



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.

Address: Extension Service
U. S. Dept. Agri.
May 24, 1939

J.
Mrs. John S. Fletcher,
Dimock P.[^]O.,
Susquehanna County, Pa.

Dear Mrs. Fletcher:

Your letter of May 22 is just received, and I am glad to return the material as requested. The specimens of shrubs other than willows which I took to our botanic section for naming have not yet come back to me. As soon as they arrive the entire packet will be mailed to you.

I enclose herewith two copies of the list of determinations, one for your own use and the other for the provincial museum in British Columbia if so desired.

This is a very interesting collection and I would like to know a little more about the locality from which they came. Can you give me the approximate elevation of the lake above sea level and the elevations at which any of the specimens were collected if they were considerably above the lake. I note that you have given the elevation for No. 11356 as six to seven thousand feet, but elevations were not given for any of the other specimens.

I have not been able to locate Lake Tetana on my maps so far. Can you give me the approximate latitude and longitude and the river drainage system to which the area belongs. It is quite probable that some of these collections represent extensions of known range for the species but this I cannot determine until I locate the place of collection.

I greatly appreciate your making this material available for study and will be glad to name additional collections for you at any time.

Cordially yours,

Carleton R. Ball,
Executive Secretary

Cord. Dec 18 Am. Jan. 27-05

221 N. Tacoma ave.,
Tacoma, Wash.,
Nov. 19, 1903.

Dear Mr. Bull:

Yours of the 28th
ult received in regard to
Willows. I am sorry to state
that I have not done very
much with that group ~~this~~
season. I believe I have one
alpine species which may
be of interest to you. It was
found on Mount Tacoma
at about the same altitude
as were the species determined
by you for me last season.
This may prove to be one of those
but its habit of growth was
very different. This has very large
thick roots and more clustered
and smaller perhaps on the average.
I will look over my specimens
(See over)

as soon as I can find
time and send you what
little I have. Pardon my delay.

Yours sincerely,

J.B. Flett.

North Carolina State College of Agriculture and Engineering
of the
University of North Carolina
Raleigh

THE DIVISION OF BIOLOGICAL SCIENCES
BOTANY

November 26, 1951

Dr. C. R. Ball
3814 Jocelyn Street, N. W.
Washington 15, D. C.

Dear Dr. Ball:

I am today taking the liberty of sending you 22 duplicate specimens of Salix mostly collected here in North Carolina during the past five years. I have attempted to name a few of them but lately have been so busy with various groups in the flora of North Carolina - chiefly legumes - that I've had little time to work with Salix, about which I know so little.

If you have time and would find a study of these specimens of sufficient interest to you, I would appreciate very much having your determinations on the enclosed sheet.

Mr. R. K. Godfrey and I are gradually building up our herbarium to the point where it might some day be part of the basis for the preparation of a flora of North Carolina and your help in getting our Salix specimens accurately determined will be of great value to us.

These specimens are all duplicates and so please dispose of them as you wish.

Thank you.

Sincerely yours,

William B. Fox

William B. Fox
Asst. Professor of Botany
& Curator of the Herbarium

WBF:k

Enc.

Vg Willows

Prof. William B. Fox,
Herbarium, Dept. of Botany,
Mc. Carr. Stetee College,
Raleigh, North Carolina.

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

29, November, 1951.

Dear Professor Fox:

Your letter of Nov. 26 came yesterday, as did the packet of 22 willows. I have given them immediate attention and inclose the list of determinations, with some comments, primarily for my own information.

I am very glad to know that a Flora of North Carolina is projected and will be glad to help in any way possible. State Floras are the most important item in taxonomic botany, as they tell us where, and partly why.

You already have collected, and recognized, the four common native species. Several others may have sparing distribution in western North Carolina. You probably are familiar with the Willows of Virginia, by Massey & Ball (Bull. Va. Polytech. Inst. Vol. 37 (No. 9), July, 1944). It has full discussion, description, and county distribution of the native and cultivated willows of your border State. It is now 7 years old and there is some additional knowledge. For example, *S. rigida* Muhl. (*S. cerdata* Muhl., not Michx.) is known from both Ga. and Ala.

You doubtless can obtain reprints of this by writing Dr. A.B. Massey at Blacksburg. I am just out.

A paper of mine, which discusses the variations in leaf form on willows, at basal, central, and apical portions of any shoot, and between spring, summer, and autumn shoots, may interest you. (I am out of reprints (Castanea 7:67-71, 1943).)

Please note the question on No. 1313, *S. nigra*. The label reads "1947", but 1336 and 1340 are labelled 1948. I assume that 1313 should be the same.

More data on No. the plant from which 2002 was taken would be helpful. Usually the staminal twigs which bear the enormous leaves are rather stout, and occur near the bases of trunk or large branches. This twig is very slender.

You may be interested in tagging plants of each species occurring near Raleigh, and collecting from them at intervals during the year. Such a series in the herbarium enables students to recognize the willows at any stage of development, besides teaching them the developmental processes.

You may not care to recognize the variety of *S. humilis* to which I have assigned your material. The species has oblanceolate to broadly oblanceolate leaves, rather thin, and not so strongly veined, and holding the pubescence through the season more fully. This variety has leaf shorter, oblong- or elliptic-oblanceolate and narrower, very strongly veined, and becoming glabrate or glabrous as the season progresses. Var. *keewauwensis* in northern Mich. has obovate leaves.

I will look my reprints and send you what I have that may be helpful, including one on uses. Notes on any uses by whites or Indians that you may discover will be most welcome. I now am writing a larger paper on uses by man only.

Will try to answer any questions which occur to you, at any time. Many thanks for the permission to keep the specimens. They will be most welcome and useful.

Cordially yours.

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

Prof. William B. Fex,
Herbarium, Dept. of Botany,
N.C. State College,
Raleigh, North Carolina.

29, November, 1951.

Dear Professor Fex:

Your letter of Nov. 26 came yesterday, as did the packet of 22 willows. I have given them immediate attention and inclose the list of determinations, with some comments, primarily for my own information.

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I will try to answer any questions which occur to you, at any time. Many thanks for the permission to keep the specimens. They will be most welcome and useful.

Cordially yours,

Prof. Ruskin S. Freer,
R.F.D. 2, Timber Lake,
Lynchburg, Virginia.

3814 Jocelyn St., N.W.,
Washington 15, D.C.
September 24, 1947

Dear Professor Freer:

rigida

Your letter of Sept. 21 and the packet of 10 willows came safely and I am very glad to see this Blue Ridge material. *S. lucida* Luhl. (*S. cordata* Luhl.) and *S. lucida* Luhl. may be looked for along streams and *S. tristis* on the sandier areas of open scrub, etc. Their then-known occurrence was listed in the Willows of Virginia.

Your *S. nigra* and the four specimens of *S. sericea* are correctly named. The other five specimens are all of *S. humilis* Marsh. and probably all are of the narrow-leaved variety, mostly acuminate at apex and inclined to become glabrate, rather rigid, and more rugose toward autumn. Just what name should be applied to this variation will require some study and interpretation of the "rules". History briefly is this:

Marshall's brief description of leaves said "oblong, somewhat oval", which puts it about intermediate between the species and the variety mentioned. However, the characteristic plant of the type area is thicket with narrowly obovate, bluntish blades and that is generally held to be the typical plant. Other specific names were given it by later authors.

Andersson (Monog. Sal., 1867) described the species with such leaves and described three new varieties, *grandifolia*, *longifolia*, and *angustifolia*, as he did for most other species. No specimens were cited. Nearly always, his first var. was the typical plant (what they call var. *typica* today) and his var. *grandifolia* was just that.

Var. *longifolia* was described as (in Latin) "leaves oblong-spatulate, 2-3 in. long ^{1/2} in. wide above the middle". This is the common western-southeastern plant such as you have collected.

Under his var. *longifolia* Anders. has 3 new forms, *rigidiuscula*, *glauca*, and *tenuis*. As almost always in his works, the first form is the typical plant (*F. typica*) and he describes it (in Latin) as "leaves finally rigid, long acuminate, opaque and glabrous above intensely tomentose beneath". This is our western plant in general, altho the leaves are not glabrous above when young, nor densely tomentose when old.

Robinson & Fernald (Gray, 1908) published *S. humilis* "var. *rigidiuscula* Anders." What Andersson published was "forma *rigidiuscula*", which R. & F. evidently overlooked, as they did not say "comb. nov." Most botanists have cited it as "var. *rigidiuscula* (Anders.) R. & F."

Now comes Fernald (1946) and says that what they described in 1908 is not the basic plant of Andersson's *f. rigidiuscula*. He does not say why it wasn't and his description of his new var. *hypophylla* does not differ from that of Andersson's plant except in the leaf hairiness. Fernald is hipped on hairiness as a character because he never has studied it; changes thro a season or on different plants (See More Plant Study). When Fernald was young the lower part of his face was pubescent (var. *puberula*). Now it is long-hirsute (var. *longivillosa*). The top of his head once was long-hairy (var. *longi-villosa*) Now it is glabrous (var. *abassa*). Once the hair was dark (var. *atrovillosa*). Now it is white (var. *albivillosa*). What nonsense! Willows show the same progressive variations of a leaf, a twig, a plant.

Now I must discover what the "rules" say regarding the status of var. *longifolia* Anders., var. *rigidiuscula* (Anders.) R. & F., and var. *hypophylla* Fern. Then I'll put a name on your plants.

Separately I send another paper discussing Fernald's methods. Another, covering his rejection of *S. petiolaris* as "a British plant" is in press.

Shall I return or keep the plants?

Cordially yours

Either suits me.

Carlton R. Ball