so wide distribution in Canada as has been thought.

BROMUS ERECTUS, Huds.

Roadsides on the south side of 2nd concession, London township, Middlesex Co., Ont., 1902. (*J. Dearness.*) New to Canada.

MUD PUPPIES.

W. HAGUE HARRINGTON. OTTAWA.

It is generally supposed that only anti-prohibitionists see snakes and lizards in the flowing bowl, but yet it sometimes happens that an adherent to the Ottawa water system finds the genuine article in his, or at least a very closely connected relative. A few days ago (on Jan. 17th) there was on exhibition in the boiler-room of the Langevin Building a "critter" that had been taken that morning from one of the water-taps. It had been placed in a bottle and elicited from those who inspected it many opinions as to its habits and qualities which, though interesting, were not of sufficient scientific value to reproduce here. The species of animal in question is one regarding which I have been often questioned, and as it is common in the Ottawa River, and occasionally brings itself before the public by issuing from the water pipes, a few lines in our Club journal may satisfy the enquiring that, though not beautiful, it is at least a harmless visitor. Its scientific name is *Necturus maculatus*, of which *Menobranthus lateralis*, *punctatus*, etc., are synonyms. The common name

northward is Mud puppy, but in the south it is known as Water-dog or Dog-fish. It has a wide distribution in eastern America, including the great lakes system and those of the great rivers southward. When full grown it is said to vary from eight inches to two feet in length. In the Ottawa specimens of one foot in length may probably be considered as above the average size. The individual mentioned above was about five inches long, and, although alive when on exhibition, it had been so badly injured in its forcible removal from its place of exit, that its days seemed to be numbered. The mud-puppy is lizard-shaped, with four short legs, on each of which there are four toes, and its tail is almost as long as the body, and broad and flattened so as to form a powerful paddle for propelling the animal if it wants to leave the bottom. At the base of the head on each side it has three tufts of large bushy gills of a bright red colour, and two slits or branchial clefts. These are the structures for maintaining respiration in the water, but it has sufficient lung development to enable it to live for some time when removed from its proper element. It is apparently largely nocturnal in its habits, lurking among stones and weeds on the river bed, but may also be active in daylight, as some years ago I saw several caught with hook and line by some boys who were fishing on the Aylmer wharf. Its food consists of worms, insects in their various stages, small crustaceans, tadpoles, small fishes, frogs and other small living forms upon which it can seize; probably it feeds upon dead animal substances as well. Its presence in the water mains cannot injure the water supply, except when one gets drawn into a service pipe and causes a blockade. The animal belongs to the batrachians, which occupy a position intermediate between the fishes and reptiles, and is placed in the family Proteidæ, the lowest group (of living forms) in the class Batrachia. The majority of the batrachians undergo metamorphoses, by which the gill-bearing young lose these organs and develop lungs, and on maturity leave an aquatic for a terrestrial existence. The frog is a good example; its young, the familiar tadpole or pollywog, has external gills, or branchiæ, and a broad swimming tail, but gradually loses these appendages and develops legs, which are remarkably serviceable both for land and water. Our friend the mud-puppy, however, never outgrows the

larval form, and is content to remain in ignorance of the beauties and charms of the dry land. The family to which he belongs is a small, as well as a lowly one, as the Cambridge Natural History reduces the various described forms to three genera, each with only one species. The mud puppy's connections are, so far as known, confined to limited areas and are of a very retiring disposition. *Proteus anguinus* is found in Austria, and inhabits subterranean waters, especially those of the large caves of Adelsburg near Trieste. Its whole body is white, but is so susceptible to light, that when removed from its natural habitat and exposed to sunlight, it gradually becomes darker and finally entirely black. The remaining species is *Typhlomolge rathbuni*, an inhabitant of subterranean waters in Texas. The extent of its distribution is unknown, for all the specimens yet observed have been taken from an artesian well, 188 feet deep, near San Marcos. Like other inhabitants of such dark hidden waters it is colourless and sightless. Possibly the fondness shown by these two species of the Proteidæ for a subterranean existence may influence the young mud-puppies which find their way in to the darkness of our water mains. Passing through the screens of the intake pipe, as an egg or while still small, it is drawn onward until it takes the plunge into the vortex of city life, from which there is no return to the home of its kindred.

THE COW-BIRD IN WINTER.

In December, 1901, Mr. W. T. Macoun saw a cow-bird associating with the English sparrow around the barns at the Experimental Farm near the city. Afterwards, this bird, or another, was picked up dead near the barns. It proved to be a male, and is now in the Geological Survey Museum.

A little before Christmas a Museum assistant noticed what he called a black sparrow sitting on the maple tree in front of a window on George street. For over ten days it remained with the sparrows, fed with them and sat on the twigs with them, but never seemed intimate with them. It was not seen afterwards, and may have succumbed to the late severe weather.

In "The Auk" for April, 1895, I find the following: "I shot a cow-bird on January 18th, 1895, on one of the principal streets of the town (Lancaster, New Hampshire). It was in company with a flock of sparrows feeding in front of a grain store. The bird had been seen at odd times throughout the winter, usually in company with the sparrows."

These occurrences are very likely the result of the same cause, which I believe to be the habit of cow-birds laying their eggs in the nests of other birds and having them do the hatching. The sparrow being a non-migrating bird retains the aliens until all the migrating birds have left, and the few strays that are observed become grain-eaters and remain with the sparrows.

JOHN MACOUN.

January 1903.

PRAIRIE HORNED LARK NEST IN NEW BRUNSWICK.

—
BY WM H. MOORE.

(Read before the Ornithological Section of the Entomological Society of Ontario.)

It has been known for some years that prairie horned larks bred in New Brunswick as several times, the old birds had been observed feeding the young. Some years this species is common during the spring migration from March until the middle of May. Being of such retiring habits during the nesting period they are seldom seen, as they sit close to the ground and will not fly except when one is about to walk on them.

This spring (1902) a nest was found by a farmer while crossing a field about April 20, and contained 4 eggs. Through the kindness of Mr. Harry Frazer, a school teacher in the district where the nest was found, I was enabled to get the nest and eggs and give a description below. The nest was situated on the ground on a dry knoll in a field, and was composed of dry grass blades, rather loosely constructed. Later a sheep stepped on one side of the nest breaking one egg, after which the birds deserted it. The nest was of the following dimensions. Diameter inside $1\frac{3}{4}$ inches, outside

$3\frac{1}{2}$, depth inside 1 inch, outside $1\frac{3}{8}$ inches. Mr. Frazer had seen the bird, previous to getting the nest and by comparison with a cut of the bird in an ornithology, was certain of the identity. The eggs measure $\frac{7}{8} \times \frac{5}{8}$ inches, are thickly and evenly speckled gray and yellowish gray on a light brownish ashy background. Two of the eggs have a decidedly plain band of slaty color about the large end. The following note was taken May 26, 1898.

At Mouth Keswick a pair of larks were found on the road; two different times as the team neared the birds the female flew to the fence, while the male would lower its wings, erect its crests, spread its tail and with the middle feathers erected more than those of the sides which were at an angle of about twenty degrees, as if in an attitude of defiance, and if of sufficient size he would abolish horses and outfit. He would hold his position, then with quick flappings of the wings and jerky flight would move on ahead a short distance.

July 9, 1898, an adult lark was observed feeding two young.

CORRESPONDENCE.

ON THE AGE OF THE BELLY RIVER SERIES OR FORMATION IN CANADA.

Editor of the Ottawa Naturalist :—

The recent communication by Dr. H. M. Ami is very timely. In conference with Mr. J. B. Hatcher a somewhat similar point has been raised, that the Belly River and the older formations in Montana of somewhat similar age should be placed in the Upper Cretaceous rather than in Mid-Cretaceous. This is largely a question of the use of terms. In most geological text books the Cretaceous is divided broadly into Upper and Lower. In this sense the Belly River falls in the upper division; the Lower Cretaceous would embrace the Kootanie stage of the northern interior. In another sense, and according to the usage which is shortly to be adopted by the United States Geological Survey, the Cretaceous is to be divided into Lower, Middle and Upper; the Lower including the basal, the Upper including the superior members of the series, and

the Middle embracing those which lie between. It was in this sense that I used the term Mid-Cretaceous in our memoir. Recent conferences with Mr. J. B. Hatcher, who is familiar with Montana formations, confirm this usage.

In addition to the above statement, I am not clear as to the correlation of the Lower Cretaceous south of the Canadian border. The Dakota series immediately overlies the Sauropoda and Baptanodon beds, which in turn are correlated by one of the most eminent authorities, Professor Eberhard Fraas of Stuttgart, with the Purbeckien and Oxfordien of the European geologists.

We are so much in doubt as to the actual relations of these rocks to those of Europe that all notes and discussions of the question are very welcome.

HENRY F. OSBORN.

SOIRÉES.

There was a large attendance of members of the Club and their friends at the first of the winter soirées at the Normal School December 16th. Dr. S. B. Sinclair, in his address of welcome, referred to the benefit derived from the Club's work by the Normal School students, to whom the spring and autumn excursions as well as the soirées held during the winter afforded an enjoyable means of supplementing their knowledge of the natural sciences.

The President's address on "The Functions of a Geological Survey" was delivered by Dr. Robert Bell, the Acting Director of the Geological Survey, and will appear in an early number of THE NATURALIST.

A short paper was then read by Dr. James Fletcher on "Some Ottawa Butterflies and Moths." This was illustrated by beautiful lantern slides, some of which had been kindly lent for the evening by Prof. W. Lochhead, of Guelph, and Mr. A. E. Norris, of Montreal. Those from the former were coloured by Mrs. Slingerland, of Cornell University, and those from Mr.

Norris were done by himself. These coloured slides added very much to the interesting statements made by Dr. Fletcher concerning the life-histories and habits of the various insects treated of. In introducing his subject he stated that he had chosen for exhibition some of the most beautiful or remarkable butterflies and moths in our fauna, and one point he wished to draw particular attention to was, that everyone of these was common and easily obtainable at Ottawa by any student with ordinary assiduity during the first year. Mention was made of the value and the great fascination of working out the life-histories of insects by procuring their eggs and watching the caterpillars during their various moults to the pupal state and then on to maturity. There were many facts which were still unknown even with regard to many of our common species. Some of the large silk worms, or Emperor moths, were shown on the screen and the habits of each kind discussed. The Luna moth, an object of great beauty, was much admired. One delightful scene showing an ideal spot for collecting insects, a limpid stream carrying on its surface water lilies in bloom, and flowing gently beneath over-arching branches, which made a grateful shade, carried the mind of the audience back to the sunny days of June when they visited the Beaver Meadow at Hull. In closing, Dr. Fletcher made a plea for a more general study of the life-histories of insects by the members of the Club, not only for the value of these studies as a source of constant pleasure but on account of the great economic value of a knowledge of insects, which are every year the cause of so much loss. He stated that the leaders in Entomology would always be pleased to help anyone wishing to take up the study of insects, and would gladly accompany them to the woods or show them their collections. The leaders each have private collections and there are also public collections in the Museum of the Geological Survey and at the Central Experimental Farm, all of which are accessible to students.

Many interesting microscopic slides were shown by Dr. H. M. Ami, W. S. Odell and W. J. Wilson, and a number of living turtles were exhibited by Mr. Odell.

REVIEW.

“PRELIMINARY REPORT ON A COLLECTION OF MEDUSÆ FROM THE COAST OF BRITISH COLUMBIA AND ALASKA,” by Louis Murbach and Cresswell Shearer. *Annals & Mag. Nat. Hist.*, 7th series, Vol. 9, No. 49, pp. 71-73. Jan., 1902.

In the summer of 1900 Cresswell Shearer, Esq., accompanied by Prof. MacBride of McGill University, in a trip along the coast of British Columbia, and collected a number of species of Medusæ, to which additions were made by Prof. Kincaid of Seattle. The list of species identified include the following :—

- | | |
|---|---|
| 1. <i>Codonium apiculum</i> , sp. n. | 9. <i>Hippocrene Mertensii</i> . |
| 2. <i>Turris brevicornis</i> , sp. n. | 10. <i>Thaumantias cellularia</i> . |
| 3. <i>Gonionemus Agassizii</i> , sp. n. | 11. <i>Probosciodactyla brevicirata</i> . |
| 4. " <i>vertens</i> , sp. n. | 12. <i>Phialidium languidum</i> . |
| 5. <i>Polyorchis inuta</i> , sp. n. | 13. <i>P. gregarium</i> . |
| 6. <i>Mesonema victoria</i> , sp. n. | 14. <i>Muggiæa Kochii</i> , one of the |
| 7. <i>Syndictyon angulatum</i> . | <i>SIPHONOPHORA</i> |
| 8. <i>Dipurena dolichogaster</i> . | |

Four additional species are recorded from the same coast, but with some doubt as to identity owing to the imperfect mode of preservation of the material examined. These include :

- | | |
|----------------------------|-----------------------------|
| <i>a. Sarsia eximia.</i> | <i>b. S. rosaria.</i> |
| <i>c. Atollia Bairdii.</i> | <i>d. Obelia polystyla.</i> |

The descriptions of the five new species are then given. This paper opens up a most interesting field of research in the invertebrate fauna of the west coast.

H. M. A.

R. H. CONLEY
 Fashionable Tailor
 213 Wellington near Bank

213 Wellington near Bank.

Fashionable Tailor,

R. H. CONLEY,

James Hope & Sons, Booksellers, Stationers,
SPARKS St., Ottawa. Book binders, Printers.

J. G. BUTTERWORTH & Co.

All-Rail Scranton Coal.

Has no Equal.
 86 SPARKS ST.

C. C. RAY & Co.
COAL

Best quality lowest price.
 53 SPARKS ST. Phone 461.

Stewart & Co.

PALACE - FURNITURE - STORE
 34 RIDEAU ST., OTTAWA.

R. McGIFFIN,

... MEN'S FURNISHINGS ...

106 SPARKS ST. OTTAWA.

The Ottawa Trust & Deposit Co.

(Limited)

as Executor, Trustee, Agent &c.

— OFFERS —

Continuous Service,
 Experienced Management,
 Prompt Investment,
 Absolute Security.

☛ Safety Vaults to Rent. ☛

H. W. CHAMBERLAIN,
 Manager.

The Bank of Ottawa.

ESTABLISHED 1874.

Head Office, - Ottawa, Can.
 Capital (Fully paid up) - \$2,000,000
 Rest - 1,765,000

DIRECTORS:

CHARLES MAGEE, President.
 GEORGE HAY, Vice-Pres.
 Hon. Geo. Bryson, Alex. Fraser,
 David Maclaren, John Mather,
 Denis Murphy, M.P.P.
 GEO. BURN, Gen. Manager.
 D. M. FINNIE, Ottawa Manager
 General Banking Business. Savings
 Department.

When on a tramp take a
 supply of...

**EDDY'S
 FLAMERS
 and
 WAX VESTAS
 MATCHES.**

They ensure a good
 "LIGHT" in any kind
 of weather.



One of the most useful things in the household is — **"MOZART PIANO and FURNITURE POLISH"** Use it on your piano and that smoky appearance will vanish. Furniture, woodwork, etc., will regain its old-time lustre.

A. J. Stephens & Son, for Fine Footwear

187 Sparks Street,
 Ottawa.

131966

THE OTTAWA FIELD-NATURALISTS' CLUB, 1902-1903.

Patron:

THE RIGHT HONOURABLE EARL OF MINTO
GOVERNOR-GENERAL OF CANADA.

President:

Robert Bell, M.D., F.R.S., LL.D.

Vice-Presidents

W. T. Macoun. A. E. Attwood, M.A.

Librarian:

S. B. Sinclair, B.A., Ph.D.

Secretary:

W. J. Wilson, Ph. B.
(Geological Survey Dept.)

Treasurer:

A. Gibson,
(Central Experimental Farm)

Committee:

Jas. Fletcher.
W. H. Harrington.
F. T. Shutt.

Miss M. McK. Scott.
Miss A. Matthews.
Miss R. B. McQuesten.

Standing Committees of Council:

Publishing: J. Fletcher, W. T. Macoun, F. T. Shutt, W. J. Wilson, A. E. Attwood.

Excursions: W. H. Harrington, W. J. Wilson, A. Gibson, S. B. Sinclair, Miss Scott, Miss McQuesten, Miss Matthews.

Soirées: S. B. Sinclair, F. T. Shutt, J. Fletcher, A. E. Attwood, Miss Scott, Miss McQuesten.

Leaders:

Geology: R. W. Ells, L. M. Lambe, W. J. Wilson, T. J. Pollock, C. F. King.
Botany: J. M. Macoun, C. Guillet, D. A. Campbell, A. E. Attwood, S. B. Sinclair.

Entomology: J. Fletcher, W. H. Harrington, C. H. Young, A. Gibson.

Conchology: J. F. Whiteaves, F. R. Latchford, J. Fletcher, R. Bell.

Ornithology: W. T. Macoun, A. G. Kingston, Miss Harmer, C. Guillet.

Zoology: John Macoun, W. S. Odell, E. E. Prince, Andrew Halkett.

Archæology: T. W. E. Sowter, J. Ballantyne.

THE OTTAWA NATURALIST.

Editor:

James M. Macoun, Geological Survey Department.

Associate Editors:

DR. R. W. ELLS, Geological Survey of Canada.—Department of *Geology*.
DR. J. F. WHITEAVES, Geological Survey of Canada.—Dept. of *Palæontology*.
MR. F. W. BROCK, Geological Survey of Canada.—Dept. of *Petrography*.
DR. JAS. FLETCHER, Central Experimental Farm.—Department of *Botany*.
HON. F. R. LATCHFORD.—Department of *Conchology*.
MR. W. H. HARRINGTON, Post Office Department.—Dept. of *Entomology*.
MR. W. T. MACOUN, Central Experimental Farm.—Dept. of *Ornithology*.
PROF. E. E. PRINCE, Commissioner of Fisheries for Canada.—Dept. of *Zoology*.

Membership Fee to O.F.S.N.C. with "Ottawa Naturalist," \$1.00 per annum