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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.

Rimouski, September 6, 1940

Dr. Carleton R. Ball
Chief Agriculturist
U.S. Department of Agriculture
Washington, D.C.

Dear Sir:

I am sending you some specimens of willows
collected in Rimouski and Gaspé Peninsula.

You surely remember the willows you identified for me this winter. These specimens ^{were} transmitted
by Rev. Père Louis-Marie, Institut Agricole, Oka.

Well I profit of the occasion to thank you
for your kindness and I hope you will determine, this
year again, the specimens sent by me and Rev. A. Dechamplain.

I thank you very much and I remain you very
obliged

Ernest Lepage

Ernest Lepage ptre.
Ecole d'Agriculture
Rimouski, Qué, Canada

2 copies

Quebec, Can.

September 25, 1940.

Father Ernest Lepage,
Ecole d'Agriculture,
Rimouski, Quebec, Canada.

Dear Father Lepage:

I have been considering your recent willow collections and those of Father Dechamplain from the standpoint of distribution and would make the following comments:

S. glaucophylloides Fernald (Nos. 2021, 2309, 2313, 2428) from Rimouski and Gaspé Counties, are interesting material and all within the known range of this species. Some of them show considerable pubescence on the branchlets.

S. laurentiana Fernald. When he described this species, Professor Fernald gave the range as Matane and Gaspé Counties. Your No. 2200 and Father Dechamplain's Nos. 764 and 765 are all from within these counties and represent some very valuable collections. Your No. 2400 is from Rimousi County and, therefore, farther West than the species was known to occur when Fernald published upon it.

S. argyrocarpa Andersson and *S. pellita* Andersson are represented by numerous collections both in your lot and that of Father Dechamplain. These specimens serve to show that these two species are much more closely related than has been appreciated before. *S. argyrocarpa* was first known as a very small mountain plant or as a dwarf plant of the Arctic areas in eastern Labrador and Newfoundland. Some of the collections you sent apparently represent *S. argyrocarpa* at lower elevations and under more favorable conditions with much larger leaves than usual.

S. Bebbiana variety *luxurians* (Fernald) Schneider. This variety is endemic in the area from Rimouski County to Gaspé County and the specimens collected by Father Dechamplain are from within that area and apparently very typical.

S. Bebbiana capreifolia (Fernald) Schneider. The single specimen, No. 524 collected by Father Dechamplain seems to be fairly typical.

Cordially yours,

Carleton R. Ball,
Executive Secretary

Rimouski, 2 Sept. 30, 1940

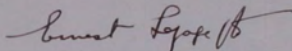
Dr. Cattleton R. Ball
Extension Service
U.S. Department of Agriculture
Washington, D.C.

Dear Sir:

I beg to acknowledge receipt of yours of the
20th of September last bringing with it the identification
of willows I sent you. Yours comments on specimens of my
collection and those of Father Dechamplain had exceedingly
interested me. I am very satisfied and I wish to thank you
for your benevolence.

I remain

Yours most truly



Ernest Lepage ptre.

RIMOUSKI



September 20, 1941

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

Dear Sir:

I take the liberty of sending you the Willows
Rév. A. Dechamplain and I have gathered in 1941.

Your past benevolence to me induces me to ask
you again this year to identify these specimens.
Mt. Blanc is an unexplored area in Gaspé

Peninsula.

Thinking you in advance, I remain

Yours very truly

Ernest Lepage ptre.

École d'Agriculture
Rimouski, Qué. Canada

September 18, 1942

Le Abbe Ernest Lepage,
Ecole d'Agriculture,
Rimouski, Quebec, Canada.

Dear Professor Lepage:

Your letter of September 9th and the packet of willows were promptly received and I have given them early attention because I expect to be absent from the city presently.

I inclose a list of the determinations, with some notes on the specimens. There were five numbers, collected by the Rev. de Champlain in Gaspé Co., which were not on the list of number you enclosed.

There must be careful study of the group to which *S. glaucophylloides* belongs, and which includes *SS. glauciphylla*, *S. monticola*, *S. pseudo-monticola* and var. *padophylla*, *laurentiana*, as well as several others less closely related. I doubt if there so many species but will be unable to go into the matter until next year.

Much of our trouble in taxonomic botany arises from dealing with fragmentary specimens and juvenile specimens. We try to determine what a plant is by looking at a small piece or a baby form. You have seen the accounts of newspaper contests in which the paper published groups of pictures of well-known persons, in the baby and adult stages, without labels, and offer prizes to those who can correctly associate the baby picture with the adult view of the same person. Few succeed. We cannot escape from such contests in botany but it does not make for accuracy.

Thanking you for giving me the opportunity to study this material,
I am Cordially Yours,

Carleton R. Ball
Executive Secretary

October 12, 1945

Professor Ernest Lepage,
Ecole d'Agriculture,
Rimouski, Quebec, Canada.

Dear Professor Lepage:

Your letter of October 3 is here and noted. I now have finished the determinations, as far as I am able, and am returning the specimens by mail.

This material was from a little-collected area and was immensely interesting. I am sure that some extension of known range is shown.

Your Nos. 11453 and 11524, from Lac Mistassini, I am unable to determine. Superficially they resemble *S. sericea* or *S. subcoerulea*, but differ in venation, color, and fine serrulation of the leaves. From the closely spaced and parallel veins, and the shining yellowish-green of the upper surfaces, I feel sure that they belong to the Section *Phyllcifoliae*, along with *S. planifolia* and several little-known species. They fit nearest to Fernald's description of his *S. paraleuca* but I have no material of this and the National Herbarium has only a paratype, which now is in war-duration storage away from Washington and cannot be consulted. You may have material of this species for comparison or you may wish to send these specimens to Professor Fernald for his determination. If you do this, please let me know results.

No. 11566, *S. McCalliana*, is a farthest east for this species, as is also your 5002 from Moosensee. On your kind permission I have kept a fragment of 11566

S. serissima had been collected at Moosensee before, by Gardner and by Dutilly. *S. laurentiana* had been collected there by Gardner.

Two of your specimens of *S. vestita* have the largest leaves I have seen on that species. They are comparable to my var. *gigantifolia* of *S. reticulata*.

Your collection of the very rare *S. cryptodonta* does not exactly match Fernald's specimen but I feel sure that it represents mature autumnal foliage.

Your specimens of *S. pedicellaris* var. *hypoglauca* have relatives broader and actually shorter leaves than most collections. I have some similar material from Maine and from Lake Akitibbi.

Trusting that the package reaches you safely, I am

Cordially yours,

Carleton R. Ball
Collaborator

P.S. Lists are inclosed.

dupl in file + S paraleuca ?

HERBIER DES MISSIONS
VICARIATS DE NN. SS. HENRI BELLEAU ET MARC LACROIX
Oblats de Marie Immaculée,
Baie James et Baie d'Hudson.

from E. Lepage
26-12-
45



Canadian Sub-Arctic Flora
East Coast of James Bay and Hudson's Bay,
Ungava, Québec.
Distributed by The Catholic University
of America, Washington, D. C.

Our trip in red line

Collectors :
Rev. Arthème Dutilly, O.M.I.
Naturalist of the Oblate Arctic missions.
Rev. Ernest Lepage, priest,
Ecole d'Agriculture, Rimouski, Québec.

Rimouski, September 26, 1945 194

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

Dear Dr. Ball:

I am sending you, this year again, some willows from the north of Québec. With the Father Dutilly, we spent two months in this region. We have started from the southern James Bay, collecting along the coast of James Bay (Rupert House, Eastmain River, Old Factory, Port Georges) and Hudson Bay (~~Sxata~~ Long Island, Great Whale River, Manitounuck Sound, Richmond Gulf). From the Richmond Gulf, we have gone across the interior Ungava as far as the Ungava Bay, about 400 miles, almost at the tree limit. At the Port Chimo, Ungava Bay, we spent one week in the american airport. From Chimo, we have gone by american ~~n~~ airplanes to Goose Bay, Labrador and from there to Moncton, New Brunswick. I hope that the sent collection of willows will be representative enough of the flora of this region.

Hoping to hear from you soon,

I remain,

Sincerely yours

Ernest Lepage

Ernest Lepage ptre

Rimouski, October 30, 1946

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

Dear Dr. Ball:

I take the liberty to send you, this year again, my lot of willows collected in the North. This summer, always with Father Dutilly, we have reached the James Bay by the Harricanaw River flowing in the Bay from the South-East. After that, we have explored the west coast of the Bay, in Ontario. Our purpose was to complete the flora of the James Bay and to see the similarity of the both coasts, even to discover the influence of the both floras of eastern and western Canada. By exemple, you will can remark the distribution of such willows as S. pseudomonticola, S. cordata Michx., S. serissima and S. laurentiana, which I suspected generally distributed in the James Bay.

We have spent three months in this region and we have made the large collections.

Yours sincerely truly

Ernest Lepage

Ernest Lepage ptre
Ecole d'Agriculture
Rimouski, Qué. Canada

(over)

3814 Jocelyn St. N.W.,
Washington 15, D.C.
December 2, 1946

L'Abbe Ernest Lepage,
Dept. of Botany,
Ecole d'Agriculture,
Rimouski, P. Q., Canada.

Dear Professor Lepage:

Your letter of October 30 and package of willows, and your recent letter of November 14 with money order, and a second shipment of willows, are all received in good condition.

When the first packet came I opened it and found it to be composed of willows only, I believe. I determined some of them but was so busy on a manuscript that I did but little then.

Today, I have gone through the entire second package and named most of them and sorted them completely by Sections, ready for further study. They are a very splendid collection and will further increase our knowledge of the lower Hudson Bay Salices.

Tomorrow, I will try to look thro the first package completely. If it contains additional material of the same numbers that are in package two, I would like to keep them while I am finishing the determinations. When the identity of a fragmentary specimen is in doubt, it is very helpful to have two or three specimens of the same number for comparison.

In a little time I shall hope to send them all back to you, with the determinations completed and a list of the specimens written.

Cordially yours,

Carleton R. Ball

3814 Jocelyn St., N.W.,
Washington 15, D.C.
November 30, 1946

Dear Professor Lepage:

I have received your letter of Oct. 30 and package of willows and also your recent letter with money order and another package before this last one came. I had examined the willows in the first package and named part of them. There were no other plants than willows in the first package. Shortly I will be able to compare the two packages and see if they contain the same or entirely independent lots of willows.

I am sorry that I am so pressed for time, but I must delay in this manner.

Cordially yours,
Carleton R. Ball

3814 J. celyn ST., N.W.,
Washington 15, D.C.

M. L'Abbe Ernest Lepage,
Ecole d'Agriculture,
Rimouski, Quebec, Canada

December 7, 1946.

Dear Professor Lepage:

I have completed the typing of the list of determinations of the 1946 willows and inclose the 4-page list.

I have entered those which I still am holding for further study, but have left the specific names blank. They can be inserted when I am able to report on them.

The determined specimens are all packed and wrapped and will be mailed today. Mails are slow because of the Christmas rush, and because the embargo on heavy packages because of the coal shortage. The package, therefore, may be slow in arriving.

In sorting the specimens into numerical order for listing, I mixed a few of the numbers in the 15000s with those of the 16000s, for which I am sorry. They have been placed in the proper order in the package of specimens. In the typed list, one is placed at the bottom of page 1, and three are listed at end of page 4. In all cases, an insert mark is placed at the proper point in the list, so that you can find them readily.

The lowest number, 15045, is entered at top of page 1, but evidently it was an error for 16045, according to its location and date of collection. Accordingly, it has been inserted also at the end of the Albany specimens on page 2. I believe that the first entry should be deleted.

In looking at the notes I made when examining the duplicates sent me in first package, I find that part of the duplicates of that specimen of *S. pseudomonticola* bear the number 16045 and part of them are numbered 15045. If I had remembered that note when the complete set came, I would have entered the specimen correctly in the list at the start. I hope that you will correct the number in both sets, so that there will be no confusion when the duplicates are distributed.

In my letter of December 5, I said that I remembered having some of your more difficult specimens of 1945 still here. Yesterday, I looked up the packet at the Dept. of Agriculture, and was very regretful to find that apparently all of the 1945 collection still is here. Most of them were determined promptly, and I supposed those had been returned long ago. I will look up the lists of determinations made then and see if they were sent to you or are still here. Then I will return all the determined specimens immediately.

Trusting that this letter comes promptly, and that the package is not too long delayed, I am

Cordially yours,

Carleton R. Ball
Collaborator

3834 Jocelyn St., N.W.?
Washington 15, D.C.

Professor Ernest Lepage,
École Moyenne d'Agriculture,
Rimouski, Quebec, Canada.

September 15, 1947

Dear Professor Lepage:

On returning to Washington recently, I find your card of August 26 and am happy to learn that you returned from Alaska safely and successfully. I will be delighted to name the willows at any time that arrive.

I am inclosing a list of determinations of 7 willows collected in Churchill, Manitoba in June 1947, and determined for Mrs. Chase grass botanist of the U.S. National Herbarium. I do not know who the collector (H. Ellis) may be but understand that he is a friend of Mrs. Chase. Will learn more later.

Cordially yours,

Carleton R. Ball

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ÉCOLE MOYENNE D'AGRICULTURE
RIMOUSKI, Qué.

Aug 26, 1947

Dear Mr. Ball,

In coming back, I find your papers you kindly sent me during the summer. I thank you very much - Now, I am preparing to you a lot of Salices collected during this summer in Alaska.

Sincerely yours

Ernest Lepage

P.S. I received in Alaska your last letter with some determinations. Thanks. C. R.

3044 Locust St., N.W.
Washington 25, D.C.
September 12, 1947

Dear Professor Jagerski,
Kew, Kew Gardens, London,
England, U.S.A.

Dear Professor Jagerski:

On returning to Washington recently, I find your card of August 28 and am
happy to learn that you returned from Alaska safely and successfully. I will
be delighted to hear the willows at any time that arrive.

I am enclosing a list of determinations of 7 willows collected in Alaska
in June 1947, and determined for you. Some were collected by the U.S.
National Herbarium. I do not know who the collector (H. H. Allen) may be but under-
stand that he is a friend of Mr. Chase. Will I hear more later.

Sincerely,
R. H. Allen

R. H. Allen

By - Schrenbaker, Dean

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By -

Ecole d'Agriculture
Rimouski, Québec, Canada
Nov. 5, 1950

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

Dear Dr. Ball:

I am sending you a little lot of willows to be determined or reviewed. The main part of them were collected in James Bay last summer. I did not send you the species I find easier to identify, like *S. argyrocampa*, *pedicellaris*, *myrtillifolia*, *planifolia*; they were frequent in the Fort George area where I spent two months. This include a trip in the interior by canoe with Indians guides. It is a little hard life, but I like this adventurous way.

Sincerely yours

Ernest Lepage

Ernest Lepage ptre

P.S. You can keep those specimens for your herbarium.
I hope you have passed throught the willows of Alaska.

Father Ernest Lepage,
Ecole d'Agriculture,
Rimouski, Quebec, Canada.

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

12 December, 1950.

Dear Father Lepage:

Your letter of 5 Nov. came promptly and the packet of Quebec willows arrived safely later on. Beth came when I was buried in Alaska willows, hence this delay in studying them, for which I am sorry.

I inclose the list of determinations and congratulate on your accurate knowledge of so many of them. For convenience, as stated on the list, I have indicated your determination by an X and mine by a ---. I note that you also collected *argyrocarpa*, *myrtillofolia*, *pedicellaris*, and *planifolia*.

Just now I am trying to determine the range of *S. myrtillofolia* var. *brachypoda* Fernald, which differs from the species in having the leaves mostly ovate, rounded to cordate at base when mature, and glaucous instead of green beneath. It was described from a poorly developed specimen from Newfoundland and the original description is quite misleading. The leaves may reach 7 cm. long.

It had been reported from Ferteau, Labrador, and the 1947 McMillan Arctic Expedition found it at Carlew Harbor, Labrador, at approx. 53° 56' N. You and Father Dutilly collected 4 numbers on Hurricane River in 1946 and 1 at the south tip of James Bay. Further north you found only the species. I will be happy if you will examine your recent collections of *S. myrtillofolia* and see if any of them have leaf glaucous beneath and therefore are var. *brachypoda*.

Your 12,537, *S. MacCalliamii*, was a good find. You had collected it before at Mesence (5002 in 1943), and at Lake Mistissini, No. 11,566.

That specimen of *S. Bobbiana* is peculiar in size of leaf, but there must have been some reason which the specimen does not reveal.

Many thanks for permission to keep these specimens, but please remember that I always am happy to study material which is to be returned, and that you may have any or all of these back if desired.

I am glad that you got in some roughing and adventure on this trip, for that is what keeps us young and keen. I am past 77 and still love it.

With all good wishes for the joys of the Christmas and New Year Holidays,

I am Cordially yours,

Carleton R. Ball

In looking in your file, I find a pencilled note saying that I wrote you on July 16, 1947, that I had studied the types of Fernald's *S. parvifolia* and found that it was a hybrid, probably of *S. planifolia* and *S. humilis*.

The note says that I wrote you also about his *S. stenocarpa* as a hybrid but did not make it clear that one parent probably was *S. discolor*.

over

Father Ernest Lepage,
Ecole d'Agriculture,
Rimouski, Quebec, Canada.

3614 Jocelyn St., N.W.,
Washington 15, D.C.

20 December, 1950

Dear Father Lepage:

You sent me 9 specimens of *Salix* in November, and I have just discovered that I reported the determinations of only 8 of them in my letter of 12 December. I am very sorry about this oversight. The unreported one is:-

12,860. *S. cordifolia* Pursh, var. *callicarpaea* (Trautvetter) Fernald. X
3-4' haut, lieu sableux. Ft. George, lat. 53° 53'. Aug. 30.

(1-yr. & seasonal twigs densely pubescent; leaves oval to broadly oval or the apical ovate, to 5 by 2.5 cm., pubescent to becoming glabrate beneath; aments fruiting, to 3.5 cm. long, on leafy peduncles to 2 cm. long; capsules to 7 mm. long (many ovaries yet); styles to 1 mm. long; pedicels 1-1.5 mm. long; gland slender, capillary, slightly capitate, 1 mm.)

Again thanking you, and with all good wishes, I am

Cordially yours,

Carleton R. Ball

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Father Ernest Lepage,
Ecole d'Agriculture,
Rimouski, Quebec, Canada.

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

23 December, 1950.

Dear Professor Lepage:

Your letter of 17 December, in reply to mine of 12 December, is here, as is also the packet with the two specimens of *S. myrtillofolia* var. *brachypoda* from James Bay. I greatly appreciate your courtesy in this matter. The two specimens are listed here with notes, just to have the record in the Quebec file as well as in the herbarium.

12,538. *S. myrtillofolia* Andersson, var. *brachypoda* Fernald. X
Marécage au bout d'un lac, entre Fort George et la Baie aux Oies,
Baie James, lat. 53° 54' N. 3 Aug., 1950. (fruiting piece with ellip.
leaflets to 4.5 by 2 cm., crenulate, bases mostly rounded; fruiting segments 2-2.5
cm. long, on leafy peduncles nearly 1 cm. long).

12,923. *S. myrtillofolia* Andersson, var. *brachypoda* Fernald.
Lieu humide, bord de la prairie côtière, Baie aux Oies, Baie James,
lat. 53° 54' N. 1 Sept., 1950. (new growth of fruiting piece with
leaflets mostly oval and becoming rounded at base, to 5 by 2.8 cm.; sum-
mer twigs with leaflets in all stages of base broadening, to 7 by 2.6-2.8
cm., all crenate, the apical ovate, to 6 by 3 cm. and lobed base cordate;
1 small fruiting segment).

I greatly appreciate your full discussion of the ecologic (geologic) factors governing, or influencing, the distribution of *S. myrtillofolia*. Also those affecting the growth and leaf size of *S. Bebbiana* and other species occurring there. Without such information, the specialist can only hazard the guess "depauperate".

Your number 12,923 is a splendid example of the variation in the bases of leaflets on a short twig. Collected a month earlier and those ovate, cordate-based apical leaflets would not have been present, and the lower ones would have been still more acute or cuneate at base. Keys are of little value until one learns the developmental history of organs.

Now for some real news. I recently received a small collection from Chesterfield Inlet. The dates are early and the plants all prostrate and creeping, with tiny leaflets and tiny segments. Some are juvenile *S. fullertonensis* Schneider. Some are *S. arctophila* Okill., with one far enough developed to be recognizable.

Three I can place nowhere except in my *S. fuscescens* Andersson, var. *reducta* Ball, a plant known only from Alaska. It is, as you know, closely related to *S. pedicellaris* Ph., var. *hypoglauca* Fernald, but has much smaller, less veiny, and rather obovate leaflets, usually sparsely denticulate on the basal part and sometimes along the whole margin. I looking at the material under *S. pedicellaris* var. *hypoglauca*, I find your No. 5012 from Moosonee, of which I have a fragment. I am sure that it represents this var. of *S. fuscescens* too. Congratulations!

Considering the amount of collecting which has been done on the west coast of Hudson Bay, it seems surprising that it has not been reported from there before. Moosonee, of course, is more than 10 degrees south of Chesterfield Inlet, and so represents a great extension of range.

With high appreciation of all of your help, I am

Cordially yours,

Carleton R. Ball

Father Ernest Iepage,
Ecole d' Agriculture,
Rimouski, Que., Canada.

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

7 November, 1951.

Dear Father Iepage:

Your fine letter of Oct. 16 was promptly received and I thank you heartily for your full notes on the *S. fragilis*, Nos. 13390 and 13395. It is a very interesting suggestion and I will discuss it with the Forest Service pathologists later on. I have copied your notes and added them to the herbarium sheets. The same has been done with the note on the relation of *S. vestita* to dolomite formations.

I am belatedly inclosing the determinations of the 7 specimens from southern Quebec. You will see that I regard 13328 as truly *S. discolor* rather than as a hybrid. I appreciate your explanation of these collections in relation to the total willow population. No apology whatever is needed for such collecting. Not even a specialist can recognize all of the problems involved in collecting living plants.

We still have the problem of whether these pubescent-capsuled plants of *S. glaucophylloides* are hybrids or an undescribed form or variety. Perhaps you may be able to locate plants with hairy and others with glabrous capsules somewhere near Rimouski, and collect from them two or three times during the year, so as to get all of the seasonal expressions of twigs, leaves, and aments. That should settle the question. Perhaps you have students now living elsewhere who would be interested to do the same thing. I will make further study of Fernald's *S. laurentiana*, and the *glaucophylloides* material, later on.

In my letter of Oct. 15, I promised to complete the varietal identification of No. 29011, *S. cordifolia*, from Ungava. It is var. *salicarpa* (Trautvetter) Fernald.

I have also your letter of Oct. 22, with which you finally sent me your remaining specimen of 25061, *S. Drummondiana*. It was a splendid piece and fully confirmed my determination. The long styles were perfectly shown on your plant but on much of the Canadian Rockies material they are deformed, apparently by late frosts. I returned the specimen by mail on Nov. 5, and hope it comes safely. I have your notes to my specimen. I have not heard from Dr. Dutilly about the one at Catholic Univ. of America but am in close touch with Dr. O'Neill. He tells me that Lloyd Spetzman is just in from Alaska with many willows and will be seeing me soon. I will ask ~~him~~ Dr. O'Neill to send your specimen down by Spetzman if he has found it. I add your Alaska notes to mine.

Again, congratulations on your discovery of *S. Drummondiana* and many thanks for your generous gift of these specimens.

I note from your file card that I have not sent you my two most recent papers, so mail them separately today.

Cordially yours

Carleton R. Ball

Ernest Lepage, Dept. Botany,
Ecole D'Agriculture,
Rimouski, P. C., Canada.

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

5 February, 1954.

Dear Father Lepage:

In further reply to your letter of 11 January, I am happy to say that I have identified the willow specimens collected in 1953 on the west coast of James Bay, and sent me last autumn (probably October).

I inclose copy of the list of identifications and wish to congratulate you on your successful identification of many of them. Keep up the good work.

I should have noted on the list that the specimen of *S. reticulata* (No. 31,277) is very small-leaved and that some of the leaves are almost round in shape. It really may be variety *subrotunda* Seringe, but it is too fragmentary to make certain. I have recognized that variety from British Columbia to Alaska, but not from the James Bay area. Today I looked at my specimens from that area and think that some of them could be placed under the variety. We need some specimens collected late in summer or fall, after larger leaves have been developed.

No. 31,500 is the ~~xxx~~ form *psila* of *S. pellita*, if that form is recognized. On many specimens the older leaves have lost much of their hairiness while the younger are still densely hairy. This one seems to be about equally demised on all leaves, and I have left your determination stand.

For No. 31,579, I have let your determination of *S. cordata* Michx. stand until I can make further study of abundant eastern and midwestern material. Fernald restored *S. cordata* Michx. but also maintained *S. syrticola* Fernald, which is abundant in the Great Lakes region. I must determine if the two really are distinct, also whether your specimen belongs with them. It is a late summer shoot, with leaves different from those on the normal shoots. I will make this study in my herbarium and the U.S. Natl. Herbarium shortly. I hope that you can get more material this summer, with leaves of different ages. (also fruit).

Just at this moment, I cannot find your letter of last October (?), sending these willows to me, though I had it a few days ago. So I do not know whether I was to return these specimens, or to keep part or all of them. Please let me know. You may be sure that I will gladly return them if you wish.

With more apologies for having delayed these determinations, and all good wishes for your successful collecting this summer, I am

Cordially yours,

P.S. Where do you go this summer.
I might suggest things desirable to look for
and study in the field.

Carleton R. Ball

PS 2 Found better 6 bot. keep willows.

Professor Ernest Lepage,
Ecole d'Agriculture,
Rimouski, Quebec, Canada.

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

4 December, 1954.

Dear Professor Lepage:

Replying to yours of Oct. 17 and Nov. 7, I am happy to inclose the list of determinations of the Quebec willows from east coast of James Bay. I regret this long delay in replying.

You will see that some problems are yet unsolved. These I will discuss now one by one, as they appear to me at this moment.

32,470. *S. calcicola*??. This may be a normal autumn shoot of *S. calcicola*, but I have no others like it. Leaf shape, size, and venation are those of this species but the twig and petioles are slender and long and all of the parts are glabrous or nearly so. In these characters it differs from the spring-summer expression of the species. Do you know if this plant had been broken off, cut off, or grazed off during the summer. That might explain this peculiar growth. Were there other similar twigs on the plant? Were there any normal stout hairy twigs with hairy leaves and petioles on it?

S. myrtillifolia var. *brachypoda* Fern. and *S. glaucophylloides* Fernald?/ See Nos. 32345, 32481, and 32943. The first and last of these three I have determined as *S. glaucophylloides*, and the second one as var. *brachypoda*. But they are all alike in having leaves larger than those described for var. *brachypoda* by Fernald, and strongly resembling those of *S. glaucophylloides*.

Specimens with pistillate flowers or fruit would prove what they are. The styles on var. *brachypoda* are less than 1 mm. long, while those of *S. glaucophylloides* are from 1-1.5 mm. long. If pistillate plants could be located and tagged in spring, flowering or fruiting specimens collected then, and leaf specimens collected from the same plants in midsummer and autumn, we would soon know what species they belong to. Perhaps you and your associates know where such plants are growing and could do this. Or perhaps you can interest others at different places. In the meantime, I will study all available material here and see if I can find leaf characters clearly separating the two.

32296. *S.* ?? (closely resembling *S. pedicularis* var. *hypoglaucæ*). You were right in suggesting that this collection is the same as your 32288 of 11 1952 (not 1950 as on the slip). I have 3 sheets of that No. It also is the same as your 30190 of 1952. Both these 1952 collections were from Albany. The heights given, 8 and 10 ft., are greater than those recorded for var. *hypoglaucæ*. Here again we greatly need flowering and fruiting specimens from these plants. Perhaps you can arrange for their collection next year.

By the way, your No. 12880, Fort George, 30 Aug., 1950, was then determined as var. *collinarpa*. But it has ovate leaves, rounded to subcordate at base, and more or less hairy on both sides. I have redetermined it as *S. cordifolia* Pursh.

With all good wishes, for the Coming Christmas, I am Cordially yours,

Carleton R. Ball

Pere Ernest Lepage,
Ecole d'Agriculture,
Rimouski, Quebec, Canada.

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

25 February, 1955.

Dear Father Lepage:

Your letter of Dec. 7, 1954, with its very helpful information regarding some of the problems in the determinations of some of the 1954 collections of *Salix*, and some earlier collections also, was promptly received. Family reunions at the holiday season, and a more recent attack by some new virus disease, which closed many of our schools, have kept me from getting much work done!

32,470. *S. aretophila* Cockerell, not *S. calcicola* ??, as determined. I have carefully restudied this specimen, and agree that it represents a vigorous summer shoot of *S. aretophila*, as per large pointed buds, narrow pointed stipules, and sparsely micro-serrulate leaves. The leaves are larger than any I had seen before, but the growth is very vigorous.

32,619. *S. anglicum* Chamisso (juvenile stage), not *S. uva-ursi* Pursh, as ^{Ag}determined. The pistillate ament you sent, with its elongated, pubescent capsules, shows clearly that this is not *S. uva-ursi*. I am returning the aments herewith, and thank you for the loan.

32,345. *S. glaucophylloides* f. *lasicolada*. I have deleted the names of the other two collectors from the label.

32,296, and earlier 30,288 and 31,438, near *S. pedicellaris* var. *hypoglauc.* I must make further study of these, as their leaves are shorter and much broader than is normal for that variety, and more brightly colored. I will have to find the descriptions and specimens of some novelties published recently, and see if a name has been applied to this form. I certainly hope that aments can be collected this year.

32,190. determined as *S. anglicum* or *X S. pedicellaris hypoglauc.* You state that this is a creeping plant, but my specimen has the small glabrous capsules *S. pedicellaris hypoglauc.* instead of the long, hairy capsules of *S. anglicum*. I wish to study it further, along with the three last mentioned. The label reads: "In swamp." but does not say "prostrate."

I will try to finish this study as fast as possible and report results. I hope that these delays are not interfering with your work too much.

Appreciating your generous aid, I am

Cordially yours,

Carleton R. Ball

Tobacco harvesting (24) is handled in some areas by the regular farm labor force, which includes women and youngsters. In other areas, extra workers are required, and some non-farm women and youth are employed in the tobacco harvest.

Another farm labor job done largely by women and youth is picking hops (28). This is a simple operation and is comparatively light work. Most of the hops are grown in Oregon and California, and are harvested during the late summer and early fall.

#

ACKNOWLEDGEMENTS

The material in this booklet was prepared cooperatively by the Extension Service, the Office of Labor, and the Bureau of Agricultural Economics. All farm labor needs are estimates, based on past experience plus a knowledge of the job to be done in 1944.

Father Ernest Lepage,
Ecole d'Agriculture,
Rimouski, Quebec, Canada.

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

14 April, 1956.

Dear Father Lepage:

I am trying desperately to clean up some the willow problems which have accumulated in the last few years.

One of these problems is the error I made in determining some of your Quebec-Ontario specimens as *S. pedicellaris* Pursh, var. *hypoglauca* Fernald when they really belong to *S. planifolia* or variety.

The following collections have finally been determined as representing *Salix planifolia* Pursh, variety *pennata* (Ball) Ball. It is distinguished from the species by leaves obovate and usually shorter than those of the species. The list below records the determinations originally made.

11,296. *Salix planifolia* Pursh (approaching *S. pennata* Ball).
Dutilly and Lepage, Quebec, 1944.

30,288. *S. pedicellaris* Pursh, var. *hypoglauca* Fernald, or *S.*
Lepage, Western James Bay Watershed, 1952.

31,438. *S. pedicellaris* Pursh, var. *hypoglauca* Fernald.
Dutilly & Lepage, West Coast of James Bay, Ont. 1953.

32,296. (not determined by me previously. Your note accompanying it reads:
"Apparently the same as Lepage 30,288 from Albany in 1952". In this
determination you were quite right.
Lepage, East Coast of James Bay, Quebec. 1954.

I am glad that you called to my attention the error made in determining some of these as *S. pedicellaris* var *hypoglauca*, and I am sorry for the trouble I have caused you by making this error.

Some other specimens determined by me as *S. planifolia* Pursh, are that species but not variety *pennata*.

WE have had a full year of freakish weather. Last summer and autumn very dry; January and February with much summer temperatures and dry. Almost no snow last winter. Now raining a little.

Trusting that all is well with you, I am Most cordially yours,

Carleton R. Ball

By the way, the label of No. 30,288, and the others of that year, bears the heading: "Western James Bay Watershed", but not the name of the Province. I assume that they are all from Ontario. Is this correct?

November 1, 1955

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

Dear Dr. Ball:

This year again, I want some help to identify the most critical specimens of my collection of willows made in James Bay last summer. I am sending you a small parcel of these ones.

During the last summer, we finished the exploration of the coasts of James Bay. I was alone with Indians for 180 miles and afterwards Father Duman met me to make the remaining 120 miles. Fr. Dutilly was not free to come with us. If we succeed to make another expedition along the rivers on the eastern side of James Bay, we will try to publish a paper on the eastern watershed of the Bay.

Sincerely yours

Ernest Lepage

Ernest Lepage ptre

Wrote him a post card on 9 Nov. acknowledging receipt of willows and stating that I was determining them and would report as soon as finished.

In the meantime, as his letter did not state whether they were to be kept by me or returned to him, I asked him to let me know, and thus save possible labor and expense to me in repacking and returning them, and possible further expense to him in sending them back to me a second time.

ÉCOLE MOYENNE D'AGRICULTURE
RIMOUSKI, Qué.

Nov. 13, 1955

Dear Mr. Ball:

The specimens of willows sent to you
are for your herbarium. When this is not ~~indeed~~
mentioned to turn back the material, it is
understood you keep it.

Very truly yours

Ernest Leforge

ÉCOLE MOYENNE D'AGRICULTURE
RIMOUSKI, Qué.

Nov. 7, 1954

Dear Mr. Ball:

I wish to thank you for your last
letter acknowledging the receipt of the packages of
Willows. It is not necessary to return the
specimens - you may keep them for you

Always yours sincerely

Ernest Leforge

ÉCOLE MOYENNE D'AGRICULTURE
RIMOUSKI, Qué.

June 1, 1956

Dear Mr. Ball:

Yesterday and to-day I received
your two letters with the list of your deter-
minations. I wish to thank you very much
for the trouble you put on my collections
every year. You may keep for yourself
the material I sent you. I hope to go
back in James Bay this summer.

Always yours

Ernest Leforge