

NOTES ON THE BRYOPHYTES AND LICHENS COLLECTED BY JOHN MACOUN IN THE CYPRESS HILLS

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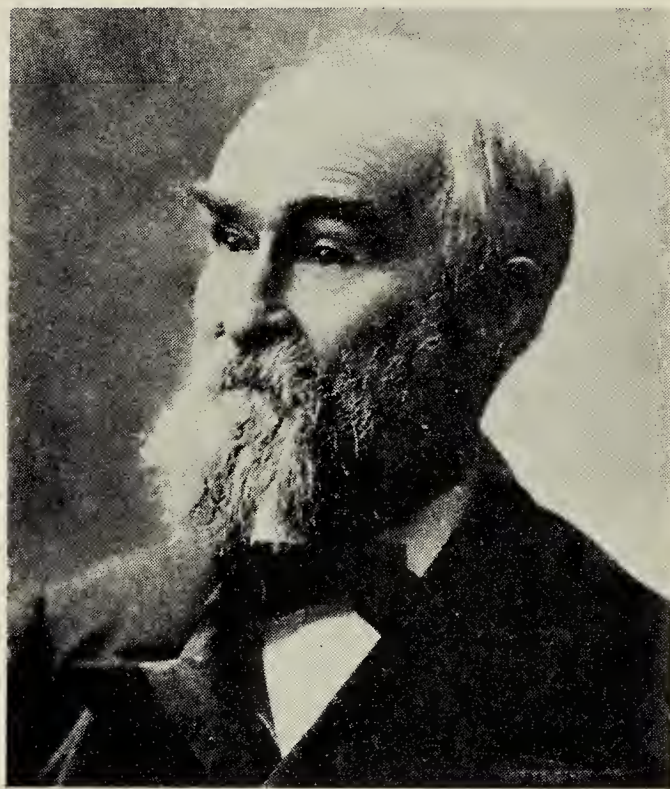
John Macoun, one of Canada's great biologists and the first botanist employed by the National Museum of Canada, visited the Cypress Hills in 1880, 1894 and 1895. Most of the bryophytes and lichens which he collected there are recorded, often without precise data, in his *Catalogue of Canadian Plants* (Macoun 1892, 1902), a brief description of the vegetation is given in Macoun (1882), and some notes on the trips are included in his *Autobiography* (Macoun 1922).

In February, 1970, while at the National Museum of Canada, I had the opportunity to study the plants which he had obtained. The following account with a number of corrections describes his itineraries and lists the species which he found, using our current terminology.

Unless otherwise indicated, voucher specimens are at the National Museum of Canada. For the sake of brevity the wording "Saskatchewan Cypress Hills Provincial Park" has been abbreviated throughout to SCHPP. The boundaries of the West, Centre and East Blocks of this Park are regarded as those shown on the National Topographic Series 1:250,000 Cypress map sheet published in 1956. The East Block is not at present part of the Park.

Itineraries

In 1880 Macoun entered the east end of the Cypress Hills after crossing Swift Current Creek. He travelled along the summit of the hills until he reached the Police trail from Maple Creek to Fort Walsh and then followed this trail down to Fort Walsh. After spending a number of days there, he departed on August 15 for the Great Sand Hills to the north. As his bryophytes and lichens were collected from August 2 to August 6 it is probably safe to assume that they were collected in the East and/or the Central Blocks of the SCHPP.



JOHN MACOUN

Reproduced from *Autobiography of John Macoun, M.A., Ottawa Field-Naturalists' Club, 1922.*

In 1894 Macoun collected at Medicine Hat, then moved to Crane Lake, near Skull Creek, Saskatchewan, where he camped for over a month. From there he went up into the Cypress Hills to a place where a Mr. Andrews had a large camp. It appears likely that this camp was situated in what is now the SCHPP East Block. His bryophytes and lichens were collected in this area from June 23 to June 26.

The 1895 trip started at Moose Jaw where he outfitted his party. They left on May 18, reached Old Wives Lake on May 19, then travelled to Old Wives Creek, Wood Mountain, the Frenchman River, Fairwell Creek, Fort Walsh, and then through southern Alberta to Waterton. A number of collections were made in the Saskatchewan part of the Cypress Hills, outside of the present SCHPP, at Fairwell Creek on June 26 and 27. Some additional collections were made at Battle Creek, pre-

sumably near Fort Walsh in the SCHPP West Block, on July 4.

Lichens Collected

Alectoria chalybeiformis (L.) S. Gray
On earth, SCHPP East or Centre Block, August 3, 1880.

Slopes, Fairwell Creek, Saskatchewan, June 27, 1895.

Cetraria nivalis (L.) Ach.

On hills, SCHPP East or Centre Block, August 3, 1880.

Cladonia fimbriata (L.) Fr.

SCHPP East or Centre Block, August 2, 1880.

Collema tenax (Sw.) Ach.

On earth, SCHPP East or Centre Block, August 3, 1880.

On earth, Fairwell Creek, Saskatchewan, June 27, 1895.

Collema tunaeforme (Ach.) Ach. (as *C. furvum*)

On stones, SCHPP East or Centre Block, August 3, 1880.

Cornicularia aculeata (Schreb.) Ach. (as *Cetraria aculeata*)

On gravel bluffs, SCHPP East or Centre Block, August 3, 1880.

Evernia mesomorpha Nyl. (as *E. prunastri* var. *gracilis*)

On dry earth on a hillside, Fairwell Creek, Saskatchewan, June 26 and 27, 1895.

Mosses Collected

Amblystegium juratzkanum Schimp. (as *A. varians*)

On earth, SCHPP East Block, June 25, 1894.

A. serpens (Hedw.) B.S.G.

On earth about trees, SCHPP East Block, June 26, 1894.

Brachythecium collinum (Schleich. ex C. Müll. B.S.G.

Earth, Cypress Hills. No specimen seen at the National Museum but reported by Macoun (1892).

Bryoerythrophyllum recurvirostrum (Hedw.) Chen (as *Didymodon rubellus*)

On rocks, SCHPP East or Centre Block, August 2, 1880.

Bryum sp. (as *B. roellii*)

On damp earth, SCHPP East Block, June 25, 1894.

Along Fairwell Creek, Saskatchewan, June 27, 1895.

B. augustirete Kindb. ex Mac. (as *B. pendulum*)

Fairwell Creek, Saskatchewan. No specimen seen at the National Museum but reported by Macoun (1892).

B. creberrimum Tayl. (as *B. cuspidatum*)

Cypress Hills. No specimen seen at the National Museum but reported by Macoun (1892).

B. pallescens Schleich. ex Schwaegr.

On damp earth, SCHPP East Block, June 25, 1894.

B. stenotrichum C. Müll.

SCHPP East or Centre Block, August 4, 1880, as *B. denticulatum*.

Springy places, SCHPP East or Centre Block, August 6, 1880, as *B. denticulatum*.

On earth, SCHPP East Block, June 26, 1894, as *B. froudeii*.

B. turbinatum (Hedw.) Turn. (as *B. erythrophyloides*)

On wet gravel, SCHPP East Block, June 25, 1894.

On earth by a spring, SCHPP East Block, June 25, 1894.

Drepanocladus aduncus (Hedw.)

Warnst. (as *Hypnum kneiffii* var. *sendtneri*)

In pools, SCHPP East Block, June 25, 1894.

Encalypta vulgaris Hedw. (as *E. subspathulata*)

Fairwell Creek, Saskatchewan, June 27, 1895.

Fontinalis dalecarlica Schimp. ex B.S.G.

Battle Creek, SCHPP West Block, July 4, 1895. No specimen seen at the National Museum but reported in Welch (1960).

F. duriaei Schimp.

Battle Creek, SCHPP West Block, July 4, 1895. No specimen seen at the National Museum but reported in Welch (1960). This collection is the type of *F. subcarinata* Card. (Cardot and Thériot 1904) a taxon now regarded as synonymous with *F. duriaei*. *Grimmia anodon* B.S.G.

SCHPP East Block, June 24, 1894. *G. arctophila* Kindb.

Cypress Hills. No specimen seen at the National Museum but reported by Kindberg (1896-97) who described it

as a new species. Not mentioned by Macoun (1892, 1902) and it may be a synonym of *G. anodon* or *G. plagiopodia*.

G. plagiopodia Hedw.

On sandstone, SCHPP East Block, June 24, 1894.

Hypnum cupressiforme Hedw.

On earth, SCHPP East or Centre Block, August 4, 1880.

H. revolutum (Mitt.) Lindb.

Cypress Hills. No specimen seen at the National Museum but reported by Macoun (1892).

H. vaucheri Lesq. (as *H. subcomplexum* n. sp.)

Sandstone rocks, Cypress Hills, Saskatchewan. No specimen seen at the National Museum but reported by Kindberg (1896-97) who described it as *H. subcomplexum*, and mentioned by Macoun (1902).

Leptodictyum riparium (Hedw.)

Warnst. (as *H. riparium*)

By pools, SCHPP East Block, June 25, 1894.

In water, SCHPP East Block, June 26, 1894.

Philonotis fontana var. *pumila* Brid. (as *P. fontana*)

By springs, SCHPP East Block, June 25, 1894.

Plagiomnium cuspidatum (Hedw.)

Kop. (as *Mnium drummondii*)

On the base of trees, SCHPP East Block, June 26, 1894.

P. rugicum (Laur.) Kop. (as *Mnium affine*)

Around springs, SCHPP East Block, June 23, 1894.

Pottia heimii (Hedw.) Fűrnr.

ex Hampe

On earth, Fairwell Creek, Saskatchewan, June 27, 1895.

Pseudoleskeela tectorum (Funck ex Brid.) Kindb. ex Broth. (as *Amblystegium adnatum*)

On sandstone rocks, SCHPP East Block, June 24, 1894.

Tortula mucronifolia Schwaegr. (as *Barbula mucronifolia*)

Bank of Fairwell Creek, Saskatchewan, June 27, 1895.

T. ruralis (Hedw.) Gaertn., Meyer & Scherb. (as *Barbula ruralis*)

SCHPP East or Centre Block, August 2, 1880.

On rocks, SCHPP East or Centre Block, August 3, 1880.

Summary

The itineraries of John Macoun's collecting trips to the Cypress Hills have been described and the species of bryophytes and lichens which he collected have been listed along with their dates and probable places of collection. It has been shown that contrary to various reports, all of his collections of these plants were made on the Saskatchewan side of the Hills.

Literature Cited

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NOTES ON THE BRYOPHYTE FLORA OF THE CYPRESS HILLS

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In 1962 I published a paper on the bryophytes of the Cypress Hills Provincial Parks of Alberta and Saskatchewan (Bird, 1962). Since that time a number of additional collections, including some new records, have been

made in the area by J. S. Rowe and by R. D. Newsome who published a detailed account of the vegetation of the area (Newsome and Dix, 1968). Recent taxonomic changes and the revision of some material have resulted