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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.

from A.E. Persild

NATIONAL MUSEUM
OF CANADA



CANADA
DEPARTMENT OF MINES AND RESOURCES
MINES AND GEOLOGY BRANCH

Ottawa, Ont., Sept. 20th, 1937.

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

Dear Dr. Ball:-

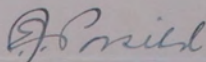
Many thanks for your kind letter dated Sept. 11th
and for the 8 separates on Salix that arrived this morning.

From earlier correspondence you will perhaps remember
that I have over a period of years collected in Alaska and
the western Canadian Arctic, and that Floderus has named my
rather large collection of Salix. Dr. Hugh M. Raup has had
this collection for some time and recently reported that on
the whole he can agree with Floderus. I do not pretend to
understand the group myself but feel that, although Floderus
is not in accord with most American students of Salix, I
more or less feel myself bound to follow his interpretation
in my Flora of Northwest Mackenzie now nearing completion.
The willows of the eastern Arctic, of course are much simpler
than those of the west, and I do not anticipate any
difficulties in the present material from three places in
Labrador and from Disko in West Greenland, which is not very

large. A few sheets in the "cordifolia - glauca" complex I shall send to Floderus. If you wish to look the material over I shall be very glad to send one set to you as soon as the labels are printed.

Thanking you again, I am,

Yours sincerely,



A. E. Porsild,
Botanist,
National Herbarium of Canada.

NATIONAL MUSEUM
OF CANADA



CANADA
DEPARTMENT
OF
MINES AND RESOURCES
MINES AND GEOLOGY BRANCH

Ottawa, October 24, 1947.

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

Dear Dr. Ball:-

During my absence in the field the
"lost" lot of willows came. Not a few sheets as
you originally hinted, but no less than 95 sheets,
including many historical collections. They were
loaned to you, apparently back in 1932, or about
the time my predecessor, Dr. Malte died, when no
accurate accounts were kept of loans.

We are glad to have these willows
back, but sorry to note that so many have been almost
totally destroyed by insects.

Sincerely yours,

A.E. Porsild

A.E. Porsild,
Chief Botanist,
National Museum of Canada.

AEF/GJ.

*my letter
of June 11
did not
mention
how many.
His letter of
June 18
said
"8 sheets, loaned
in 1932"*

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Franklin District

Dr. A. E. Persild,
Herbarium, Natl. Museum of Canada,
Ottawa, Ontario, Canada.

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

9 November, 1950

Dear DR. Persild:

Yesterday, I mailed to the Natl. Museum of Canada, in your care, the carton of willow specimens you so kindly loaned me last March. I trust that they arrive promptly and safely. I regret this long delay, but illness in the family has slowed down my work somewhat.

Please note that I have retained one sheet for critical study. When I packed them for mailing, I discovered that I had not completed the determination. As it may be a critical specimen, I want to do the job right. It is your No. 17381, from Victoria Island, and was received as *S. cordifolia* Fl., var. *cellicarpa* (Trautvetter) Fernald. It is Natl. Mus. Can. sheet No. 127665. Please charge this to me as a new loan.

Two other specimens were received under the same name. One proved to be *S. brachycarpa* Nuttall, var. *Gansoni* Hall. The other probably was one of the specimens of *S. nipheclada* Rydb., but I seem not to have listed the name under which it came. The *S. brachycarpa* specimen is your No. 17270 from Victoria Island. No. 17381 is more difficult to determine and I will have to study it in my overhauling of the whole Section *Glaucæ*, on which I am now engaged.

When I determine specimens I usually make a list by Provinces (States) and general localities, giving for each number the label data and some notes on the specimen, for my own information. I have done that for all of your North American specimens, and inclose copy of the list for whatever use you may be able to make of it.

I am very happy that, for the most part, your specimens were numbered in order of the dates of collection. This makes listing much easier, and finding also. Sometimes it also helps the collector to discover errors in writing either numbers or dates. I venture to call your attention to the following seeming discrepancies in these lists.

Queries on Persild & Breitung, Yukon Terr., 1944.

Should No. 10165 really be No. 10965? This would keep the number in order of dates.

Should the single pistillate twig in No. 10988 be placed in No. 10990, with which it is completely identical?

Should Nos. 11068, 11070, and 11071 really have been Nos. 11668, 11670, and 11671, which would give them proper sequence between preceding and following numbers and would keep these numbers in order of the assigned dates?

Query on Keewatin- Mackenzie Dists. Persild. 1938.

Your No. 6782 contains the species, *S. anglorum* Chardac, and also its var. *anti-plasta* Schneider. Accordingly I have designated them as A and B, respectively.

Query on Franklin Dist.: Victoria and Banks Ids. Persild, 1949.

No. XX 17270 is listed as collected on July 28. No. 17271 is listed as coll. on Aug. 8 but all its other label data are the same as those for 17270. Should it have the same date?

Nos. 17513, 17548, and 17615 contained either two different species or a species and its variety. In each case I have used A and B to distinguish the two.

from National Museum of Canada. A. E. Persild, 1949.

Victoria Island.

- 17192.
- S. anglerum*
- Chamisso (probably var.
- kophophylla*
- Schneider).

Read Id., off south coast of Wallaston Penin., July 27. (ca 70° 40' N., 116-117° W.). (twigs long, sldr, branching, brownish, glabrous; leaves young, ellipse-oval, 1-2 cm., some pilose beneath; pist ants 1-2 cm., coming in fl.; stem. ants 2.5 cm., in fl.; scales obov., trunc or retuse).

17270. *S. brachycarpa* Nuttall, var. *Sansoni* Ball (not *S. cordifolia* Hb., var. *callicarpa* (Trautvetter & Eremald.). SW. coast, vic. of Helman Id. Trading Post (south of tip of Wallaston Penin., ca. 70° 30' N, 117° 40' W). (Shrub ~~erect~~ prostrate but not creeping, forming compact crowns on windswept rock. July 28. (dense sht-branched mts; twigs to 15 cm. long, leafy toward apex; leaves to 1.5 cm., bases broadnd or broadng, pubesc.; pist ants to 1.5 cm., not infl; scales still obovate, yellow or some tips dark). July 28.

- 17380.
- S. arctica*
- Pall.

Creeping shrub (no sign of rooting), on strand flat near mouth of river, head of Minto Inlet (west side, ca 71° 30' N, 115° W.), Aug. 2 and 3.

(stout vigorous growth to 20 cm. long; leaves oval-obov., to 5 cm., apical brdly ~~xxxxxxxxx~~ oblanc., to 7 by 2.5 cm.; pist. ants. basally lax, to 5 or 6 cm., on lfy pedunc. 2-3 cm., in fl to yng frt; capsules to 10 cm., styles 1.5 mm., stigmas 0.5 mm. plus, m/l div.)

- 17381.
- S.*
- (gl. acut ?) (
- S. cordifolia*
- var.
- callicarpa*
-)

Shrub low and prostrate but not creeping, on dry stony summit and rocky ledges of wind-blown hill 500 ft above sea level; as 17380.

(seasonal & 1-yr twigs densely pubesc. or subvillous; leaves 2-3 cm. by 9-12 mm., ellip or broadly so, densely pubesc. both sides or becom. thinly. stem. ants 1-2 cm., on lfy pedunc. sht same (frosted) pist. ditto; ovar. white pub.; scales obov. or bec. oval, yellow to brownish).

17382. *S. polaris* Wahl., var. *selwynensis* Raup (det. as *S. pseudopolaris* Fied.) as 17381, but "alpine summit". (tiny fragment; leaves 0.5-1 cm.; 1 stem. & 1 pist. ant, in fl., 1 cm. long; scales obov, blk, thin vill tow base)

- 17452.
- S. anglerum*
- Chamisso, var.
- kophophylla*
- Schneider. (not
- S. arctica*
- Pall.)

Low and trailing shrub in wet tundra, west end of Thuee Lake, Aug. 4.

(twigs sldr, br, glabrous; leaves ellip. to obov., 1-2 cm.; pist ants to 3.5 cm., larger in yng frt (blackened), capsules sht 7 mm. long; scales obov., black).

- 17467.
- S. anglerum*
- Chamisso. (not
- S. arctica*
- Pall.)

Creeping in rocky places, Cambridge Bay, near Hudson Bay Post (SE corner, ca. 69° N, 105° W.), Aug. 5. (twigs sldrish, yell to brown, mush-br., glabrous; leaves narr-brdly obov. or oval, to 3-3.5 cm., mostly acute, veins raised both sides, badly insect-parasitized; pist ants 1.5-2 cm., in fl., apptly injured, on pedunc. 2-4 cm. long).

- 14473.
- S. polaris*
- Wahl., var.
- selwynensis*
- Raup. (not
- S. pseudopolaris*
- Fied.)

Common on snow patch above lake shore, at north end of large lake near large sandplain about 60 miles north of Cambridge Bay (ca 70° N, 105° W., Aug. 6. (twigs very sldr, yellow, to 8 cm. long; leaves just expndng, to 1 cm., oblanc.; stem & pist ants just coming in fl., 1-1.5 cm. long; scales black, obov. yet, or broadly oblanc.).

- 17271.
- S. polaris*
- Wahlberg, var
- selwynensis*
- Raup. (not
- S. pseudopolaris*
- Fied.)

Wet tundra, as 17270 of July 28 but "Aug. 8". (twigs sldr, yell to brownish, from steuter subterranean stem; leaves ellip-oblanc., to 2 cm. long, bases not yet broadnd; pist. ants 2-2.5 cm., lax at base, about 20 capsules ea., 5-6 mm. long; styles 1.5 mm., stigmas 0.5 mm., divided; scales black, oval or subobovate).

Victoria Island, Cont'd).

17272. *S. arctica* Pallas.

As 17271, but on south-facing slope. (more vigorous growth than 17280; br. to 15 cm.; twigs slenderish, yell-brown; leaf's marr. to brdly oblanc. to subobov., to 5-5.5 cm. by 2-2.6 cm., petioles to 2 cm.; pist ants 4-6.5 cm., lax at base, not in fl.; stem ants 2.5 cm. long).

17273. *S. polaris* Wahl., var. *selwynensis* Raup. (not *S. pseudopolaris* Fled.)

As 17271 but "low, creeping, on south-facing slope watered by snow drifts" (vigorous growth; twigs slar, yellow, from stouter subterranean br.; leaf's 1-2 cm. marr-brdly obov.; pist ants 2.5-4 cm., with to 40 or more cap-sules; ovar. gray-pubes., caps. also pubesc. but thinner.)

17502. *S. polaris* Wahl., var. *selwynensis* Raup. (not *S. pseudopolaris* Fled.)

"Jackpot Lake", 60 miles east of head of Minto Inlet (ca 71° 30' N., 118° W), Aug. 16. Collected by Tahoe Washburn. (depaup. growth; leaf's obov. or oval, to 1 cm.; pist ants 1-1.5 cm., in fruit).

XXXXXX

Banks Island:

Sachs Harbor, south of Cape Mellett, on SW. coast, July 30. (ca 72° N, 125° W.)

17512. *S. arctica* Pallas.

Creeping on Owl Hill. (fel. & pist. flowers).

17513 A. *S. polaris* Wahl., var. *selwynensis* Raup.

Wet tundra. (leaf's oval, obtuse, to 1.5 cm.; twigs yell-brown, glabrous; aments in yng fruit, 2-3 cm. long; capsules 5-6 mm.; styles 1 mm. plus, stigmas 0.5 mm., notched to div.; scales black, brdly to narrowly obovate).

17513 B. *S. anglerum* Chamisso, var. *kophephylla* Schneider.

(2 small twigs mixed with A.)

S.W. Coast, Cape Mellett, Trap rock cliffs and steep talus slopes. July 30.

17547. *S. arctica* Pallas.

Low creeping shrub on grassy place below sea gull cliffs.

(foliage, pist. fruit.; stem. flowers).

17548 A. *S. polaris* Wahl., var. *selwynensis* Raup.

(juvenile; leaf's more or less oblanc.; yng pist. fls., styles long; scales broadly obovate yet).

17548 B. *S. anglerum* Chamisso, var. *kophephylla* Schneider.

(1 twig, mixed with A.)

17549. *S. polaris* Wahl., var. *selwynensis* Raup.

Grassy slope. (more fully developed than 17548 A.; leaf's broadening to obovate, some still acutish; pist. & stem. aments short, in flower).

DE Selis Bay, on south Coast. July 31. (ca. 71° 30' N., 122° W.)

17615 A. *S. anglerum* Chamisso.

Creeping shrub in dry tundra flat near lagoon. (yng leaf's oval-obov., hairy below; pist ants 2-3 cm., in flower).

17615 B. *S. anglerum* Cham., var. *antiplasta* Schneider.

Mixed with A. (leaf's juvenile, marr. oblanc.; stem flowers).

17616. *S. nipocladia* Rydberg.

Low prostrate shrub growing on hummocks in tundra. Same as 17270. (depaup., juvenile, much-br.; leaf's lomo., bread-based, acuminate, up to 2 cm., sericeous, pedunc. leafy, elongating; pist. fls.)

Lake near N.E. corner of Island; approx. lat. $73^{\circ} 34' N.$, long. $117^{\circ} W.$, elev. 400 ft., rolling country. Aug. 13-20. 1949.

17665. *S. anglicum* Chamisso, kophophylla Schneider.

Low prostrate shrub. (stems & twigs stoutish, orange; leaves juvenile, to 2 cm. long, apiculate, m/l pilose beneath; pist. fls.) *obovate*

17666. *S. polaris* Wahlenberg, var. *selwynensis* Raup.

Wet swale where snow lies late. The dominant species in snow flushes, where in habit and appearance it simulates *S. herbacea*. (It belongs to the same Section, and is closely related. CRB). (juvenile; leaves expanding, oblong. to obov.; stem & pist. flowers).

17735. *S. arctica* ? Pallas.

Prostrate on barren, wind-swept hill; the largest willow seen. (piece of stem 10 cm. long and 1.2 cm. thick; impossible of certain determination).

Bernard Island, on NW. coast of Banks Id. Aug. 22, 1949.

17744. *S. polaris* Wahlenberg, var. *selwynensis* Raup.

On snow flushes. (twigs very delicate; leaves just emerging; pist. ams. frested; capsules & styles blackened).

King William Island (lat. 68-69° N., long. 96-98° W.)

9-XI-50

1226. *S. anglerum* Chamisso (probably var. *antiplasta* Schneider by narrow leafs but too juvenile). Det. by C.H. Ostenfeld as *S. arctica* Fall., forma. Knud Rasmussen (5th Thule Exped., 1921-1924), July 8, 1923. (yng leafs to 1 cm., glauc. & srt hairy beneath, ellip-oblong.; stem. ants in fl., to 1 cm.; scales ellip-oval, black, some acute). *Depaup*
- 8 and 10. *S. anglerum* Cham. (too juvenile, perhaps *S. arctica* Fall., as det. by A.E. Persild in 19 . Gjea Haven (ca. 68° 30' N; 96° W.), C. W. Ierson, July 1939. (No. 8 ants not yet in fl., pist. to 3 cm., stem. to 2 cm.; pedunc. 0.5-1 cm. (stem.), 1-2 cm. (pist.); scales large, broad & obtuse as in *S. arctica*)
82. *S. anglerum* Chamisso (probably) det. by A.E. Persild as *S. arctica* Fall. inland. Y. O. Fortier, Aug. 2, 1947. (stout, depaup.; yng leafs oblong. to obovate, blackened, to 2.5 cm.)

Prince of Wales Island. (72-74° N., 100° m/1 W.)

79. *S. anglerum* Chamisso, var. *kophephylla* Schneider. (det as *S. arctica* Fall. by A.E. Persild). Guillemard Inlet, Y.O. Fortier, Aug. 12, 1947. (oval-obov. leafs to 2 cm., glabrous; petioles less than 1 cm.)

Melville Island, (north of Victoria Island)

77317. *S. anglerum* Chamisso. (perhaps a variety but too juvenile and fragmentary). det. as *S. arctica* Fall. ? by Floderus in 1935. Winter Harbour, J. G. McMillan, June 29, 1909. (fragments with yng leafs to 1.5 cm., and pist. & stem. to 1 cm., not yet in flower).

23. *S. anglerum* Chamisso, var. *kophephylla* Schneider. (det. as *S. arctica* Fall. by A.E. Persild in 1948). head of Fiddon Gulf, 75° 18' N., 111° 20' W., Peter Jenness, 1948. (ellip.-obov. leafs to 2 cm., on very short petioles; pist. ants (1947) to 1.5 cm., on short peduncles; scales ellip-oval, black, some acute).

Victoria Island (north shore), Richard Collinson Inlet, 72° 38' N., 112° 40' W.

18. *S. anglerum* Chamisso, var. *kophephylla* Schneider. (det. as *S. arctica* Fall. by A.E. Persild in 1948). Peter Jenness, 1948. (fragments; tiny ellip-oval leafs to 1.5 cm., on very short petioles; pist ants. (1 of 1947) to 2 cm. long, dense, on pedunc. 1.5 cm. long; frtg. capsule to 6 or 7 mm., styles 1 mm.)

Banks Island, Castel Bay (north end, ca. 74° 30' N., 119° W.)

51. *S. anglerum* Chamisso. (det. as *Salix* ? *arctica* Fall. by A.E. Persild in 1948). Peter Jenness, 1948. (stout reddish-yellow buds to 6-8 mm. long; yngest thinly pubesc.; leafs narr. obovate, 2-3 cm. long, yngest thinly pubesc. beneath)



DEVELOPMENT SERVICES
BRANCH

DEPARTMENT
OF
RESOURCES AND DEVELOPMENT

NATIONAL MUSEUM OF CANADA

Ottawa, Ontario,
May 8, 1952.

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

Dear Dr. Ball:

Thank you for your letter of April 22nd. and for the corrections to various willow specimens in the National Herbarium. We are glad to have these notes that have now been marked on the sheets in question.

I am interested to see that you have gone over Hultén's treatment of *Salix* in his Alaska Flora, and I expect that in a number of instances your views would be somewhat divergent.

I plan to stay in Ottawa this summer in order to complete my Flora of the Canadian Arctic Archipelago and when that is done I shall get busy with the Rocky Mountain Flora. You still have a few of my willows from Banks Island and as soon as I get your report on them I can finish the manuscript.

With sincere regards,

A. E. Persild,
Chief Botanist,
National Museum of Canada.

AEP/Y

(See over)

Dr. A. E. Forsild,
Department of Botany,
Canadian National Museum,
Ottawa, Ont., Canada.

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

28 May, 1952.

Dear Dr. Forsild:

Your letter of 8 May came promptly and I am sorry for this long delay in reply. Section Glaucæ was the last one tackled in my study of Hulten's treatment of our arctic species of *Salix*. Considering that some 30 species have been named in that Section, you can imagine that it has proved a difficult and time-taking task.

I am far enough along now to know that all three of your Banks-Victoria Islands willows, which I have had, are referable to *Salix niphoelada* Rydberg and I have so annotated them. What I do not yet know is whether that will remain as a species or be reduced to varietal status before I get done. In the latter case, I will let you know.

I have packed the specimens and will mail them tomorrow. With them is reprint 176, the only one not sent you to date.

I greatly appreciate the opportunity to see these three specimens because material from the fringe of Arctic islands is not abundant in herbariums. I am truly sorry if this delay has hampered you in finishing your manuscript. At times I have thought the endless grind on the Glaucæ would drive me crazy, but the end begins to appear.

Cordially yours

Carleton R. Ball

(See over)

Dr. A. N. Persild, Chief Botanist,
National Museum of Canada,
Ottawa, Ont., Canada.

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

21 May, 1953.

Dear Dr. Persild:

I have received your paper on Edible Plants of the Arctic, and have read with interest the paragraph on the use of willows as potherbs (p. 29).

You already have the reprint of my paper on "Willows: Helpers of Man". I have a request for a more extensive paper on uses of willows but am not sure how soon I shall be able to finish the manuscript.

Cordially/yours,

Carleton R. Ball