

Notes and Quotes on the History and Origins of the Amur Chokecherry (*Prunus maackii*)

Maackii, *amurensis*, *ussuriensis*—these and certain other specific epithets, or variants of them, appear in the scientific names of many specimens in the Living Collections of the Arnold Arboretum. There is even a genus *Maackia*, the type species of which is *Maackia amurensis*. All are linked by a story that combines plant exploration with the international intrigue and politics of a century and a quarter ago, intrigue and politics that led to the discovery, and eventually to the cultivation, of *Prunus maackii*, the Amur chokecherry. How? Perhaps the comments made in *Horticulture* magazine in 1912 by the Midwestern horticulturist, E. O. Orpet, give us the best excuse to explore the issues surrounding the origins of *Prunus maackii*. Orpet wrote as follows:

Prunus maackii

Surprises come to all of us who have eyes to see, and the other day when visiting Mr. William Constantine Egan at "Egandale," his estate in Highland Park, Illinois, by invitation to see his "Russian May Day" trees in full bloom, it was a revelation indeed, and yet a puzzle to explain how it is that so good a thing, with all the help Mr. Egan has given it in the way of publicity, should be practically unknown in cultivation, certainly unlisted in catalogues, and given only scant notice in Bailey's *Cyclopedia*.

The trees with Mr. Egan are rapid in growth, with perfect pendulous habit for a specimen or lawn tree, and they are in full bloom with the shad-bush, which most of us regard as the harbinger of the flowering trees. The whole tree was covered with the spikes of bloom, these being as large as and much more abundant than our *Prunus serotina*, and the sweet fragrance can be noticed

many yards away. A very happy and instructive combination is obtained by the planting of *P. maackii*, *P. padus* and the native *P. serotina* in the same group, thus having the European, Russian, and American Bird Cherries, no two of which flower together. When asked as to seeds, Mr Egan said it was very hard to get as the birds carried them all off. There is compensation in this, however, for we noticed the young trees coming up spontaneously in the vicinity presumably from seed carried by birds.

It would appear from other cultivated trees of *P. maackii*, that it does not bloom for at least twelve years from seed; we find that this is so with specimens here in Lake Forest and in Lake Geneva, but after they do begin, it is a continual May Day feast, and we doubt not that in the future, when better known, *Prunus maackii* will figure in the landscape to a marked degree. The writer is free to confess personally that not in ten years has any tree or shrub made as great an impression at first sight, hence the present note.

The first week in November last, Mr. Dunbar pointed out in Highland Park, Rochester, N. Y., *Lonicera maackii* in fruit, bearing as profuse as we see it in *L. morrowii*, in August. There are few shrubs fruiting in November, and this had a very distinct decorative value. We have young plants now raised from a few seeds gathered at that time, but this again is a plant we do not find in catalogues; in other words it can't be bought.

It appears that there was once a *Maackia amurensis*, now reduced to *Cladrastis*. The three plants under note are from Manchuria, and were described by Ruprecht. We are wondering who Maack was. Perhaps some one from the Arboretum can tell us.

In this particular year when we are all talking about hardiness or otherwise of all outdoor things, it is good to be able to report



so favorably on a seemingly new tree, originally distributed by Prof. J. L. Budd of Ames, Iowa, and said to be the hardiest farthest north of all Cherries with a very marked horticultural value as a decorative tree.

—Excerpted from *Horticulture*, Volume 15, Number 21 (May 25, 1912), page 755.

A Case of Misplaced Enthusiasm?

Messrs. Orpet and Egan, among others, would have been chagrined to read the following information in an article by Charles Sprague Sargent that was published in *Garden and Forest* in 1888. Discussing a very-early-flowering variety of *Prunus padus* (like *Prunus maackii* a bird cherry from Manchuria), Sargent reported that a specimen in the Arboretum's collections

was raised from seed sent many years ago to the Arnold Arboretum from the St. Petersburg [Leningrad] garden as *Prunus Maackii*, a Manchurian Bird Cherry, with pubescent

foliage and young branches, while those of this plant are quite glabrous and show no trace of the glandular dots which cover the under surface of the leaves of that species.

While they might have failed to see the by then decades-old *Garden and Forest* article, Orpet and Egan no doubt did see a much later one—which may also have been written by Sargent—in the *Bulletin of Popular Information* (now called *Arnoldia*), in 1917, though chances are they already knew the unhappy truth it revealed. In the later article, an anonymous author confesses, in describing a specimen of *Prunus padus* var. *commutata* in the Arboretum's collections, that

The seed from which this plant was raised was sent from the Botanic Garden at Petrograd [Leningrad] in 1878, incorrectly as *Prunus Maackii*, under which name the young plants were distributed from the Arboretum, and as *Prunus Maackii* it is still cultivated and much esteemed in some Illinois gardens.



Maackia amurensis var. *buergeri* in the Arnold Arboretum. Left: habit, right: close-up of leaves and an inflorescence. *Maackia* is one of the many plant taxa named after Richard K. Maack. Photograph by Herbert W. Gleason. From the Archives of the Arnold Arboretum.

Opposite. Drawing of the leaves and an inflorescence of *Prunus maackii*. From *Flora Sylvatica Koreana*, by Takenoshin Nakai (Part 5, 1916).

The Arboretum's records on the seeds sent from Leningrad seem to be lost. In 1915, however, it did receive "Seed" of *Prunus padus* var. *commutata* from none other than E. O. Orpet of Lake Forest, Illinois. No doubt there had been an interesting exchange of letters between him and Sargent in the three years since his piece on "*Prunus maackii*" had appeared in *Horticulture*. The Arnold Arboretum did receive three authentic plants of *Prunus maackii* from Leningrad in 1878, however, one of which survived until 1946, when it had to be removed because it was in poor condition.

Fortunately, the two taxa can easily be distinguished from each other. The following chart should help expose any specimens of *Prunus padus* var. *commutata* still masquerading as *Prunus maackii*:

	Most Likely Time of Bloom	Length of Racemes	Flowers		Leaves
			Diameter	Number per Raceme	
<i>Prunus maackii</i>	Mid- to late May, after leaves appear	2 to 3 inches	1/3 inch	6 to 10	Midribs hairy beneath, glandular dots on lower surfaces
<i>Prunus padus</i> var. <i>commutata</i>	Early May, before leaves appear	3 to 6 inches	1/2 inch	10 to 40	Hairless, no dots on lower surfaces



The leaves of *Prunus maackii*. Photograph from the Archives of the Arnold Arboretum.

Richard Karlovich Maak

The Great Soviet Encyclopaedia states that Richard Karlovich Maak was "Born Aug. 23 (Sept. 9), 1825, in Arensburg, present-day Kingissepp, Estonian SSR; died Nov. 13 (25), 1886, in St. Petersburg." He was, the *Encyclopaedia* continues, a "Russian naturalist and explorer of Siberia and the Far East." (In English translation, the *Encyclopaedia* renders the surname "Maak," not "Maack" as most other sources do.)

"In 1853, Maak took part in the expedition which first described the orography, geology, and population of the basin of the Viliui, Olekma, and Chona rivers" the great work continues. "He studied the valleys of the Amur (1855-56) and Ussuri (1859) rivers." An account of Maak's work in the Amur valley,

Puteshestvie na Amur, sovershennoe po rasporiazheniiu Sibirskogo otdela Russkogo geograficheskogo obshchestva v 1855 godu, was published in St. Petersburg in 1859. The title is usually given in English as *Journey to Amur in 1855*. Here, at least in brief outline, is an answer to E. O. Orpet's query.

Emil Bretshneider, the Russian biographer, tells us more. Maak, he says,

studied natural sciences at the St. Petersburg University, took his degree of Candidate, in 1849, and in 1852 was appointed Professor of Natural Sciences at the Gymnasium of Irkutsk. Subsequently he became Director of that Gymnasium, and from 1868 to 1879, he was Superintendent of all schools in Eastern Siberia. He died at St. Petersburg,

November 13, 1886.

Maak described his first expedition down the Amur and back in a book entitled: *JOURNEY ON THE AMUR, IN 1855* (in Russian), published in 1859, accompanied with an Atlas containing maps, views and drawings of plants.

The expedition left Irkutsk in April 1855, and proceeded by the ordinary way to Nerchinsk. Here, at the discharging of the Nercha into the Shilka, they found a great raft prepared for them, on which they embarked on the 5th of May. Albazin, May 26, stay till 31st.—On August 8, the expedition arrived at the post Marinsk, near the Kidzi Lake and remained there till August 14. Then back up the Amur River, reached Aigun October 11, spent a month there. On November 12, started on horse back, for the Amur was frozen, following the river valley. Ust Strelka, December 30, Irkutsk January 16, 1856.

As on this river journey frequent stops were made, sometimes for several days, Maak had a favourable opportunity for making botanical and zoological collections. The plants gathered by him in the Amur valley, in 1855, were determined and described by Maximowicz in his *Primitiae Florae Amurensis*.

The Amur River

The Amur River (*Hei-lung Chiang* in Chinese) is a river of eastern Asia that forms the present border between the Soviet Union and China (Manchuria, or Heilongjiang). Flowing generally southeastward, the Amur is nearly 1,800 miles in length. (Counting the Shilka-Onon system, the Amur would be 2,700 miles in length.) It did not always form the frontier between the two countries, however. Before 1858, when China ceded all lands north of the Amur and east of the Ussuri rivers to Russia by the Treaty of Aigun, the Chinese claimed both of its banks. Russians had first reached the Amur area in the Seventeenth Century, but by the Treaty of Nerchinsk (1689) had yielded it to the Chinese.

Russians began to colonize the area again in the Nineteenth Century. Richard Maak, the botanist, was part of that second wave.

Enter Perry McDonough Collins

Only a few months after Richard Maak explored the Amur River, an American, Perry McDonough Collins, having travelled the length of Russia eastward from Moscow, drifted down the Amur on a barge provided by Siberian officials, the first American to navigate the Amur from its source to its mouth. A businessman and promoter, Collins had managed to get himself appointed the official "American Commercial Agent to the Amoor River." Attracted by the potentialities he saw for American trade in the Amur region, he went there to see for himself, and on behalf of the United States government. Like other Americans of the time, Collins was afflicted with "Russian fever." Eventually, the era of good feeling between the United States and Russia would be capped by the sale of "Russian America" (Alaska) to the United States in 1867.

In an account of his travels, prepared for the United States Congress (*A Voyage Down the Amoor*, originally published in 1857, and reprinted by the University of Wisconsin Press in 1962 under the title, *Siberian Journey: Down the Amur to the Pacific, 1856-1857*), Collins captured a moment of change in czarist Russia's eastward expansion and development of Siberia. Fresh from the developing frontier of his own country, Collins saw Russian activities in the Amur region through approving eyes. "Siberia is comparatively a free country," he wrote.

There are no landed proprietors, no serfdom. The land belongs to the Crown, and is given to the settlements or villages in the country or to individuals in cities. Public sentiment and speech are quite free also; in fact, the reins of government seem to set lightly on her people. The people are hardy and robust, accustomed, like our own frontiersmen, to

a rough and active life, have the rifle and use it well, as the mountains of furs and skins seen in the cities and market-towns fully attest.

Collins described the mighty Amur in terms any American could have understood:

The river is truly a grand one, and since we passed the Zea, more and more resembling the Mississippi, and since we passed the Songahree, and now the Ousuree [Ussuri], in many places with its cut and crumbling shores, falling-in timber, and the muddiness of its waters, and its huge sandbars, the resemblance has become almost perfect.

From the Songahree the Amoor is certainly a more considerable river in breadth than the Mississippi below the mouth of the Ohio. The expanse of water, the numerous islands, and the many navigable chutes, some of them thirty miles in extent, must give it more breadth than the Mississippi. As for distance, above the Ousuree the river is divided into two parts, one—the right—usually navigated, into which falls the Ousuree, deep, and about the size of the Ohio; the other, broad and filled with islands, bars, and chutes, certainly as large as the Mississippi above Memphis, and looking very like it.

Charles Vevier, who edited the 1962 reprinting of Collins's book, summarized the political situation of the Amur region during the 1850s in the following clear terms: "Economic opportunity in this unknown region . . . was grasped in a Russian fist which now, after some two hundred years of negotiation, had unclenched, spreading its fingers over the Amur region, the Ussuri River area east to the Pacific coast, Northern China, Sakhalin, and Japan." There was at least one benign result of Russia's thrust into eastern Asia, a flood of plant material new to botany and horticulture. Richard Maak alone discovered forty-two new taxa in the Amur and Ussuri river valleys on the two expeditions he made to the region during the 1850s, the first in 1855, the second in 1859. The genus

Maackia was among the new taxa, as was the species *Prunus maackii*. It was the year after Maak's first expedition to "Amur-land" that China, in the city of Aigun, relinquished all claim to territory north of the Amur and east of the Ussuri. Two years later (1860), Russia established the town of Vladivostok at the southeasternmost extremity of its newly secured territory.

Professor Sargent & Son in Amur-land

Forty-three years later, Professor Charles Sprague Sargent, the first director of the Arnold Arboretum—accompanied by his son, A. Robeson Sargent, and the naturalist-writer, John Muir of California—travelled to the Amur region in search of plants. They left the United States on May 29, 1903, on a six-month around-the-world tour, arriving in Russia on August 1st and the Amur region a dozen days later. The journey went well for the most part until the travellers arrived in Manchuria and Siberia. There, they had to spend days at a time on hot, crowded trains, unable even to change their clothes. The food was abominable; at Harbin, Manchuria, Muir developed a severe case of food poisoning. These hardships, plus a profound difference of temperament between Muir and the elder Sargent that intensified during the trip, prompted Muir to strike out alone once the party had escaped Siberia and Manchuria. A newspaper interview with Robeson Sargent and private accounts of the trip by Muir follow.

Prof. Sargent Garner Rare Specimens of Eastern Flora

His Recent Expedition to Russia, and Through Siberia, Will Be of Vast Benefit to Plant Collection at Arnold Arboretum

Prof. Sargent, of the Arnold Arboretum, has just returned from a 6 mos.' tour of Russia and Siberia.

The journey was undertaken by Prof. Sargent for the purpose of securing an exhaustive collection of tree and plant specimens, and in this arduous task he was assisted by his son, A. R[obeson]. Sargent, the landscape architect.

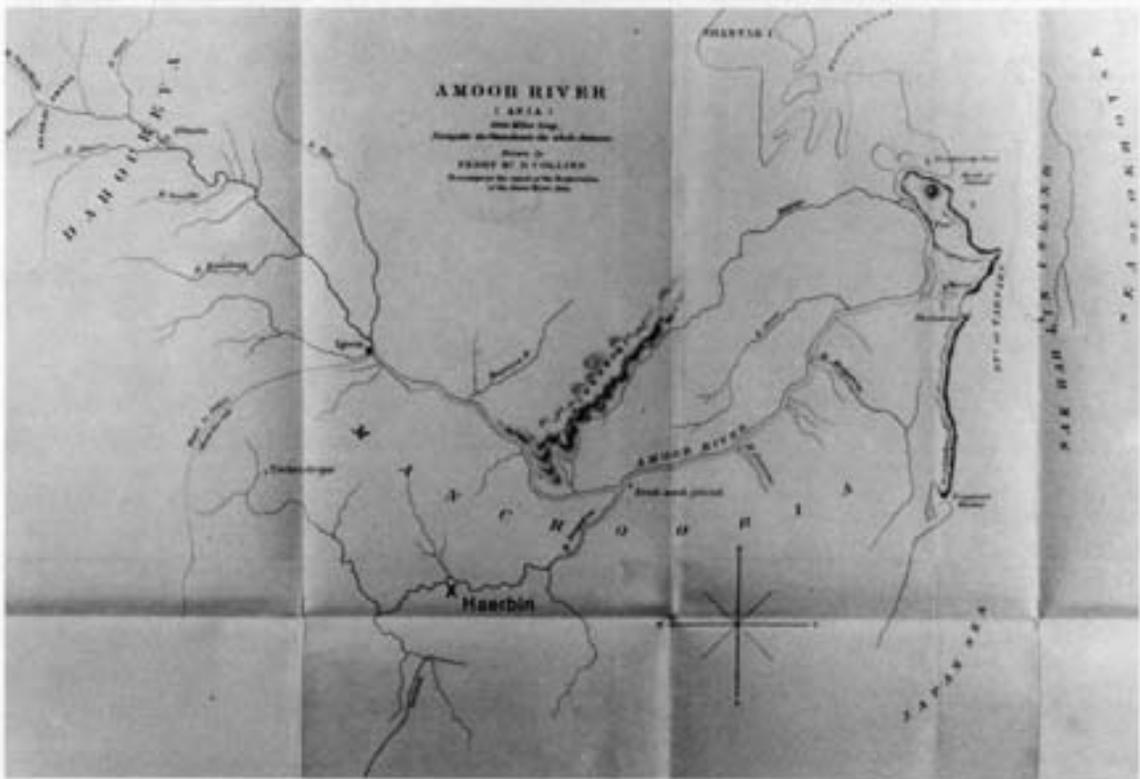
More than 8000 bulbs, seeds and roots were the result of the expedition, and while it will require many months for development to reveal the exact value of the collection, the professor is sure that many rare specimens of eastern flora have been gathered and the success of this mission is a question beyond cavil.

The party left New York May 29, and entered the land of the czar Aug. 1.

Several weeks were devoted to the Crimea, where the younger Sargent was charmed with the landscape effects of the gardens attached to the imperial palace, pronouncing them surpassed only by the craft of the Italian landscape gardener.

"The most superb thing in nature that Russia had to offer," said he,

was the voluptuous floral display of Mt Kasbek, a spur of the Caucasus range, where 10,000 ft above the sea level the luxurious profusion of wild flowers was astounding.



*Perry McDonough Collins's map of Amur River basin as it was when he made his trip through the area in 1857. An American, Collins floated down the 1,800-mile waterway on a barge a year or two after the Russian botanist Richard K. Maak made the same trip on a raft, discovering, among other plants, *Prunus maackii*. (Amur is spelled "Amoor" on Collins's map.) The Amur reminded Collins of the Mississippi, and its tributary the Ussuri ("Ousuree" on Collins's map), of the Ohio. China, by the Treaty of Aigun ("Igoon" here), ceded all lands north of the Amur and east of the Ussuri to Russia in 1858 (An "X" has been added to indicate the location of Haerbin, Manchuria, from which B. V. Skvortzov sent seeds of *Prunus maackii* to the U.S. Plant Introduction Station in 1940.) Map courtesy of the Boston Athenaeum.*

Every conceivable color was there to be found, and yet the blending was in such perfect harmony that it constituted a color scheme well worth cultivating in landscape gardening, and one scarcely creditable to accident alone

My one ambition is to reproduce the effect in America

We entered Siberia by way of the Chita branch of the railway and spent 28 nights upon the train, during 10 of which we did not remove our clothing, owing to the miserable sleeping car accommodations

In Russia every traveler takes his bed clothing with him, and through ignorance of this custom we found ourselves in a sorry plight. Often where bedding could not be hired, we were compelled to drive the streets all night

I was impressed with the vast forests and broad steppes of Siberia, and as we sped over the Amur R. R., the original one of the country, we passed many trains filled with Russian convicts. They were crowded into small box cars, lighted with tiny barred and grated windows

At Harbin, in Manchuria, we found the Russian government was secretly mobilizing her troops, and everybody professed belief in the permanent occupancy of that country by the czar's minions. Harbin is a new town and tenanted by soldiers and Russian officials exclusively. The most interesting town in Manchuria is Khabarovsk [i.e., Khabarovsk], a place of 5000 inhabitants and delightfully situated at the juncture of the Amur and Usuri rivers

We expected to return from here to Harbin, where the Eastern China R. R. commences, but while en route thither a bridge went down with 40 passengers and we were compelled to retrace our steps

Farming is quite primitive in Siberia and agricultural implements are most crude. Wooden plows are used and drawn by 12 yokes of oxen. I was pleased to see, however, that American implements of agriculture are beginning to be introduced into the country

The soil is fertile and with proper cultivation would supply the world with wheat

Vehicles with 2 wheels are employed exclusively and the ox is ubiquitous as a draught beast

We had ample opportunity to study the people, for the Russian trader usually reaches the depot several days in advance of the departure of his train and there he sleeps and eats in the depot, carrying his food and bedding with him. They are all disgustingly dirty and wear shoes made of pelts and twisted twine. The beverage is invariably tea, which is drunk with black bread. The national intoxicant is voyaka, which is sold by the bottle, the law prohibiting its sale by the glass, and the purchaser gets gloriously drunk thereon. It seems to be made of pure alcohol

Everybody smokes, the women using the cigarette and, though I am advised that universal discontent prevails, the people present an air of silent satisfaction

The edifices are mostly block houses with thatched roofs

Living is expensive, though railway fares are ridiculously cheap

The better class of Russian women are the handsomest in the world, but the military officers do not present so fine an appearance as do those of the German and Austrian armies

Aside from the novelty and pleasure which the trip afforded, I feel that the benefit which will thereby accrue to the study of trees and plants is of incalculable value

—*Boston Evening Record,*
December 29, 1903.

John Muir's accounts consist of a letter to his wife, Louisa ("Louie"), which he wrote in Vladivostok, and hastily scribbled entries in his diary. These give a vivid and decidedly more candid picture of the unhappy conditions under which the party travelled than did the newspaper account. Both the letter and diary excerpts are presented below with only minor editing.

Letter

Vladivostok Aug. 19, 1903

Dear Louie After many short stops here & there we are at last on the Pacific having crossed the whole vast breadth of Asia, & now you don't seem so dreadfully far. We arrived yesterday morning very tired having slept in our clothes the last 8 nights & the heat has been trying 80 to 90° in the cars. & miserable uneatable food at the stations most of the [m]. Here it is delightfully cool—but the food is very poor. I'm resting today while the Sargents are out botanizing. I suppose we will be here a few days longer. Then Sargent wants to [see] the Amour for a day or two, thence back to Harbin, thence to Muken & thence to Peking which will require 8 to 10 days more of rail riding of most wearisome sort, but with views of wonderful regions their rocks scenery flora people etc by way of compensation. I had made up my mind to leave the Sargents here

& go to Japan Shanghai, etc as I long for the cool sea. But Sargent advises very strongly against my going off alone & raises all sorts of objections, difficulty of arranging money matters etc. promises not to stay but a day or two in Pekin or hot, dusty Mukden (suggestive name) So I suppose Ill go on with him as far as Pekin or Shanghai—where I hope to hear from you once more. The whole trip has been exceedingly interesting far more so than anything I had read lead me to expect. And now dear wife & babes Heaven bless you. How glad Ill be to get home. Love to all. John Muir

Muir's diary is even more revealing than his letter.

Diary

Aug 12 . . . Mr Sargent & Son have decided to give up the voyage down the Amour on acct of missing todays boat, tho another sails in 4 or 5 days. Would go on alone but can't separate. . . .

Aug 19. Sargents out botanizing while I read & work & rest. Would like to leave for Japan etc but Sargent wishes to go with him to point on the Amour & thence to Mukden Pekin & Shanghai. 2 weeks more of miserable rail travel in very enfeebled condition but I suppose I'll get thro somehow & I will see more of Manchuria.

Aug 20. In house all day resting.

Aug 21. The sea air reviving. Hope to leave this eve 9. PM for Kabarovsk. . . .

Aug 28. 6 A.M. In broad flat mostly cultivated. At Harbin 7 a.m. Bar[ometer] 600 rainy Harbin is situated on river. Flat & muddy streets. When dry fill in ruts & sink-holes the story of sea of mud. Large Governmt buildings—intended for large town. like many others along the R.R. but Yankee enterprise sadly wanting or adventurous builders of homes. The whole country seems a Government camp. Drive to so-called garden restaurant 5 ms of the most horrible

streets for holes basins pits ridges & peaks made chiefly of mud. Harbin on its large flat rain again and dark. Left Harbin at 2.30 for Mukden. Rain at 2.45 in rich rolling treeless prairie like country planted mostly to millet.

4:30 Bar 700. Same prairie sunflrs millet, melons etc. Still dark, rainy, extremely rich soils gl[acial] mud silt reformed in slow water—few clumps of trees on horizon mud adobe houses thatch roofs mud corall walls, some corn.

6 P M universal rain Bar 850 Dripping Chinamen herding cattle & horses here and there some with umbrellas. Nearly all cultivated or in pasture The country is flatter than 2 hrs ago. All looks like Illinois

29 aug. Bar 650, cldy. The same prairie & crops. All Chinese horses poor & sore. Groves & single trees here & there Willow poplar tillia [*Tilia*] or elm mostly not a stone to be seen Houses mud framework wood. The whole country beautiful in features of low swells & ravines with hills dotted with trees in dist. seems to have been cultivated every inch of it time immemorial No wildflrs in it only weeds by waysides & in pastures rose colored polygonum the showiest. Chinese here keep hogs wh they herd. The largest ever saw have enormous ears look like baby elephants.

We are running back to [Kungchuling]. 3 bridges said to be washed out ahead.—going back all the way to Harbin. Dont know how long may have to wait in that filthy place. Sargent seems pleased.

30 Aug. Still damp and cloudy & running wearily back thru millet fields to Karbin will probably get there this P.M. arrived at 10 a.m Stay here until 3 P M when we again go back 200 ms or so into first mtns to N of here to botanize. A day or so while waiting repairs on line to Port Arthur None knows when they will be completed.

Start at 3.40 PM rain hazy muggy weather. Bar 650 has stood so from when we turned

back. At 6 P.M Bar 800 Many on train going this way via Vladivostok to Pt. Arthur, wish we were but of course Sargent wont & he has me in his power

Arive Aug. 31 at station in the mtns 1600 ft El at daybreak & in pouring rain, Crouch for a while back of brick wall then go to porch of restaurant where I lie on bench all day in terrible pain. indigestion after 3 mos of abominably cooked food. Start back to horrid Harbin at 4 or 5 P.M. Arrive Sep 1, at 6 AM. After dreadful night of pain. I told S. that we wld probably be compelled to go via Vladivostok & Japan after all thus passing 5 times ovr part of road on acct of the broken bridges. He never seemed to think of me sick or well or of my studies only of his own. until he feared I might die on his hands and thus bother him—He was planning another botanical trip to some point on the Sungari, going by Stmr & leaving me alone at some hotel or lodging house. But fortunately learned the R R might not be opened for a Mo & that a stmr wld leave Vladivostock on the 3d or 4th. So back N we went again this Eve Sept 1.

Sep 2. Still alive. Morphin to stupify pain & brandy to hold life.

Sep 3 arrived at old quarters in Vladivos- tock at 7 AM. after most painful days of all my experience in this ○ Learn the steamer sails at 3 PM. today. Robeson [Sargent] loses his passport, & cant buy ticket or leave country. After big fuss went to Am consul & under his direction got out papers enabling him to leave—got off at 6 P.M. & now hope to get well.

Ate a little supper & suffer no pain.

Sep 4 glorious to be free from pain. Arrive at San Won [Wonsan] beautiful harbor on Korean coast leave at night . . .

From Korea, the party went to Japan and thence to China. At Shanghai, Muir and the Sargents went their separate ways.

The Sargent–Muir Trip in Context

Manchuria and Siberia, separated by the Amur and Ussuri rivers, increasingly became the scene of international rivalries between the time Maak and Collins, on the one hand, and the Sargents and Muir, on the other, travelled there. They also became the scene of intense botanical collecting. Frank N. Meyer, for instance, was in Siberia and Manchuria in late 1906 and early 1907. He was there again in late 1912 and early 1913. On both occasions he passed through Harbin and Mukden. During the first of those trips Meyer also travelled in northern Korea. On August 21, 1903, he collected a pyramidal wild cherry with bright-green foliage that Alfred Rehder of the Arnold Arboretum much later named *Prunus × meyeri* in his honor. (Two days after Meyer made the collection, he recorded a killing frost.) Meyer reported seeing “Only two or three trees . . . during the whole trip through northern Korea and only two had a few seeds.”

When he described *Prunus × meyeri*, Rehder had suggested that it might actually be a hybrid. “*Prunus Meyerii* seems in all its characters intermediate between *P. Maackii* Rupr. and *P. Maximowiczii* Rupr.,” he wrote in the *Journal of the Arnold Arboretum* in 1920, “and is probably a hybrid between these species, both of which grow in northern Korea and in the same regions, as specimens collected by Mr. [E. H.] Wilson on the Tumen–Yalu divide on two subsequent days show.”

In 1928, the Russian botanist B. V. Skvortzov reported two forms of *Prunus maackii*, *Prunus maackii* forma *rotunda* and *Prunus maackii* forma *oblonga*, from northern Manchuria, in the *Lingnam Science Journal*. In 1939, from a forest near Hsiaoling, Manchuria (a town on the Trans-Siberian Railroad through which the Sargents and John Muir must have passed several times in their wanderings), Skvortzov collected seeds of *Prunus maackii*, which he

sent to the U. S. Department of Agriculture and from which came the scions that produced the trees now growing in the Arnold Arboretum.

The Sargents and Muir travelled in Manchuria during a period of intense rivalry between Russia and Japan through which China was drawn to Russia (and Russia to China) in an alliance against Japan. As part of this process, Russia had begun to build the Trans-Siberian Railroad in 1891, to forge a link between Vladivostok and Russia proper; Russia was able to exact from China a concession that part of the line run through Manchuria in order to protect the Amur River frontier. The alliance between Russia and China was strengthened by Japan's victory over China in the Sino-Japanese War in 1895. Harbin (or Haerbin) owed its origin to the construction of the Manchurian section of the Trans-Siberian Railroad, the "Chinese Eastern Railway," over which the Sargents and Muir travelled. Before 1896, Harbin had been a minor fishing village and market town; thereafter, it became the construction center for the Chinese Eastern Railway. Another railroad (on which the Sargents and Muir also travelled) was built southward from Harbin to connect it with the Russian-developed city of Port Arthur (Lushun) on the Liaotung Peninsula in southern Manchuria. Largely Russian-built, Harbin became a base for Russian military operations in Manchuria during the Russo-Japanese War of 1904-05, which broke out soon after the Sargents and Muir were in the area. After the Russian Revolution of 1917, Harbin became a haven for Russian refugees; for a time, it was the largest Russian city outside the Soviet Union. Most likely B. V. Skvortzov was one of those refugees.

Summer Monsoons and *Prunus maackii*

The Sargent-Muir party chose a very poor time of year to travel in the Amur River region of Siberia and Manchuria, at least from John Muir's point of view. While they were there (mid-August through early September), the summer monsoon was at its height. On average, ten to sixty times more precipitation falls during the summer in the Amur region than during the winter. In the peak monsoon months of July, August, and September, 70 to 90 percent of a month's total may fall in only five or six days—up to 9.5 inches of it in a single day. A. A. Borisov, in *Climates of the U. S. S. R.*, reports that, "At Vladivostok 386 mm [15.3 inches] of precipitation, 65% of the annual total, fall from June to September, but only 28 mm (5%) fall in winter." Summer floods, some of them very destructive, are common. During the ripening and harvesting of grain crops, the excessive moisture affects the harvest adversely. Muir's "universal rain" seems an apt description. In the vicinity of Vladivostok, a coastal city, the summer monsoon usually lasts for four to four and one-half months, inland and northward for shorter periods of time. Contributing also to Muir's misery was the high humidity, which averages 88 percent during the summer. Winters, on the other hand, are sunny and dry in the Amur region; snow cover is thin and persists only in the northernmost parts of the region. Autumns are warm and dry.

The climate of Harbin, which is only forty or so miles northwest of Xiaoling (Hsiaoling), the town where B. V. Skvortzov collected the seeds he sent to the U. S. Department of Agriculture in 1940, is similar to that of Winnipeg, Canada, as the following table shows:

Mean Daily Temperature, C

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Year
Harbin	-20.1	-15.8	-6.0	5.8	14.0	19.8	23.3	21.6	14.3	5.7	-6.6	-16.7	3.3
Winnipeg	-17.7	-15.5	-7.9	3.3	11.3	16.5	20.2	18.9	12.8	6.2	-4.8	-12.9	2.5

While Harbin and Winnipeg receive similar amounts of precipitation (577.4 mm [about 23 inches] and 516.9 mm [about 20 inches] per year, respectively), the precipitation is more evenly distributed from month to month in Winnipeg than it is in Harbin. Winnipeg receives eight times more snow than does Harbin in an average winter (50 inches versus 6.7 inches).

Prunus maackii does best in moist, well drained soil—perhaps reflecting the soaking summer conditions of its native range. And, while very cold-hardy, it seems to be less frost resistant than *Prunus padus*, another early-blooming species. Also, it may not take to transplanting as well as some other species of tree, at least under certain conditions.

Acknowledgment

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