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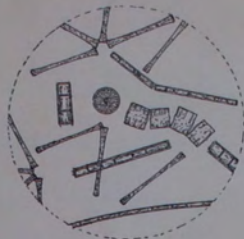
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About the Institute

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.



F. F. FORBES, C. E.,
Superintendent of Water Works,

Ans. Feb. 5-07.

off. 1907 exc. compl. spec.
asked if cult. sp. desiderata
Named Flett, Nelson, E., Cotton
& Blumer as colls in west.

Brockline, Mass., Dec. 15 1906

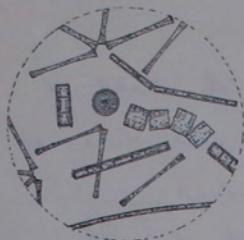
Prof. C. R. Ball

Dear Sir

I am very much interested
in willows and desire to obtain all
the material possible. I have much
difficulty in ^{getting} good specimens from this
west. I have ~~good~~ ^{some} material of the
willows which grow in this state. I tag
my shrubs so that collections made
at different times of the year can be
kept together. If you have any
duplicate willows, or know of any one
who will exchange, I shall be very glad
to exchange. I will buy good
specimens. I hope to hear from
you.

Yours sincerely

F. F. Forbes



F. F. FORBES, C. E.,
Superintendent of Water Works,

Brookline, Mass., Feb. 8 1907

Mr. Carleton R. Bell

Dear Sir

Your letter of Feb. 5
received this morning. I will send
you in the course of two weeks a set
of the willows of Mass. and during the
winter I shall probably have collections from
Northern Quebec. I collected in
Quebec and Matane^{P.Q.} in 1894 and 1895
but nearly all of that material is
now gone. You need not send
to me before the close of the collecting
season of this year.

I tag my willows so as to be sure
the blossom fruit a leaf are from
same shrub, which appears on any of
my sheets. I have also found
one

that in Mass. at least, the last of
August is the time when the leaves
show their character the best.

I thank you very much for the
addresses you gave me.

Yours sincerely

F. F. Forbes

Feb. 23, 1907.

Mr. F. F. Forbes,
Brookline, Mass.

Dear Sir:

Your favor of the 8th instant came duly to hand. I am very glad indeed to know that you will be able to furnish specimens of the willows in Massachusetts, and that you are likely to collect in Northern Quebec during the present season.

This material will all be especially welcome to me, as my own collection is very rich in specimens from the West and from the middle United States. I note your system of insuring the collection of complete specimens. It is the only satisfactory one and is as rare as it is efficient.

Regarding the addresses of collectors recently given you, I may say that Mr. J. C. Blumer is at present at the Desert Laboratory of the Carnegie Institution, Tucson, Arizona. If you have already written him at Paradise, it is likely that his letters will be forwarded. I am about to write him at Tucson and shall suggest that he ask for the forwarding of any mail from Paradise, in case he has not previously done so.

Very sincerely yours,

March 5, 1907.

Mr. F. F. Forbes,
Supt., Water Works,
Brookline, Mass.

Dear Mr. Forbes:

I received several days ago, by registered mail, the package of salix you so kindly sent me. These are a very critical lot of specimens and deserve careful study. I had hoped to be able to work them over quite completely and report to you before this. I was interrupted, however, by the arrival of some type material from one of the larger herbaria. This having been sent on request, it was necessary to give it early attention. I hope to resume my study of your specimens at an early date.

At this time I may say, however, that the three sheets designated as *S. cordata* X *myrtilloides* is probably the variety of *cordata* listed as *S. cordata rigida* (Muhl.) Carey in Gray's and Britton's Manual. The specimen labeled *S. alba vitellina* X *petiolaris* appears to me to show no evidences of this cross. Is it not true *S. petiolaris* with the

F. F. Forbes 42.

aments somewhat deformed? On the other hand, I think you have an undoubted hybrid of cordata X petiolaris.

I hope that further study will serve to straighten out part of your problem with Humilis tristis and discolor. I have, however, not yet had time to study this suite of specimens.

Please accept my sincere thanks until I can reply you in more acceptable form.

Very sincerely yours,

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Agronomist in Sorghum

RMK.

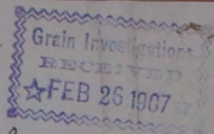
Investigations.

G.S. The value of spec. is always materially incr. by the add. of def. num. This no. shld be serial, not dupl from yr to yr. It may be quite indep. of the notok no. the usually the same.

Would it be poss. for you to assign nos. to this suite of S. spec.? It wd much facilitate ref. to in fut. corresp. besides adding to their perm. val. I shall be glad to hear from you on this point & to add the nos. if you care to assign them Four colls. prep. to start each seas. with an even hundred, i.e.



F. F. FORBES, C. E.,
Superintendent of Water Works.



Ans. 3.5. 07

Brockline, Mass., Feb. 23 1907

Mr. Caledon R. Ball

Dear Sir

I send you today
a package of willows from Mass.
You will find three sheets of
Salix cordata & *myrtilloides*, and I
should be pleased to have them sent
to the National Herbarium. I hope
that you will find time to look them
over and write me about them. I am
anxious to know as much as possible
about willows. I tag my willows, so
that leaves and fruit &c. can be kept
together.

Yours sincerely
F. F. Forbes



F. F. FORBES, C. E.,
Superintendent of Water Works,

Brockline, Mass., March 3 1907

Mr. C. R. Ball

Dear Sir

Thanks for your letter of
March 5. Allow me to give my reason for
giving name of *S. cordata* ^{oides} ~~cordata~~ ^{myrtilloroides}. I have been watching
the clump of willows for 15 years and in
all this time I have never been able to
find a single fertile capsule. The flowering
time of this willow has always been from
7 to 10 days later than *S. cordata*, and
quite near the time of *S. myrtilloroides*. In
fact when *S. cordata* is in full blossom, this
willow shows no sign of flower.

S. cordata here, grows from 10 to 15 feet
high, and *S. myrtilloroides* 1 to 3 feet. This
willow never gets above 7 feet high although
the conditions are favorable for normal
over (See over)

growth. I have growing in my willow
patch as follows.

⁰
s. mytilloides s. cr. x mgr. s. cordata

I looked at these nearly every day last season

When the leaves began to change color in
the Fall, both s. mytilloides and s. cr. x mgr.
had leaves of a light yellow, while the
leaves of cordata were green in common
with other cordata, and never turned that
light yellow. Mytilloides and cr. x mgr.
shed their leaves before cordata

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When I showed this willow to Mr. Fabon
of the Arnold Arboretum he called it "s. cordata"

I asked him to go with me and see
the willow growing and he concluded at
once that it was not s. cordata. He
visited the clump several times last year
and thinks that I am right in calling
it s. cr. x mgr. Prof. Fernald at first

pronounced it s. cordata, but I have
convinced him that it is not s. cordata.

Of course you know that a willow



F. F. FORBES, C. E.,
Superintendent of Water Works,

Brookline, Mass.,

growing can be much better studied
than from herbarium specimens. If you
come to Boston in the summer I hope
that you can find time to go with me
to the clump of willows. Electric cars
from Boston go right by. Please write

me whether or not the information which

I have given will change your opinion
in any way. I am not a professional
botanist as you of course know, but I am
very much interested in willows, and want
all the information I can get in relation
to them. What I called *S. alba* &
petiolaris. I found one year ago last
spring. Last spring I took it up carefully
and set it out in my willow patch, where
I am watching it. I am not going

to say much about it until I can watch
it for two or more seasons. All the
aments for two seasons have been like
those sent you. The shrub is growing
nicely and appears normal in all ways.

All my willows from which specimens were
sent you are tagged, and I intend to study
them more carefully this summer.

I find that the twigs of *S. humilis* vary
from yellow and glabrous, to almost black
and very pubescent. The same is true of

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S. discolor. I have an instrument for
measuring the thickness of cover glasses, and
I am using it to measure the thickness of
willow leaves. With hybrids of *discolor* &
humilis this is quite a help.

Yours sincerely

F. F. Fernald

P.S. I care much more for your opinion
in relation to the willows I sent you, than
I do for specimens, and I will gladly exchange
my specimens for your opinions.

BROOKLINE, MASS.

March 5 1880

Mr. Carlton R. Ball

Dear Sir

Your letter of Feb. 28 received a short time ago. and the printed matter relating to willows was received yesterday. and please accept my thanks for all you have sent me. I will visit you probably a little later. The leaf specimens mentioned in Rhodora were collected by me. Two years ago I took an auto trip to Albany and down the Hudson to N. Y. city and did more or less collecting on the way.

I am very much interested in willows and have probably 100 shrubs growing in my garden. I am crossing willows, planting the seeds. I have been surprised how rapidly they grow from the seeds. - 18 inches high, the first season. I will send you some of my specimens if you care for them.

I am very anxious for western material

and if you know anyone who would
exchange with me, should be glad of their
address.

Yours sincerely

F. F. Forbes

Burkline

Mass

BROOKLINE, MASS., Oct 4

1924

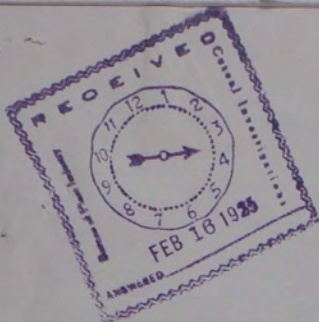
Mr. Carleton R. Bell

Dear Sir

Please accept my sincere
thanks for "The Willows of the Pacific States" and
'Rhodora' for July. I am always interested
in anything relating to willows.

Sincerely

P. P. Forbes



BROOKLINE, MASS. Feb. 14

1923-

My dear Mr. Bell

Please accept my thanks for
publication of "Shrubby Willows of Indiana".
I am much interested in willows, and
sedges also. I am always glad to receive
such publications.

Sincerely

Fayette F. Forbes

How can I get a copy of the *Illustrated Flora of
Pacific States*?

Abrams

Per me

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February 18, 1925.

Mr. Fayette F. Forbes,
Brookline, Mass.

Dear Mr. Forbes:

Your letter of Feb. 14 is received. The illustrated flora of the Pacific States is published by Stanford University, California. Only the first volume has been issued as yet, although others are in course of preparation. An order can be placed at the above address or directly to Prof. L. R. Adams, Department of Botany, Stanford University.

The University has its own post office, so that the institution and the post office are the same.

Trusting that this gives you the information desired,

I am

Very sincerely yours,

C. R. Ball,
Senior Agronomist in Charge.

CRB/ecs