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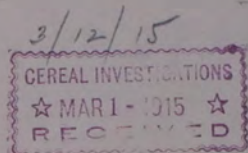
The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains 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.

Stanford University, Cal.,

Feb. 24, 1915.

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



Dear Mr. Ball:

Inclosed are some sample pages of my manuscript for the proposed tree and shrub book of the Pacific Coast. Extra work this year in connection with the Pacific meeting of the American Association has retarded my progress in the preparation of the text, so it seemed best early in the fall to abandon the attempt to put it through this year. I now hope to get it out about a year hence.

It is my intention to make it a field-book that may be carried in the field. The size of the printed page will be about 6 1/2 by 3 1/2 inches. Illustrations will be run as small text figures. They will be outline drawings with as little shading as possible.

I shall be very grateful to you if you can contribute the text for our willows. Coville is going to do the Grossulariaceae and Vacciniaceae and Mr S.B. Parish the Cataceae.

Please let me know if you wish any more information concerning the general plan of the book, or any other detail of the work.

We of the Pacific Coast are looking forward with pleasure to the prospect of meeting eastern botanists this summer. I hope you can arrange to be one of them.

Would you care to look over our collection of willows? If so I shall be glad to forward them to you, at our expense.

Yours cordially,

L.R. Abrams

S. Alder L.

Alder.

Trees and shrubs with astringent smooth or scaly bark, soft close grained wood, naked leaf-buds and deciduous, dentate or serrate, stalked leaves. Flowers monoecious, both kinds in aments, the staminate aments clustered at the ends of the branchlets, long and pendulous, the pistillate clustered usually near the base of the staminate cluster and erect. Staminate flowers 3-6 in the axil of the scale, consisting of a 4-parted perianth and 1-4 stamens, subtended by 2-4 bractlets; pistillate flowers 2 in each axil, without perianth, subtended by 2-4 bractlets, these adnate to the scale, the whole becoming woody in fruit forming an ovoid or subglobose cone; nutlets flat, ovate or obdli, with lateral wings or membranous borders.

A genus of approximately 20 species inhabiting moist situations throughout the northern hemisphere, in the New World extending as far south as Bolivia and Peru.

Flowers developed with the leaves in the spring; cone-stalks slender, longer than the cones; leaves shining; nutlets with a broad membranous wing.

1. A. sitchensis.

Flowers opening before the leaves in early spring or winter; cone-stalks shorter than the cones; leaves dull.

Leaves rusty pubescent beneath, at least on the veins; stamens 4; nutlets with a narrow somewhat membranous wing.

2. A. rubra.

Leaves green beneath, at least not rusty pubescent; nutlets merely margined.

Leaves rounded or cordate at base, doubly serrate and lobed; stamens 4.

3. A. tenuifolia.

Leaves mostly wedge-shaped at base, doubly serrate, not lobed except on vigorous shoots;

stamens 2 or rarely 3.

4. A. rhombifolia.

1. *Alnus sitchensis* Sarg.

Sitka Alder.

Leaves ovate, 3-6 in. long, acute at apex, rounded or wedge-shaped at base, shallowly lobed and doubly glandular-serrate, yellow green above, pale and shining beneath, glabrous or ~~scabrous~~ villous on the midrib and in the axils of the veins; leaf-stalks grooved, $1/2$ - $2/3$ in. long. Staminate aments with ovate apiculate scales; stamens 4. Fruiting aments on slender stalks in panicles, ~~scabrous~~ long $1/2$ - $5/8$ in. long, their scales truncate and thickened at apex; nutlets oval, about as wide as the wings.

A small tree sometimes 40 ft. in height with a trunk up to 8 in. in diameter, or more often a shrub forming thickets; young twigs puberulent and glandular, brown and shining, becoming much roughened the second year; winter buds long-pointed, $1/2$ in. long. ♀ (*A. viridis sinuata* Regel) Pacific Northwest, growing with dwarf willows and forming dense thickets along the border of the Arctic Circle, extending southward to the mountains of Oregon, and eastward to Alberta and the western slopes of the Rocky Mountains.

2. *Alnus rubra*.

Red Alder.

Leaves ovate, 3-5 in. long, acute at apex, wedge-shaped at base, crenately lobed and minutely glandular-dentate, tomentose when young, becoming dark green and glabrous or sparsely hairy above, rusty pubescent beneath;

Stanford University, Cal.,

Feb. 15. 1910.

Mr. C. R. Ball

Bureau of Plant Industry
Washington Dc.

Dear Mr. Ball:

I am preparing a paper along the lines of ^{Peters'} Washington Flora, on the Southern Cal. forms of trees and shrubs. In connection with this I should like your opinion on a few matters, if you feel that you can spare the time to look up the material for me. The following are in the National Herbarium:

Abrams and Mc Gregor 767, Distributed as S. macrocarpa, with which it has no affinities. Do you think it should be included with S. glauca or is it distinct and new?

Abrams & Mc Gregor 105: Dist. as S. lasiophis, a small shrub of the Transition Zone. Should it be separated? An Eminelli's specimen from the San Bernardino mts named by Rae as S. biplexis the same?

Do you recognize S. exigua as a species? Are there any specimens of this in Southern Cal. My own.

15-11-10
from L. R. Abrams

numbers 3679 and 3255 were so distributed, also Parish
4931, and Hall 2104. - let flow in 26 H

What is the Imperial Valley specimen I am forwarding
you by mail. This is a bush growing along irrigating
canals in this valley. It is an evergreen
from the Colorado Delta. It seems the same
as A. & E. G. Heeler 3684 from New Mexico - distributed
as S. fluviatilis. I have seen no other which
exactly like it in Southern Calif.

What is your opinion of ~~my~~ Dudley's S. nigra
vallicola published in my flora and named by
Britton in his "Trees" to a species.

Now I know this is asking a whole
lot, but I would appreciate your opinion on
these points very much. If I may carry
the question even farther. I should like your
opinion on the S. longifolia group in South
Calif. including Roulet's species and varieties.

Yours sincerely
L. R. Abrams.

Feb. 22, 1910.

Prof. L.R. Abrams,
Stanford University, Calif.

Dear Prof. Abrams:-

Yours of the 15th. inst. and accompanying package just received. I note your queries regarding Southern Calif. willows. I shall be most happy to look up the specimens cited and give you such conclusions as I arrive at therefrom if you are not wanting the information at once. You doubtless are aware that my work with the willows is all done privately and that my available time is limited. Just now I am finishing a paper on the species of this region and hope to give it completed by the end of this month. After it comes a bit of research promised to Prof. Macoun, which will require about a week. I could then take up your request and let you have the data by March 20th. if it suits you. Of course, I may be able to sandwich it in with these other lines and so get it done earlier; on the other hand, I may be delayed still more.

The specimen you send is *S. exigua* Nutt. as I understand that species. Has it a number?

Under separate cover I send copy of my treatment of the Rocky Mountain species.

Very sincerely yours,

My dear Mr. Ball:

It is very kind of you to favor me
the willow in question, and March 20th
will not be too late.

Abrams & Mc Geyor 105 *Lopholoma* Mch.
a "Transition Zone" species or form is giving
me much trouble just now. I sent it
to Dr. Hottel and Dr. S. L. Hottel, but
he holds it is very different. Do you think it
should be separated. I so have it in my
mind but hesitate to describe it without
the advice of someone better posted on the
genus.

Yours truly

W. B. Abrams

I am, friend, Yours

3/10/10.

April 2, 1910.

Prof. L.R. Abrams,

Stanford University, Calif.

My dear sir:-

Your are doubtless wondering about my promised notes on your Calif. willows. When I went to look them up I could not find them in the herbarium. Inquiry showed they were not yet mounted and search revealed that they were at the mounters. I have waited their return. Part of them came back today but the two willows were not among them. I hope for their arrival Monday.

I have gone over a great many sheets of *exigua*, so-called, and think that a good part of the far western material should be referred to *S. argophylla* Nutt. instead. There are about a dozen sheets of California so-called *exigua* and all of them, probably will need to be referred to other species.

It will be necessary for me to go over the whole *Longifolia* group, as represented in Calif., before I can give a critical opinion. Parish 4931 and Hall 2105 are probably *S. argophylla*. I will write you definitely as soon as your specimens are available. I think Prof. Rowlee limited the range of *S. argophylla* too much in his monograph.

Very sincerely yours,

April 20, 1910

My dear Mr. Ball:

Many thanks for your note
on Salix argophylla and S. exigua

I had feared that, all the continent
californic material ^{of this group} fell into two species.

The plant you call S. exigua. In
my opinion has migrated through
the influence of the Colorado River
from the Rocky Mts or Great Basin.

Can it ^{not} be possible that these specimens
from the Colorado Desert, and the Colorado
delta, and those of ~~the~~ ^{the} Columbia have come from the

same general locality - toward the
headwaters of these two rivers. If
this is true we probably should not
expect the willow in the coastal parts
of California or west of the Sierra Nevada.

4/20/1910.

Yours sincerely
W. A. Alarum

LELAND STANFORD JUNIOR UNIVERSITY

DEPARTMENT OF BOTANY

Stanford University, Cal., October 25, 1918.

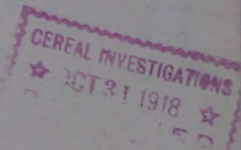
Mr. C. R. Ball,
Bureau of Plant Industry,
Washington, D. C.

Dear Ball:

How are the western willows progressing? As I worked with the Forest Pathology people all summer, I am a little behind schedule, and will not need the manuscript this Fall, but I want to get the first volume in press next Spring if possible. In the meantime, will you kindly send me a list of the number or approximately ~~such~~ of species. How about the drawings?

Yours cordially,

L. R. Alva



November 14, 1918.

Prof. L. R. Abrams,
Leland Stanford Junior University,
Stanford University, Calif.

Dear Professor Abrams:

Your letter of October 25 received. In reply, would say that I have not smelt, tasted or thought willows for months. As you probably know, we have been conducting two very strenuous Nation-wide campaigns, one for the control of cereal smuts, the other for the education of the people as to the relation between the common barberry and the black stem rust epidemics on wheat, in which we have located barberry plants in all states from the Rocky Mountains to the Allegheny Mountains and made a good start toward their eradication. This, added to our agronomic work in connection with the production of sufficient wheat to feed ourselves and the Allies, with corresponding increases in other cereals, has made it impossible for me to even consider anything else.

As you know, rifts are now appearing in the clouds and it is likely that before the winter is far advanced I will have time to think of willows again. In the meantime, I will endeavor to give you very quickly a list of the species and suggestions as to illustrations.

Very truly yours,

Cerealist in Charge.

GRB:BAS

LELAND STANFORD JUNIOR UNIVERSITY

DEPARTMENT OF BOTANY



Stanford University, Cal.,

Dec. 19, 1918

My dear Mr. Ball:

In regard to the drawings of the willows, we will be glad to have them done here, but we will have to ask you to send us a good botanical specimen of each species. Besides of the Arnold Arboretum has all our willow material at present. The drawings will be done by Mr. Atkinson, who is one of the best scientific illustrators that I know.

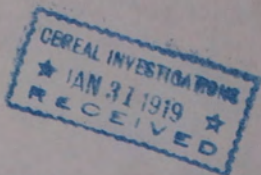
Yours cordially

L. R. Abraham

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LELAND STANFORD JUNIOR UNIVERSITY

DEPARTMENT OF BOTANY



Stanford University, California,

January 24, 1919.

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

Dear Mr. Ball:

I am sending a sample drawing of Salix laevigata for suggestions. This was made by Mr. Atkinson, who is making most of the drawings at this end. Unless you prefer to have the drawings done there under your personal supervision, we can arrange to begin the work as soon as the material is ready. As nearly all of our Salix collections are loaned to the Arnold Arboretum, you would have to forward us selected specimens for the illustrations.

Yours cordially,

L. P. Chas.

LELAND STANFORD JUNIOR UNIVERSITY

Stanford University, Cal.,

Dec. 8, 1919.

My dear Mr. Ball:

Well how are the willows coming on? Have you had an opportunity to think of them? I hope so for I am counting on you. We have not begun the drawings, but should very soon. If you can find the time to select out material we would prefer to use it in all cases, but if you haven't the time we will go ahead with the well known species, first, submitting to you doubtful or critical species.

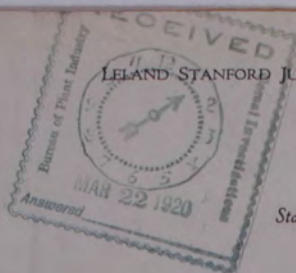
The willows come late in the volume, so it is not absolutely necessary that they be in when we go to press, which I hope now will be some time in February. If you can get them completed by the first of March, it will not be too late, but at this writing that seems to be the limit in full.

With the very best regards, I am,

yours very sincerely,

L. R. Alcock

DEPARTMENT OF BOTANY



Stanford University, California,

March 16-1920.

Dear Mr. Ball:

What is the status of Solix? I hope to go to press some time this spring, as most of the work is completed. If you are not in shape yet I can allow sometime, even until July 1st if I can count on it definitely by that time. I will in all probability go to press before that time, but as Solix comes near the end it will not be necessary to wait providing we can definitely count on it.

You know I must have you do this. it would be almost a crime not to incorporate your knowledge of western midwinters. If you have not had time to talk them seriously I hope you will at least prepare a key as Coville did for *Juncos*, with this on a basis I can prepare a tentative text for your revision.

Yours cordially
L. C. Abraham.

LELAND STANFORD JUNIOR UNIVERSITY

DEPARTMENT OF BOTANY

Stanford University, California,

July 15, 1920.

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

Dear Mr. Ball:

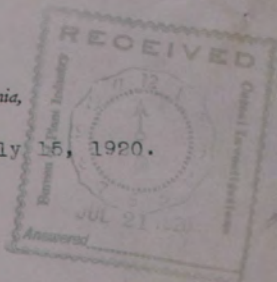
Since our interview in April 1919,
I have written a couple of times asking how the
Salix manuscript was progressing. I appreciate
that you are a mighty busy fellow, and do not
wish to seem impatient, but my work has reached
the stage where I must know when I can expect
the various manuscripts completed.

There is a possibility that I shall hold
off publishing for another year awaiting
price readjustments, but at present I am planning to go
to press this fall. In order that I may
complete my plans, I wish you would kindly inform
me as soon as possible just how much time
you need to wind up the work.

Hoping you can find time to give this
immediate attention, I am

very sincerely yours,

L. R. Alrum



August 20, 1920.

Prof. L. R. Abrams,
Department of Botany,
Stanford University, California.

Dear Professor Abrams:

Your letter of July 15, regarding the manuscript, was duly received. I was then, and still am, among the submerged tenth. I come up for air occasionally, but not for long at a time. I think that after September 15 I shall be able to do some work on matters of this kind, but certainly cannot before that date.

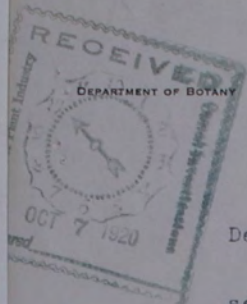
Very truly yours,

Cerealist in Charge.

CRB:RL

This doesn't sound very encouraging or even polite but you may know something of conditions here.

LELAND STANFORD JUNIOR UNIVERSITY



Stanford University, Cal.,

Oct. 2. 1 920.

Dear Mr. Ball:

Your very encouraging letter came several days ago, and I would have answered it at once, but I was waiting from day to day for a final decision concerning the publication of the flora. The high cost of printing had made rearrangements necessary, but it has been definitely decided to print the first volume this fall, and I expect to begin operations by the first of November. The willows will come at the tail end so it will give you some grace. I think we will reach them sometime in January, so I would like to count on them by the first of the year.

Please let me know at once if you want the drawings made out here. I can have my artist, Mr. Atkinson, take them up at once.

Very sincerely yours,

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October 8, 1920

Dr. L. R. Abram,
Department of Botany,
Stanford University, California

Dear Dr. Abram:

Your letter of October 2 is received and I note your decision on the publication of the flora.

I expect to be in California the later part of this month or early in November and may have time to run down to Stanford and see you while I am there. In any case, I think it will be well to undertake the drawing of Pacific Coast species under your supervision as my time is greatly limited by the pressure of work here.

Very sincerely yours,

Cerealist in Charge

CRB:MLT

LELAND STANFORD JUNIOR UNIVERSITY

DEPARTMENT OF BOTANY

Stanford University, Cal.,

Feb. 2, 1921.



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

Dear Mr. Ball:

I was very sorry not to see you while you were in California, for I wanted to talk over the Pacific Coast willows with you, especially the question of illustrations.

We are now reading proof on the Pteridophytes, so you see we are finally getting on. I will need the *Salix* manuscript by April first, and would appreciate it very much if I could have it earlier. I have done nothing about the drawings, preferring to hear from you, but we will begin on them in a few days, drawing the more well-defined species first.

Please let me know at your earliest convenience when I may expect the manuscript ready. If you are finding it difficult to write up the descriptions, perhaps I could do that for that of the species if you can furnish a key.

With best regards, I am,
Very truly yours

L. B. Adams

February 26, 1921

Prof. L. R. Abrams,
Department of Botany,
Leland Stanford Junior University,
Stanford University, Calif.

Dear Professor Abrams:

Your letter of February 2 has been lying untouched, while I was finding out where I stood. It looks now as if I will be able to give time to the preparation of this manuscript during March. In fact, I did not write you until I had made a beginning. I tackled the worst job first, starting with the long-leaved species in an endeavor to find out just what should be recognized in the mass of mixed-up material. I have very nearly finished my study of the herbarium material in this complexed group, and feel that I can get the whole thing ready in a month.

Very sincerely yours,

Cerealist in Charge.

GRB:LT

LELAND STANFORD JUNIOR UNIVERSITY

DEPARTMENT OF BOTANY

Stanford University, Cal.,

March 3, 1921.

Dear Ball:

Your letter announcing the good news came yesterday. I am delighted to know that you are going to be able to work up the willows. We are in press now, but as we have to put everything into page form, on account of the cuts, it is a slow process. If you can get your manuscript to us sometime in April or the First of May it will be in time to cause no delay.

A couple of years or so ago I sent you a sample drawing of a willow for criticism. If you will look this over and ~~make~~ send it back with your suggestions, we will begin the drawings. I would like to get these done long enough ahead so we can send them back to you for inspection before they go to the engraver.

Very sincerely yours,

L. C. Cramer



March 18, 1921

Mr. L. R. Abrams,
Leland Stanford Junior University,
Stanford University, California.

Dear Mr. Abrams:

Your letter of March 3 was duly received, but a reply has been neglected. However, the work with the manuscript is progressing very well.

I am returning under separate cover the drawing and think that the illustration was fairly satisfactory in most points. On one of the small obovate expanding leaves is the characteristic tuft of hairs shown protruding from beneath the cuspidate point. The stipules, however, appear to be drawn as if pilose or strigose at the margins when in reality they are glandular.

I am just completing the paper for the Botanical Gazette in which I will record some of my conclusions reached in studying the material and in preparing descriptions for the Flora. I am puzzled by some very narrow leafed forms of *laevigata* or *lasianдра*, or both which occur in the Sierras or the valleys East of them. I am not sure what to do with some of this material and would very much like to have more specimens for study. In the Journal of the Arnold Arboretum, Volume 1, Snyder refers to some apparently similar specimens in his discussion of *lasianдра* in the second paragraph on page 17 and again at the bottom of page 18 and top of page 19 in his discussion of variety *landifolia*. If you are able to send me any of the specimens cited or any material similar, I will greatly appreciate it. In the Owens Valley I collected a couple of a very narrow leaf willow which I thought was *complanata*, but which appears more closely related to *laevigata*. It has, however, some fairly distinct glands on the petiole. A specimen of *laevigata* collected by M. E. Jones at Bishop in Inyo county some years ago has the same narrow leaves apparently without glands. I would very much like to get enough of these narrow leafed forms of the two species to find out what they really represent.

Very sincerely yours,



LELAND STANFORD JUNIOR UNIVERSITY

DEPARTMENT OF BOTANY

Stanford University, Cal.,

April 28, 1921.

Dear Mr. Ball,

These drawings, 23 in number, are all we feel safe in making from our material. Please look them over for suggestions or corrections. For the remaining species you had better send on material. We probably have most of them, but I think it would be better for you to send on selected sheets.

My printers have been eternally slow or I should have been inquiring before this how you are getting on with the descriptions. I see now that I will not need them before early June, but I should like to have all the drawings out of the way next month (May).

Yours respectfully,

L.R. Ahnab

*If there is a question about identification
we can send in any species drawn.
Simply give us the name and number
of botanical sheet, found on back of
drawing. L.R.A.*

May 6, 1921.

Prof. L. R. Abrams,
Department of Botany,
Leland Stanford Junior University,
Stanford University, Cal.

Dear Professor Abrams:

Your letter of April 28 and accompanying drawings are received. I will look these over within the next day or two, and write you concerning them.

While I have not been able to complete the manuscript, I have been working rather steadily on other lines necessary to its satisfactory preparation. As a result, I have sent two papers to the Botanical Gazette, and have completed the identification of a mass of material from the Rocky Mountains in Canada, which was necessary to a better understanding of forms found in Washington and Oregon. The decks are now clear for the completion of my contribution to the Illustrated Flora of the Pacific Coast.

I was nearly taken off my feet about a week ago by the arrival of a box weighing something less than a ton. I have been afraid to open it, but hope to overcome my feelings within the next few days.

Very truly yours,

SPECIMENS SENT FOR DRAWINGS.

<i>caulata</i>	3 (Jones 6561, Jones 1750 Stokes June 8, 1901 -All National Herbarium
<i>farrae</i>	2(Sauson 228, Macoun 68,900) GRB
<i>pseudomyrsinites</i>	3(Tidestrom 1948, Ingram 337) Sanson 2054-2073) GRB
<i>piperi</i>	2(Flett, 1875) GRB (Walpole 2151) National Herbarium
<i>pedicellaris</i>	2(Flett 1883, Forbes)GRB
<i>cascadensis</i>	1(Merrill and Wilcox 1074)GRB
<i>(planifolia) monica</i>	3(Jeps. 3308, Goodding 1800, Ramalay 6369) GRB
<i>pennata</i>	2 Sukedoff (type, frag. and Photo) GRB
<i>nivalis</i>	1 (Flett Mtr (GRB.
<i>drummondiana</i>	2 (Sanson 2072) 2076) GRB. (Standley 17907) National Herbarium
<i>bella</i>	2 (Piper 2922) GRB.
<i>delnortensis</i>	0 See list by Schneider in Journal Arnold Arboretum

1:97. 1919.

May 18, 1921.

Prof. L. R. Abrams,
Stanford University, California.

Dear Professor Abrams:

I returned to you by insured parcel post this morning the drawings, which you submitted for inspection, and would make the following comments concerning them. The numbers preceding the names refer to the numbers on the accompanying check list of species to be included.

8 parishiana This species has long stigmas.

12 argophylla The leaves are silky villous.

14 mackenziana The drawing of the twig is fair, but the capsules are 5 mm long, and the pedicels 3 to 4 mm, and the drawings should be in proportion. The staminate portion of this drawing apparently is lasiandra or audata, as the ament is broad with a long peduncle and 5 stamens instead of 2.

17 monochroma The drawing is good except that the pedicel is proportionately too long. The capsule is 4 to 4.5 mm, and the pedicel 2 to 3 mm. The style in both mackenziana and monochroma should be .5 to .7 mm long.

18 lasiolenis The nearly obovate leaf shown approaches that of the variety bigelovii. Typical leaves of the species are narrower. The aments, also, usually are nearly sessile.

20 barclayi The pistillate ament ^{in the drawing} is rather too long peduncled to represent an average in dimension. The capsule is 6 to 7 mm, and the style 1 to 1.5 mm.

21 commutata The leaves are tomentose. The small leaves in the drawing are O. K., but the full grown leaf to be typical should be more distinctly ovate. The stamens should be two.

22 eastwoodiae The style in this species is 1 mm long.

25 hookeriana The pistillate ament should be stouter, as the capsules are about 6 mm long, and the style is more than 1 mm long.

36 sitchensis The mature leaves usually are more broadly oblanceolate or obovate.

38 breweri The style is about 1 mm long.

40 scouleriana In this species the stigmas are long, considerably longer than the style.

41 hebbiana The scale should be linear and acute.

In general, I will say that the drawings are as satisfactory as can be accomplished on that scale and in large numbers. It will be a real help to the user of the volume, if the relative proportion of pedicel, capsule, and style, can be maintained. In these drawings very little attempt has been made to show the characters of the style. There was one drawing in which this had been done well. However, I neglected to note which one before remailing them. I think it was sitchensis. Many of the notes given above are designed to bring out these proportions.

The first twelve species in the accompanying check list, all have very short styles, those of the long lived section being nearly ~~obsolete~~ *obsolete*. The next seven species, numbers 13 to 19 inclusive, have styles approximately .5 to .7 mm in length. The next seven, numbers 20 to 26 inclusive, have styles about 1 mm long in the first five species, and 1.5 mm in the last two. Number 27 again is short styled. Numbers 28 to 39 inclusive have long styles, mostly 1 mm or a little more, while the last seven species, numbers 40 to 46 inclusive, have short styles about .5 mm or less. Those of the last 3 are very short. I believe that this general difference can be shown more clearly in the drawings of the enlarged capsule than has been done in the plates submitted.

I think that you will have material of nearly all of the species for which the drawings have not yet been made. The star at the right hand margin indicates that the drawing has been sent to me. The drawing of number 4 was sent some months ago.

Very truly yours,

CRB/CAR
1-Incl.

I send also page 1 of the Key, and text for the first 5 species, and this variation. I have had no time to accord range with life zones. CRB.

June 11, 1921.

Dr. L. R. Abrams,
Stanford University, Cal.

Dear Dr. Abrams:

Did you get the package of illustrations which I returned to you by registered mail and the accompanying letter which contained my suggestions concerning them, and also some sample pages of the text I am preparing? I certainly hope you did.

I am working away steadily at the varietal descriptions and keys and have been living in fear that almost any mail would bring me the sad news that they positively must be in your hands in about six days. I am not yet done but I am getting so near the end that such a notice would not worry me very much.

In my treatment of ^{each} this species I am trying to embody all the notes I have made during the past ten years in which I have published very little. I want this treatment to be up to date not only for the sake of the western botanists who will use it but because I wish to be able to use it myself with the feeling that the statements made as to characters and distribution are the most accurate possible. To this end I am going over large numbers of specimens. In fact I am pretty nearly revising all the western material in my own and the ~~National~~ herbaria, and that, by the way, is some job. At my present rate of progress, I should have the work done by June 20, or certainly by June 25 at the latest.

Very truly yours,

CRB/CAR

Cerealist in Charge.

Carmel-by-the-sea
California

June 30, 1921.

Dear Ball,

Mr. Atkinson and I went over the returned drawings of willows noting the suggestions you made. He is making the changes, and drawing other species represented in our collections. I find we have no material, ~~that~~ I can be sure of, of the following species:

Salix caudata
farrae
pseudomyrsinitis, (we have ♀ flower only)
piperi (have fls, but no mature leaves)
pedicellaris
cascadensis
planifolia monica
pennata
nivalis
drummondiana (Some)
bella 2
delnortensis 0

If you are able to forward specimens of these, please send them to Mr. W.S. Atkinson, Stanford University as I am down here for the summer teaching at the Hopkins Station. My printers have promised to get busy on the book this summer, but I expect it will be six weeks or more before we shall need your manuscript.

Yours respectfully,

L.P. Abrams



Digitized by Hunt Institute for Botanical Documentation

July 1, 1921.

Dr. L. R. Abrams,
Department of Botany,
Stanford University, California.

Dear Doctor Abrams:

At the end of June 30 I had completed my review of material necessary for rewriting descriptions of all the species to be included in the Illustrated Flora. As soon as the keys are finished the manuscript will be mailed to you. I have received no reply to my last two letters but assume that you are submerged in work and that the time had not arrived when the manuscript must absolutely be in your hands or you would have let me know.

I would like your judgment as to whether or not Salix drummondiana should be included perhaps with an explanatory statement. Its general range seems to be from northern Alberta to northwest Montana and sparingly in northern Idaho where I have a specimen which I believe represents this species collected at Priest Lake over near the Washington boundary. This does not bring it within the range of the Illustrated Flora. My reasons for suggesting its inclusion are two, namely, that it occurs so very close to the border and that while published many years ago it was lost to science for a long while and therefore has appeared in but few manuals and is known to comparatively few collectors.

I have included it in the species treated and if I mail the manuscript before I hear from you I will send it along.

Very truly yours,

CRB/GAR

Carmel, California
July 10, 1921.

Dear Mr. Ball:

Answering your letter of July 1:

I think it well worth while to include *Salix drummondiana*. Be sure to send along a specimen for illustration. I am anxious to finish up all the illustration work as soon as possible, and will appreciate it very much if ~~lettwilltsandevndane~~ specimens I listed in my you will forward at your earliest convenience the specimens still to be illustrated. I presume you received a list of these which I mailed a few days ago.

It is good news to hear that you have about wound up the manuscript. It will undoubtedly be ready in ample time. My printers have been slower than molasses, much slower, for so far I can detect no movement whatsoever, nothing but rosy promises. However I am assured that they are going to take care of it this summer, and I am daily expecting proof to come in in wholesale lots.

yours respectfully,

L.R. Chas.



August 1, 1921.

Professor L. R. Abrams,
Stanford University
California.

*) Sent to Carmel by
the Sea*

Dear Professor Abrams:

because

Your two letters of June 30 and July 10 are duly received. I have scandalously neglected to send the material for the drawing boxes and felt that I would surely be able to work up the material which you shipped me by express some months ago. I have finally succeeded in doing this and the result is Salix lasiantha variety abramsii, a new variety in which I take much delight in naming in your honor. The type is your number 4493 collected near the Sentinel Hotel in the Yosemite Valley.

I am returning the box of material to you by express, today, at Stanford University and am writing Mr. Atkinson that the additional material for the drawings is in the same box. I segregated and named the sheets which represent the new variety and they are in one bundle by themselves in the box. Through Mr. Atkinson I am sending also a check list of the sheets, most of which are from my own collection, but a few from the National Herbarium.

a copy for you Very truly yours, *and enclose*

GRB:F

Cerealist in Charge.

SPECIMENS SENT FOR DRAWINGS.

L. L. R. Abrams
8/1/21

caulata	3(Jones 6561, Jones 1750 Stokes June 8, 1901) All National Herbarium
farrae	2(Sanson 228, Macoun 68,900) CRB
pseudomyrsinites	3(Tidestrom 1948, Ingram 337) Sanson 2054-2073) CRB
piperi	2(Flett, 1875) CRB (Walpole 2151) National Herbarium
pedicellaris	2(Flett 1883, Forbes) CRB
cascadensis	1(Merrill and Wilcox 1074)CRB
(planifolia)monica	3(Jeps. 3308, Goodding 1800, Ramaley 6369) CRB
pennata	2 Saksdorf (type, frag. and photo) CRB
nivalis	1(Flett Htr) CRB
drummondiana	2(Sanson 2072) 2076) CRB. (Standley 17907)National Herbarium
bella	2(Piper 2922) CRB
delnortensis	0 See list by Schneider in Journal Arnold Arboretum 1:97. 1919.

August 2, 1921.

Mr. W. S. Atkinson,
Botanical Artist,
Stanford University,
California.

Dear Mr. Atkinson:

In accordance with a request from Professor Abrams, I am today shipping additional material to be used in making Salix drawings for the Pacific Flora. I enclosed a check list of the specimens herewith. I suppose that the University Herbarium has material of some of these under other names. You probably have caudata under the name of fendleriana, pedicellaris under the name myrtilloides, and cascadensis under the name tenora. Some of the material is not very good but is the best I could lay hands on quickly. Most of it is from my own collection and some from the U. S. National Herbarium. I could have supplied caudata from my own, but forgot it and so sent National Herbarium material when I got from them the specimens of piperi and drummondiana.

I regret that I have no specimens of delnortensis nor are there any in the National Herbarium. You will find the list of the specimens cited by Schneider in the Journal of Arnold Arboretum.

The specimens for drawing are coming by express in one bundle of five in a large box, addressed to Professor Abrams. I trust they will arrive safely and will prove suitable for illustration.

Very truly yours,

CRB:LF

Cerealist in Charge.

August 2, 1921.

Mr. W. S. Atkinson,
Botanical Artist,
Stanford University,
California.

Dear Mr. Atkinson:

In accordance with a request from Professor Abrams, I am today shipping additional material to be used in making Salix drawings for the Pacific Flora. I enclosed a check list of the specimens herewith. I suppose that the University Herbarium has material of some of these under other names. You probably have caudata under the name of fendleriana, pedicellaris under the name myrtilloides, and cascadensis under the name tenera. Some of the material is not very good but is the best I could lay hands on quickly. Most of it is from my own collection and some from the U. S. National Herbarium. I could have supplied caudata from my own, but forgot it and so sent National Herbarium material when I got from them the specimens of piperi and drummondiana.

I regret that I have no specimens of delnortensis nor are there any in the National Herbarium. You will find the list of the specimens cited by Schneider in the Journal of Arnold Arboretum.

The specimens for drawing are coming by express in one bundle of five in a large box, addressed to Professor Abrams. I trust they will arrive safely and will prove suitable for illustration.

Very truly yours,

CRB:LF

Cerealist in Charge.

August 6, 1921

Professor L. R. Abrams,
Stanford University,
California.

Dear Professor Abrams:

I am sending today under separate cover, by registered mail, the manuscript covering the genus *Salix* for the proposed Illustrated Flora of the Pacific Coast. I trust that there is still plenty of time for your use. One thing I am sure, by taking sufficient time to resurvey all the groups concerned, I have been able to make it more complete, and, therefore, more useful than it otherwise could have been. It includes forty-six species and fifteen varieties. I believe that this is the largest number of species that has been presented in any Flora so far issued in the United States. While I have not ascertained accurately, I believe that it is more than half the species that occur in the United States.

Very sincerely yours,

CRB:NMK

Cerealist in Charge.

P. S. Pages 6 and 8 to 15, inclusive were sent you previously. I enclose a check list of the numbers assigned to the different species included. I think the numbers of the species on the missing pages are different on this list than on the pages sent you, and I would like to have you arrange them in the order of this check list before including them in the manuscript.

ILLUSTRATED FLORA OF THE PACIFIC COAST.

Working Plan for Contributors.

GENERAL CHARACTER.

The general character of ILLUSTRATED FLORA of the PACIFIC COAST will be patterned after Britton and Brown's Illustrated Flora. The work will comprise descriptions, keys, synonymy and distribution of the ferns and flowering plants, with a text illustration of each species. There will be three or four imperial octavo volumes; the initial one, comprising the ferns, gymnosperms and monocotyledones, will be undertaken at once, and it is hoped to have it completed in 1918.

AREA.

The area covered includes the three Pacific Coast states, Washington, Oregon and California.

ILLUSTRATIONS.

Arrangements have been made for using the illustrations of species in "Britton and Brown" that are found on the Pacific Coast. On account of uniformity therefore all the illustrations will be of the same general type and size as those in that work. The drawings will be made natural size and will include the entire plant or, in case of the larger plants, the most characteristic parts. In addition to the general habit sketch, detailed enlargements will be made of the characteristic essential parts.

TEXT.

The general plan of the text will follow that of "Britton and Brown," the chief points of difference being as follows:

1. Family descriptions:--The family descriptions will be followed by a paragraph briefly stating the number of genera and the geographical distribution.

Example: "A family of six genera, inhabiting the northern hemisphere."

ILLUSTRATED FLORA OF THE PACIFIC COAST.

2

2. Generic descriptions:--At the end of the paragraph giving the number of species and the distribution the type species will be given as a concluding sentence.

Example: "Type species, Limnanthes douglasii R.Br.

3. Specific descriptions:--The metric system will be used, for the botanical descriptions, but feet will be used in expressing altitude. All specific names will begin with a small letter.

4. Distributional notes:--On account of the diversity of the Pacific Coast more detailed distributional notes are necessary than are employed in eastern manuals. The introduction of Merriam's Life Zones is the most concise way of giving a clear conception of the distribution. Two examples are given, the first being for a widely distributed species, and the second for a restricted species that demands more explicit information.

Example 1. "Mountain meadows of the arid Transition Zone; eastern Washington to southern California, Montana and Colorado."

Example 2. "Chaparral of the Upper Sonoran Zone; southern California, in the coastal ranges from Santa Barbara to the Santa Monica Mountains."

5. Type locality:--The type locality will be given as the concluding sentence to the paragraph on distribution. Whenever practical the original will be quoted, but in case this is too general an endeavor will be made to ascertain where the type specimen was collected.

6. Trinomials:--Trinomials will be employed whenever circumstances warrant, but they will not be illustrated. Further divisions as "sub-varieties" and "forms" will not be recognized as such cumbersome combinations do not give a clear comprehensive classification. It is believed that it is not within the province of a general descriptive manual to describe all minor variations, such as "ecological forms," "elementary species," and "races."

7. Nomenclature:--The rules of nomenclature adopted at the Philadelphia meeting will be followed, with the understanding that the rule governing varietal names shall be interpreted to mean that varietal names shall not replace specific names on account of priority.

Stanford University. Aug 12. 1921

Dr. C. R. Ball, cerealist.
Washington,
D. C.

Dear Sir,

I am in receipt of yours of
Aug 2, also specimens for drawing sent by
express to Dr. Abrams. I am sure Dr. Abrams
will be very glad to get the material of
which we were short. The drawing will
probably be ready for him on his return
to the university. Sep. 1.

Very truly

W. S. Ackerman
Stanford University



STANFORD UNIVERSITY

DEPARTMENT OF BOTANY



STANFORD UNIVERSITY, CALIFORNIA,

~~Carmel~~

Aug. 19, 1921.

Dear Mr. Ball,

Your manuscript came in due time, and I have just been going over it. You have done an excellent piece of work, one that will be of great service to the botany of the west. I congratulate you especially since you have had to do this under pressure of your many other duties.

Word came yesterday from Mr. Atkinson relative to the arrival of your box of willows. He will not be able to make the drawings at once, but as soon as he does I will send them on to you for criticism.

I am very grateful to you Mr. Ball for undertaking the work, and I hope you are as pleased as I am that you were able to carry it through.

Hoping I may be able to be of some small service to you sometime, not that I can ever equal what ~~xxxxxx~~ you have done, but at least that I may show my good will.

Yours respectfully,

L R Albram

September 19, 1921.

Prof. L. R. Abrams,
Stanford University,
Stanford University, California.

Dear Professor Abrams:

Your letter of August 19 and one from Mr. Atkinson on date of August 12 I find awaiting me on my return from the West. I am glad to know that the material was received and trust that it will enable you to make satisfactory drawings of the remaining species. I will be glad to see them at your convenience.

I greatly appreciate your kind words concerning the quality of the manuscript submitted. I have tried to give an entirely new survey to each species involved in order that the treatment might be up to date in both description and distribution. I am ashamed that I was not able to resolve the habitat records into terms of biologic zones. I may be able to do something in that direction yet as I wish to do it for my own information.

In the meantime let me say that you are under no obligation to me in the matter. I had intended for sometime to make a more definite study of the Coastal species as I have previously done for the Rocky Mountains and the Pacific Northwest and I would not have done it yet had not this opportunity exerted its pressure on me. There are a few relatively rare California species of which I will be very glad to obtain herbarium material should the opportunity to collect them come to you. Among these are breweri Bebb, dennortensis Schneider, parishiana Rowlee, jeppsonii Schneider, and prestera Schneider.

When this manuscript gets to the galley-proof stage I shall wish to order 100 separates or reprints.

With kindest regards, I am

Very sincerely yours,

LELAND STANFORD JUNIOR UNIVERSITY

DEPARTMENT OF BOTANY

Stanford University, Cal.,
Oct 19, 1921.

Dear Mr. Ball:

I have been checking up the illustrations of the willows with Mr Atkinson and find we need a little more material in one or two instances:

Salix pseudomonticola no material
farrae no staminate flowers.
cascadensis " "
drummondiana " "
jepsoni " "
delnortensis no material

I note what you say about *delnortensis*, and I presume we can get this and probably *jepsoni* at U. C. If possible I wish you would send us the needed material of the others.

In the key I do not see *wolfii* mentioned.

Yours respectfully,

L. R. Abrams



January 10, 1922

Prof. L. R. Abrams,
Leland Stanford Junior University,
Stanford University, California.

Dear Professor Abrams:

Your letter, transmitting seed of *Rhamnus californica* for the crown-rust investigation, reminds me that I have not heard from you in some time concerning the progress of the illustrated flora of the Pacific Coast. I have a suspicion that a request for some illustrated material is still on my desk at home. For more than two months I have been entirely unable to give any time or attention to personal scientific matters as the pressure of various new things in the Department has kept me more than occupied. I am hoping, however, to be able to clear up several packages of willows sent for identification and other correspondence relating to willows which has lain neglected for some weeks. In the meantime, I hope that the better conditions obtaining in the printing trade will enable the progress of the printing of a new flora.

Very sincerely yours,

CRB/CAR

Cerealist in Charge.

Washington, D. C.

Corn Investigations

Division of Plant Industry
United States Department of Agriculture

Corn Investigations.

Washington, D. C.,

[illegible]

JUN 10 1955

February 25, 1922

Dr. L. R. Abrams,
Department of Botany,
Stanford University,
Palo Alto, Calif.

Dear Doctor Abrams:

Among some willows collected by Mr. C. V. Piper in California last May I find an excellent and undoubted specimen of *S. hookeriana* Barr. from Eureka in Humboldt County. I do not recall that this species has been credited from California previously and I find by reference to my manuscript covering willows for the Illustrated Flora of the Pacific Coast that I have given the southern limit of its range as Coos County, Oregon. I would suggest, therefore, that on page 43 the following language be added after the word "Oregon" in the last paragraph discussing distribution of the species:

"...and Humboldt Co., Calif. (Eureka, C. V. Piper 5027, May, 1921);"

For your convenience I am enclosing this same language on a separate sheet so that you can cut it and paste it at the desired place. You may leave out the reference to the location and the specimen if you prefer, although as this seems to be the first recorded and perhaps the only collection in California, I thought it might be well worth while to indicate it more specifically as I have done above. The specimen mentioned is now in my own herbarium, but as the label accompanying it is one of the printed labels of the California Academy of Sciences I suspect that Miss Eastwood also may have material there.

Very truly yours,

Cerealist in Charge.

CRB:ahbk

March 15, 1922.

Dr. L. R. Abrams,
Stanford University, California.

Dear Doctor Abrams:

I am inclosing herewith a rewritten copy of page 4 with wolfii idahoensis inserted in the key. I am glad that you called my attention to this omission. The reason for numbering it 20a instead of 20 is that it is only a varietal rank and I felt it desirable to indicate a variety by the sub-letter rather than to give it an entire number. You are at liberty to make it agree with the practice in the remainder of the volumes.

Very truly yours,

CRB/CAR
Incl.

Cerealist in Charge.

Leaf blades hairy on at least one side.

Aments sessile or subsessile.

Blades oblanceolate to narrowly obovate; styles 0.5 mm.

long 19. lasiolensis

Blades broadly oval; styles 1 mm. *long.* 27. hookeriana

Aments on leafy peduncles; styles 1-1.5 mm. long.

Blades thinly tomentose above 22. barclayi

Blades tomentose on both sides 23. commutata

Capsules hairy (See also 19a, 22, 23b, and 27a)

Styles distinct, 0.5-1 or 1.5 mm. long.

Leaves more or less glabrate at maturity.

Prostrate creeping shrubs, blades dull.

Blades glabrous, green beneath 28. cascadensis

Blades hairy on margins, glaucescent beneath . . 29. petrophila

Erect or ascending shrubs; blades bright green.

Blades broadly elliptic ovate, 1-3.5 cm. long. . 30. monica

Blades oblanceolate to obovate, 3-6 cm. long. . 31. pennata

Blades lanceolate to narrowly elliptical, 4-9

cm. long 32. lemonii

[Leaves densely hairy (at least beneath) at maturity.

Branchlets always pruinose; blades silvery pubescent beneath

Pubescence short; scales thinly pilose 33. subcoerulea

Tomentum long; scales densely lanate 34. bella

Branchlets never pruinose.

Styles 0.7-1.5 mm. long; stamens 2.

Leaves silky villous on both sides

Leaves tomentose on both sides.

20a. wolfii ida-
hoensis

Aments leafy - pedunculate 24. eastwoodiae

Aments subsessile 25. orestera

September 5, 1922

Dr. L. R. Abrams,
Department of Botany, Stanford University,
Stanford University, Calif.

Dear Doctor Abrams:

Some time ago I received the package containing willow specimens sent you for making illustrations for The Illustrated Flora of the Pacific Coast. I found them all present and in good condition and I thank you for the care taken of them in handling and shipping.

I now have the page proof, which I am reading carefully and of which I will return half or more today, under separate cover, and take the remainder with me on a field trip on which I am just starting, and return it within two or three days.

I note your suggestion that the key on page 488 is not completely dichotomous. Besides the place noted by you there are two others farther down which I have indicated on the proof where a trichotomous arrangement exists. I do not believe that this will make the key difficult to use and would much prefer to see it stand as written. If necessary, however, the dichotomy can be preserved by simple additions and indenting what follows one more space.

Most of your other questions I think I have answered on the proof itself.

I note your desire for specimens with which to illustrate No. 21, Pseudotsuga monticola, and send you, under separate cover, six specimens from my herbarium, which should give you a sufficient selection of material.

I would like to obtain from the printer 100 reprints, with cover, of this portion. I note that it now contains 21 pages and that with the expansion you have indicated on pages 504 and 505 it will become 22 pages. This will require the use of 24 pages of paper, and therefore I would suggest that Populus be included also, as the missing portion of this genus probably occupies less than two pages, so that the total will not exceed 24 pages. This will give me the family complete with the family description. If you will be kind enough to place the order for 100 copies, with cover, I will greatly appreciate your courtesy.

Recd
Oct
1922

I certainly hope that this will not be overlooked, as it will be too bad not to have any separates of this portion for use among the numerous specialists and collectors who are so helpful to me. If you do not wish the separates released until the volume is issued that is all right with me. I do not wish to make any complications or to cause another mixup of any citation, such as occurs with Bebb's Willows of California. I forgot to mention that the words "and published with the permission of the Secretary" do not need to appear on papers which do not in any way concern the official work of Department employees.

With kindest regards, I am,

Very sincerely yours,

(C. R. Ball)
Cerealist in Charge.

Digitized by Hunt Institute for Botanical Documentation

CRB:ahbk

Dr. L. R. Abrams
Stanford Univ Calif

5-X-27

SPECIMENS SENT FOR DRAWINGS.

caudata	3(Jones 6561, Jones 1750 Stokes June 8, 1901) All National Herbarium
farrae	2(Sanson 228, Macoun 68,900) CRB
pseudomyrsinites	3(Tidestrom 1948, Ingram 337) Sanson 2054-2073) CRB
piperi	2(Flett, 1875) CRB (Walpole 2151) National Herbarium
pedicellaris	2(Flett 1883, Forbes) CRB
cascadensis	1(Merrill and Wilcox 1074)CRB
(planifolia)monica	3(Jeps. 3308, Goodding 1800, Ramaley 6369) CRB
pennata	2 Saksdorf (type, frag. and photo) CRB
nivalis	1(Flett Mtr) CRB
drummondiana	2(Sanson 2072) 2076) CRB. (Standley 17907)National Herbarium
bella	2(Piper 2922) CRB
delnortensis	0 See list by Schneider in Journal Arnold Arboretum 1:97. 1919.

March 10, 1923.

Prof. L. R. Abrams,
Department of Botany,
Stamford University,
California.

Dear Professor Abrams:

I have received from Professor Munz at Pomona College, Claremont, some willows collected by him in the San Bernardino mountains last spring. One of them is a form of *Salix orestera* Schneider, but differs in having very long and very narrow leaves, about 12 mm. x 8 cm. I think that this will prove to be worthy of description ~~as~~ a new variety, but so far I am unable to find any other specimens which seem to represent the same variety.

I will be glad if you will look through your specimens of *orestera* and see if you have anything that accepts this description. According to the specimens cited by Schneider, *orestera* is not found south of the southern end of the Cascades. Have you any material from the San Bernardino, San Jacinto, and other ranges, and if so, does it show a tendency toward long and slender leaves?

Should this prove to be worthy of varietal rank, is there room and still time to insert it under *orestera* in your forthcoming Flora of the Pacific Coast? It will not take more than two or three lines of type?

Appreciating your consideration of these questions, with kind regards, I am

Very sincerely yours,

C. R. Ball,
Cerealist in Charge.

CRB:SS

LELAND STANFORD JUNIOR UNIVERSITY

DEPARTMENT OF BOTANY

Stanford University, Cal.,

March 23, 1923

Dear Ball,

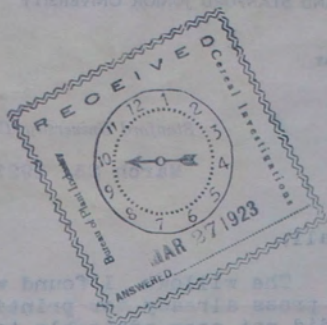
The willows I found were on the press already for printing so it did not seem advisable to hold them up until I could hear from you. I added the San Bernardino Mountains to the distribution and let it go at that.

We have just one specimen in our collections from the San Bernardino mountains. This was collected by Geo. B. Grant 6353 on High Creek, 9500 feet, Mt. San Geronimo. July 24, 1904. It was determined by Parish as S. flavescens and by Schneider as S. cresteria. This specimen has leaves a little narrower than many of the Sierra plants, but a specimen from Fresno County has even narrower leaves. The branches are a glossy ~~xxxx~~ brown and lighter colored.

Do you want your ~~xxxx~~ reprints indexed. The printers have not given me a price, but apparently it will not cost you much more for they can simply pull it out of the main index. I am giving a full index to species synonyms. I am also running a separate index to the English names, but I assume you would not care to have this included.

Yours truly,

L. B. Chasman



Dear Sir,
The specimens found were
on the same site as the
one I did not seem to be able to
hold them up until I could hear
from you. I added the San Bernardino
mountains to the distribution area.
Let it be at that.
We have just one specimen in
our collection from the San Ber-
nardine mountains. This was
collected by Geo. A. Grant 1922
on High Creek, 9500 feet, San
Bernardino, July 24, 1922. It was
determined by Farish as *S. flavescens*
and by Schneider as *S. oregonensis*.
This species has leaves a little
larger, but a specimen from Fresno
County has even narrower leaves.
The branches are a glossy green
brown and lighter colored.

Do you want your index reprints
indexed. The printers have not
given me a price, but apparently it
will not cost you much more for
them than simply pull it out of the
main index. I am giving a full in-
dex to species synonyms. I
am also running a separate index to
the English names, but I assume
you would not care to have this in-
cluded.
Yours truly,
C. L. ...

April 7, 1923

Prof. L. R. Abrams,
Department of Botany,
Stanford University,
California.

Dear Professor Abrams:

Your letter of March 23 was duly received and I greatly appreciate your attention to the possible occurrence of orestera in southern California. I have not had much time to spare in studying willows recently but I feel certain that the specimen about which I wrote you does not belong to orestera, but rather, is closely related to lemmonii. I find nothing exactly like it in the material of that species here in Washington. There is a single other specimen here from the San Bernardino Mountains but it is too immature to determine what it would look like at maturity.

I hope within the next few days to be able to study this material sufficiently to decide what I will do with it.

I will be glad to have the index of salix included with my separates if this can conveniently be done.

Thanking you for calling this to my attention, I am

Very truly yours,

C. R. Ball,
Cerealist in Charge.

CRB-mik

STANFORD UNIVERSITY

DEPARTMENT OF BOTANY

STANFORD UNIVERSITY, CALIFORNIA,

May 19, 1923

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

My dear Mr. Ball:-

I sent you a copy of the first volume of the Illustrated Flora on the fifteenth. I think you will also be relieved to see this out at last.

The reprints of Salix, including index, will be run off in a few days and I shall forward them to you as soon as possible.

Thank you again for your hearty cooperation, I am

Yours sincerely

L. R. Abrams

L. R. Abrams,
Professor of Botany

LRA:HG



May 22, 1923.

Dr. L. R. Abrams,
Department of Botany,
Stanford University, California.

Dear Doctor Abrams:

I am just in receipt of your complimentary copy of Volume I of the Illustrated Flora of the Pacific States, bearing preface date and inscription date of May 15. Please accept my hearty thanks for your prompt courtesy in sending this volume and my most sincere and hearty congratulations on its publication. As it arrived only a few minutes ago, and I am exceedingly busy with administrative matters, incident to reclassification, promotion, and other factors influencing the personnel, I naturally have not had time to read it, but I have glanced through the text and it looks good to me. I believe that the illustrations in general are a distinct advance over those in a similar volume on the Eastern States.

I can appreciate what a tremendous amount of labor has gone into the preparation of text, and I know by long years of experience the tedious and thankless labor of eternal proof reading. I am glad that it was my privilege to have even a very small part in the preparation of this material.

Again congratulating you, and with the hope that material for subsequent volumes is coming along even better than can be expected, I am

Very sincerely yours,

C. R. Ball,
Cerealist in Charge.

CRB:SS

August 20, 1923.

Prof. L. R. Abrams,
Department of Botany,
Stanford University,
Stanford University, California.

Dear Professor Abrams:

Your letter of May 19, stating that the reprints of my article on *Salix* would be sent forward in a few days, has remained unanswered because the reprints had not arrived at the time I left here early in July. I have just returned from six weeks in the mid-west and do not find them here yet. Any information you can give me concerning them will be appreciated.

Hoping that the work is going forward satisfactorily and with kind regards, I am

Very sincerely yours,

CRB:SS

C. R. Ball,
Cerealists in Charge.

LELAND STANFORD JUNIOR UNIVERSITY

DEPARTMENT OF BOTANY

Stanford University, Cal.,

August 24, 1923

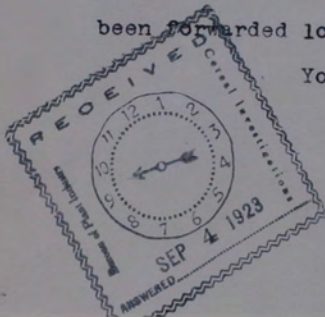
Dear Dr. Ball:

Upon receipt of your letter I called upon the Stanford Press to find out why your reprints had not been forwarded. They have your type all held out, but have not struck them off. The result of my visit is a promise that they will attend to it at once, and I am hopeful of results, because September is our vacation month and usually a slack time with the Press.

I am very sorry that this has drifted along, I had supposed that they had been forwarded long ago.

Yours respectfully,

L. R. Abrams



September 17, 1923.

Dr. L. R. Abrams,
Department of Botany,
Leland Stanford Junior University,
Stanford University, California.

Dear Doctor Abrams:

Upon my return to the office this morning from a short vacation trip, I find your good letter of August 24 and am delighted to know that the type on my willow chapter of the illustrated Flora has not been piled. I am in no particular hurry for the separates, but I was getting a little worried for fear the order might have been overlooked and the type redistributed before they were printed. I greatly appreciate the trouble you have taken to get this information and will await the separates in due season.

I was not able to finish my study of that peculiar specimen from the San Bernadino Mountains before going out on field trips this summer. I hope to finish it soon and send it forward for publication. I got some very interesting material on headwaters of the Minnesota River in South Dakota, in an area quite different from the rest of that State.

Trusting that everything is progressing well with you, I am

Very sincerely yours,

CRB:SS

C. R. Ball,
Cerealist in Charge.

March 20, 1924.

Dr. L. R. Abrams,
Department of Botany,
Stanford University,
California.

Dear Doctor Abrams:

In clearing up duplicate material of *Salix* collected by me at various times and places, I was glad to send you yesterday by mail a small package containing half a dozen or more specimens, many of them from California, which I trust will be found of some interest and value to you.

I have a few little things developing which I hope to get into print during the current year, but nothing of very great importance. I hope the Illustrated Flora is "doing as well as can be expected" as the doctors say.

With kind personal regards, I am

Very sincerely yours,

CRB:SS

C. R. Ball,
Cerealist in Charge.

Stanford University, Cal.,

April 11, 1924

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

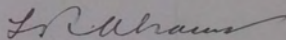
Dear Doctor Ball:

I have just returned from a two weeks trip in southern California and find your letter of March 20th reporting the shipment of duplicate material of *Salix*. The packages are also here and we are very glad to add them to our Herbarium.

The Illustrated Flora is growing slowly but the past year has been a dry one, not only for plants but for scientific work too. I am having this quarter free, however, and expect to spend considerable time on manuscripts.

Are you people still interested in *Rhamnus*? It seems to me that the genus is so important to plant pathology should be carefully worked over from the standpoint of Taxonomy and Geographic Distribution. Could we not work with some plan of cooperation with this as an object in view?

Yours respectfully,



L. R. Abrams,
Professor of Botany

LRA:HG



omit +
insert
* * * *

Handwritten notes:
Mrs. Moore
5 copies, all - in
Thins of ports.
of letters.
sent on one A.P.
sent.

April 23, 1924.

Dr. L. R. Abrams,
Department of Botany,
Stanford University,
Stanford University, California.

Dear Doctor Abrams:

omit & insert

Your letter of April 11 was duly received and I presume that since then you have received my letter asking that if through carelessness I sent you two packages containing Salix discolor overi you forward one to the California Academy of Sciences for which the second package was intended.

That portion of your letter suggesting cooperation in a study of the taxonomy and geographic distribution of Rhamnus will be taken up here for conference. How much further it is desirable to go in that I do not know, nor how much if any we may be able to expand the funds allotted to the Crown Rust of Oats.

Very sincerely yours,

CRB:SS

C. R. Ball,
Cerealist in Charge.

STANFORD UNIVERSITY

DEPARTMENT OF BOTANY

Stanford University, Cal.,

(1924)?

April 19-1902

Dear Dr. Baill,

The extra duplicate of your
new willow did come to us, and
I rescued it before it had reached the
hands of the mounter. It is now
on its way to the California Academy.

Yours sincerely,

H. Robinson

Digitized by Hunt Institute for Botanical Documentation



STANFORD UNIVERSITY

DUDLEY HERBARIUM

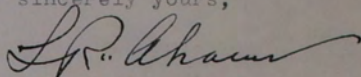
STANFORD UNIVERSITY, CALIFORNIA

27 June 1932

Dear Dr. Ball:

I regret to report that there is no specimen of *Salix maccalliana* residing in the Dudley Herbarium, unless perchance it is here under an assumed name. You know not all of our specimens have been finger-printed as yet by the *Salix* sleuth.

Very sincerely yours,



Digitized by Hunt Institute for Botanical Documentation

Berkeley, July 11, 1932.

Dear Professor Abrams:

Thanks for your note about *Salix maccalliana*. I was able to get a couple of specimens at the Academy herb. The Lassen specimen is not that species, the near it.

I had hoped to get there over the 4th but one of the party was sick and another called away.

We are making progress slowly. Setchell's Alaska specimens are arriving. Nothing new so far but I am only started on it.

Cordially,

Carleton R. Ball

January 25, 1933.

Dr. L. R. Abrams,
Department of Botany,
Stanford University,
Palo Alto, California.

Dear Dr. Abrams:

It was very kind of you and Mr. Hudson to deliver the seven boxes of undetermined and long-leaf willows to me a couple of weeks ago. You will remember that I had also a box which was brought up last year and has been held pending the final settlement of some problem in the group mentioned.

I have nearly completed the identification of the undetermined material except that from the Orient, which I am not prepared to handle at the present time. Four or five boxes of this material will be ready to return within the current week. The remainder, consisting of the long-leaf group from both shipments and a few sheets representing a problem in the Cordatae section I shall wish to hold for a time longer. I am just starting active work on the longifoliae.

If Mr. Hudson or any other worker is up this way he can get the boxes which are ready for return from Mrs. Bracelin at any time. If I get around to come down to Stanford before anyone from there calls here I will be glad to bring them back with me.

With personal regards, I am

Very sincerely yours,

Carleton R. Ball

Research Associate

CRB:CSB

Program Planning Division

September 12, 1936.

Dr. L. R. Abrams,
Dept. of Botany, Stanford Univ.,
Stanford University, California.

My dear Dr. Abrams:

Recently I have sent a package of willows to the Dept. of Botany of the University of California. In it I inclosed a similar packet for your herbarium, and one for the Academy of Science.

I have written Mr. Massey to that effect and he will hold the packet until some one from there comes down or some one from Stanford goes up to Berkeley.

I have had very little time for collecting since leaving California, altho I have been in the field much of the time. Next summer I hope to get into the southern Appalachians for some real scouting around.

It is certain that some northern willows range much farther to the south than has been known.

Hope we will see you in the east this winter.

With regards to yourself and mutual friends,

Cordially Yours,

Carleton R. Ball

P.S. I have just seen Thurston's new "Wildflowers of Southern California. It certainly is something new in treatments and I will be much interested to know how it takes. Too bad he could not have taken his willow names from Abrams rather than Jepson. That "*Salix argophylla*" always gets me riled.

Of course, he omitted some vars. known to occur in So. California, such as *S. laevigata* ariquipa and *S. lasiantha* ~~laevigata~~ lancifolia, as well as *S. hindsiana* leucodendroides (probably what he called "argophylla").

Delivered to Mrs. Ferris by Dr. Massey
see letter Oct 8

August 8, 1942

Dr. L. R. Abrams,
Department of Botany,
Stanford University,
Stanford University, California.

Dear Dr. Abrams:

Separately I am sending five copies of a reprint of my recent paper on far western novelties in *Salix* published in Madrono. Two of these are for cutting up and pasting on herbarium sheets if the Dudley Herbarium maintains that practice. The others are for yourself and any other taxonomic workers who may wish them.

If more copies are desired for other workers, I will be glad to send them on request.

Cordially yours,

Carleton R. Ball,
Executive Secretary