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About the Institute

The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

October 25, 1919.

Mr. Paul C. Standley,
U. S. National Herbarium,
Smithsonian Institute,
Washington, D. C.

Dear Mr. Standley:

I am returning herewith the remainder of the willows collected by you in Glacier National Park last summer. I am transmitting also a copy of the type-written list showing the species and varieties included and giving descriptive notes on the individual specimens.

These notes probably will not be of much interest to you, but were made for my own information. As I told you in conversation, I have had the privilege of studying a series of 600 or 700 specimens from the Rocky Mountain Park at Banff, Canada, and also, some splendid recent specimens from Professor Macoun, collected in Jasper Park and in the mountains of British Columbia. In the light of all these collections, I am endeavoring to work out a much better determination of the species found in the northern Rocky Mountain region than has been possible heretofore. The determinations in the case of a few species must be regarded as tentative.

I am leaving town, however, for 2 or 3 weeks and thought it best to send the material back to you before going. The names which are used tentatively are the 3 following:-

1. *S. pseudomonticola* Ball (ined)
2. *S. farrae* Ball (ined)
3. *S. drummondiana* (?) Barr.

Of the first two, I have an abundance of material from Canada and expect to give them careful study early this winter.

The specimens which I have returned under the name drummondiana, for the most part, almost exactly match the description of that little known species. One or two of them, however, approach typical sitchensis. More study is necessary before I can pronounce on these with certainty.

I will be glad to give you, at your convenience during the winter, notes on the distribution and relationships of these species in whatever form you desire them for your publication. The notes sent herewith were not expected

P. O. Standley

October 25, 1919.

to be of any interest to you for that purpose.

Under S. glaucops glabrescens, you will note that No. 16,509 is quoted as being 5 feet high, according to the label. This height is greater than I have ever known that species to attain, and I am wondering if reference to your notebook will not find a different height recorded.

Very truly yours,

CRB:K
Enclosures.

Cerealist in Charge.

RECEIVED
SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON, D. C.
JAN 20 1920
Assured

January 19, 1920.

Mr. C. R. Ball,
Bureau of Plant Industry,
Department of Agriculture.

Dear Mr. Ball:

(5. mmulius)

Herewith I am sending you copy of a portion of the manuscript of the Glacier Park Flora, which will show the general style of the work. I am also sending a list of the Salix species with the distribution of each in the Park indicated. It has not been the intention to make the flora a descriptive manual in the usual form, but rather to give in the descriptive notes only such matter as will supplement the key. In the case of the willows you can, of course, use your judgment as to how extensive these will be. Any general or critical comments upon the species are desirable also. If your account of the genus can be ready soon it will be greatly appreciated, for I hope to be able to send the paper to the printer this winter. The new species can be published later, for it usually takes about six months to get a paper through the press.

Your assistance in the matter will certainly be greatly appreciated.

Sincerely yours,

Paul C. Dudley
Assistant Curator,
Division of Plants.

(Enclosure)

5. MIMULUS L.

Plants usually perennial, somewhat succulent; leaves opposite, shallowly toothed; flowers large or small, borne in the leaf axils or arranged in leafy racemes; calyx 5-lobed, angled; corolla 2-lipped; stamens 4.

Corolla rose-red. 1. M. lewisii.

Corolla yellow.

Stems covered with long weak hairs; calyx lobes nearly equal
in length. 2. M. moschatus.

Stems glabrous or with minute hairs; calyx lobes very unequal.

Corolla 25 to 35 mm. long. 3. M. caespitosus.

Corolla 5 to 15 mm. long.

Calyx lobes obtuse; corolla 2 to 15 mm. long.

4. M. glabratus.

Calyx lobes acute; corolla 5 to 8 mm. long.

5. M. hallii.

1. *Mimulus lewisii* Pursh. Red monkey-flower. Common about timber line, and frequently found along streams at middle elevations; in wet ground, especially along streams. B. C. to Calif., Colo., and Minn. --Stems 30 to 60 cm. high, usually tufted, finely hairy and somewhat viscid; leaves oblong or ovate, 4 to 8 cm. long, sharply toothed; corolla 3.5 to 5 cm. long. A very showy plant, often growing in dense masses, especially along brooks.

2. *Mimulus moschatus* Dougl. Musk-flower. Infrequent; near Sun Camp and along Snyder Creek; in wet thickets or along brooks

in deep woods. B. C. to Calif., Colo., and Ont. --Stems slender, prostrate or creeping, very viscid; leaves slender-stalked, ovate, 3 to 5 cm. long, finely toothed. This species is often cultivated.

3. *Mimulus caespitosus* Greene. Common above or near timber line, usually along brooks or on wet banks. B. C. to Calif., Colo., and Mont. --Stems 10 to 20 cm. high, usually forming dense clumps; leaves broadly ovate or rounded, 1 to 2 cm. long, sessile or short-stalked; flowers usually 2 or 3 on each stem; corolla bright yellow, the throat spotted with brownish purple. One of the most handsome plants of the Park, frequently occurring in great abundance. In Rydberg's Flora this is united with *M. langsdoeffii* Don, but in size and in habit of growth it is very unlike the common forms of that species. The plants of Glacier Park are very uniform in size and habit.

4. *Mimulus glabratus* H. B. K. Baring Falls, on wet mossy cliffs. Mont. to Ill., Mex., and S. Amer. ^(*M. geyeri* Torr.) --Stems long and weak, glabrous, prostrate or nearly so; leaves rounded, 1 to 4 cm. long, sparsely toothed, short-stalked; flowers few, in the leaf axils.

5. *Mimulus hallii* Greene. Baring Falls, on mossy cliff in the spray of the falls. Mont. to Colo. --Stems slender, 5 to 15 cm. long, glabrous; leaves rounded or broadly ovate, 0.5 to 1.5 cm. long, entire or slightly toothed. The Glacier Park plants are only 3 to 5 cm. high, and are, therefore, much smaller than is usual in the species. The specimens were determined by Mrs. A. L. Grant as a depauperate form of *M. hallii*.

May 22, 1920.

Mr. Paul C. ^{S.}Gandley,
Assistant Curator, Division of Plants,
Smithsonian Institution,
Washington, D. C.

Dear Mr. ^{S.}Gandley:

Replying to your letter of January 19, I am transmitting herewith nine pages of the manuscript covering the willows for the Glacier Park Flora. This includes the key and the discussion of twelve species or about one-half the total number. The rest will follow as rapidly as it can be prepared.

In consulting the list of species collected by Dr. Vernon Bailey of the U. S. Biological Survey and by Titus Ulkey, which I determined in 1917, I find that ~~the~~ *Salix nivalis* Hooker was collected by Dr. Bailey once in the Park and once at Boundary Peak, B. C., on the north side of the Park. Should I include this species?

Very truly yours,

Cerealist in Charge.

CRB:RL

Enclosure.

SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON, D. C.

May 25, 1920.

Mr. C. R. Ball,
Department of Agriculture,
Washington, D. C.

Dear Mr. Ball:

The first portion of the *Salix* manuscript reached me safely yesterday, and I am certainly very much obliged to you for it. It would be very desirable, I think, to include *Salix nivalis*, since it has been collected on the Park boundary, and doubtless extends into the Park itself. I am returning the key herewith so that this species can be inserted in its proper place.

Sincerely yours,

Paul C. Standley
Assistant Curator,
Division of Plants.

(Inclosure)

May 27, 1920.

Mr. Paul C. Standley,
Division of Plants,
Smithsonian Institution,
Washington, D. C.

Dear Mr. Stnadley:

Your letter of May 25 is just received with returned portion of manuscript containing key. I am revising this to include *nivalis* and am returning it herewith, together with Pages 10 and 11 of the text. The remainder of text will be sent when completed.

Very truly yours,

CRB:RL
enclosure.

Cerealist in Charge.

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June 30, 1920.

Mr. Paul C. Standley,
U. S. National Herbarium,
Washington, D. C.

Dear Mr. Standley:

I greatly regret to find that the final sheets of my treatment of *Salix* for your flora of Glacier National Park have not been sent to you. I finished this manuscript on the train and while at several experiment stations in the middle west. After the hand-written manuscript was copied, however, it remained here in the Office instead of it going to you, and I have just become aware of that fact. I greatly regret this delay of nearly a full month and trust that Pages 11 to 16, which I enclose herewith, are still in time to be of service to you. Please note that No. 24 is included on the basis of two specimens collected by Dr. Vernon Bailey of the U. S. Biological Survey, one in the park and one from Boundary Peak on the north line of the park, but the actual collecting being adjacent to British Columbia.

Very truly yours,

Cerealist in Charge.

ORB:RLL

Enclosure.

July 8, 1921

Mr. P. C. Standley,
U. S. National Herbarium,
Washington, D. C.

Dear Mr. Standley:

I have been revising a large amount of Salix material recently in preparing a treatment of this genus for the Illustrated Flora of the Pacific Coast. This has involved a redetermination of some of your material collected in the Glacier National Park. The following notes may be of interest.

I did not report S. bella Piper, but I now believe that two of your specimens, Nos. 18432 and 18604, should be referred to that species instead of to subcoerulea. I am not sure about the last number because I cannot find it in the National Herbarium, but according to my notes it answers the description of bella.

I determined eight numbers of your material as S. ~~Drummondiana~~ Drummondiana Barratt. I believe also that your No. 18193 collected in the vicinity of Gunsight Pass should be referred to that species. In consulting the material in the National Herbarium I am unable to find No. 18761 which I originally determined as this species.

I determined ^{many} most of your specimen as S. subcoerulea Piper. I now believe that much of this material is more closely related to Drummondiana and more properly should be arranged as a variety of that species. In subcoerulea the twigs usually are dark brown and always pruinose, while the pubescence of the leaves is much shorter and rather thinner. To that species I still refer the following numbers: 14961, 16864, 16885, 17311, 17342, 17642, 17655, 18127 (near bella). The last two are not typical subcoerulea numbers. No. 17655 is glabrous and may be a hybrid, while No. 18127 appears to vary in the ~~direction~~ of bella.

The other numbers which I originally referred to subcoerulea have reddish-yellow to reddish-brown branchlets, never bruinose, with longer and thinner pubescence. I think I will segregate them presently as var. ~~Drummondiana~~ ~~Drummondiana~~ ^{of} var. ~~Drummondiana~~.

Should there be any defective or mutilated copies of your Flora, I would like to extract the willow chapter from one or two of them in order to have a working copy both at home and at the Office, as they are much more convenient to carry about and use than the entire Flora.

Very sincerely yours,