



Hunt Institute for Botanical Documentation
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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.

Botany Department
Utah State Agricultural College
Logan, Utah

December 6, 1941

Dr. Carleton R. Ball
Extension Service
U. S. Dept. of Agriculture
Washington, D. C.

Dear Dr. Ball:

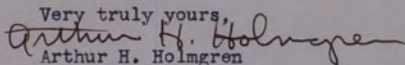
I have just shipped a small package of *Salix* specimens to you. The alpine willows, *S. petrophila* Rydb. and *S. saximontana* Rydb., were confusing to me. I suspect that I have included three species under the above two names. There are several other species that troubled me somewhat.

This last field season was my fifth summer in northeastern Nevada. During this time I have collected more than three thousand numbers and have had a wonderful opportunity to study the plants in the field. I have studied all the Elko County material deposited at the University of Nevada, many of M. E. Jones' collections, the Forest Service collections from this area, and many fine numbers collected by Dr. Maguire. At the end of this school year I will have studied approximately 8,000 sheets of Elko County plants.

For partial fulfillment of a master's degree I am making a preliminary study of the "Flora of Northeastern Nevada".

I will appreciate your determinations at your earliest convenience and any additional information you might have concerning the *Salices* of northeastern Nevada.

Thank you.

Very truly yours,

Arthur H. Holmgren

Department of Botany
Utah State Agricultural College
Logan, Utah
December 23, 1941

Dr. Carleton R. Ball
Extension Service,
U. S. Department of Agriculture
Washington, D. C.

Dear Dr. Ball:

I have just received your letter of December 19 and was very pleased to get your determinations. I suspected that many of my identifications were not correct.

I want you to keep the willow specimens and I hope they may be of some value to you.

The parts of the Nevada flora have been sent to me at irregular intervals. At the present time I have thirty-one numbers and am looking forward to adding your willow study to my collection. I want to thank you for being so thoughtful in this matter.

Dr. McVaugh or Dr. Archer will be very interested to hear from me, as I have over a dozen good species which haven't been included in the studies issued to date, several new range distributions, and two or possibly three new species.

I am sending all the critical groups off to specialists so that I can cite specimens and feel safe in doing so.

Thank you.

Very truly yours,
Arthur H. Holmgren
Arthur H. Holmgren

December 31, 1941

Mr. Arthur H. Holmgren,
Department of Botany,
Utah Agric. College,
Logan, Utah.

Dear Mr. Holmgren:

Your letter of December 23 came promptly, and I greatly appreciate your permission to keep this fine collection. They will be of great value to me in my revision of the willows of Nevada and later in my monographing of N.A. willows.

I am passing your comments regarding the parts of the Flora of Nevada you have received and the unincluded species you have collected along to Dr. Archer.

I am hoping to finish my Nevada willow manuscript during the spring but there is some question as to how it will be published. The cooperative WPA project in Nevada is discontinued and it has done the mimeographing of the parts of the Flora.

Undoubtedly it helps to send critical groups to specialists but I have just discovered that this specialist let you down on one specimen. Your No. 1909, which you sent as *S. lutea* Nuttall, was determined by me as *S. lutea* var. *Watsoni*. I don't see how I ever did that. It is *S. Lemmonii* Debb, and may set the record for eastern distribution. I am sorry for this error, especially if you have labeled duplicates of it.

Cordially Yours,

Carleton R. Bell
Executive Secretary

December 26, 1943

Dr. Arthur H. Holmgren, Dept. Botany,
Utah Agric. College, Logan, Utah.
Dear Dr. Holmgren:

I have just seen your "Plants of Northeastern Nevada" in the Library and congratulate you on the completion of what must have been a hard job.

I had been intending to write you, and this reminds me to do it. I had finished the manuscript of the Willows for the Flora of Nevada, sponsored by the National Arboretum Herbarium and the Univ. of Nevada, but had not completed the keys, when the WPA funds ran out. The Eu. Plant Industry here cannot afford to mimeograph it because of shortage of funds, paper, and labor. I am intending to write to Prof. Liebenhauer about it.

I am wondering if you and the Grazing Service would consider getting it out. The willows are extremely valuable as browse plants. While I have not included data on browse values, I would be glad to do so if desired. I have collected a mass of material on willow uses, and the Forest Service has much more, all accessible.

It makes about 60 pages, double-spaced, 8 x 10½ in., including full keys on ~~habit~~ floral, and on vegetative, characters. Descriptions are full because willows are considered difficult by most folks, and specimens are cited because Nevada has never been adequately covered and contains both eastern and western species. With best holiday wishes, I am

Cordially yours,

Carleton R. Ball, Collaborator

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UTAH STATE AGRICULTURAL COLLEGE

FRANKLIN STEWART HARRIS, PRESIDENT

LOGAN, UTAH

SCHOOL OF AGRICULTURE
AGRICULTURAL EXPERIMENT STATION
OFFICE OF THE DEAN AND DIRECTOR

August 23, 1948

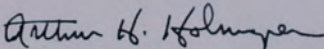
Dr. Carleton R. Ball
Executive Secretary
Extension Service,
U. S. Department of Agriculture
Washington, D. C.

Dear Dr. Ball:

I am mailing a separate package containing a specimen of the willow found in Willow Park in Cache Valley. I have become interested in this willow because the park was recently named Black Willow Park and in the very near future a large plaque will be placed in the park telling how this willow was found all over the floor of Cache Valley when the pioneers arrived and that the present park site contains the only specimens of this tree left in the entire valley.

I have always thought that these large willows were the Brittle Willow (Salix fragilis). I would appreciate your opinion on the identity of this species and something as to whether the plant is native in our area. It would be very unfortunate if a myth were to go on the proposed plaque. I believe the true story as to how the early people in the valley probably planted these trees would be just as interesting as the fancied story that is becoming so well known in the valley here.

Very truly yours,



Arthur H. Holmgren
Curator of the Intermountain Herbarium

AHH:mnw

Dr. Arthur H. Holmgren,
Curator, Intermountain Herbarium,
Utah State Agricultural College,
Logan, Utah.

3814 Jocalyn St., N.W.,
Washington 15, D.C.

October 2, 1948

Dear Dr. Holmgren:

I picked up your letter of August 23, at the Dept. yesterday. It came in an envelope plainly marked postmarked "Sept. 22". I am both astonished by, and interested in, your problem. I certainly hope the Utah will not follow California in honoring and memorializing a fake. California has its Burbank and many wish they hadn't.

Three tree willows from Europe and Asia have been widely introduced into the United States. These are the Crack, or Brittle, Willow (*S. fragilis* L.), the White Willow (*S. alba* L.), and the Weeping Willow (*S. babylonica* L.). The Crack Willow was first and most widely brought in because it was the standard source of charcoal for black gunpowder, universally used until smokeless (chemically synthesized) powder was invented, some 50 years ago. Settlers migrating to the existing frontier always took this willow along for that purpose and unquestionably the Mormons did when they trekked to Utah. It has never been found native outside the Eurasian continent.

The only native willow in the West, of tree size, which has the lanceolate serrate leaf's white beneath and the petioles glandular is *S. lasiandra* Benth., which is a far western species extending from Mexico to the Yukon in Alaska but with a narrow eastward extension across northern Ariz. and New Mex. and extreme southern Colorado and Utah. It never has been collected in the Salt Lake area or northward, so far as I know. In any case the willow you sent me is *S. fragilis*.

How widely *S. fragilis* is distributed in Utah, I do not know. If you wish I can give you a list of the counties from which I have identified specimens at one time or another, and also list other specimens which may be in the U.S. Natural Herbarium. I feel quite sure that I have seen it growing in the Cache Valley as also in other cities of the State.

The placing of the proposed plaque certainly would be most unfortunate for the State after it was written up by some magazine, as also by the press at the time of unveiling. President Harris there is a long-time friend of mine and you may take my letter up with him if you wish. Undoubtedly, the U.S. Forest Service and the National Park Service would be glad to make statements regarding the matter of *S. fragilis* if that is desired.

If there is any thing more that I can do, I will be most happy. I carried large cooperative work in cereals at both Logan and Nephi, in cooperation with the State Agric. Expt. Station, just as I did in 44 States. My brother, Elmer D. was first entomologist, and then Dean and Director at UAC.

Cordially Yours,

Carlton R. Ball

As I have been retired for 5 years, you probably will get more prompt reply by using my home address, altho I have an office at the Dept. and my willow herbarium (20,000 sheets) is there. I go down about two days a week.

large in *S. fragilis*

Dr. Arthur H. Holmgren,
Dept. of Botany,
Utah State Agricultural Colleg,
Logan, Utah.

1500 15th St., N.W.,
Washington 15, D.C.

October 17, 1948

Dear Dr. Holmgren:

Just now I am writing keys and descriptions of the willows, to be included by Prof. Ray J. Davis, in his Flora of Idaho. Because I am taking much of the material from a manuscript on the willows of Nevada, it set me to thinking (something I seldom do).

You know the floras of both Nevada and Utah much better than I, but I have an impression that the willow floras do not differ very much. I had about 24 species in the Nevada treatment. Utah probably has a few Rocky Mtn. species which do not cross the desert.

This Nevada manuscript was prepared at the request of botanists in the Bureau of Plant Industry, Dept. Agric., who had some relief money to spend on employment during the depression. I was so busy with my TVA duties that I could not finish the manuscript before the money ran out and so it never was published. As you know, the descriptions and discussions were quite full, and all known collections were cited by counties.

What popped into my mind was that you might wish to consider getting out a paper on the willows of Utah and Nevada, perhaps under joint authorship. In that case, I would be glad to supply the manuscript, revised as might be decided upon.

If collections were to be cited, I would give you a list of all Utah specimens I have determined thro the years, whether in my herbarium or elsewhere, as well as those in the U.S. Natl. Herbarium. I also would add any species or varieties occurring in Utah but not in Idaho. If collections were not cited, a list of counties covered by each species or variety might be compiled, or merely the general distribution indicated.

If you are interested, I can send you a carbon copy of the Nevada manuscript for consideration. I believe that a discussion of the willows of the Great Basin States would be helpful, especially as it would include extreme easter extensions for some wester forms, and extreme southern extensions for some norther forms, and extreme northern extensions for a few southern forms.

Cordially yours,

Carleton R. Ball

P.S. By the way, I had an interesting letter from
Pres. Harris a few days ago.

Holmgren, Helen