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THE OTTAWA NATURALIST.

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No. 5.

THE CRYPTOGAMIC FLORA OF OTTAWA.

BY PROF. JOHN MACOUN, M.A., F.L.S., F.R.S.C.

Continued from the June Number.

360. *Pertusaria communis*, DC.

On bark of old trees. On maple trees in Stewart's Bush near the C.A.R. track, April 12th, 1898; on beech trees in woods one mile south-east of Billings' Bridge; on old fence rails along the Richmond Road west of Hintonburgh; on trees in woods west of Hull; on trees in woods at Leamy's Lake; on trees and old logs, Aylmer and King's Mountain.

361. *Pertusaria velata*, (Turn.)

On an ash tree in a swamp, Britannia, April 20th, 1895; on beech trunks, "Pine Hill," Rockcliffe Park; on old rails near Aylmer and at the base of King's Mountain; on butternut trees along the Aylmer Road west of Hull.

362. *Pertusaria leioplaca* (Ach.)

On beech trees in woods at Buckingham, Que., May 14th, 1896.

363. *Pertusaria Wulfenii*, DC.

On beech trees in woods, Rockcliffe Park, April 21st, 1891; on the base of beech trees in woods one mile south-east of Billings' Bridge; on beech trees in woods west of Hull Station; also on beech trunks near Leamy's Lake.

XXII. CONOTREMA, Tuckerm.

364. *Conotrema urceolatum*, (Ach.) Tuckerm.

On bark of bitter nut hickory in woods north of the Aylmer Road and west of Hull, Oct. 4th, 1884.

XXIII. GYALECTEA, (Ach.)

365. *Gyalectea lutea*, (Dicks.) Tuckerm.

On the bark of hemlock trees in woods north of Beechwood Cemetery, April 27th, 1892.

XXIV. THELOTREMA, (Ach.)

366. *Thelotrema lepadinum*, Ach.

On black ash trees in a swamp west of the entrance to Beechwood Cemetery, Oct. 16th, 1884.

XXV. STEREOCAULON, Schreb.

367. *Stereocaulon paschale*, (Ach.)

Abundant on damp shingle along the C. P. R. west of Britannia, April 20th, 1895 ; on boulders in pastures, Ottawa East, and almost everywhere around Ottawa ; on boulders around Hull, quite common ; also on boulders near the Catholic Cemetery, Hull ; on boulders in fields at Stittsville ; on boulders at King's Mountain.

XXVI. CLADONIA, Hoffm.

368. *Cladonia alpicornis*, Fløerk.

On limestone boulders, in shade, south of the Aylmer Electric Railway and west of the C. P. R., Hull, Que., April 27th, 1895 ; on earth on stones along Brigham's Creek ; on limestone rocks between Aylmer and King's Mountain.

369. *Cladonia mitrula*, Tuckerm.

On earth at the base of pine stumps west of Britannia, Oct. 11th, 1890.

370. *Cladonia cariosa*, Fløerk.

On earth on stones by a fence, Ottawa East, April 14th, 1897 ; on earth at the base of a stump in woods, Leamy's Lake ; on old rails near Aylmer.

371. *Cladonia pyxidata*, Fr.

On earth, rocks, old logs and old fence rails. Old rails, Stewart's Bush, April 12th, 1895 ; on boulders, earth and old stumps, Rockcliffe Park ; common on earth and pine stumps at Britannia ; on old pine logs and limestone rocks, Aylmer Road, Hull, Que. ; on boulders, borders of Dow's Swamp ; on boulders, Ottawa East and Billings' Bridge ; on boulders along Brigham's Creek ; on old rails and stones near Aylmer.

372. *Cladonia fimbriata*, (L.) Fr.

On pine stumps, "Pine Hill," Rockcliffe Park, April 14th, 1895 ; on cedar stumps in Dow's Swamp ; and also in a swamp east of Beechwood Cemetery ; on the base of stumps in woods west of Hull Station ; on the base of stumps in a swamp at Stittsville ; on old rails near Aylmer and King's Mountain.

373. *Cladonia fimbriata* var. *tubæformis*, Fr.

On pine stumps and old pine logs at Rockcliffe Park, April 17th, 1895 ; on pine logs and stumps at Britannia ; on rotten pine logs and stumps south of the Aylmer Road, west of Hull, Que. ; on old logs in Dow's Swamp ; on dead wood in woods near Leamy's Lake ; on old logs in a swamp at Stittsville ; on old rails near Aylmer and King's Mountain.

374. *Cladonia gracilis*, var. *verticillata*, Fløerk.

Quite common on earth at Britannia, along the Can. Pac. Railway west of the station, April 20th, 1895; on boulders in woods, Rockcliffe Park; on earth in woods at Leamy's Lake.

375. *Cladonia gracilis*, var. *hybrida*, Schær.

On pine stumps and earth; common. Pine stumps, Rockcliffe Park, April 17th, 1895; on earth and pine stumps at Britannia; on old pine logs and stumps at Stittsville and Carleton Place, and on the same at Aylmer; on earth in woods, Leamy's Lake; on old rails and logs near Aylmer.

376. *Cladonia gracilis*, var. *elongata*, Fr.

On old pine logs in a swamp at Stittsville, May 14th, 1897.

377. *Cladonia squamosa*, Hoffm.

On old pine stumps at Britannia, April 20th, 1895; on the base of a stump in woods, Leamy's Lake.

378. *Cladonia furcata*, var. *crispata*, Fløerk.

A small clump on a pine stump a mile west of Britannia, April 20th, 1895; on old pine logs south of Aylmer Road, west of Hull; on damp earth in woods along the cliff, Rockcliffe Park, May 7th, 1896.

379. *Cladonia furcata*, var. *racemosa*, Fløerk.

On old logs in woods in Rockcliffe Park; also on pine stumps at Britannia, April 20th, 1895.

380. *Cladonia rangiferina*, (L.) Hoffm.

On pine stumps in Rockcliffe Park, April 17th, 1895; on earth and pine stumps at Britannia; on old logs and stumps in a swamp at Stittsville; on old stumps at Carleton Place; on old logs and stumps in a swamp east of Beechwood Cemetery; on old pine stumps and logs, Aylmer Road, west of Hull; on old logs and earth, King's Mountain.

381. *Cladonia rangiferina*, var. *alpestris*, L.

On rotten pine stumps at Britannia, April 20th, 1895.

382. *Cladonia uncialis*, (L.) Fr.

On rocks on the island at Gilmour's Mill, Chelsea, Que., May 15th, 1896; on the summit of King's Mountain.

383. *Cladonia delicata*, (Ehrh.) Fløerk.

On rotten pine stumps at Britannia, April 20th, 1895; not uncommon on old pine logs in woods close to the Can. Pac. Railway bridge west of Hull; on the base of stumps in woods at Buckingham, Que.; on an old pine log in a swamp at Stittsville.

384. *Cladonia deformis*, (L.) Hoffm.

On a pine stump at Britannia; very rare. April 20th, 1895; on an old stump in a swamp at Stittsville; in a swamp near Lake Florz, Hull, Que.; on earth slopes of King's Mountain.

385. *Cladonia digitata*, (L.) Hoffm.

On an old pine stump about a mile west of Britannia, April 20th, 1895; on old pine logs south of the Aylmer Road, west of Hull.

386. *Cladonia cristatella*, Tuckerm.

On cedar rails and pine stumps and old logs in Stewart's Bush, April 12th, 1895; on old pine stumps, Rockcliffe Park; very common on pine stumps at Britannia; on dead pine logs and stumps at Aylmer, Que.; on logs in a swamp east of Belleville; on stumps and old logs at Stittsville; on logs and stones in woods near Leamy's Lake; on old stumps and pine logs near Aylmer.

XXVII. BÆOMYCES, (Pers.) DC.

387. *Bæomyces æruginosus*, (Scop.) DC.

On dead pine wood in cool woods. In woods at Meeche's Lake, Que., Sept. 23rd, 1893; in woods at Buckingham, Que., May 14th, 1896.

XXVIII. BIATORA, Fr.

388. *Biatora rufo-nigra*, Tuckerm.

On limestone rocks in Rockcliffe Park, April 17th, 1895.

389. *Biatora granulosa*, (Ehrh.) Pœtsch.

On carbonized wood on dead pine stumps one mile above Britannia, April 20th, 1895; on burnt logs, King's Mountain.

390. *Biatora rubella*, (Ehrh.) Rabenh.

On bark of maple and ash trees at Stewart's Bush near the Canada Atlantic Railway, April 12th, 1895; on ash trees in a swamp at Britannia; on black ash, white cedar and maple, Aylmer Road, west of Hull; also on oak bark in Rockcliffe Park; on trees in a swamp at Stittsville; on trees in woods at Leamy's Lake, near Hull; on black ash in a swamp near Hintonburgh, April 18th, 1896.

391. *Biatora fusco-rubella*, (Hoffm.)

Near the base of black ash trees in Stewart's Bush near Canada Atlantic Railway, April 12th, 1895; on balsam poplar bark in woods south of the Aylmer Road west of Hull; on beech trees in woods at Buckingham, Que., May 14th, 1896; on black ash east of Beechwood Cemetery, and west of Hull Station; on the base of young maples in woods, Rideau Park, April 19th, 1897.

392. *Biatora suffusa*, Fr.

On the base of black ash trees in Stewart's Bush near Canada Atlantic Railway, April 12th, 1895; on bark of black ash, Aylmer Road, west of Hull; on basswood bark, Dow's Swamp; on beech trees in woods near Leamy's Lake; on black ash bark in the swamp west of Hull Station, Que., April 24th, 1897.

393. *Biatora Schweinitzii*, Fr.

On spruce, pine and beech trees in woods at Rockcliffe Park, April 17th, 1895 ; on white cedar in Dow's swamp ; on old fence rails along the Richmond Road west of Hintonburgh, April 18th, 1896 ; on cedar bark in a swamp at Stittsville ; on spruce trees in woods west of Hull, Que., May 7th, 1892.

394. *Biatora sanguina-atra*, Fr.

On moss on the base of trees in Dow's Swamp; May 2nd, 1896 ; on earth at the base of trees along the cliff in Rockcliffe Park, April 22nd, 1896 ; on moss in woods west of the Beaver Meadow, Hull, Que., Oct. 20th, 1884.

395. *Biatora varians*, Fr.

On bark of young maples at Casselman ; and at Aylmer, Que., May 5th, 1891 ; on alder bark in Dow's Swamp, May 2nd, 1892.

396. *Biatora oxyspora*, (Tul.)

On *Parmelia Borreri* in McKay's Woods, near the Lake, April 23rd, 1891.

397. *Biatora Laureri*, (Hepp.)

On the bark of dead and living beech trees in woods near McKay's Lake ; on beech trunks, "Pine Hill," Rockcliffe Park, April 16th, 1896.

398. *Biatora sphæroides*, (Dicks.)

On roots of trees at Ottawa, 1884 ; on the bases of trees in woods at Carleton Place, May 12th, 1892 ; on moss on rock at Rockcliffe Park, May 7th, 1896,

399. *Biatora hypnophiba*, Turn.

On moss on rocks or rails. On moss on damp rocks, Rockcliffe Park, April 16th, 1891 ; also on moss on an old log in Beechwood Cemetery, April 14th, 1896.

400. *Biatora Macounii*, Eckfeldt. (N. sp.)

On granite boulders in woods at Rockcliffe Park, April 17th, 1895 ; also on boulders in woods south of the Aylmer Road, Hull, Que., April 27th, 1895.

XXIX. HETEROTHECIUM, Flot.

401. *Heterothecium pezizoideum*, (Ach.) Flot.

On moss on the base of a tree at Carleton Place, Oct. 21st, 1891.

XXX. BUELLIA, De Not.

402. *Buellia parasema*, Ach.

Not uncommon on the bark of growing pine trees. In McKay's Woods and "Pine Hill," Rockcliffe Park, April 20th, 1891 ; on young

pinus, along the Ottawa River west of Hull, Que. ; on pines, at King's Mountain, near Chelsea, Que ; on ash trees in a swamp north of Beechwood Cemetery, April 27th, 1892 ; on trees in a swamp at Stittsville, May 14th, 1897.

403. **Buellia myriocarpa**, (DC.)

On old fence rails ; doubtless common. On stones in fields near Britannia. April 20th, 1895 ; on old fence rails in McKay's Woods, quite common. April 23rd, 1891 ; on old rails at Stittsville, May 14th, 1897 ; also at Buckingham, Que ; on old fence rails near Hintonburgh, April 18th, 1896.

404. **Buellia papillata**, (Sommerf.) Tuck.

On moss on old fence rails at Carleton Place, Oct. 11th, 1889.

405. **Buellia Pertusaricola**, Willey.

On the bark of aspen poplar, but parasitic on *Pertusaria communis* in woods by the Beaver Meadow near Hull, Que., Oct. 16th, 1889.

XXXI. GRAPHIS, Ach.

406. **Graphis scripta**, (Ach.)

Very common on trunks of all kinds in woods around Ottawa. On black cherry, beech, maple and oak bark at Aylmer, May 6th, 1891 ; on butternut, birch and beech at Hull, Que., April 28th, 1891 ; on maple, basswood and ironwood in Beechwood Cemetery, April 26th, 1892 ; on balsam fir at Stittsville, May 14th, 1897 ; on blue beech at Leamy's Lake, Hull, Que. ; also abundant on trees at King's Mountain, Chelsea, Que., May 22nd, 1897 ; on alder trunks in Dow's Swamp ; also in Rideau Park, April 19th, 1897.

407. **Graphis recta**, Humb.

Not uncommon on the bark of yellow and canoe birch in woods. In woods along the Beaver Meadow, Hull, Que., May 16th, 1896 ; also on the same at Buckingham, Que., May 14th, 1896.

XXXII. OPEGRAPHA, Humboldt.

408. **Opegrapha varia**, Pers.

On butternut bark in woods along the Aylmer Road west of Hull, Que., April 23rd, 1891 ; also on cedar bark at King's Mountain, near Chelsea, Que., May 22nd, 1897 ; on cedar bark in Dow's Swamp, May 2nd, 1897.

XXXIII. ARTHONIA, Ach.

409. **Arthonia astroidea**, Ach.

On bark, quite common in woods around Ottawa. On bark of *Juglans cinerea* in woods along the Aylmer Road west of Hull, Que., April 28th, 1891 ; on *Abies balsamea* and young pines in Dow's Swamp, April 23rd, 1892 ; in woods near Aylmer, Que.

410. *Arthonia Swartziana*, Ach.

Not uncommon on oak and ironwood trees near Aylmer, Que., May 6th, 1891; on maple trees at King's Mountain, near Chelsea, Que., May 22nd, 1897.

411. *Arthonia lecideella*, Nyl.

On various young trees and shrubs. On *Acer spicatum* at Aylmer, Que., May 6th, 1891; quite common on young *Acer rubrum* in Stewart's Bush and Rideau Park; on young maple trees at Buckingham, Que., May 14th, 1896; on young red maples near Hintonburgh, April 18th, 1896.

412. *Arthonia spectabilis*, Flot.

On thick bark of old trees; common on basswood and sugar maple bark at Carleton place, May 7th, 1882; on bark of *Carya amara* in woods west of Hull, Que., September 21st, 1889; on old maples at Casselman; on *Juglans cinerea* at Aylmer, Que., May 6th, 1891; on maple trees in Rideau Park, near Billings' Bridge, April 19th, 1897.

413. *Arthonia tædiosa*, Nyl.

On young beech and maples, at Buckingham, Que., May 14th, 1896.

414. *Arthonia dispersa*, (Schrad.) Nyl.

On bark of young sugar maples at Ottawa. Collected in Beechwood Cemetery, April 16th, 1892.

XXXIV. MYCOPORUM, (Flot.) Nyl.

415. *Mycoporum pycnocarpum*, Nyl.

On oak bark in woods by the lake near Aylmer, May 6th, 1891; also on bark of young *Acer rubrum*, at Britannia, April 20th, 1895.

XXXV. CONIOCYBE, Ach.

416. *Coniocybe furfuracea*, (L.) Ach.

On the roots of trees in woods. On earth on pine roots in woods north of Ironsides, Que., Sept. 16th, 1891; on roots of trees in Dow's Swamp, Oct. 12th, 1887.

XXXVI. CALICIUM, Pers.

417. *Calicium subtile*, Fr.

On dead cedar stump in Dow's Swamp, Sept. 26th, 1891.

XXXVII. ENDOCARPON, Fiedw.

418. *Endocarpum, fluviatite*, DC.

On stones in the Beaver Meadow Brook below the C. P. Ry. bridge near Hull Station, Que., April 24th, 1897; on rocks in a brook

at Mecche's Lake, near Chelsea, Que., Sept. 23rd, 1893 ; on limestone rocks, close to the Ottawa River, Gatineau Ferry, Rockcliffe, Nov. 12th, 1896.

XXXVIII. *TRYPETHELIUM*, Spreng.

419. *Trypethelium virens*, Tuck.

On beech trunks on "Pine Hill" in Rockcliffe Park, and Beechwood Cemetery, April 26th, 1891 ; on beech trees at Casselman, and at King's Mountain near Chelsea, Que., May 22nd, 1897.

XXXIX. *PYRENULA*, (Ach.)

420. *Pyrenula punctiformis*, (Ach.)

On bark of trees at Carleton Place, May 12th, 1892 ; on maple trees near Hintonburgh, April 18th, 1896 ; on trunks of sugar maple, "Pine Hill," Rockcliffe Park, April 16th, 1896.

421. *Pyrenula gemmata*, (Ach.)

On old maple trunks in McKay's Woods near the lake, April 16th, 1891.

422. *Pyrenula mamillana*, (Ach.)

On bark of maple trees in old woods, Carleton Place, May 12th, 1892.

423. *Pyrenula nitida*, Ach.

Quite common on beech trunks around Ottawa. On beech trees in Rockcliffe Park and McKay's Woods, April 26th, 1891 ; on beech trees at Moose Creek and Casselman, Sept. 6th, 1891 ; on trees at Aylmer, Que., May 6th, 1891.

424. *Pyrenula thelena*, Ach.

On canoe birch in woods along the Beaver Meadow, Hull, Que. April 24th, 1897.

425. *Pyrenula fallacia*.

On bark of young maples at Chelsea, Que., May 15th, 1891.

426. *Pyrenula cine*.

On young maple trees at Ottawa, May 7th, 1892.

VEGETATION IN THE BEMUDAS.—PART. I. TREES

BY H. B. SMALL, ESQ., OTTAWA, CANADA.

Bermuda, locally called the "Land of the Lily and the Rose," presents an aspect of shelving cedar, sloping hills green with verdure, and shimmering under a southern sun, with a misty haze of violet hovering over all. For the horizon there is a sea of emerald hue, shading at times to turquoise blue, whilst purple patches show the coral shoals and reefs, with ever and anon the white sails of a fishing boat flashing in the sunlight. It may be styled a land of sleep, of rugged gorge, of sheltering valley. Vegetation is profuse, and its growth is maintained by the very heavy dew nightly occurring, and which is so saturating that at sunrise it may be seen dropping from the foliage like rain. As a consequence trees, shrubs and plants attain a luxuriance unknown in more northern climes. The most abundant and universal tree is the Juniper (*Juniperus Bermudiensis*), known in the islands only as the Cedar. Its abundance everywhere makes it almost wearisome to the eye in its sombre monotony. It varies in size according to soil and situation. The wood is very durable and fragrant. The earliest records of parties wrecked, as far back as 1593, speak of the cedar, palmetto, mulberries and wild olives, "infinite store, with divers other unknown by name and nature." But there is in fact no reliable data or report respecting the arboreal or floral vegetation of these islands between these early records and the beginning of the present century. Helmsley, whose report on the botany of Bermuda in connection with the "Challenger" expedition is the best work of reference, says the botanical history of the islands really began in 1806, when Micheaux visited them. Helmsley thinks the native plants may be put down at from 140 to 150, and that a parallel is offered on the other side of the Atlantic by the flora of the Azores. He places the endemic flora of Bermuda as eight species, and adds to this that "weeds and chance species brought out in seed packages naturalize with facility, and

perhaps few places of so limited an area offer a greater variety, or so much to gratify a botanical observer."

The most abundant tree, next to the cedar, is the Fiddle-wood (*Citharoxylum Quadrangulare*), ornamental in its growth, its trunk or larger branches being cylindrical, valuable as a timber tree, and not unlike our beech, but of a more graceful growth. The Poinciana (*P. Regia*), originally a native of Madagascar, is one of the most graceful trees to be found on the islands. Its far and wide-spreading branches, peculiarly smooth and bare, closely resembling an elephant's trunk, with leaves one foot long, composed of from 12 to 18 pairs of leaflets, must be seen, rather than described, to be admired. It attains a height of some thirty feet. The Tamarind (*Tamarindus Indicus*) is another tree of striking appearance, attaining a large size, and with far spreading branches densely clothed with bright green leaves. The Galba (*Calophyllum Calaba*) is largely distributed, a tree with blunt, leathery, dark green leaves, very glossy. Although as a tree it attains a height of 30 feet, it has the peculiarity when trimmed young of branching from the ground and is sometimes grown as a hedge or wind brake. Very similar in appearance is a tree known as "White Cedars," a most misleading name as it has nothing in common with the Cedar family. It is the *Tecoma Pentaphylla*, and makes a handsome and ornamental tree in large grounds. The Loquat (*Eriobotrya Japonica*), bearing a small edible fruit is a handsome middle sized tree of dark green foliage, with blossoms very similar to our horse-chestnut. It is abundantly grown not only for its beauty as a flowering tree, but also for its fruit, somewhat resembling the smooth yellow tomato. The Seaside Grape, (*Coccoloba Uvifera*) another misnomer as it has nothing to do with the grape vine—is a tree from 10 to 30 feet high with large smooth shining leaves, almost round or heart shaped from 3 to 6 inches long and often broader, and of a very massive appearance. It probably takes its name from the fruit which is the size of and not unlike a grape and of a pleasant taste and purplish hue. The Alligator or Avocado Pear (*Persea Gratissima*)

forms a very handsome tree when standing out alone. The Pride of India, (*Melia Azedarach*) a large massive tree with lilac pendulous flowers flanks many houses, and is planted on the streets. But being deciduous, its leafless state and dried, and withered berries in contrast with the foliage all round, give it the appearance of a dead tree from November till March. The Mangrove (*Rhizophora Mangle*) is abundant along the lagoons, sending out from every branch secondary limbs which form new trunks and consequently dense thickets. The Mulberry (*Morus Rubra*) the Ailanthus, Banyan, Mahogany, and Calabash, with a variety of others are to be found, but with the exception of the Mulberry have been imported. Palms of every kind abound, and the row of Royal palms (*Oreodoxa Oleracea*) at Pembroke Hall some 70 feet high with a graceful feather-like plume of leaves at the summit are an object of admiration to all. The Palmetto (*Sabal Umbraculifera*) grows indigenous everywhere, some old specimens rising 20 and 30 feet in damp valleys, whilst on the rocks it is completely dwarfed. Its fruit or seed was used by the early settlers and the wild hogs fed largely thereon; the leaves were used as thatch for houses, and were woven into baskets; but with the exception of a few fans made from its bleached leaves the palmetto is now neglected. The Rubber Tree (*Ficus Elastica*) is not uncommon and presents a remarkable growth, branching out from the root with numerous sturdy branches clothed with long thick leathery leaves, the young buds of which are tipped with a reddish brown tinge. It attains a great height and covers a large expanse of ground with its spreading boughs. Although scarcely ranking as a tree, the Bamboo may claim the rank, as in sheltered places it (*Bambusa Arundinacca*) raises its rodlike stems 30 and 40 feet high, attaining at their lower joints the thickness of a man's thigh. The stem has slender branches of *solid growth* which bear leaves about six inches long. The cane terminates in a large tawny plume or panicle, which sways with every passing breeze.

With the exception of two or three species, there are no trees that may be called deciduous on the islands. Although not

evergreen in the true sense in which that term is applied in the North, they retain such a proportion of foliage during the winter season, that the leaves they shed are scarcely noticed. The Rubber Tree, although always green, sheds a large portion of its leaves in March, perhaps more noticeable from their size than with other trees; but the new growth either forcing off the natural leaf, or supplying its place before the latter is shed, fills up the gap. Northern trees, which require by nature a period of rest, such as the apple, do not thrive, and degenerate very quickly. I omitted to mention above the Tamarisk (*T. Gallica*) which thrives along the shore, and is a favourite in exposed situations. It is never injured by the salt spray in storms, which quickly tells on other trees, and is used as a wind break largely along the North shore. The False Mangrove (*Aricennia Nitida*) is easily distinguished from the true Mangrove, with which it is much intermixed, by its darker foliage. The two species form the Mangrove swamps, a well known characteristic of the tropics.

I have copious notes on the flowering shrubs and flora generally of Bermuda, which are reserved for a future article.

BIRD NOTES FOR JULY.

Edited by W. T. MACOUN.

The only notes for this month are those sent in by Mr. F. A. Saunders. In "Birds' Nests and Breeding Places" for June, "Yellow-bellied Flycatcher" should read Yellow-bellied Sapsucker. The only additions to the birds recorded this year were the Brown Creeper, July 3rd, and the Field Sparrow, July 4th; seen by Mr. Saunders.

BREEDING NOTES.

Blackburnian Warbler.—Seen July 2nd and 3rd. Breeds commonly back of Low.

Magnolia Warbler, *Parula Warbler*.—July 2nd. Breed commonly back of Low.

Olive-backed Thrush.—July 2nd. Commonest thrush back of Low.

Field Sparrow.—July 4th. Near Kazabazua. Does not usually breed so far north.

NOTES ON THE FLORA OF LONG POINT ISLAND,
LAKE ERIE, PROVINCE OF ONTARIO, CANADA.

By LEROY J. BOUGHNER.

I arrived here about the middle of May and took up my residence at "the Bluffs." This is the most central part of the Point, and is situated on dry land. The island is about twenty miles long, the upper part of which is almost entirely marsh, while the eastern part is covered by dense forests of cedar and birch. These two trees are the most common on the island, although red cedar is a close second. Oak is very abundant and pine was originally, but was removed about thirty years ago. There are no hickory nuts, no chestnut, and but one tree each of beech and butternut. There is also a single representative of the nettle-tree, on Ryerson's Island. I am preparing a catalogue of the summer and autumn plants of the island which I shall send in the fall. Meantime my botanical notes will be brief. The commonest plant on the island is Indian Puccoon, *Lithospermum canescens*, Lehm. *Convolvulus sepium*, L., is also very common, principally about "The Cottage." *Epiphegus Virginiana*, Bart., is not infrequent and in abundance is about equalled by *Pogoniaop lioglossoides*. *Calopogon pulchellus*, R. Br., is common on the southern side. *Utricularia vulgaris*, L., is of course common, but not so much as *U. Cornuti*, Michx. An ordinarily rare plant, Pin-drops, *Pterospora Andromedea*, Nutt., is so frequent on the island as to be almost termed common. I have found one specimen each of *Cypripedium parviflorum*, Salisb., and *C. arietinum*, R. Br. *Sparganium eurycarpum* and *Pontederia heterantha* are very common, and I have found in great numbers flowers of *Lemma perpusilla*. I have observed carefully one remarkable fact of the island which seems to me to be such a remarkable instance of the adaptation of plants to insure cross-fertilization as to well merit the notice of the Club. On my arrival I perceived that the staminate flowers of the Common Meadow Rue, *Thalictrum dioicum*, were growing higher on the ridges and more to the eastward than the *pistillate*. The only explanation I could offer was that afforded by the winds which are almost invariably from the east when the Meadow Rue flowers.

A LITTLE BIRD EXPEDITION.

By F. A. SAUNDERS.

On July 16th the writer, in company with some hundreds of other excursionists, left Ottawa for Ste. Anne de Beaupré, not in the hope of being relieved of any bodily ailment, but for the prosaic reason that the trip was cheap, and would bring a lover of nature very easily to a part of the country where the fauna is more northern in character than ours at home. After a visit to that famous place of some few minutes duration only, the road east was taken, with shank's mare for a conveyance, and in due time the picturesque village of St. Joachim de Montmorency came in sight, standing just opposite the lower end of the Island of Orleans, and giving a fine view of both Mt. Ste. Anne and Cap Tourmente, the mountains which are visible down the river on a clear day from the terrace at Quebec, the latter being the first of the Laurentians below that point whose base is washed by the tides, and the one which, with the little chapel and cross on the summit, is so well seen from the deck of a passing steamer.

The next day was spent in climbing to the top of this hill, and the writer was so fortunate as to miss the main path and get entangled in a swamp in which there was such an abundance of bird life, and all of it so interesting that one knew not which way to turn or which bird to look at first. Here was surely the place where they make up those tourist parties of warblers that are at the same time such a delight to see and such a vexation to sort out in the fall migration. Blackburnian, Magnolia and Parula Warblers, and many commoner species came up from all sides to see who the intruder was,—a mutual inspection in which the birds had much the worst of the bargain, as they are perfect gems of colour and were that day in their very best Sunday plumage, which the writer certainly was not.

The climb proved to be a comparatively easy one after all, and repaid the climber in many ways, but chiefly by the view from the top, which was most impressive. Except for the mountains near by, and those bounding the horizon to the south (in

Maine) the whole country was spread out like a carpet under foot, the Citadel of Quebec itself seeming little higher than a footstool though forty miles away, and here with the eye delighted by the silent ships passing over the great blue floor of the St. Lawrence, and the ear greeted by a chorus of Olive-backed Thrushes and White-throated Sparrows, a very memorable hour was spent. The descent, though the good path deprived one of the pleasure of pioneering one's own way through unknown forests, proved interesting on account of the birds. Here were met mixed flocks of both kinds of Kinglets (the Golden-crested much the commoner of the two however) with the usual accompaniment of Nuthatches and Chickadees, and at one point an uncanny black-eyed owl fluttered clumsily from one branch to another, peering with much curiosity and a very human expression at the strange field-glass-eyed creature that confronted him, and the interest on the other side was even greater, as he proved to be a Barred Owl, a rarity almost anywhere, and like most owls very seldom met with in broad daylight. When his feelings became too much for an owl to bear, he relieved them with a yell not unlike the unearthly whining that greets the ear morning and evening from a siren-whistle in Hull, but with a human quality that made it seem the voice of some wild departed spirit,—a sound quite capable of making the chill run up a strong man's back, if he heard it at night and alone, not knowing its source. According to the books this is but one of the many calls of this owl, but neither my derisive imitation (though he eventually had the grace to answer it) nor any other noise I was capable of producing could induce him to express himself otherwise, nor could any jests change the expression of pained self-importance on the bird's face.

On the following day the writer tramped to Bay St. Paul over the road used daily by the mail wagon. This road goes up-hill for nearly seven miles from St. Joachim until, on turning around the shoulder of a high cultivated hill, a wide view is obtained both forward and behind, the latter being almost as fine as that from Cap Tourmente in the same direction. Then after crossing a great valley we plunge into unbroken forest from which we emerge after ten or twelve miles in a nearly straight line, up hill and down dale, and then travelling about as far

again, almost continually down hill, we enter the village of Bay St. Paul in the middle of its beautiful valley. This proved the most interesting day of the whole trip from an ornithological point of view, 52 species being observed. As soon as the forest was reached Pine Siskins and Kinglets became common, and a wild and varied canary-like song was, after much trouble, traced to the White-winged Crossbill which was found to be not uncommon throughout all that region, though difficult to identify on account of its preference for the highest perch available. A few warblers were singing, and of these the Black-throated Green, Magnolia, Blackburnian, Mourning, Nashville, Canadian and Black-throated Blue were the most prominent, while the rest of the warblers seemed to have already formed into mixed flocks, amongst which were found the Bay-breasted and Myrtle Warblers. A little group of Yellow-bellied Flycatchers answered readily to an imitation of their simple call-note (not unlike the Wood Pewee's); at one place a Blue-headed Vireo displayed great anxiety when the chirp of a young bird was imitated, and at a couple of others Hudsonian Chickadees were found and showed themselves to be the same little busy-bodies as their commoner cousins. This district would doubtless repay a long study, as the Canada Grouse, Canada Jay, Blackpoll warbler, the Three-toed Woodpeckers, and perhaps the American Crossbill might reasonably be expected to breed here, and there is always in addition the chance of some great rarity that every naturalist has one eye open for; and if the birds are so northern as this, no doubt the other branches of natural history would yield equally interesting results to collectors. The writer was on the lookout for the Gray-checked thrush also, but the only thrushes found were the Olive-backed, the Hermit and the Veery, the first-named being twice as common as both the others put together, and though every thrush that was convenient was coaxed into good view none were seen that had any trace of gray in the cheeks.

The rest of this short trip included walking as far as Murray Bay, but no further bird records of value were obtained. Kinglets, White-winged Crossbills and Pine Siskins were to be heard and seen about the hotel there quite often and we were treated regularly to a concert by the Olive-backed Thrushes, but the time of song was nearly over, and when the visit came to an end the deep silence of midsummer held the woods all day, broken only by the faint chirp of some warbler wandering through the tree-tops, or at night by the hoarse bark of the Night Heron passing overhead to his feeding grounds uncovered by the falling tide.