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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.

Dept of English

from J. K. Henry.

May 20, 1916

VANCOUVER, CANADA

W. L. R. Yall,
Washington;

Dear Sir

Your report on certain Western Willows has been received from Prof. F. V. Coville. As the report in details that I have is much uncertainty regarding these plants, I venture to make a few notes which may be of some assistance when you return to Washington. As I do not have the plants before me, I turn to a few observations in my Flora of Southern British Columbia (for the most part a rather blundering compilation of no authority)

Salix Scouleriana Barratt.

(1) S. Scouleriana Barratt. Shrub or small tree with rather slender branches; leaves obovate or oblanceolate, finely silky beneath, 2.5 - 5 cm. long

S. flavescens Nutt. Often a large tree; leaves more coarse, leaves 5-10 cm. long often remaining tomentose beneath, in drier habitats often finely silky beneath.

As the capsules of the two are the same, and as the plants are easily distinct in extreme forms though they grade into each other, I have called the former S. Scouleriana var. flavescens. It presents 2 well marked forms: (a) Head often oblong, leaves mostly oblanceolate to (b) Head often round, leaves mostly obovate. The latter on Vancouver Island looks much like an apple tree. The likeness of the one or other of the 2 kinds of plants to S. Scouleriana leaves sometimes distinguishes

20-V-16
from J. K. Henry

THE UNIVERSITY OF BRITISH COLUMBIA
VANCOUVER, CANADA

Salix geyeriana Anderss

(2) S. Geyeriana. Our coast form differs from the Rocky Mountain form in the entire absence of the bluish bloom on the twigs. On Vancouver Island the twigs branches & stems are sometimes banded with black and gray. So far as my observations goes the coast plant is usually taller, and with more oblong leaves which are early quite glabrous and shining above. The hairs on the lower surface become more or less brown as in S. Scouleriana. Whether this last point is a character of the Rocky Mt. plant I do not know. The form I have just described I have called S. Geyeriana var. meleina (in allusion to the dark twigs which however are sometimes yellow) With us at the coast it always grows in swamps, or very wet ground; S. Scouleriana & S. sitchensis prefer drier ground.

Salix hookeriana × "scouleriana var. flavescens"

3. S. Hookeriana X S. Scouleriana var flavescens. You say you are doubtful about this — "Seemingly unfertilized Hookeriana". The plants came from a swale (within 1 Fraser River) between grass fields. The swale was about 1/4 mile long and about 75 feet wide — not noticeably much lower than the grass fields, and was full of typical undoubted S. Hookeriana of both sexes. The male plants with their red stamens were very striking. Just at the borders of the swale on slightly drier

20-V-16
from J. K. Henry

VANCOUVER, CANADA

Ground were the coarse true-like forms of S. Scouleriana flavescens. Aphids were abundant and the leaves particularly fine. It is therefore evident to me that any peculiarity I observed in seed is not due to lack of pollen. If I remember correctly the supposed hybrid was much larger than S. Hookeriana, which in B.C. at least, is a shrub 1.5 – 2.5 or 3 m. high. In determining it as a hybrid I depended mainly upon the combination of the habit and leaf-form of Hookeriana with the long styles of Scouleriana. Short forms of Hookeriana with long stigmas are by no means rare. Typically Hookeriana has a glabrous capsule and long styles 1.5 – 2 mm. long, and short stigmas. All grades between glabrous and densely tomentose capsules occur. I should think a var. tomentosa might do, tho' I have not decided in view of the fact that capsules glabrous on the lower half are common. I have thought there may be a connection between fully tomentose capsules and very pubescent leaves, but I cannot substantiate this idea. I have seen a var. laevifolia: leaves finally shining above, strongly glaucous & merely pubescent beneath; twigs usually dark glabrous; capsule glabrous or nearly so; autumn foliage deep yellow (in open blackening)

20-V-16

VANCOUVER, CANADA

It is probably only only a form in drier habitat.

With apologies for the length to which my notes have run.

I remain

Yours sincerely

J. K. Henry [J. K. HENRY]

20-X-16
Herb. J.K. Henry

WILLOWS FROM J.H. HENRY, VANCOUVER ISLAND, B.C. (K)

Sent to Coville, Oct. 1916 for det + Herb

1420 S. sitchensis Sans.

1421 S. sessilifolia Nutt.

1428 S. hookeriana Barr. ("long stigma suggesting hybrid")

1429 " " laurifolia J.H.H. (2 m. high, Mar. 20)

1430 " " tomentosa " in herb.

1430a " " " " " "

(2 unnumbered) " " " " " "

1431 S. scouleriana flavescens (Obovate leaves)

1432 S. " (sm. ob.-spat. lvs.)

1433 " " tenuijulis (short aments, dry hillside)

1435 " " flavescens (oblong-oval crenate lvs.)

1436 " geyeriana meleina J.H.H. in herb.

1437 " sitchensis Sans. (2 spec.; one Vancouver, one New Westminster).

1438 S. mackenziana (Barr.) Hook.

1441 S. hookeriana Barr,

1442 S. lasiandra Benth.

1443 S. geyeriana meleina J.H.H. in herb.

1444 S. hookeriana Barr. (autumn foliage)

1445 (or 9145) S. geyeriana var. x sitchensis. Probably O.K. Capsale longer, pedicel longer, leaves as in sitchensis.

1446 (or 9146) S. hookeriana x scouleriana flavescens, seemingly unfertilized hookeriana.

Ocean Park
British Columbia
October 1922

Mr C. R. Ball,
Washington.

Dear Sir,

I thank you for your Notes on Willows. The Notes on the Pentandrae are of especial interest to B. C. collectors as they mention forms that may be looked for in this province. Recognition of varieties that pass into species on a much more helpful and hopeful attitude than that of some botanists who can draw very definite lines between species. Yours sincerely

J. H. Sorby

November 11, 1922.

Prof. J. K. Henry,
Ocean Park,
British Columbia.

Dear Professor Henry:

Your recent letter is received and I am glad to know that the little paper on the willows was of interest. I learned long since that one can not be dogmatic in discussing a dioecious genus like the willows when so much of the herbarium study must be made on quite fragmentary material. Furthermore, if we accept the evolution theory rather than that of a separate creation, there is no reason to believe that species will always be sharply and clearly delimited, but rather there is abundant reason to believe that more or less parallel evolution will have taken place and that the lines of demarkation between some forms will be very difficult to recognize, while between others there will be an unbridged gap.

There are two or three studies which I hope that some botanist will undertake on the willows, although they might be pursued with equal benefit on other plants.

One of these is to determine whether an individual plant of any species show the same characters of foliage, flower and fruit through all its years of existence. In other words, does a plant which bears relatively narrow leaves this year, bear relatively narrow leaves always and vice versa. Another question which confuses me is the cause of and the conditions under which the glaucous bloom appears and disappears on the twigs of various species of willows. What effects do such climatic factors as frost, snow, rain, intense heat, wind-blown dust, and so forth, have on this deposit and how is it correlated with the changing vegetational conditions throughout the season, as for instance, with the appearance of the leaves and of the flowers and with the maturity and fall of the leaves in autumn? If it were possible for you to make a series of studies of either or both of these points on a sufficient number of plants, I believe it would be a contribution of great value to plant students.

Very sincerely yours,

CRB:SS

Ocean Park P.O.
British Columbia
Oct 18 1924

Carleton R. Ball Esq.
Washington, D.C.

Dear Sir: Please accept my thanks for the "Pacific Willows," in which I have, I believe, some humble part. For Southern British Columbia it is the most attractive, sane and useful treatment we have. I think this will eventually be found to be true, tho' as yet I have had no opportunity to test the work in any critical way. As I was today walking through the burned areas of what was once a magnificent forest of Cedar and Douglas fir, I noticed that a form of Salix Scouleriana was very abundant, but it is much nearer S. flavescens Nutt., in the leaves are large and all acute. I think this form, since it covers large areas* here, is worth varietal mention. With it is an occasional striking form with much smaller leaves mostly acute, on abundant slender fan-growing twigs. I enclose a few leaves, not to inform you at all, but rather on the principle that leads a young lady to press a rose leaf or a violet in her book of poetry.

Yours Sincerely
J. K. Henry

* i.e. on 49th parallel near the coast

Ocean Park
British Columbia
Dec 8 1904

Mr C. R. Ball
Washington D.C.

Dear Mr Ball: I shall be pleased to make representative specimens of the forms of Salix Scouleriana that occur in this neighborhood. The form with large leaves I believe to be S. flavescens Nutt. (S. Scouleriana flavescens J.K.H.) S floribunda Schneider (a name which I do not have this monograph before me). The form with narrow leaves I cannot name.

I am glad to learn of your purpose following up this species and shall be glad to be of any small assistance.

Yours Sincerely
J K Henry