

LIST OF CANADIAN HEPATICÆ

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List of Canadian Hepaticæ by Wm. Hy. Pearson

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WM. HY. PEARSON

**LIST OF CANADIAN
HEPATICÆ**

Canada. geological survey.

GEOLOGICAL AND NATURAL HISTORY SURVEY OF CANADA.
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LIST

OF

CANADIAN HEPATICÆ

BY

WM. HY. PEARSON,



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PREFACE.

The following list is the result of the microscopical examination of a large collection of Hepaticæ made by Mr. Macoun in different parts of Canada, and of those in my possession from the herbarium of the late Mr. Austin; in order to make the list as complete as possible I have added all records known to me of species found in Canada and northwards, including those mentioned in G. L. N. Syn. Hep. (1884); Mitten, The "Bryologia" of the Survey of the 49th Parallel of Latitude, Pro. Linn. Soc., Vol. VIII. (1846); Stephani Hepaticæ von der Halbinsel Alaska, Bot. Jahr., Vol. VIII. (1886) and Delamare, Renauld et Cardot's "Flora Miquelonsia" (1888) (Hepaticæ determined by Stephani.)

The striking feature of the flora is its great similarity to that of Northern Europe, as Dr. Spruce intimated in his note on *Arnellia fennica*.

In my descriptions I have adopted the terms used by Dr. Spruce in his monograph "On Cephalozia" 1882.)

WM. HY. PEARSON.

ECCELES, ENGLAND.

LIST OF CANADIAN HEPATICÆ.

BY W. H. PEARSON.

***Frullania Selwyniana*, n. sp.**

Small, reddish brown, irregularly dichotomously branched, innovant branches produced repeatedly from below the female bracts. Leaves imbricate, rotund, slightly papillose, with lines of moniliform cells; lobule $\frac{1}{4}$ th smaller than the leaf, galeate, wide mouth, erect or a little divergent from the stem; stylus wanting or very minute; cells small to rather minute. Underleaves about $\frac{1}{2}$ smaller than the leaves, rather broader than the stem, oval, to a $\frac{1}{2}$ acutely bifid, segments acutate, slightly unidentate. Inflorescence monoicous, terminal on short branches. Bracts 3 pairs, the innermost about twice the size of the leaves, unequally lobed, complicate, lobe obtusate, irregularly dentate-serrate; lobule acute with a large segment near the middle, margin distantly ciliate-dentate; second bracts similar, only smaller and less dentate; third bracts subentire. Bracteole free, bifid to below the middle, sinus and segments acute, margin ciliate-dentate. Perianth small, subemersed, pyriform, smooth, trigonous, antical face plane, postical broadly carinate, apex rostellate. Male bracts 3 pairs, on short lateral branches immediately below the female, globose.

Hab.—On trees, Ste. Anne's River, Gaspé, 19th August, 1882. (*Macoun.*)

Obs.—I take the pleasure of naming this distinct and beautiful little species in honor of Dr. Selwyn, C.M.G., the able and distinguished Director of the Geological and Natural History Department of Canada, under whose auspices this list is published. It differs from *Frullania polysticta* Lindenb in the absence of the large irregularly interposed cells, in the lobule of the bracts being much smaller than the lobe

(not of equal size), and in the margin of the under leaves being unidentate near the middle, from *Frullania fragilifolia* Tayl. in being monoicous, and in the irregularly ciliate-dentate lobule of the bracts, which has a large segment near the middle.

Measurements.—Fronds $\frac{1}{2}$ to $\frac{3}{4}$ inch long, .5 to .75 mm. wide, stem .1 m. diam., leaves .4 mm. long x .3 mm. broad, .3 mm. x .25 mm., lobule .15 mm. high x .1 mm. broad, cells .02 mm. x .015 mm. .015 mm. x .015 mm., underleaves .175 mm. long x .15 mm. broad, sinus .05 mm., .2 mm. x .175 mm., sinus .05, .25 x .15 mm., lobule .45 mm. long x .225 mm. broad at the base of the juncture, bract lobe .75 mm. long x .4 mm. broad, lobule .6 mm. long x .25 mm. broad, .85 mm. x .35 mm. lobule .75 mm. x .45 mm.

Description of Pl 1.—Fig. 1. Plants nat. size. 2. Plant x 24, antical view. 3. Portion of stem x 64, postical view. 4. Portion of leaf x 290. 5-7. Underleaves x 64. 8. Bract x 64. 9. Bract x 31. 10. Second bract x 64. 11. Bracteole x 31. 12. Perianth x 31. 13. Cross section of the perianth x 31.

2. *Frullania Virginica*, Gottsch.

Hab.—New Brunswick. (James, *Herb. Austin, cum per.*) Hastings Co., Ont., May, 1868. (Macoun, *Herb. Austin.*)

3. *Frullania Hallii*, Aust. Bull. Torrey Bot. Club, 6, n. 2, 1875.

Hab.—On trees, Vancouver Island, May, 1875. (Macoun.)

4. *Frullania Eboracensis*, Gottsch.

Hab.—On trees, at Belleville, Ont., 1868 (18-35). On fir trees in woods, Gaspé, 1882 (8). On birch trees, Ste. Anne's River, Gaspé, ♂ et ♀ *cum per.*, August, 1882 (12). Ottawa, 1883, *cum per.* (246-228-252). On birch trees, Truro, Nova Scotia, June, 1883 (172). On rocks, Lake Nipigon, July, 1884 (9). On poplar bark, Vancouver Island, May, 1887 (22). On rocks, V. I., May, 1887 (228). (Macoun.)

Obs.—Several forms are in the collection, but as the characters are more or less variable in the different organs on the same stems, I have not thought them worthy of ranking even as varieties. In the drawings taken under the prism are given several figures showing this.

In one compact form the perianths were often more rotund with the lobule of the bract obtusate (fig. 8-9-10), in another, the perianth was slightly keeled antically (fig. 17), and almost bicarinate postically (fig. 16-17), and some lobules of the bracts uni-bidentate at the base (fig. 14).

Description of Pl. II.—Fig. 1. Portion of stem $\times 31$ (8). 2. Under-leaf \times (8). 3-4. Bracts $\times 31$ (8). 5. Bracteole \times (8). 6. Perianth \times (8). 7. Cross-section of the perianth \times (8). 8. Bract $\times 31$ (11). 9. Bracteole $\times 64$ (11). 10. Perianth $\times 31$ (11). 11-12. Underleaves $\times 85$ (9). 13-14. Bracts $\times 31$ (9). 15. Bracteole $\times 31$. 16-17. Cross-section of the perianth $\times 31$ (9). 18. Bract $\times 31$ (172). 19. Bracteole $\times 31$ (12).

5. **Frullania Tamarisci**, (L.) Radd.

Hab.—“Vancouver Island and Orcas Island. Collected also by *Menzies* and *Douglas* on the N. W. coast. The specimens are very slender, and at first sight would scarcely be supposed to belong to the same species as the European forms; the leaves are rounded, in the fertile stems acute, in the male plants with the point inflexed and the colored cells in some of the leaves are only found after careful search. No American examples have yet been met with which can compare with the British in size.” (*Mitt.*) Miquelon Island. (*Delàmare.*)

6. **Frullania Asagrayana**, Mont.

Hab.—On rocks on an island in Gull Lake, Victoria Co., Ont., July, 1868 (32). (*Macoun.*) Charlottetown, Prince Edward Island. (*James.*) Bass River, New Brunswick, 1871. (*J. Fowler.*) On birch trees, coast of Gaspé, August, 1882 (7). (*Macoun.*) Island of Miquelon. (*Delàmare.*)

7. **Frullania Asagrayana**, Mont. var.

Hab.—On rocks, Pirate's Cove, Nova Scotia, 1883 (111). (*Macoun.*) On rocks, Vancouver Island, 1885 (139). On trees, V. I., 1885 (140) (*Dawson.*)

8. **Frullania Asagrayana**, Mont. var. **Californica**. Aust. MS. Underw. Catal., Hep. N. Amer., p. 67, 1883.

Hab.—On rotten wood, Nanaimo, Vancouver Island, 4th June, 1887 (86). On trees in woods, Comox, V. I., 29th July, 1887 (57). (*Macoun.*)

9. **Frullania Nisquallensis**, Sulliv. Mem. Amer. Acad. N. Ser. III. p. 175.

Hab.—On the bark of cedars, Mount Mark, 26th July, 1887 (102). ♂ and young ♀ Vancouver Island, 26th May, 1887 (22). (*Macoun.*) Alaska. (*Krause.*)