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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.

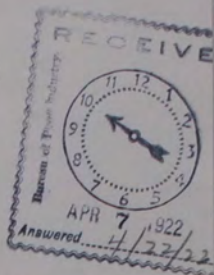
from P. A. Rydberg

New York Botanical Garden,
Bronx Park,
New York City.

April 6, 1922

Dr. Carlton R. Ball
Bureau of Plant Industry
Washington, D. C.

Dear Dr. Ball:



I thank you for your kindness in sending me a separate on the willows. You ask, in your letter, how soon the North American Flora will be advanced so far that the family Salicaceae would appear. I could not tell you this because there would be at least one or two parts preceeding the willows in that volume. Professor Trelease has been asking to prepare Piperaceae but I do not know how soon he could furnish the manuscript. I think there are more than a dozen titles but manuscript which have not been sent to the printer. The New Bra Company, which has done most of the printing of the North American Flora, does practically nothing, as their force has been reduced by the strike which has been running for a year. The Intelligencer has started a little on some new volumes of the Flora, but they are also very slow and as it appears now, two or three parts a year is all that we can expect. When the work was started I was supposed to write up the willow family, as I did a little work on willows years ago. I have been switched off on other work and have done very little on the group for a decennium. I also feel that our collection here at the Garden has not kept up with the development of the knowledge of that genus and there might be some one who could do it better than I. One time Dr. Britton suggested Professor Rowlee, but he is out of the question. He knows much less than I do. Dr. Schneider

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has done fairly good work in many cases and has been over the field pretty thoroughly, but I cannot agree neither with his disposition of many of the forms nor of his manner of treating nomenclature. When he was here we had some discussion, but he did not want to argue the matter but said as far as nomenclature was concerned, he would leave that to the judges. Who he referred to I do not know. Perhaps it was Professor Sargent or some one else. His interpretation of many of the types is erroneous, as for instance Anderson's *S. glaucops*. I do not see on what ground he applies the name to the Alaska plant which I called *S. Seemannii*, nor his interpretation of the type of *S. arctica* R. Br. Dr. Enander, the great Swedish psychologist, was here and he had little regard for Dr. Schneider's work. I have not followed up his work very closely, but he draws his characters of relating species almost wholly from the leaf, paying altogether too much attention to the presence and absence or the frequency of stomata, a character that I think is due mostly to physical local conditions. I would not like to see him write the manuscript for the North American Flora and Dr. Britton would not give it to him under any circumstances, so the only one in this country that may be available for the work, I think, is yourself. I have been thinking of proposing to you, if you are willing, that you cooperate with me and we do the family together. I know perfectly well that I cannot do it alone to satisfy myself because I have had too little field work in that line for the last ten years, and there are many things that are necessary to know from the field in order to make a good work. If you would be willing to work up the manuscript in conjunction with me I would be very

From P. A. Rydberg
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New York Botanical Garden,

Bronx Park,
New York City.

from F. A. Rydberg
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glad to do this. One may hesitate to do cooperative work in that line as there might be some differences in our limitation of species and matters of nomenclature, but cases of that kind could be well discussed and you would find that I am open to criticism and persuasion.

One point in your separate I must call your attention to is that I do not believe that the true Salix lasiandra is found in southern Colorado and northern Mexico. Heller's 3637 and 3719 cited under the same name, are in our collection and both have practically mature leaves, though the leaves are slightly paler beneath they are not glaucous. They are yellow green as in the type S. caudata. They have the caudate acumination characteristic of that species. They

are not dark green and glossy above, and not gradually tapering to the apex, characteristic of typical S. lasiandra. When I wrote my flora of the Rocky Mountains, I thought that I also found differences in the staminate catkins of S. caudata and S. lasiandra, but I do not remember exactly what it was now. To me S. Fendleriiana and S. caudata are synonymous. Anyone that has collected in Colorado knows that there is only one species of the pentandra group. General conditions of the country in Colorado are very unlike those of California and there are exceedingly few plants that are common to the same. Many specimens collected in New Mexico and in the northern part and in the southern extension of the Rocky Mountains the flora is practically that of Colorado. The specimens from the Mogollon Mountains I have not seen and cannot tell whether or not they belong to S. caudata. I understand that you were in some doubt whether the specimens from Colorado and New Mexico should be

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regarded as *S. lasiandra*, and it seems to me as if I can read between the lines that you have made this position on account of Dr. Schneider's determinations.

Dr. Schneider has no idea of phytogeography of North America, and has paid no attention to physical condition in interpreting the ranges of the different species. Two of Leiberg's specimens (#8872 & 56) from Oregon Schneider has determined as *S. caudata*. They are, especially the first one, as typical *S. lasiandra* as you can find. I do not believe either that *S. Lyallii* is a pure synonym of *S. lasiandra*. It is nearer to that species than to *caudata*. It has much broader leaves than *S. lasiandra*, but the circulation of *S. caudata*.

Yours very truly

P. A. Rydberg

Curator

from P. A. Rydberg
6-IV-22

April 22, 1922

Dr. P. A. Rydberg, Curator,
New York Botanical Garden,
Bronx Park,
New York, N. Y.

Dear Dr. Rydberg:

Your letter of April 6 was duly received, and the fact that it has not been answered sooner is not caused in any way by a lack of interest but by the pressure of work which has made me neglect everything of this sort.

I am much disappointed to know that the treatment of the willows is not to be made available soon. I note carefully your discussion of the authorship of this section and your proposal that I collaborate with you in the preparation of this treatment. I will be glad to give this very careful consideration and to write you my decision within a reasonable time. Personally, I feel confident that we could reach a high degree of agreement as to the limitation of species and varieties. It is always true, of course, that no two workers see these matters in exactly the same light. It is also true, in my own case at least, that I do not see them in the same light any two years in succession, so that as I progress in my studies I find myself in disagreement with views which I had held previously.

With reference to your discussion of lasiandra and caudata or fendleriana, I am quite willing to acknowledge that I accepted Dr. Schneider's statement that in some specimens which he has been able to examine the cotype of fendleriana has the leaves white on the under surface and therefore represents lasiandra rather than caudata. The two specimens of this number in the National Herbarium are too immature to permit positive identification.

On the other hand, I did not get my belief as to the distribution of lasiandra in New Mexico and Colorado from any statement by Schneider or other author. I have examined in the National Herbarium and elsewhere undoubted material of this species from both States. From New Mexico, Standley's 6645, from Rio Arriba County, Wootton's 3118, from Reserve, and several other unnumbered specimens of Wootton's, all have the leaves pure white on the under surface. Of the two numbers collected by Heller, to which

you refer, 3719 in the National Herbarium also has the leaves full grown and distinctly white beneath, while 3637 is less mature and only the distal leaves show a whitening.

From Colorado, Walker's 454, from San Miguel County, and Wootton's 2718, from Archuleta County, have leaves distinctly white beneath. Baker's 141 has the leaves pale but not white.

I will be glad to have you examine such of this material as is in the herbarium at the Garden and write me your impression. It is possible that in some cases collectors take specimens from both species, where they are growing near together, without being aware of that fact, so that the plant in one herbarium may be quite different from that in another, and always there is the difficulty of identifying immature material. I have just verified this material at the National Herbarium in order that I should not be depending on a possibly faulty memory in writing you.

Very truly yours,

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New York Botanical Garden,

Bronx Park,

New York City.

May 8, 1922



Professor C. R. Ball
Bureau of Plant Industry
Washington, D. C.

Dear Professor Ball:

I thank you for your letter of April 22nd which I have not answered, in fact there was nothing very important to be answered just now. It seems, however, that I have a different interpretation of Salix lasiandra from yours and Dr. Schneider's. We have a specimen collected by Hartweg which I think is a duplicate of the type. It is a staminate plant, very young, but with narrow leaves. The leaves are a little paler beneath but have no trace of glaucousness. They have not the abruptly long acuminate leaves characteristic of the Rocky Mountain plant, and the serrations are very fine. It has nothing to do, in my opinion, with S. Lyallii which is considerably glaucous beneath. I do not think that the glaucousness amounts to much in the case of these willows, but if it should be a character of value the glaucous Rocky Mountain specimens do not belong to the typical S. lasiandra. These, of course, are facts that we could discuss further with actual specimens before our eyes. Of course if you are willing to cooperate in preparing the manuscript it would be easy for me to come down to Washington or for you to come up here. If I go there I would bring with me all doubtful material, etc. You say in your letter that you have often

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Bronx Park,
New York City.

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changed your views regarding certain species. This is also the fact with me and I have found several times that I have been mistaken. I am, therefore, very open to persuasion, which I must say Dr. Schneider was not. Whenever we disagreed he did not want to discuss the matter. Perhaps it was a personal feeling on his side to the New York Botanical Garden, as Dr. Britton did not think he could give all the facilities and courtesies to a man who was an enemy alien at that time.

Yours very truly

J. A. Rydberg
Curator

May 17, 1922.

Dr. P. A. Rydberg,
New York Botanical Garden,
Bronx Park,
New York.

Dear Dr. Rydberg:

Your letter of May 8 received, and I note with much interest your interpretation of Salix lasiandra based on a probable cotype in the New York collection.

The glaucousness of the under surface of the leaves of willows ordinarily does not show when the leaves are quite immature. This fact I have found to be true of many species including amygdaloides, lasiandra, cordata, mackenziana, monticola and many others.

This character seldom appears before the leaves are half-grown, although the stage of leaf development at which it appears seems to vary with the climate and with the rapidity of leaf growth.

The most important fact in the present discussion is that so far as I have observed in personally collecting in California, and from study of a large amount of herbarium material, as well as from the records in the California floras, the form with leaves green on the under surface does not occur west of the Sierra Navadas and the Cascades. I reviewed this entire situation only a year or so ago in preparing the text of this genus for the Illustrated Flora of the Pacific Coast.

The type of lasiandra was collected, I believe, on the Sacramento River, which, of course, is wholly west of the Sierra Navadas. The species with white leaves is common along the Sacramento wherever I have seen it, while, as noted above, the green leaf species never has been found west of the mountains, so far as I can determine.

As the type and cotype of lasiandra are confessedly immature, does it not seem probable that the glaucous under surface had not yet developed at the time of collection and that it represents the white leaf form so common in the Sacramento Valley?

Very truly yours,