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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.

Alaska Territorial Legislature

House of Representatives

Thirteenth Session Juneau,, Alaska,
March 31, 1938.

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

Dear Dr. Ball:-

You may be interested to know that I have started to work on an illustrated descriptive Flora to cover the vascular plants known to occur naturally in Alaska. I have already written the preliminary descriptions of about 750 species from material in my own herbarium. There are several genera that I have for the present passed over; especially *Carex* and *Salix*. In regard to *Salix* I hope either to have the help of your forthcoming monograph on the subject or your personal help. My present plans are to do field work during the summers of 1938 and 1939, then proceed to the States to examine specimens from Alaska in the larger herbaria including the National Herbarium at Washington.

For the coming summer I expect to collect specimens along the Bering sea and Arctic coasts. I have been promised accommodations on the Coast Guard Cutter Northland which leaves Seattle May 20, I shall be pleased to send the willows I may find to you for determination.

Very truly yours,

J. P. Anderson
J. P. ANDERSON.

(see over)

April 17, 1938

Hon. J. P. Anderson,
Juneau, Alaska.

Dear Mr. Anderson:

Your good letter of March 31 came several days ago. I am delighted to know that you are engaged on a flora of Alaska, and can assure you of my hearty support in the project.

I have been able to do very little of the willows of the Alaska and Yukon, that is, on the manuscript, in the last two years. There have been increasing collections to determine, from both Canada and the States, including Alaska. This is not time lost, for I learn something from each collection.

Then I have several hundred galleys of proof to read, covering the writing I did while at the University of California. It is most exacting work, because of vicious editing by an irresponsible person at the University and because there are many citations which must be verified. It is hard on the eyes and I cannot do herbarium work during the same period. This will last for several weeks yet.

I will be glad to determine any willows you get on your explorations. I will continue my monograph as soon as possible. As to the text of *Salix* for your flora, you can prepare it from my more extensive descriptions, or I will undertake to write it for you if desired.

Hope you have a wonderful summer in the field. If you continue your field work in 1939, I might be able to put in part of the time with you. I would delight to do so. By the way, Dr. R. M. Anderson of the National Museum at Ottawa was here recently. He is a zoologist whom I knew in Iowa years ago, and was with the Stefansson expedition in the Arctic.

Cordially Yours,

Carleton R. Ball

Alaska Territorial Legislature

House of Representatives

Thirtieth Session

Juneau, Alaska, Oct. 20, 1938.

Dr. Carleton P. Ball
3814 Jocelyn St. N.W.
Washington, D.C.

Dear Dr. Ball:-

I returned from my Bering Sea and Arctic trip on Sept. 26. Spent nearly 5 months on the Coast Guard cutter Northland and picked up botanical collections to the number of 2150. Of these some 90 were willows. I am sending you duplicates of nearly all of these and in return I wish you to determine them for me. In addition to the ones sent I collected *Salix reticulata* at Gambell, St. Lawrence Isl (3698) and at Cape Lisburne (4499).

I expect to continue my field work next year and should be delighted to put in part of the time with you. Dr. Geo. B. Riggs of the University of Washington at Seattle may also visit Alaska.

I was reelected to the Alaska Territorial Legislature last month. The legislature meets the second Monday in January. Between legislative duties and caring for my summers botanical collection I will be kept busy until spring.

I regret that I cannot furnish really first class specimens of ~~th~~ all the willows collected but some were not in the best condition and others were not ~~gathered~~ ^{gathered} up in sufficient quantity. Cordially yours.

J. P. Anderson

Address:

Extension Service, U. S. Dept. Agric.,

December 7, 1938

Mr. J. P. Anderson,
Juneau, Alaska.

Dear Mr. Anderson:

Your letter of October 20 and the package of willows arrived just when I was completely submerged in preparation of material for the Congressional Committee investigating the TVA. Things have eased of a little now and I was able to determine most of the material before coming down here to Knoxville, Tennessee, for a few days.

I am typing the lists and will inclose copy herewith. A few specimens have not been determined yet. They belong to the *S. glauca*, and the *arctica-anglorum* complexes. Will finish them in a few days after I get back at the end of this week. I will then send you the remaining determinations and some comments on the collections as a whole, which I cannot do while away from the material.

It was a splendid season's work, and represents practically all the species and varieties to be found on the southwest and western Alaska coasts.

With best holiday wishes, I am

Cordially Yours,

Carleton R. Ball
Executive Secretary

July 6, 1940

Mr. J. P. Anderson,

Juneau, Alaska.

Dear Mr. Anderson:

I am enclosing herewith a list of willow species in the Flora of Alaska with notes thereon by A. E. Persild. You will note some strange and unfamiliar species in the list. I have not had time to check up and see what the plants really are.

His *S. glacialis* probably is an immature *S. ovalifolia* because that is what Anderson had in hand when he described his species. Just what he has under the name *S. arbutifolia* and *S. cuneata* I do not know. His *S. crassijulis* probably is another name for *S. arctica*.

What he calls *S. pseudopolaris* Fløderus probably is what we have called *S. polaris*. Whether it deserves separate varietal or specific rank, I am not yet sure.

Mr. J. P. Harrington of the Bureau of American Ethnology, was in to see me a few days ago with three willows which you had told him to bring to me for determination. Two of them represent the relatively local species *S. amplifolia* Coville, for which Yakutat Bay is the type locality and from which area the species does not extend apparently.

Cordially yours,

Carleton R. Ball,
Executive Secretary

CONTRIBUTIONS TO THE FLORA OF ALASKA- Ccontd.

A. E. Persild, Rhedera 41:216-217 (Salix). June, 1939.

- S. alaxensis (Anders.) Coville. Alaska Range: Mts. between Healy and Meedy Creeks, No. 254; Nenana Valley, Lignite, No. 296. Head of Chitina R.: H.M. Laing Nos. 41, 46, and 48. Norton Sd.: Unalakleet, No. 1105; hills back of Unalakleet, No. 1143.

Common throughout the region in well drained alluvial soils, in the Bering Sea region on the Neatak R., north at least to 68° N. In spring the young leaves are very fragrant, like those of *Populus tremuloides* or even more so.

- S. arbutifolia Pallas. Yukon Delta: Ketlik, No. 867. Norton Sd.: Qigertariaq, No. 1046. A common trailing willow on old sand dunes.

- S. arctica Pallas ? x cuneata. Alaska Range: Bread Pass, common on snow flushes in the alpine zone, No. 25 B.

- S. Barrattiana Hook. Head of Chitina R.: H.M. Laing Nos. 216 and 222.

- S. Barclayi Anders. Head of Chitina R.: H. M. Laing, No. 223.

- S. Bebbiana Sarg. Fairbanks: Goldstream Cr. and Pedro Dome, No. 130. Head of Chitina R.: H.M. Laing Nos. 43, 45, and 218. A common shrub 10-12 feet high on alluvial banks in the interior.

- S. Chamissonis Anders. Seward Pen.: Nome, No. 1326. Common on dry slopes.

- S. crassifolia Trautv. Norton Sd.: Unalakleet, No. 1142. Seward Pen.: Nome, No. 1329. Diomedes Isl.: No. 1676 B. The last two x ovalifolia.

- S. cuneata Turcz. Norton Sd.: Qigertariaq, No. 1407; Unalakleet, No. 1142 (x *Seemannii*). Occasional on barren, windswept hilltops of the Bering Sound region. An E. Asiatic species new to the flora of N. America.

- S. glauca Anders. Seward Pen.: Nome, Anvil Hill, No. 1330. Common along ditches in the mining district.

- S. myrtilloides Anders. Fairbanks: In a wet muskeg, No. 184; Head of Chitina R.: H.M. Laing, No. 221.

- S. nipheclada Rydb. Alaska Range: Richardson Highw., Castner Glacier, on fresh moraines near the glacier, No. 478.

- S. ovalifolia Trautv. Diomedes Isl.: No. 1676-A. Common in wet places in the Bering Sea region. Sound (p 217)

- S. phlebophylla Anders. Fairbanks: Goldstream Cr. and Pedro Dome, No. 129. Alaska Range: Richardson Highw., Castner Glacier, No. 477. Norton Sd.: hills back of Pastelik, No. 904; hills back of Unalakleet, No. 1144. Seward Pen.: South coast, Bluff, No. 1211 (f. *nana*); Nome, No. 1327; north coast, Buckland R., 1553. Diomedes Isl.: No. 1677. Common on barren windswept hill tops throughout the region, but in the interior perhaps restricted to the higher mountains.

- S. pseudopolaris Flederus. Alaska Range: Bread Pass, on snow flushes in the alpine zone, No. 25-A. Head of Chitina R.: H.M. Laing, No. 39.

- S. pulchra Cham. Seward Pen.: north coast, Kiwalik R., No. 1462. Diomedes Isl.: No. 1678. One of the most common willows of the "Barren Grounds" of Alaska. It is nearly always found along small streams and brooks where it forms almost pure thickets from 5 to 12 feet high. The leaves remain on the branches throughout the greater part of the winter, and on gently sloping coastal plains the dark narrow fringes of this willow clearly stand out against the snow-covered landscape, beautifully outlining the drainage system of the slope.

The buds of *S. pulchra* are subject to the attacks of a gall-fly and in some years nearly all specimens are infested with galls.

dupl in Alaska & to Anderson

- S. reticulata L. Alaska Range: Bread Pass, No. 24. Head of Chitina R.: H. M. Laing, Nos. 44 and 47. Seward Pen.: south coast, Bluff, No. 1209 (var. orbicularis (Anders.) Fiederus). Perhaps the most common willow on dry tundra ridges and hilltops. Common in such places throughout the region.
- S. Richardsenii Hook. Head of Chitina R.: H.M. Laing No. 42.
- S. retundifolia Trautv. Seward Pen.: Nome, No. 1328.
- S. Seemanii Rydb. Norton Sd.: Qiqertariaq, No. 1048. Seward Pen.: south coast, Bluff, No. 1210 (forma); Port Clarence, No. 1429; north coast, Kiwalik R., No. 1463. Common in the Bering Sea region.
- S. sitchensis Sanson. Head of Chitina R.: H.M. Laing, No. 40.

The willows in the collection were named by Dr. B. Fiederus, Stockholm.

DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

WASHINGTON

Mr. Carleton R. Ball,
Washington, D.C.

Juneau, Alaska, July 23, 1940.
Post marked July 23, 9am
Recd July 26, 9am

Dear Mr. Ball:-

Yours of July 6 was duly received but before replying I waited until I had time to look over my collection of *Salix*.

I think I can help you on one species of Mr. Persild's list. My collection of willows collected in 1935 and previous years was sent to Sweden where they were examined by Foderus. The names he applied to some of the species differed from those applied by you. One #2171 collected at Isabella Pass (Mile 203, Richardson Highway) on July 10, 1935 was named *Salix arbutifolia* Pall. The same specimen was named by you as *Salix fuscescens* var *reducta*. I cannot enlighten you regarding *Salix cuneata* but is probably some species you are already acquainted with.

Three of my specimens were named *Salix crassifolia* Trautv. One of these you named *Salix stolonifera* Cov., the other two *S. anglorum* Cham. copied for Alaska & off.

Ball 2

Salix Siemannii Rydb. you call *Salix glauca*.

I have seen ~~the~~ *Salix polaris* and *Salix pseudopolaris* in several lists of plants collected in Alaska but I seem to have no specimens in my collection unless I have it under a different name.

I hope to be in Washington next December, and we can then talk matters over regarding the willows occurring in Alaska.

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Very truly yours,

J. P. Anderson.

P.S. I was in Fairbanks last May to be honored by the University of Alaska with the degree of Doctor of Science. At the time I collected several willows and will send you specimens in a few days.

J. P. A.

file

August 6, 1940

Dr. J. P. Anderson,
Juneau, Alaska.

Dear Dr. Anderson:

Your air-mailed letter of July 23, postmarked at 9 am., was delivered to me here on July 26, at 9 am. The package of willows came yesterday. The determinations are given below.

6075. *S. Bebbiana* Sargent. (both sexes) *longistylis* May 10
6079 *S. Bebbiana* Sargent. " (R) "
6080 *S. arbusculoides* Andersson. (both sexes) "
6081 *S. pulchra yukonensis* Schneider. (var. dist. by hairy br.) "
6082 *S. alaxensis yukonensis* " (var. dist. by glabrous brch) "
6083 *S. pseudomonticola* Ball "
6086 *S. myrtillofolia* Andersson (both sexes) May 12
6087 *S. arbusculoides* Andersson "
6088 *S. lasianдра lanceifolia* (Andr.) Beth "
(var. disting. by hairy branchlets)
- write JPA

S. myrtillofolia, *S. pseudomonticola*, and *S. lasianдра lanceifolia* are especially good finds as they are not abundant anywhere in Alaska. All have been collected in the vicinity of Fairbanks by Palmer, or Setchell, or both. You certainly did well to get so many just in flower at that date.

Congratulations on the doctorate degree. It is well deserved. Many thanks for the suggestions regarding Persild's collections and names used for some of them. I have no time to check on them yet.

I am delighted to know that you are planning to be in Washington in December next. We will have a lot to talk about. I then will be only 2½ years from retirement, when monographing can start in earnest.

Dr. Gardner, of Montreal, who has collected extensively in Labrador, will be here next week. Pere Ratilly is in the Mackenzie Basin this summer and he, with Rip's expedition to the Nahanni Mts. last summer, should help to bridge the gaps in our knowledge of the Arctic flora. Walter J. Eyerdal of the Univ. of Washn. Arboretum, in in Alaska for the summer, located at a herring fishery in Prince William Sound. am

With thanks for the material and personal regards, I am

Most cordially,

Carleton B. Ball

dupl in file, Alaska, *S. lasianдра* + *S. pulchra* var

DEPARTMENT OF BOTANY
IOWA STATE COLLEGE

Nov. 4, 1941.

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

Dear Dr. Ball:

I have now become settled here at Iowa State and am at work on my last summer's collections. Collected a total of some 1300 numbers in various parts of Alaska the past summer. Under separate cover I am sending you 69 specimens of *Salix* collected in several regions of the territory.

I remember with pleasure my visits with you last year when in Washington, and feel grateful to you for the prompt response you have always made in determining the willows of Alaska.

Very sincerely yours,

J. P. Anderson

J. P. Anderson
Assistant Curator

JPA:GMR

See if these corrections got on labels

December 1, 1942.

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

Dear Dr. Ball :-

Yours of Nov. 27 was received yesterday. It was very nice of you to send me that list of willows collected in Alaska. I think your guess of what species they reported as *Salix pedicillaris* and *S. uva-ursi* is better ^{than} mine. I notice that Britton & Brown in their Illustrated Flora report *S. uva-ursi* as occurring in Alaska.

I met Dr. Kol when she visited Alaska in 1936. She seemed very grateful for what little favors I was able to extend to her. She evidently is very competent in her specialty. She is the author of a paper on "The Snow and Ice Algae of Alaska"; Smithsonian miscellaneous Collections vol. 101, no. 16, with 6 plates, issued Sept. 19, 1942.

My Flora of Alaska will be published in parts, in the Iowa State College Journal Of Science. ^{The manuscript for} The first part, comprising the Pteridophytes and Conifers has been handed in. I am now working on the grasses and if times were normal I would I would soon leave here for Washington to study the collections in the Department of Agriculture and the National Herbarium at the Smithsonian. Owing to the congested condition of travel and the lack of lodging space in Washington I have about given up the idea, but such study would be of inestimable value to me.

Sincerely yours,

J. P. Anderson

J. P. Anderson
Botany Dept.
Iowa State College,
Ames, Iowa.

(See over

April 28, 1943

Dr. J. P. Anderson,
Dept. Botany, I.S.C.,
Ames, Iowa.

Dear Dr. Anderson:

After 8 weeks in hospital with (1) pneumonia and pleural drainage and (2) prostate removal, I have been home for 10 days getting back my strength and the some 20 Odd pounds which I lost. Gained 8 lbs. first week.

Have had accumulated correspondence and publications from the office sent up to the house and have been busy. Also have rounded up unanswered letters here in my desk. So I have been busy.

I am delighted to know that your flora of Alaska is shaping up to the point of publication. What a joy as the successive parts are finished and the earlier ones appear!

I note (very belatedly) that you might come to Wawhington for further herbarium study but were deterred by prospects of crowding and lack of rooms. We usually have a room free, except for the brief periods when we have relatives visiting. If you still are thinking of coming, I let me know about when. My sons wife and grandson from Detroit probably will be here within two weeks, for a few days, before he gets called for military service but outside of that we should have a room at any time.

With regrets for this delayed message, and regards to mutual friends, I am

Cordially yours,

Carleton R. Ball
Executive Secretary

P.S. I retire in June and then get busy all over on monograph of willows, on my 3rd. Univ. Calif. volume (Natural Resources), and other writing.

BOTANY DEPARTMENT
IOWA STATE COLLEGE,
AMES, IOWA

May 4, 1943.

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

Dear Dr. Ball:-

Your letter of April 28 was received a few days ago. I was glad to hear from you but was sorry that you had been so ill.

In regard to my flora of Alaska I am now waiting on two things before finishing the grasses. A part of my Agropyrons are out on loan and Dr. Swallen has most of my Puccinellias. I am waiting the return of these and Dr. Swallens version of the genus Puccinellia. I have done most of the work on Cyperaceae and in a week or so will be ready to start on the manuscript of that family. The higher monocotyledons should not prove to be too difficult so that I should teach Salix by late fall or early winter. I hope you have your monograph on willows ready by that time.

I have not planned to go to Washington any time in the immediate future, but problems may arise that might make such a trip advisable. If so I shall be pleased to take advantage of your very kind offer.

Cordially yours.

J. P. Anderson

J. P. Anderson,
Botany Dept.,
Iowa State College,
Ames, Iowa.

July 11, 1943

Dr. J. P. Andersen,
Dept. Botany, U.S.G.,
Ames Iowa.

Dear Dr. Andersen:

I am inclosing a copy of the willow portion of the list of plants from interior Alaska, by Edith Scamman. It was published in 1940 but apparently I had not looked it up then.

One almost wonders how she missed some of the other fairly common species at the various points where she made extensive collections, unless she collected only those in flower or fruit. I have not seen her material but am making a few comments on species.

S. pseudopolaris Fied. This will may be *S. polaris* var. *Silwynensis* Haup, from the Liard River area.

S. stelenifera Cav. If this determination is correct, this probably extends the range northward from McKinley Nat. Park.

S. reticulata var. *orbicularis* Andersson (Floderus). This combination was made by Kernerov but Floderus may be earlier. Must look up.

I was in hospital for two operations this spring and that, with convalescence, took three months. When I got back to office I could not get completely caught up before I retired on June 30, being past 70. Just before retiring I had to move my office again, so life has been hectic.

I am beginning at once my monograph of *Salix* and the completion of my volume on cooperation in handling natural resources. The work on *Salix* includes the write-up for the No. Amer. Flora, as well as treatments for you and for Idaho, and completion of Nevada manuscript, still lacking keys.

So you can see that I shall not lack for work. I remain in my driving pool, expect to maintain a small office at the Dept., where my herbarium is quartered, and can be reached there as heretofore, or at my home, 3814 Jocelyn St., N.W. Washington 15, D.C.

With best wishes and hopes to see you next winter if not before,

Cordially yours,

Carleton R. Ball
Collaborator

July 21, 1943.

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

Dear Dr. Ball:-

Your letter of July 11 was received several days ago. Thank you for your notes on Miss Scamman's "List of Plants from Interior Alaska". I met Miss Scamman when she was in Alaska. She very kindly sent me copies of her paper.

I am pleased to know that you are now ready to go ahead with your works on *Salix* and I shall be very much interested in receiving a copy of your monograph.

In regard to my Flora of Alaska and the Yukon, I am waiting for further word on the genus *Puccinellia* from Dr. Swallen before completing part 2. The Cyperaceae is completed and I am now at work on the higher monocotyledons. It will be several months before these groups are completed. *Salix* will be included in the first part dealing with dicotyledons but this part will also include *Betula* and *Alnus*, both of which are quite complicated in the north and will require considerable time to straighten out.

Cordially yours,

J. P. Anderson

J. P. Anderson
Botany Dept., Iowa State College,
Ames, Iowa

Nov. 5, 1943

Dr. Carleton R. Ball
Washington, D.C.
Dear Dr. Ball:-

This week I have been checking my willows with Hultén's treatment of *Salix* in the third part of his "Flora of Alaska and Yukon". Since all my willows have been determined or the determination confirmed by you, I should like your opinion on some of the determinations by Hultén.

Salix arbutifolia Pall. This name is used for *S. fuscescens* Ands. He claims your var. *reducta* is *S. arbutifolia* x *S. ovalifolia*. All the specimens I have of *S. fuscescens reducta* are cited under the main species and not under the hybrid.

Salix arctica Pall. he uses in a very restricted sense. *Salix arctolitoralis* Hult. in Sv. Bot. Tidskr. 34 (1940) p. 373 fig. 1 describes this as a new species with my 4705 collected at Kotzebue as the type. He also cites 4806 Deering, 4626 Kivelina, and 4417 Pt. Lay. All these are quite uniform and are readily distinguished from the other specimens of *ovalifolia* that I have. They are all marked *ovalifolia* var. *camdensis* Schn. but Hultén claims that that variety is a synonym of *S. glacialis* Ands. *Salix arctophila* Cock. he cites Nome JONES 9042 as belonging to this species. You had determined it as *S. anglorum*.

Salix brachycarpa Nutt. var. *Mexiae* x *S. Muriel* Hult. Under this head Hultén classifies my 2012 Chitina, as probably this hybrid. I have under the name *S. desertorum* yet that name is used by him as a ssp. of *S. glauca*.

Salix flagellaris is described by Hultén in the same paper in which he describes *S. arctilitoralis*. He cites 5 specimens, the type being Walpole 1672 from Kruzamapa R., Seward Peninsula. I probably do not have have this form.

Salix fullertonensis Schn. He lists one specimen from Nome, JONES 9045.

Salix glacialis Ands. When I first arrived in Nome, June 4, 1938 I found some willows just beginning to develop and gathered some as 3178a. Returning June 10 I was much surprised at the great development that had taken place in six days and collected some more from the same group, applying the number 3178b. 3178 a is cited as *S. glacialis* while 3178b is cited as *S. glacialis* x *S. ovalifolia* as are also Pt. Hope 3787 and Pt. Lay 4418. I have all of them under *S. ovalifolia*.

My collections Unalakleet 3266, St. Michael 3449, and Teller 3576 are listed by Hultén as *S. glauca* L. ssp. *desertorum* (Richards.) Ands. In my collection they are all classified as *S. glauca* var. *Alleeae*.

Salix hebecarpa Fern. is listed as being the proper determination of Walpole 1826 collected at Teller although this species is otherwise not known outside of the Mt. Albert locality in Quebec.

Salix Muriel is described as a new species . The type is MURIE Salcha Slough June 18, 1922. I do not think I have it.

Salix polaris Wahl. ssp. pseudopolaris (Flod.) Hult. None of my collections are cited but I think I have this form. Mr. L. J. Palmer sent me some small specimens, hardly more than fragments, collected by Rouse in 1932 at Cape Etolin, Nunivak Island. They are numbered 11 12, 13, 14, 16, 17, and strongly resemble S. polaris of Europe.

Three of my numbers cited as Salix tortulosa Trautv. I have under the name S. anglorum.

I have now about completed the manuscript for all the monocotyledenous groups and will soon be ready to start on the dicotyledons. I hope you are getting well along with your work on Salix.

Cordially yours,

J. P. Anderson

J. P. Anderson
Botany Dept. I?S?C.
Ames, Iowa

February 23, 1944.

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

Dear Dr. Ball:-

I have now finished the manuscript covering the Monocotyledons for my "Flora of Alaska and adjacent parts of Canada" and have started work on the Dicotyledons. I sent you a copy of part one covering the Pteridophytes and Coniferales, so will see how I am treating the species. As most of the species will be illustrated by a small drawing of some characteristic parts I am enclosing the drawings I made of forms of Salix. These cover the species of which I have good material in my collection here. If you think it is desirable to illustrate other species I shall be glad to make the drawings if you will lend me the material.

I have been very much dependent on you for the determination of my willows and information regarding them. I should like to be informed as to the progress of your work on the western and northern species of Salix. I shall need your help in preparing the text, either direct or from your publications. The text I am preparing is intended primarily for popular use and if new species or varieties are described I would prefer that they be first published elsewhere.

I am hoping to spend at least part of the summer in the field. If so the next part of my flora, or rather the manuscript for it will not be completed until late this fall.

The drawings will be reduced about one half in the published work.

Cordially yours,

J. P. Anderson

J. P. Anderson
Botany Dept.
Iowa State College
Ames, Iowa.

STATE DEPT. OF BOTANY
IOWA STATE COLLEGE,
AMES, IOWA

May 4, 1944

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

Dear Dr. Ball:-

On Feb. 23 I wrote you a letter and sent some drawings of *Salix*. So far I have received no reply. Since in the past you have always been so very prompt in your correspondence I am wondering what is the matter. Indeed, I have been wondering if you have been sick. I noted some months ago that your brother had passed away.

I am leaving Ames May 20 and sailing from Vancouver for Alaska on May 26. I expect to spend the summer botanizing in Alaska and Yukon. I do not know just when I will be back here at Ames but it will probably be between Sept. 1 and 18.

Cordially yours,

J. P. Anderson

J. P. Anderson
Botany Dept., I.S.C.
Ames, Iowa

Dr. J. P. Anderson,
Dept. Botany, Ia. State
College, Ames, Iowa.
Dear Dr. Anderson:

May 16, 1944

Your letter of May 4 sent me on a long hunt for the letter of Feb. 23, about which you inquired. It must have come at a time when I was on a rush job and was not going thru my second and third class mail and somehow it failed to get sorted out. Now letters and all other mail are delivered separately.

I am extremely embarrassed and regretful over this long delay in answering your query about the illustrations. I am sure that I have hindered your work, and I really like to be helpful.

These past circumstances make it all the harder for me to tell you what I firmly believe, namely, that it is practically a sheer waste of money to publish illustrations of this sort. Not only that, but they confuse rather than inform the reader. The whole object of publication is to inform.

In my volume on "How to Write, I say that accuracy, brevity, and clarity are the abc of writing. These drawings are not accurate. They are brief, because they are only fragments, and they are not clear in meaning because they are not accurate. Let me illustrate.

The drawings of most of the leaves are 6 to 7 cm. long. The average length of the leaves of these species varies from about 3 cm. in *S. brachycarpa* var. *Mexiae* to 10 cm. in *S. lasiandra* and varieties. Yet all are drawn to the same length and presumably will have the same reduction in engraving. That is misleading to the reader.

The leaves of *S. ovalifolia* and its var. *canadensis* are shown with finely reticulate venation, but *S. angulorum*, *S. arctica*, and *S. stolonifera*, belonging to the same Section *Ovalifolia* s, and having essentially the same venation, are not so drawn. This will confuse readers.

In the same way, the drawings of the capsules of the different species are not in proportion to their actual length. For example, the capsule of *S. reticulata* is drawn distinctly larger than that of *S. commutata*, yet actually it is about half as large. Other similar discrepancies are discernible.

The capsule drawings consist of capsule, pedicel, style, and stigmas. In each species, these have an average length and that average length should be shown by the relative length of the organ in the drawing. This has not been done. For example the ratio of capsule-pedicel-style should be 10-1-2. In the drawing it is 6-1-0.6. In other words, the pedicel is too long and the style too short. Many of the other drawings show similar discrepancies.

All capsule drawing should be of the same stage of development or they are not comparable and therefore misleading. The same hold for leaves, and much more so, as discussed in the paper on "Illustrating Plant Organs", sent separately. Note drawing differences in capsule of *S. ovalifolia* and var. *canadensis*, which do not differ at all, on the average.

I strongly recommend discarding the whole set of drawings.

Cordially yours,

Drawings inclosed.

dupl in Bot. Dep. Carleton R. Ball

Illustrations of Alaska Willows

1. *S. lasiandra* (*lanifolia*) ✓
5-10 or 15 x 1.5-3 cm. 65 x 15
cap. 5-5.7 ped 1.5-2; sty 0.5 ✓ 4.8 ped 1.5 at 33
2. *S. interior* ✓
5-12 (40.6-8) cm. 60 x
cap 7-9, ped 0.7-1.5, sty 0. 4.6 ped 1.5, sty 0
3. *S. myrtillofolia* ✓
2-4 x 1.5 6.0 x 2.8
cap 4.5-6.5, ped 1.5, sty 0.5 cap 3.7 ped 1.5, sty 2
4. *S. Walpolei* ✓
4-8 x 2-3.5 cm (6 x 2.5) 5.7 x 2.5
cap 5-7, ped. 0.5+; style 0.2+ cap 4.7, ped 3, sty 2
5. *S. Barclayi* ✓
4 x 10 x 2-4 60 x 22
cap 5-8, ped 0.5-1, sty 1.5-2 cap 4.8, ped 1.8, sty 5
6. *S. Chamissonis* ✓
1.5-5.5 x 1-2.5 (3 x 1.8) 5.0 x 2.3
cap 5-6, ped 0, sty 1-1.2 cap 5.4, ped 0, sty 9
7. *S. commutata* *denticata* ✓
3-7-8 x 1.5-3-4 42 x 21
cap 5-7, ped 1.5-2, sty 1.5-2 cap 2.7, ped 5, sty 4.5
9. *S. alaxensis* ✓
5-9 x 3-4, (4 x 1) 5.7 x 1.5 *amplifolia*
cap 6.5-8, ped 0, sty 1.5-2 cap 2.1, ped 0, sty 7
10. *S. Barrattiana* var *australis* ✓
3 x 7 x 1.5-2.2 both + 66 x 20
cap 6-7, ped 0, sty 1.5-2, cap 3.6, ped 1, sty 11
11. *S. Richardsonii* ✓
4 x 7 x 1.5 x 3.5 6.0 x 2.9
cap 6-9, ped 0-1, 1.5-2+ cap 4.5, ped 4, sty 15
8. *S. pseudomonticola* ✓
4-7-10 x 1.8-3-5 5 x 2.4
cap 6-8, ped 1.5-2.5, sty 0.8-1.3 cap 4.8, ped 5, sty 11

S. fuscescens *reducta* ✓

3.8 x 22

cap. 40, ped 6, sty 1.5

S. phlebophylla ✓

5-12-18 x 4-10-14
cap 4-6, ped 0.5+, sty 0.5-0.6+

✓ 32 x 16

cap. 29, ped 1, sty 5

S. polaris

S. Setchelliana

54 x 21

S. rotundifolia

7-8 x 4-7 as 10 x 9
cap 4-6, ped 0-0.5, sty 0.5-0.6

✓ 24 x 22

cap 27, ped 0, sty 5

S. reticulata

✓ 38 x 29

cap 34, ped 2, sty 4

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S. angustum

✓ 46 x 18

cap 17, ped 4, style 6

S. arctica

✓ 48 x 26

cap. 15, ped 2, style 3

S. ovalifolia

✓ 46 x 23

cap 46, ped 8, sty 7 ✓

S. istolonifera

✓ 45 x 29

cap 45, ped 10, sty 11

S. ovalifolia condensens ✓

✓ 57 x 23

cap 58, ped 2, sty 5

- S. brachycarpa mexicana* 6.3
 2-3.5 x 4 x 0.7-1.0, 1.2
 caps. 6-7 mm. ped 0-0.5, sty 0.7-1
 caps. 6.5, ped 0, sty 3
- S. desertorum* ~~axial~~
 6.0 x 9
 caps. 5.5, ped 2, sty 0
 5.7 x 2.2
 caps. 4.8, ped. 8, sty 4.5
- S. glauca*
 6.6
 2-4.5 x 0.7-1.2
 caps. 6-7, ped 0.4-0.7, sty 0.5-0.8 | caps. 5.0, ped 2, sty 2
- S. niphlosada* ✓
 6.3 x 12
 caps. 4.5, ped 5, sty 9
- S. arbusculoides* ✓
 6.3 x 12
 caps. 4.5, ped 5, sty 9
- S.*

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- S. sitchensis* ✓
 6.4 x 2.6
 caps. 4.0, ped 8, sty 8.
- S. pulchra* ✓
 6.3 x 2.4
 caps. 4.5, ped 3, sty 10
- S. Leouleriana* ✓
 6.3 x 2.6
 caps. 5.0, ped 15, sty 0
- S. Bebbiana* ✓
 6.6 x 3.0
 caps. 4.5, ped 18, sty 2
 scale twice / two wide

34

S. ovalifolia + *S. canadensis* differ only by leaf shape but see diff in capsules

S. ovalifolia + *S. stolonifera* ~~both~~ both from by ~~trained leaves~~ but see diff in drawings

Relative lengths of capsule, pedicel, style

	<u>Desc.</u>			<u>Drawings</u>		
<i>S. lasiocarpa</i>	6	1.5	$\frac{1}{2}$	6	1	$\frac{1}{3}$
<i>S. interior</i>	7	1	0	3	1	0
<i>S. myrtillif</i>	4	1				
<i>S. Barclayi</i>	10	1	2	6	1	0.5
	10	0	2	6	0	1

Dr. J. P. Anderson,
Dept. Botany, I.S.C.,
Ames, Iowa.

May 17, 1944

Dear Dear Anderson:

In writing you yesterday I spoke only of the drawings. I still plan to prepare the text for you Flora of Alaska, so far as willows are concerned, if you so desire. I have had a manuscript covering the first half of the species ready for several years but the second half is only partly done. Of course, there will be some additions of species and varieties and much addition of range.

From your letter of May 4, I learn that you will leave Ames on May 20 for a summer in Alaska and the Yukon. I wish I were going with you. You doubtless will plan to cover much new territory and will extend ranges of species.

I have just heard that A.E. Persild of Ottawa, accompanied by August J. Breitung, an enthusiastic collector of willows in central Sask., will be in the Yukon this summer, but I do not know their itinerary.

I am not been sick, but greatly overworked, as several extra jobs for the Dept. have been dumped on me. That is one way in which I can help the war effort.

Reup and a party are going to the Mackenzie Basin again this summer but I don't know just what parts. I shall do little collecting but hope to get some manuscript done.

Wishing you a wonderful summer and a safe return, I am

Cordially yours,

Carleton R. Ball
Collaborator

Dr. J. P. Anderson,
Dept. Botany, Ia. State College,
Ames, Iowa.

June 30, 1944

Dear Dr. Anderson:

I am inclosing copy of a list of determinations made for Lt. C.L. York, on material from Mt. McKinley Natl. Park. It should have been sent earlier.

I have started on the manuscript of the willows of Alaska, for your use next fall, and have done the Pentandrae, Longifoliae, Cordatae and M. Balsamiferae. That is just a start but it is progressing. It requires working over a mass of material and determining the complete ranges.

Treatment is fuller than in your part on the Pteridophytes, etc. but the size and complexity of the genus probably warrants that.

Did you know that a large quantity of Alaskan material in the U.S. Nat. Herb. had been taken out for shipment to Hulten but the war intervened and it has been neither shipped nor put back into the Herbarium. If you send for material, or come here to work, it will be well to keep this in mind or you may miss some needed material.

Hope you are having a wonderful summer. Hot as Hades here.

Cordially yours,

Carleton R. Ball

P.S. If you do come east this next winter, why not stay with us?

Miss Inez M. Eckblad:

Professor George W. Gasser,
College of Agriculture,
Univ. of Alaska, College, Alaska.

July 10, 1944

Dear Professor Gasser:

In 1933, ~~Philip~~^{Roland} Snodgrass, of the College, collected about 100 numbers of willows in Alaska. These were sent to me in the spring of 1934 for determination. In returning them, in May, 1934, I asked him where they were collected, as he had no data with them. I wrote again in December, but received no reply to either letter.

In preparing a monograph of the Alaskan willows, I need to know where these were collected, if possible. Some of them are of special interest and I would like to cite them if I knew where they came from. Some one (I forget who) suggested they were from Kodiak Island. I am sure that they came from the southern and/or western part of the coastal area but doubt if all of them came from Kodiak Id.

If you can tell me of Mr. Snodgrass' present address I will be very glad to have it. If the willows are in the college herbarium, and if they have the places of collection on the labels, I will be willing to pay some one (perhaps a student) who will give me the data. They included *S. arctica* and var. *obcordata*, *S. Chamissonis*, *S. S. fuscescens* and var. *reducta*, *S. ovalifolia*, *S. phlebophylla*, *S. reticulata* and var. *subrotunda*, and *S. rotundifolia*, and *S. pulchra*.

Cordially yours.

Carleton R. Ball, Collaborator

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Oct. 7th, 1944
asked Anderson if he would write

Whitehorse, Yukon Terr. Canada
July 30, 1944

Mr. Carlton R. Ball,
3814 Jocelyn St. N.W.
Washington, D.C.

Dear Mr. Ball:-

I left Ames May 20 to spend the summer collecting plants in Alaska and Yukon. Your letter has been forwarded here. Thank you for the enclosed determinations. This fall you will receive a package of willows from me as so far I have collected nearly 1200 numbers altogether among which are several willows from each of about 8 localities.

Your letter criticising my illustrations of willows was received the day before I left Ames. I agree with you for the most part but not with everything you said. Will have more to say about that matter later when I return to Ames which I expect to do about Sept. 1.

Mr. Basset Maguire informed me ^{from Alaska} months ago that Mr. Nulton had most of the Chickweeds in the leading herbaria of the country on loan. This will prevent my work on this group from being completed for some time.

Thanks for the invitation to stay at your house should I go east this winter. Cordially, J. P. Anderson
Bot. Dept. U.S.C. Ames

RECEIVED
IOWA STATE COLLEGE

Sept
August 5, 1944

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

Dear DR. Ball:-

I returned about a week ago from the north, having spent most of the summer in Alaska and Yukon. I collected more than 1400 numbers of which 67 were willows. I have now sorted these out and am sending specimens of them to you. Most of them are the common kinds but some are of the less frequent species. You will find 2 collections of *S. setchelliana*.

I am also sending you a copy of part 2 of my Flora of Alaska and the adjacent parts of Canada. This part is already out of date as I found one species of grass not listed. On working over my summers collections I may find other species of plants not previously known to occur in Alaska or Yukon. I have one very puzzling form of *Juniperus*.

It now looks as though the war in Europe will soon be over. This should clear the way for normal intercourse with Sweden. Collections of plants and publications may be freely exchanged.

Cordially yours,

J. P. Anderson

J. P. Anderson
Botany Dept., I.S.C.
Ames, Iowa

October 9, 1944

Dr. Carleton R. Ball,
Extension Service, U.S.D.A.
Washington, D.C.

Dear Dr. Ball:-

Your letter of the 5th inst. has been received. That letter if mine from Ames dated Aug. 5 should have been dated Sept. 5.

Roadhouse keepers in Alaska have the habit of changing their locations when activities change. The Eureka roadhouse where I collected is not the one in the Hot Springs district but one at the highest elevation on the Glenn Highway which connects the Matanuska valley with the Richardson Highway. It is near the crossing of the 62 parallel north and 147 meridian west, probably a few miles northeast. The elevation is such as to make the flora a timberline one.

Mileage on the Richardson Highway starts at Valdez, Mile 122 is 6 miles south of Gulkana.

The place where the White River is crossed by the Alaska Highway is 6 miles below Canyon City, approximately 61 degrees 52' north, 140 degrees 30' west. According to my maps Mayo is nearer 136 than 135 degrees west.

I shall be much interested in seeing your write up of the Alaska willows. You thank me for the material sent. I thank you for the fine cooperation you have given me in my work.

Cordially yours,

J. P. Anderson

J. P. Anderson
Botany Dept., I.S.C.
Ames, Iowa

October 13

Dear Dr. Ball:

Mileage on the Alaska Highway starts at Dawson Creek, B.C. The Alaska boundary is about 1221. Mile 1247 is at an Alaska Fire Control Station 26 miles northwest of the Canadian boundary. Northway Junction on the Highway is about 1264.

I am plugging away at determining the past summer's collections. Have found several species not previously known from Alaska or Yukon.

Cordially yours,

(Sgd) J. P. Anderson.

(See over)

Dr. J. P. Anderson;
Dept. Botany, Iowa St. College,
Ames, Iowa.

October 14, 1944

Many thanks for your letter of Oct. 9 and the information regarding localities. I will add these data to the labels.

I have noted instances of two places of the same name on the maps of Alaska, as Blackburn in SE. Alaska north of Mt. St. Elias and also on the Yukon no. of Holy Cross. Likewise Heal at east end of McKinley Park and also on Norton Sound.

I am really disturbed because I cannot find out where Mr. Roland Snodgrass collected 113 willows in 1933. He then was at the Agricultural College and I determined them for him in 1934. On May 14 I returned them to him with a request for the collection data. Receiving no reply, I wrote again on Dec. 31, 1934, but had no answer to that. The specimens had no labels when I determined them.

On July 10, 1944, I wrote to Prof. Geo. W. Casser, of the College, and asked him if he could give me the data from the herbarium sheets. Have had no reply to that. They are species of the south coast, and I thought they were from Kodiak Island or southward. I need the data now to determine distribution of species, but it looks as if I am not getting them. Do you know where he collected in that year, 1933?

Cordially yours

Carleton R. Ball
Collaborator

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Dr. J. P. Anderson, Dept. Botany,
I.S.C., Ames, Iowa.
Dear Dr. Anderson:

October 18, 1944

All the helpful data in your letter of October 9 and card of Oct. 13 have now been added to the labels of the Alaska willows and will make them much more exact.

I am glad that you are finding plants new to the Alaska-Yukon area as you work up your collections. That probably will continue for several years yet, considering the size of the area and the relatively little coverage by collectors.

I had a kick of the same sort this week. Got 4 typical *S. cordata* from NW. Arkansas, far out of its known range. Also a few odd things from the Rocky Mtn. Herb. found two fine specimens of *S. cascadiensis* from Albany Co., Wyo., the first records for the Rocky Mtns. Likewise a specimen of *nivalis* from California, collected by a friend of mine in 1900 but never seen by me before. It antedates the first Calif. collection previously known by 15 years and my re-finding of the spot by 32 years. I still cannot find the mountain from which it is said to come.

Will be able to send you mass. of 20 species and nearly as many varieties of Alaska willows by end of this week, I think. You then can study it and make suggestions. I have given a full treatment, which seems needed if we ever are to have people know willows.

Cordially yours,

Carleton R. Ball
Collaborator

extra copy

Dr. J. P. Anderson:
Dept. Botany, Ia. State College,
Ames, Iowa.

October 21, 1944

Dear Dr. Anderson:

As promised, I am inclosing a first draft of 20 species and 13 varieties of Alaska willows for your consideration and opinion.

This is not at all the kind of treatment you have been giving Alaska specimens in your published papers. As I wrote you, however, I feel that we have got to give much fuller treatment to the willows species if we are ever to have collectors and taxonomists become familiar with them. I feel too that there will be much collecting in Alaska in the next 20 years and that this large and difficult genus will be much better known if we can start them off well equipped.

For these reason I have given full descriptions of species and distinguished the varieties by their differences therefrom. I have tried to show where they have been found geographically. I wish that you would add more on habitats, soils, elevations, etc.

As noted above, this treatment occupies much more space than you have been giving. It is up to you to say how much you can give and I will cut the cloth to fit the garment. I am planning two keys, one based on vegetal characters, the other on flore (principally pistillate) characters. These will take space with a big genus like Salix.

You will note that No. 18, *S. polaris*, is more of a discussion than a taxonomic treatment like the others. I must get hold of Raup's material and some other before I write this in final form, but have put down what I now know.

In the case of No. 18, *S. barrattiana*, I have noted that the species has not yet been recognized in Alaska but that I am describing it, and then differentiating the var. *angustifolia*. I did this because the species may turn up there yet, and it would have taken a full description for the variety if the species had not been described.

There are about 14 more species and about the same proportion (2 to 3) of varieties to write up, and then the keys to make. In Coulter & Nelson Manual Rocky Mtn. Botany, I keyed and described the Sections first and then the species in each Section. I would like to do that here if you feel that the space can be given, and that the method is proper. Its one way of helping folks to see the relationships in this difficult genus.

Now it is my wish that you be perfectly and brutally frank about the whole proposition. Its your publication and must suit you. Say why you wish. I will take it.

Cordially yours,

Carleton A. Ball
Collaborator

3rd copy

October 25, 1944

Dr. Carleton R. Ball,
Extension Service, U.S.D.A.
Washington, D.C.

Dear Dr. Ball:-

Your letter of Oct. 21 together with the manuscript has been received. I agree with you that a very full treatment of the species of *Salix* in Alaska and Yukon with some of northwestern B.C. is very desirable. I am doubtful, however, of the desirability of treating one group so much more thoroughly than other groups in a flora such as I am preparing. I therefore suggest that you prepare a paper on the genus going even more into details than in the manuscript you sent and have it published as soon as possible. I could then easily condense the descriptions so as to conform with treatment of other groups in my flora, acknowledging that my treatment was based on your paper and referring anyone wanting more information on the subject to it. My work is prepared especially for the botanical amateur, the same as Grays Manual, Britton & Brown, or other popular manuals. It is my intention to issue it in regular manual form when the work is completed. For such a uniform treatment of all groups is desirable.

I suggest that in giving synonyms you quote Dr. Hultén's name as given in his *Flora of Alaska and Yukon*, part III. This part includes the families from Juncaceae to Salicaceae. I do not suppose that there are many copies of this in America. If you do not have access to a copy I shall be pleased to loan you mine. Dr. Hultén apparently sent it through diplomatic channels to England whence it was sent to this country. I presume he sent a copy to Dr. Raup and perhaps others. I received my copy nearly a year ago. Hultén's treatment differs from yours. He describes some new species.

You have more specimens of willows from the region than I have, therefore you are better able to give detailed ranges than I am. If you see fit to follow my suggestion and publish such a paper it might be desirable to name all the localities in the region covered where the species has been collected.

I have examined the manuscript but wish to further examine it with the specimens of the species before me and will return it soon.

Cordially yours,

J. P. Anderson

J. P. Anderson
Botany Dept., I.S.C.
Ames, Iowa

Dr. J.P. Anderson,
Dept. Botany, Ia. St. College,
Ames, Iowa.

November 10, 1944

Dear Dr. Anderson:

Your letters of Oct. 25 and 30 were promptly received, and noted. I will out the treatment of *Salix* to fit your pattern, both in description and distribution. I will omit the references to Schneider. If reference is made to the two publications of Hulten, I think reference should be made to Coville, also.

I have no publications from Hulten, and no parts of his Flora of Alaska are in the Library of this Department. Please send me your copy. In Hulten's Flora of the Aleutians, he does not give the names used by Coville and, in default of his specimens, we can only guess what species he is discussing. It seems to me that taxonomists from other countries who come over here and describe new species ought to furnish their publications to American specialists.

Floderus, Forsild, and Hulten, between them, certainly have muddled up our *Salix* species. Floderus developed the crazy theory that practically all willows are hybrid and that he can distinguish, from dried fragments, not only simple hybrids of two species, but also the hybrid progeny of three, four, and five species, and proceeded to name all the Arctic material sent him by Forsild on this absurd basis. Worse still, he insisted that he could tell the relative influence of each of the alleged three, four, and five parents, and arranged the five parent names in different sequences on different specimens from the same locality. Try to file or find that material in the herbarium. Then, too, he insisted that the parent species did not need to occur in the same region, so predicated parentage of species not occurring within a thousand miles of the collecting area. The result is a mess and has held back recognition of the existing species in our Arctic. And now comes Hulten.

I will be glad to have you write to Snodgrass. The set of specimens I named for the Univ. of Alaska were number from 1 to about 150 (I have not the figures before me). That set should be in the Univ. Herbarium. The U.S. Natl. Museum has a much smaller number of them. No records without the numbers will be of much value because only by the number can I know what I called the plant. There often were several of the same species and variety in adjacent numbers. The Nat. Museum specimens are not in the material which was laid out for Dr. Hulten.

If there is anyone at the University Herbarium who would be willing to check the list I made against the specimens and add the localities, that would be the simplest way to get the records. I suspect that they were not numbered until after being prepared for shipment to me, or else the willows would not have been consecutively numbered. Therefore the set I had may be the only one with numbers on the labels. Probably, therefore, a letter to someone at the Univ. of Alaska will be best. If you do not have your copy of this list, let me know and I will make you another copy.

Cordially yours,

Carlton M. Ball
Collaborator

November 13, 1944

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

Dear Dr. Ball:-

Your letter of the 10th inst. has arrived. In regard to references in my work I have been giving synonyms only in case the name accepted differs from those used in publications relating to Alaska or used in manuals in common use, such as Gray, Britton & Brown, Abrams and Henry's Flora of southern B.C. If Coville's or Hultén's name differs from that accepted by you it should be given, otherwise not. In my work I do not aim to make citations as such but to make known the names that have been used for the species in publications that may be available to the common person who may be interested but is not a professional botanist. If you do write up the willows to suit my treatment of other groups in my Flora of Alaska and adjacent parts of Canada I do hope that you will be able to get out an exhaustive paper on willows that will give full citations and list every specimen known to you, and that soon.

It has often wondered how Floderus could tell such complex hybrids. Forsild seems to follow Floderus, at least in part. It is not unreasonable to suppose that hybrids exist and some of the varietal variations may be such hybrids, but one should have evidence that such forms have the proper characteristics to render hybridity probable. This mixup you mention makes it all the more desirable that you write an exhaustive paper on our northern willows as soon as possible.

I am sending you Hultén's Flora of Alaska and Yukon, part 3 under separate cover. This reached me from London, England, having been sent to London through diplomatic channels. Dr. Hultén most likely sent one also to Dr. Hugh M. Raup and I doubt if there are any more in the U.S.A. Since I have finished writing up the monocotyledons I am in particular hurry to have it returned but be sure and take good care of it and return it when you are through with it. I am also returning the manuscript you sent some time ago.

I am writing to Prof. Gasser at the University of Alaska and asking him to get the record of the Snodgrass specimens in the herbarium there. Prof. ~~Snodgrass~~ Gasser and I are very good friends and have made several trips together.

Cordially yours,

J. P. Anderson

J. P. Anderson
Botany Dept. I.S.C.
Ames, Iowa

May 7, 1945

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

Dear Dr. Ball:-

Part 4 of my Flora of Alaska and adjacent parts of Canada will treat the families from Salicaceae to Caryophyllaceae. I have just finished writing up this group except the genus Salix. I should like to hand in the manuscript before long so that it ~~can~~ ^{can} be published in the October number of the Iowa State College Journal of Science.

I am also wondering about illustrations. Other groups are illustrated but not every species. In Salix I feel that there should be at least a few illustrations, at least one for every group.

I do not wish to unduly hurry you but am simply letting you know the situation from my point of view.

Cordially yours,

J. P. Anderson

J. P. Anderson
Botany Dept., Iowa State College
Ames Iowa.

August 6, 1945

Dr. Carleton R. Ball
Extension Service, U.S.D.A.
Washington, D.C.

Dear Dr. Ball;-

Dr. Gilman has just returned home and he told me that you were busy running three offices. It is not surprising that you have not had time to write up the willows for the Flora of Alaska and the adjacent parts of Canada. If you are too busy to do the work now I suggest that I go ahead and hand in the manuscript for part 4 now with a note that you are working on the genus *Salix* and that would appear later as a supplement to part 4. This would give you lots of time and the treatment would not necessarily have to be uniform with that pursued in the treatment of the other groups. It would not even be necessary to have illustrations. If this suggestion meets with your favor please let me know at once.

Cordially yours,

J. P. Anderson

J. P. Anderson
Botany Dept., Iowa State College
Ames, Iowa

January 16, 1946

Dr. J. P. Anderson,
Dept. of Botany, Ia. State College,
Ames, Iowa.

Dear Dr. Anderson:

For months I have to neglect Salix almost entirely. There were several causes. Among them illness in family (now happily relieved), closing out war-time commitments, completing my term as President of the Organization of Professional Employees (wished on me in a nearly dead condition and now booming), and about double our usual measure of dark rainy weather, which has made using a microscope very hard on old eyes.

I wound up the last of these extra-curricular activities at 4.30 yesterday. Returning to my office, I found a small packet of Alaska willows from Eyerdam and immediately determined them just to get my hand in. The list of determinations is inclosed for your information.

Now I am going to jump back into this willow business at high speed. I don't know just how far I gotten with you Alaska project but will get at it at once.

I am as sorry as can be that these conditions developed, but sorrow writes no manuscripts.

With all good wishes to you and your associates, for the present New Year, I am

Most cordially

Carleton R. Ball
Collaborator

January 23, 1946

Dr. Carleton R. Dall,
Washington 25, D.C.

Dear Dr. Ball:-

Yours of the 16th inst. was received last week.
Thank you for the list of willows collected by W. J. Eyerdam.

I have recently had the privilege of examining a collection of plants from Atka Island collected by Lt. C. L. York and I was permitted to keep such numbers as there was sufficient material of. About the same time I received a collection of 573 numbers from Attu Island collected by Capt. Gilmore W. Soule of the Medical Corps. In both collections there were some willows. These collections are now in the process of being mounted. In a few days I will send you the willows. I have attempted to determine them but wish your reaction to my efforts. In the past I have become accustomed to depending on you for the determination of the willows that I have collected. I am sure that I feel none too competent to deal with.

I spent more than two months on the two collections mentioned above together with two smaller collections and found much very interesting material. In this work I was slowed down by an attack of the flu in early December.

I am pleased to know that you will now be free to pursue your work on Salix. Part IV of my Flora is now in press but minus the genus Salix. Part V, Cabombaceae to Droseraceae will be in the following number of the Iowa State College Journal of Science. I am now working on the legumes but find lots of headaches, figuratively speaking.

With kindest regards and best wishes,

Cordially yours,

J. P. Anderson
J. P. Anderson
Botany Dept., I.S.C.
Ames, Iowa

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

April 4, 1947

Dr. J. P. Anderson,
Dept. of Botany, I.S.C.,
Ames, Iowa.

Dear Dr. Anderson:

As you may have known, Washington has had one of the worst winters in recent history. That ought not to bother a man from Northwest Iowa, but I got a fall which put my left arm in a cast for a month and, the day I got the cast off, I got another fall which put both knees in bandages for weeks. Both ends are usable now but not back to normal. Then too we are having one of the worst flu epidemics in our experience. The papers do not mention it but the doctors and the people know it. Both my family and that of my daughter have had it and Mrs. Ball is far from well again. I got off with a mild case (didn't need any more troubles).

On April 1 I got back to willows again and am making them hum. Just about got caught on recent accumulations and today have started on Alaska willows again. I suspect that you are badly discouraged and don't blame you a bit. With what is already done, it seems as if the paper could be finished this spring.

I send separately three more or less recent papers. I will be interested to know what you think of "More plant study: Fewer plant names. Fernald's flat dropping of *S. petiolaris* as a "British" plant is a good late example of complete lack of study.

I cannot find any file card for you in my mailing list for reprints. I seem to have a vague recollection that I wrote you once before about this but will not take time to go thro the files now. I am sure that I have sent you reprints thro the years but doubt if I have sent you these last two. One is just out, and includes a discussion of Fernald's failure to study species related to his Section types and those species included some Alaskan willows.

Hoping that all is going well with you and your work, I am

Cordially yours,

Carleton R. Ball

P.S. Many thanks indeed for the splendid map of Alaska which came as a Christmas present. It will get a lot of wear in the days coming.

Carleton R. Ball

Dr. J. P. Anderson,
Dept. of Botany, Ia. State College,
Ames, Iowa.

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

31 July, 1949.

Dear Dr. Anderson:

At 10 p.m. yesterday, I finished and mailed the last section of the manuscript for *Salix* in Britton and Brown Illustrated Flora. Next in order is to finish the manuscript on the willows of Alaska.

The work for the Illustrated Flora probably represents about one third of the spade work for a monograph of American *Salix*. I included 40 numbered species (35 native and 5 introduced) but had to dispose of some 20 others credited to the area. This required about as much study and time as the 40 recognized.

Of the 20, about 10 proved to be hybrids, many based on a single collection, and joyously described as species with no recognition of hybridity. The rest were mostly wrong determinations of area plants as species which actually have not been found in the area (including *S. arctica*, *S. Barclayi*, *S. fuscescens*, etc. *S. glauca*). One or two were now species found to be synonyms of previously published species.

It was my first comprehensive treatment of all eastern willow for a manual. All were studied and described anew from abundant material, and an entirely new set of keys worked out. Some job!

The Alaska willows probably will represent fully another third of the total. More than half of them are in manuscript and some work has been done on most of the others. The same type of keys will be used, unless I work out something still better, so that part should be easier.

The final third will comprise the western-southwestern species which do not reach Alaska, plus a few from N.E. Canada which range neither to Alaska or to the south shore of the St. Lawrence River.

Separately I have mailed you four reprints later than those last sent you. Two for Dr. Hayden are in the same envelope. Your file card does not have any of my older papers on it and I think I wrote something about that but will not stop to look up correspondence now. Certainly I intended you to have all available.

Our terrific heat spell which broke all records here, ended last night, with cooling winds and a little rain. We hope for more of both. Trust that all is well with you.

Cordially yours,

P.S. Dr. Floyd Anise, who comes to I.S.C. as Dean and Director in Agriculture this fall, is a long-time friend and a mighty able man.

Carleton R. Ball

Dr. J. P. Anderson:
Dept. of Botany, Ia. State College,
Ames, Iowa.

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

11 August, 1949

Dear Dr. Anderson:

I inclose two sample write-ups of Alaska willows, modelled on your plan of arrangement. The two are *S. lasiandra* and *S. interior*, each having one variety, so that they are fairly representative of most problems encountered. I will be glad to have you consider these treatments, in the light of the suggestions below, and let me have your conclusions.

1. The descriptions are longer than the average of those in your publications. *Salix*, however, is not only a large genus, but a very variable one, with extremely variable (plastic) species, as you know. Brief and sometimes faulty descriptions and keys have prevented students from knowing willows. I am trying to remedy this. Gleason has allowed an average of 10 typed lines for the descriptions of *Salix*, and 2 or 3 other difficult families, in the new Illustrated Flora. He hopes thereby to increase knowledge of such families.

2. I have given only the major synonyms, with out citations. I also have indented the synonyms more deeply than the first line of the text below. This seems to set them off more clearly and takes no more space because the synonym lines are never full.

3. For these two, and some later species which are intrusives from the south, I give the distribution from south to north. For arctic species, this would be reversed. It seems to me that readers will learn more if we follow nature in such cases.

4. I am not yet certain which will be the best way to indicate the Provinces, districts, and points of occurrence or collection. One way will be to make B.C., Yukon, and Alaska data three separate sentences, each ending with a period. The other way will be to run all three into one sentence, separated by a semicolon (;). Within each province, my experiments indicate that writing the districts with initial capitals (Southern, East-Central, etc), and placing the list of collection points or areas in parentheses (Fairbanks, Nenana, etc) thereafter, is about as brief and clear a method as any. I believe these two have been written that way.

I expect to go straight ahead with this study until it is done, but will not write any more pages in final form until I hear from you in regard to these suggestions.

I have gone thro the Hulten treatment and have written a general appraisal of it. Now I am taking it species ^{by species, and}, as I write, make notes on the statements and assumptions. When I have them worked up, I'll send you a copy.

Because the U.S. National Herbarium is so deficient in Asiatic and some European material, I will have to send to other herbariums before I can evaluate his conclusions regarding *S. fuscescens*, *S. arctica* Pallas, *S. anglica* Chamisso, etc. I hope to go up to N.Y. Bot. Gard. and Harvard institutions later anyway.

It is still hot as -- here. Hope it's better in Iowa or that you have gone elsewhere.

Cordially yours,

Carleton R. Ball

15 August 1949

Dr. Carleton R. Ball
3814 Jocelyn St.
Washington 15, D.C.

Dear Dr. Ball:-

Yours of July 31 and August 11 have been received. Your treatment of the willows of Alaska as per sample is very satisfactory to me. The reprints were received and the ones ~~xx~~ marked for Miss Hayden were turned over to her. Thank you.

When I revise my treatment of the species for the publication of the Flora of Alaska and adjacent parts of Canada in book form I shall outline in more detail the distribution of the species in the north ~~in more detail~~ than I have used in the parts, and I am pleased to know that you have started it in the treatment of the two species as per the sheet ^{you} enclosed. I hope to use your treatment for publication both as a supplement to part four already issued and in the completed work. Critical groups need more detailed descriptions than some groups where there are few species or where the specific differences are more evident.

The summer here has been hot and dry. Last week there were widely scattered rains, Des Moines had between 3 and 4 inches but we had only about half an inch here. That is all we have had this month.

I am being delayed in getting out part 8 of my flora. It will treat the Gentianaceae to the Campanulaceae. That will leave the Compositae for part 9. Will issue a part 10 on the rust fungi. The rusts is the only non vascular group with which I am well enough acquainted to deal.

Cordially yours,

J. P. Anderson
J. P. Anderson

Dr. J. P. Anderson,
Dept. of Botany, Iowa State College,
Ames, Iowa.

3914 Jocelyn St., N.W.,
Washington 15, D.C.

3 November, 1949

Dear Dr. Anderson:

Your letter of August 10 apparently has had no reply. I'm glad that the sample treatment for the Alaska-Yukon flora were fairly satisfactory. I went ahead on the manuscript until outside events changed my whole plans for the summer and fall. Illness in the family and the sudden development of wide-spread cancer in my oldest sister, which probably will end her life soon, have slowed down my writing.

On the other hand, some splendid collections, about 75 sheets have come in from extreme northern Alaska (Pt. Barrow, and the various rivers flowing north into the Arctic Ocean, as well as from the passes in the Brooks range at the headwaters of ~~xx~~ these rivers). I have just about finished the determinations, altho several were mere fragments and a few were very moldy. They give us much better information about the range of such willows as *S. polaris* var. *calwynensis* Raup, *S. Walpolei* (Cov. & Ball) Ball, *RS pulchra* and its var. *Palmeri* Ball, *S. Richardsonii*, *S. niphoelada*, and others. I am very glad to have this knowledge before getting the mas. all done.

I have just received word that some 30-odd sheets are coming from Wiseman, which be useful also in bridging the gap between the well-known Yukon area and the Brooks Range, which previously had been almost unknown. I understand that Mrs. Williams and some of her friends were taking a long collecting trip there this summer but don't know just where they were going.. Their collections probably will be along in early winter.

Things are getting straightened out now, and I am driving ahead at full speed. I am handicapped at the U.S. Nat. Herb. because ~~Hulten~~ did not return a lot of the specimens they loaned him. He claims that they never were received but that seems peculiar because they all were shipped in one box and the box came all right to him.

The one cover containing all of the specimens of the rare and local *S. Chamissonis*, the creeping relative of *S. Barclayi* and *S. comutata*, did not come back. Luckily I have several sheets of it in my collections, now numbering about 22,000 sheets. But the absence of many specimens from the USNH. will prevent a full knowledge of the range of some species.

This NW Alaska collection contained one little specimen, without aments, which I take to be an arctic *Kalmia*. The leafs are densely tomentose beneath, like those of *S. alaxensis*. I have turned it over to the USNH. botanists for determination. The leafs are small, perhaps 2-3 cm. long and narrowly elliptical.

I probably have told you that I have written *Salix* for the new Britt. & Brown, Illustrated Flora. Last week, Dr. Rickett came down from New York and we picked out typical material to illustrate leafs and flowers of each species.

I'm slipping my latest reprint in with this letter. Have just read proof on a paper disposing of two of Dr. Fernald's species, which prove to be hybrids. He is publishing it in *Rhodora*. Believe it or not.

Thanks for passing the reprints along to Dr. Hayden, to whom my regards.

Cordially yours,

Carleton R. Ball

BOTANY DEPARTMENT
IOWA STATE COLLEGE,
AMES, IOWA.

19 January 1951

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

Dear Dr. Ball:-

On December 14 I had a heart attack. I spent four weeks in the hospital but was discharged about a week ago. I am still rather weak and am not supposed to do much work. This will explain any delay in answering correspondence.

Please send all the mounted willows from the Oregon State College directly to Dr. Helen Gilkey, Curator of the Herbarium.

Copy (The Alaska Highway is well marked by mileposts. Zero miles at Dawson Creek, British Columbia. Whitehorse is off mile 917. The Alaska boundary is a fraction of a mile beyond mile 1221. Milepost 1270 is a few miles west of Northway Junction. Milepost 1299 is 14 miles east of Tok Junction. Citing the milepost is the most accurate way of giving the exact location.)

Alaska Range probably refers to where the Richardson Highway cuts through the Range. The Alaska Highway lies wholly north of it.

Cordially yours,

J. P. Anderson

Dr. J. P. Anderson,
Dept. of Botany,
Iowa State College, Ames, Iowa.

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

22 January, 1951.

Dear Dr. Andersen:

Your letter of 19 Jan. is just here and I am glad to hear from you again. I am indeed sorry to know that you have had another heart attack, but rejoice that you can be out after only four weeks in hospital. Take it easy for awhile and I am sure you will be feeling quite fit again as the spring time comes around.

I realized that I had had no reply to my query but supposed at first that the holiday season, scientific meetings, and perhaps some visiting with friends, had kept you busy. Just lately it began to dawn on me that the delay was so unusual and long that I planned to write and ask further about you.

When I finally get the Glaucae straightened out, I will ship the two sets of mounted Alaska willow specimens to the Oregon State College (Dr. Helen Gilkey). I have just had Dr. Lutz' 1950 collections from the Forest Service for naming and will inclose a copy.

It would seem to me that, if locations on the Alaska, Richardson, Steese, and the several minor named Highways in Alaska are to be given only in miles, without reference to known points (as rivers, towns, mountains, etc., then the miles at beginning and end, at provincial, territorial, and international boundaries should be given on maps. Then one could determine location of collections by measuring from the nearest boundary or starting point. But I never have seen a map that showed any miles whatever. Some years ago you gave me the Alaska Highway mileage at the Yukon-Alaska boundary, and I have determined relative positions by making measurements from that point.

We are having a continuation of the freakish weather of the past 3 years. One of the coldest Decembers on record, and now jumping from 75 degrees well down toward zero, with almost continuous northwest winds. One good comes from the winds, however, for I pick up the tree branches they break off in this neighborhood, and turn them into firewood. Have not bought any since I retired, I think.

Here's hoping that you come along swimmingly, and will be ready to prowl when prowling season comes again.

Most cordially yours,

Carleton R. Ball

IOWA STATE COLLEGE
OF AGRICULTURE AND MECHANIC ARTS
AMES, IOWA

DEPARTMENT OF
BOTANY AND PLANT PATHOLOGY

29 October 1951

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

Dear Dr. Ball:-

Yours of 23 October was received on the 26th and the package arrived the next day. The new curator of the Herbarium here is Dr. Richard H. Pohl.

I handed in the manuscript for part nine of my "Flora of Alaska and adjacent parts of Canada" last July but it will not be published until September. I have been publishing in the Journal of Science. I am now engaged in revising and bringing up to date the flora. Instead of extending the range to Hudson Bay I have decided to include only the western part of the Mackenzie District including the Great Bear and Great Slave lake regions. This will considerably reduce the amount of work necessary and expedite the work.

I am getting along fairly well.

Cordially yours,

J. P. Anderson
J. P. Anderson

IOWA STATE COLLEGE
OF AGRICULTURE AND MECHANIC ARTS
AMES, IOWA

DEPARTMENT OF
BOTANY AND PLANT PATHOLOGY

25 February 1952

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

Dear Dr. Ball:-

It is a long time since I heard from you and I am wondering how you are getting along. I was in the hospital four days early in January but am better and now I am about the same as I was last June when you were here.

Although I handed in the manuscript for part nine of my Flora of Alaska and adjacent parts of Canada last July it will not be published until the April number of the Iowa State College Journal of Science. In August I handed in a manuscript on the Uredinales and since then I have been making notes on the revision and extension of range for the publication as a manual to cover our northern regions. Such a manual is much needed,

Since you offered to prepare a treatise of the willows for this work I suggest that you drop the idea of two treatments, one for Alaska and Yukon and the other of more extended range and simply prepare a treatment of the genus Salix for Alaska, Yukon, Mackenzie and the necessarily small part of British Columbia in the extreme northwest.

Usually I receive a number of collections of plants from Alaska every fall or winter but have received very little so far this season.

February here has been very mild, quite a contrast to the wintery weather we had in November and December.

Cordially yours,

J. P. Anderson
J. P. Anderson

Dr Anderson died at Mayo Clinic on
Feb 13, 1953. See letters from Dr Bragioni
and Prof. Duane Isely of Ia. State College

SCIENTIFIC NOTES AND NEWS

DR. JAMES BRYANT CONANT, president of Harvard University, has been appointed chairman of the National Defense Research Committee. He succeeds Dr. Vannevar Bush, who has become director of the newly established Office of Scientific Research and Development.

DR. THOMAS H. NORTON, research chemist of the American Cyanamid Company, celebrated his ninetieth birthday on June 30.

At the seventieth commencement of the University of Nebraska the degree of doctor of laws was conferred on Dr. Arthur Sperry Pearse, professor of zoology at Duke University.

A WIRELESS dispatch to *The New York Times* states that Dr. Alexis Carrel has been commissioned by Marshal Pétain's Government to organize in France an institute for scientific and medical research. The institute would be in the occupied zone, where Dr. Carrel is at present. Funds for its operation would be granted through subventions by the State.

THE Lamme Medal "for meritorious achievement in engineering" of the Ohio State University has been awarded to Harry C. Mougey, Detroit, technical director of the Research Laboratories Division of the General Motors Corporation.

At the annual meeting of the Rochester Academy of Medicine the Albert D. Kaiser Medal "for distinguished service to the medical profession" was awarded to Dr. David B. Jewett in recognition of his efforts in building up the library of the academy.

DR. C. H. DESCH, scientific adviser to the British Iron and Steel Research Council, has been awarded the platinum medal for 1941 of the Institute of Metals "for distinguished services to non-ferrous metallurgy." The medal, which is awarded every year, was presented to the institute by the Mond Nickel Company.

SIR THOMAS LEWIS, University College Hospital, London, has been elected a foreign member in the division of medical research of the Royal Swedish Academy of Science.

ACCORDING to the *Journal of the American Medical Association* the annual award of the faculty of medicine of the University of Berne for research on encephalitis will be made retroactively to Dr. B. Disertori, of Trient, Italy, for 1938 and to Professor G. Panegrossi, of Rome, for 1939.

At the annual meeting of the American Association for the Study of Allergy held in Cleveland on June 2 and 3, Dr. Milton B. Cohen, of Cleveland, was elected

president; Dr. Samuel Feinberg, of Chicago, president-elect; Dr. Oscar Swineford, Jr., of Charlottesville, Va., vice-president, and Dr. J. Harvey Black, secretary-treasurer.

DR. L. A. CORWIN, of Jamaica, L. I., was elected president of the New York State Veterinary Medical Society at the Ithaca meeting. He succeeds Dean W. A. Hagan, of Cornell University. Dr. H. H. Fehr, of Buffalo, was elected vice-president and Dr. W. J. Hellman, of Utica, treasurer.

DR. HARDY A. KEMP, professor of bacteriology and preventive medicine and dean of the College of Medicine of the University of Vermont, has been appointed dean of the College of Medicine of the Ohio State University. He succeeds Dr. John H. J. Upham, who has retired.

DR. WILLIAM STOCKTON NELMS, since 1920 professor of physics at Emory University, retired from active service with the title emeritus at the close of the college year.

DR. OLIVER REYNOLDS WULF, of the U. S. Department of Agriculture, has been appointed research associate in physics at the Institute of Meteorology of the University of Chicago. He also will take charge of the Chicago station of the U. S. Weather Bureau.

DR. ROBERT J. TERRY, professor of anatomy of the School of Medicine of Washington University at St. Louis and head of the department, retired in June. He will be succeeded by Dr. Edmund V. Cowdry, professor of cytology.

DR. GEORGE F. KAY, of the University of Iowa, will relinquish his administrative work on September 1. He will become dean emeritus and professor of geology. Since Dr. Kay went to Iowa in 1907 he has served for twenty-three years as head of the department of geology, as state geologist for an equal length of time and as dean of the College of Liberal Arts for twenty-four years.

H. P. GOULD retired on July 1 as head of the Division of Fruit and Vegetable Crops and Diseases of the Bureau of Plant Industry after serving for forty years. He will be succeeded by Dr. John R. Magnus, who has been a project leader in the division for several years. Dr. Lee M. Hutchins has been appointed chief of the Division of Forest Pathology. He has been in charge of research on virus diseases of tree fruits, working principally in the South and West. He succeeds the late Dr. Haven Metcalf.

PROFESSOR EARLE D. ROSS, of the department of history of the Iowa State College, has been selected

by the Iowa State Historical Society to prepare a history of agriculture in Iowa for the centennial publication of the society. This book, which Dr. Ross, as research associate of the Historical Society, is preparing this summer, will be one of a series to commemorate Iowa's one-hundredth anniversary of statehood in 1946.

DR. HARRY R. HOFFMAN, associate clinical professor of neurology of the Rush Medical College, Chicago, and director of the Cook County Behavior Clinic, has been appointed state alienist of Illinois, taking the place of the late Dr. H. Douglas Singer. He will be succeeded at the clinic by his assistant, Dr. William H. Haines.

DR. SAMUEL GLASSTONE, research associate in chemistry at Princeton University, has been appointed scientific editor of the Princeton University Press.

DR. ROBERT S. MORISON, of the department of anatomy of the Harvard Medical School, has succeeded Dr. Alexander Forbes as editor of the section of neurophysiology of *Biological Abstracts*. Dr. Ralph G. Smith, of the Medical School of the University of Michigan, has become editor of the section of pharmacology in the place of Dr. Erwin C. Nelson.

DR. SHARAT K. ROY, curator of geology at the Field Museum of Natural History, left Chicago on July 1 for western New York to collect specimens of invertebrate fossils of the Paleozoic era. Dr. Fritz Haas, curator of lower invertebrates, has recently returned to the museum after a two months' expedition to Southern California, where he collected specimens of Pacific shore animals.

DR. MADISON BENTLEY has completed a term as special lecturer in psychology at Goucher College. On June 2 he lectured before the Rochester Psychology Society on "The Hominid Animal from Egg to Age." Since he left the consultanthip in psychology at the Library of Congress his address has been Palo Alto, Calif.

DR. GEORGE W. CORNER, director of the department of embryology of the Carnegie Institution of Washington at the Johns Hopkins University, delivered on May 6 the sixth Leo Loeb Lecture before the St. Louis Medical Society. His subject was "The Ovarian Cycle."

DR. CECIL K. DRINKER, professor of physiology and dean of the School of Public Health of Harvard University, will give from October 6 to 20 a series of five Lane Lectures at Stanford University Medical School, on the general subject of the lymphatic system. The Lane Medical Lectures, given biennially, were founded in 1896 by Dr. Levi Cooper Lane.

It is planned to build a laboratory for medical

physics with a staff of five research workers at the University of California at Berkeley. This has been made possible by a gift of \$165,000 from an anonymous donor to build and equip the laboratory; and a contribution of \$50,000 from the Columbia Foundation of San Francisco for the payment of salaries. The laboratory will represent a union of physics and medicine and other branches of science, such as chemistry, bacteriology, biology and genetics. The plans are under the direction of Dr. John H. Lawrence, who now is in charge of medical investigations with the cyclotron.

By the will of Dr. Robert S. Forsythe, formerly head of the department of book selection at Newberry Library, Chicago, the sum of \$100,000 for research on asthma is bequeathed to Harvard University.

J. P. ANDERSON, of Juneau, Alaska, has given to Iowa State College one of the largest collections of Alaskan plants in the United States. It comprises more than 10,000 specimens. Mr. Anderson, a graduate of Iowa State College of the year 1914, has been active in Alaskan public affairs, recently serving in the territorial legislature and as superintendent of census. He plans to increase the selection further this summer and to carry on research with Alaskan plants at Iowa State College next fall.

THE Institute of Medicine of Chicago announces the establishment of a foundation to be known as the Edwin R. Kretschmer Memorial Fund, given by Dr. Herman L. Kretschmer, the Chicago surgeon, and Mrs. Kretschmer, in memory of their son, who died last February. Income from the fund is to be used for lectures on myelogenic leukemia and for research in the field of blood dyscrasia. Dr. Kretschmer is a member of the Board of Governors of the Institute of Medicine and treasurer of the American Medical Association.

REVISED examinations have been announced by the Civil Service Commission for those qualified in all branches of naval architecture and marine engineering. They are particularly needed for positions in the assistant and associate grades (\$2,600 and \$3,200 a year, respectively). However, naval architects or marine engineers qualified to fill all the grades (salaries range as high as \$5,600 a year) are urged to apply at once, although applications will be accepted until June 30, 1942. The commission will not accept applications from those who successfully passed the examinations for the position of naval architect or marine engineer which closed on June 30, unless they are now eligible for rating in a higher grade. Those who have been placed on the commission's em-