



# The Commonwealth of Massachusetts

DEPARTMENT OF AGRICULTURE

136 STATE HOUSE

ARTHUR W. GILBERT, COMMISSIONER

DIVISION OF PLANT PEST CONTROL

R. H. ALLEN  
DIRECTOR

Boston, May 29, 1920

Prof. R. T. Fisher,

Petersham, Mass.

Dear Prof. Fisher:

This is to acknowledge with thanks the check for \$500.00 from the Petersham Blister Rust account.

The list of the donations to date, amounting to \$930.00 is given below.

Allen, C. L.	--	50.00	✓	0.12
Miss Brooks	--	200.00	✓	
Choate, C. F. Jr.	140.00	✓	(two checks)	0.12
Dexter, E. C.	--	30.00	✓	0.12
Gaston, W. A.	--	125.00		
Hall, John L.	--	60.00		
Schwartz, G. F.	--	25.00	✓	
Simes, Wm.	--	100.00	✓	
Waldo, C. S.	--	75.00	✓	0.12
Woolsey, Mrs.	--	25.00	✓	
		\$830.00		
Harvard Forest		100.00	✓	
		\$930.00		

*Aug. 29/20 #  
Personal check 135.  
Drawn to care of  
to get in state*

*140  
30  
125  
295*

*1090  
620  
410*

If these figures are not correct, please let me know at your convenience.

Very truly yours,

*C. L. Perry*

AGENT, BLISTER RUST CONTROL WORK.

CAMBRIDGE TRUST COMPANY

HARVARD SQUARE  
CAMBRIDGE, MASS.

GEO. HOWLAND COX, PRESIDENT  
ALVAN B. HATHAWAY, FIRST VICE-PRESIDENT  
EDWARD A. DAVENPORT, VICE-PRESIDENT  
HERBERT H. WHITE, VICE-PRESIDENT  
E. WILLARD PHIPPEN, TREASURER  
LINCOLN F. SCHAUB, SECRETARY

June 10, 1920.

Mr. R. F. Fisher,  
Petersham,  
Mass.

Dear Sir: —

The separate deposits on the  
account of Blister Rust Fund  
are —

Webster & Atlas Nat.	Mar. 18	100. ✓
" "	" "	70. ✓
Old Colony Trust	Mar 23	25. ✓
" " "	" "	200. ✓
National Schaumburg	" "	25. ✓
Fifth Ave. Bk.	Apr 7	100. ✓
Cambridge Trust	June 2	58. ✓
State Street Trust	June 1	50. ✓
Merchants National, Worcester	" "	

Very truly yours

Cambridge Trust Co.

620 ✓

gmd.

EDWIN C. DEXTER  
PETERSHAM MASSACHUSETTS

June 17/1920

L. R. S. Hooley Esq.

My dear Sir:

Mr. Perry sent me an  
acknowledgment for the  
Contribution to the Post  
Fund, but the account  
has not yet been  
returned from the  
Bank.

Dup. requested  
June 28/20  
Rec'd July 1/20

Very truly yours

E. C. Dexter

CHOATE, HALL & STEWART

CHARLES F. CHOATE, JR.  
JOHN L. HALL  
RALPH A. STEWART  
FREDERICK H. NASH  
FRANK W. KNOWLTON  
JOSEPH WENTWORTH

30 STATE STREET  
BRANCH EXCHANGE MAIN 6160

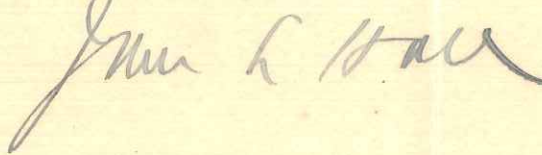
BOSTON, MASS. June 19, 1920.

Mr. R. T. Fisher,  
40 State Street,  
Boston, Mass.

Dear Sir:-

Check for \$60. drawn by me to your order on April  
26th has not been cashed. I have stopped payment on same,  
as requested by you, and await your further instructions.

Yours truly,



*Dep. requested  
D June 28/20*

Charles Lucius Allen  
Worcester, Massachusetts

June 22, 1920

Mr. R. T. Fisher  
Harvard University  
School of Applied Biology  
Petersham, Mass.

Referring to our letter of June 21,  
the Merchants Bank of Worcester advise that  
Mr. Allen's check dated April 30, #10401,  
was deposited on June 2 through the Cam-  
bridge Trust Co.. You no doubt have this  
information by this time.

O.K.

Yours truly,

*J. R. Cook,*  
Mr. Allen's Secretary

CHOATE, HALL & STEWART

CHARLES F. CHOATE, JR.  
JOHN L. HALL  
RALPH A. STEWART  
FREDERICK H. NASH  
FRANK W. KNOWLTON  
JOSEPH WENTWORTH

30 STATE STREET  
BRANCH EXCHANGE MAIN 6160

BOSTON, MASS.

June 23, 1920.

R. T. Fisher, Esq.,  
Harvard Forest,  
Petersham, Mass.

Dear Mr. Fisher:-

I am enclosing another check to take the place of the one drawn April 26th, which has been lost.

Very truly yours,

*Chas. F. Choate, Jr.*

CFC:L  
Enc.

*acknowledged  
June 28/20*

P. O. ADDRESS  
PINE ROAD, CHESTNUT HILL 67

CHARLES SIDNEY WALDO  
PINE ROAD  
BROOKLINE, MASS.

Dear Mr. Fisher:

The check which  
has gone astray had  
not been cashed on  
June 1<sup>st</sup>. I have written  
the State St Trust Co. to  
stop payment on it.

Sincerely yours,  
Charles S. Waldo

Dep. requested June 28/20  
Rec'd & acknowledged July 16/20  
June 21<sup>st</sup>

Will you let me know  
when you wish a duplicate?

MEMORANDUM OF UNDERSTANDING BETWEEN

R. T. FISHER, TRUSTEE OF PETERSHAM, MASSACHUSETTS.

AND

THE MASSACHUSETTS DEPARTMENT OF AGRICULTURE  
RELATIVE TO COOPERATIVE WORK ON THE CONTROL  
OF THE WHITE PINE BILSTER RUST

\*\*\*\*\*

This Agreement is made in view of the fact that R. T. Fisher, Trustee of Petersham, Mass., acting in the interest of certain property owners in the town of Petersham, Mass., will make available the sum of approximately \$1000.00 for the control of the White Pine Bilster Rust upon certain lands in said town, said appropriation to be expended under the direction of the Director of the Division of Plant Pest Control, Massachusetts Department of Agriculture, or his authorized agent, in cooperation with the representative of said land owners.

It is understood by said owners and agreed by the Massachusetts Department of Agriculture, that said appropriation of \$1000.00 shall be increased through State and Federal funds available for this purpose by an amount not to exceed \$3000.00 thus providing the sum of \$4000.00 to be used for the pay of temporary laborers employed and any other necessary expenses incurred in the eradication of wild and cultivated currant and gooseberry bushes, upon and around such areas as may be deemed necessary to protect the Pines in said town.

It is agreed that,

(1) Upon the request of the Director of the Division of Plant Pest Control or his authorized agent, the representative of said land owners, will provide payments (in total, not exceeding \$1000.00), to be expended for the payment of wages and necessary ex-

penses of field employees.

(2) The charges against the total sum available for this project will consist of wages and expenses of the necessary field employees including necessary transportation.

(3) In selecting the proper areas upon which control work should be carried out, the Field Agent in charge will cooperate with the representative of said land owners.

(4) Upon the request of the representative of said land owners, the Field Agent in charge will submit a statement of all expenditures incurred upon the control work.

This Agreement, signed by the representative of said land owners and the Commissioner of the Massachusetts Department of Agriculture, shall remain in effect until the completion of the control measures herein specified but not later than November 30, 1920.

May 14 1920

Richard J. Allen

Trustee

MAY 11 1920 1920

Richard Gilbert

Commissioner, Massachusetts  
Department of Agriculture

May ~~25~~  
26

1926

Slab City Block

Protection Strip.

Map - OK

Time - 172 hrs + 80

Bushes - 71,500 + 700

Area -

Chas. J. Choate

Map - Rough map.

Time - 719 hrs

Bushes - 40,135 + 11,225

Area -

Mrs. Olin Fisk (Protection)

Map - No.

Time - 19 1/2 hrs

Bushes - 700

Area - 50

(Protection)

George Cobb

Map - No.

Time - 10 1/2 hrs

Bushes - 400

Area - 9

145368 13560

George Ward (Protection)

Map - none  
Time - 1 hr.  
Bushes - 700  
Area - 3

---

Mrs. Hayes <sup>Dupe</sup> (Protection)

Map - none  
Time - 6 hrs,  
Bushes - 700  
Area - 10

---

Mrs. Fishers

Map - OK  
Time - 130  
Bushes - 17  
Area - 124

---

Tom Swamp Block

Map - OK  
Time - 182 1/2  
Bushes - 1190  
Area -

---

Dickman (Protection)

Map - No.

Time - 1 hr.

Bushes - none

Area - 9

---

Herbert Lamb (Protection)

Map - No

Time - 1/4 hr

Bushes - 50

Area - 1

---

Unitarian Church (Protection)

Map - No

Time - 1/4 hr.

Bushes - 50

Area - 1

---

Clutter Belden (Protection)

Map - None

Time - 1/4 hr.

Bushes - 4

Area - 1/2

---

Frank Woods - (Protection)

Map - None

Time - 5/4 hrs.

Bushes - 300

Area - 1/2

---

C. L. Allen

Map - OK.

Time - 278 hrs

Bushes - 76 00.

Area - 120

---

A. Putnam

Map - OK.

Time - 225 hrs.

Bushes - 84

Area - 68

---

Hall

Map - No

Time - 179 hrs

Bushes - 3300

Area done - 100

THE NEW HAMPSHIRE LUMBERMEN'S ASSOCIATION

Manchester, N. H.  
George Johnson, President

THE HARVARD FOREST

Harvard Forest  
360 Mt. Auburn Street  
Cambridge, Mass.

AN ACCOUNT OF BLISTER RUST ERADICATION ON THE HARVARD FOREST  
AND ADJOINING PROPERTIES IN 1926

Following the discovery of infected white pines on S-III, Vaughn's mill set, by Dr. Perley Spaulding of the Northeastern Forest Experiment Station, it was decided advisable to re-eradicate ribes throughout the Forest. The original eradication took place about ten years previous with the usual results, namely, a regrowth of currants and gooseberries from small seedlings not discovered by the workmen, and ~~by~~<sup>from</sup> shoots from portions of roots left in the ground.

A crew composed of Leon Baldwin as foreman and several other Peterham boys was organized early in the summer of 1926. The federal bureau of Blister Rust Control, learning of the outbreak on the Forest, kindly loaned ~~us~~ their Mr. Hodgkins for several days at the start. First under his direction and later under the Assistant Director's, the work was carried on over the Slab City block. In addition to <sup>the</sup> currant bushes found near the ~~pond~~<sup>point</sup> where the blister rust was first observed, a great many <sup>more</sup> bushes were found along the Swift River. It was thought at the time that many of these were on experimental areas laid out by the government during the first eradication. After these areas were no longer valuable for experimental purposes, the bushes were to have been destroyed, but apparently they were not. Throughout the remainder of the block scattered bushes were found which were considered of little danger. Another infection of pine was located in Compartment XI, just east of the road which divides the compartment into two lots. Maps are on file showing the location and character of the ribes found throughout the block.

The Tom Swamp block was the next part of the Forest to be covered. Although scattered gooseberries and occasional patches of both currants and gooseberries were found, no pine infections were discovered.

A total of 335 hours was spent in eradication on the Slab City and Tom Swamp blocks. Total expense for labor, \$167.50. During the same period in which eradication work was carried on in the Tom Swamp block, the adjoining properties belonging to R. T. Fisher, R. L. Putnam, Mrs. Otis Fisk, the Dickman estate, and others were gone over. 229 hours were spent on the property of R. T. Fisher; 126 hours on that of R. L. Putnam; 150 hours on those remaining. Maps are also on file showing the location and character of the bushes on these properties.

The most serious pine infections were found on the estate of C. F. Choate, Jr., especially in the plantations near the old barn and in that portion of the tract near Connor's Pond, and in two plantations on the other side of the road leading from the wooden bridge towards Petersham. This property had also been eradicated about ten years previous, but as in the case of the Slab City block an abundant regrowth of ribes had taken place. Thick patches of ribes were found in the ~~wood~~<sup>wet</sup> runs and along the Swift River. A map is on file showing the location of all ribes found on the property. Total time spent in eradication, 719 hours, or a total cost of \$431.01.

The next property worked over was that of C. L. Allen. Though bushes were found generally scattered over the property, only one infected pine was discovered. A map is on file showing the location and kind of bushes eradicated. Total time, 278 man hours; total cost, \$95.82.

Work was next undertaken on the property of John L. Hall. By this time the crew had lost its zest for the work and repeated cases of loafing resulted in the disbanding of the party. A reorganization was effected <sup>in</sup> by which the foreman of the original crew and one other were retained.

The next area eradicated was the Prospect Hill block. A few places where ribes were likely to be found were scouted by Leon Baldwin, but very few bushes were discovered. This block was almost free of ribes and costs of eradication were consequently very low.

A total of \$1,084.17 was spent for re-eradication on the Forest and adjoining properties noted above. Casual observations made throughout the town indicate that blister rust is generally present, but has not reached a serious stage as yet. According to the advice of the government agent, Mr. Hodgkins, and in view of the observations just mentioned, it appears desirable that re-eradication should be undertaken throughout the town.

A. C. CLINE,  
ASST. DIRECTOR

June 1927.

UNITED STATES DEPARTMENT OF AGRICULTURE  
Federal Horticultural Board  
Washington, D. C.

September 1, 1926.

Dear Sir:

Federal Plant Quarantine No. 63 on account of the white pine blister rust, enclosed herewith, embodies substantially the restrictions which were indicated for consideration in the notice of hearing issued May 23, 1925, and which were later discussed at length at the hearing of June 30 of the same year. This quarantine covers the entire domestic blister rust subject and replaces the existing quarantines (Nos. 26 and 54). It involves restrictions which cover the entire continental United States. To make it possible to more readily understand the significance of the restrictions under the quarantine a digest of the regulations, with explanatory notes, is appended.

The quarantine is effective October 1, 1926. Those desiring to ship five-leafed pine, currant and gooseberry plants interstate within the continental United States should take the following action at once:-

1. In each state, prospective shippers whose stock for shipment has not been inspected during the current year by the state nursery inspector should apply at once to the State Nursery Inspector for such inspection.

2. In each state, prospective shippers of such stock into any New England state, New York, New Jersey, Pennsylvania, Michigan, Minnesota, Wisconsin, Montana, Idaho, Washington, Oregon and California should write to the nursery inspector of the state of destination inquiring as to the permit requirements of such state. (Some of the states listed above have established legal blister rust control areas, and it is probable that

additional states in the list will do so for the protection of their white pine interests. In all states having a legally established blister rust control area or areas a permit from the state of destination is required),

3. In the designated infected states and counties, those desiring to ship cultivated red and white currant, mountain (or alpine) currant and cultivated gooseberry plants interstate should:

(a) Apply at once to the state nursery inspector (who is also a federal inspector) for inspection of the stock and the surrounding premises. (Inspection must be made between August 15 and September 30, except in Washington and Oregon, where it must be made between September 1 and October 31.)

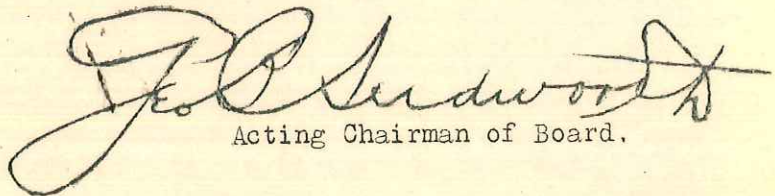
(b) Write at once to the Federal Horticultural Board, Washington, D. C., for an application blank for a federal permit.

(c) After Federal inspection certificate and permit are issued the shipper should make such arrangements as may be necessary to meet the requirements as to dipping, dormancy, defoliation and other shipping requirements under the new regulations.

4. In the twelve states from which European black currants may be moved interstate within the area comprising these states, shippers should at once apply for inspection by the state nursery inspector of the state where the plants are growing. (Inspection must be made between August 15 and September 30.)

The information relative to the pine blister rust situation in the United States, given in the notice of hearing of May 23, referred to, has been rather widely published and is not here reproduced.

Yours very truly,



Acting Chairman of Board.

PLANT QUARANTINE NO. 63 ON ACCOUNT OF WHITE PINE BLISTER RUST

Digest of Regulations with Explanatory Notes.

The quarantine and regulations carry out the suggestions which were made in the notice of hearing issued May 23, 1925, and discussed at some length at the hearing of June 30, 1925. There has been no change in the general proposals considered at that time but many changes have been made in the details of the regulations from the draft sent out for criticism under date of June 30, 1926.

REGULATION 1. Defines certain words, names, and terms as used in the regulations.

REGULATION 2. Indicates the restriction on the movement of five-leaved pines.

Paragraph (a) prohibits interstate movement of five-leaved pines from all States except (1) upon compliance with the requirements of Regulation 5(a), including inspection and certification by the State where the shipment originates; and (2) upon compliance with the requirement that a permit from the State of destination accompany the shipment when it is consigned to a State having a legally established blister rust control area.

Paragraph (b) prohibits the movement of five-leaved pines from all States lying east of and including Minnesota, Iowa, Missouri, Arkansas, and Louisiana to States lying west of these five States, but permits interstate movement within the group of States designated under (b) upon compliance with the requirements in Regulation 5(a), except as to the infected States and counties designated in Paragraph (c), following.

Paragraph (c) prohibits interstate movement of five-leaved pines (1) From the New England States into any State except the six States comprising this group. (2) From New York into any other State. (3) From Minnesota and Wisconsin into any State except the two States comprising this group and the New England States and New York. (4) From Michigan, New Jersey, and Pennsylvania into any State except the three States comprising this group and the New England States, New York, Minnesota and Wisconsin. (5) From Washington into any other State. (6) From seven designated counties in northwestern Oregon into any State. Interstate movement permitted under Paragraph (c) must comply with requirements of Regulation 5(a).

NOTE: (1) The requirement of State inspection and certification as a condition of interstate movement of five-leaved pine, currant and gooseberry plants from States not known to be infected with white pine blister rust is based on the thought that there may be undiscovered nuclei of infection existing in the nurseries in these States, and that by means of such inspection and certification such areas will be probably discovered and be prevented from becoming new centers of distribution of the disease. The State certificate required under Regulation 5 (a) and (c) is expected to be the usual form of nursery inspection certificate

now issued by most States and which most States require as a condition of entry of nursery stock. The requirement of a permit from the State of destination to accompany shipments of five-leafed pine, currant and gooseberry plants from any State into a State having a legally established blister rust control area is sufficiently explained in Regulations 2(a) and 4, and the footnotes thereto.

(2) Under Paragraph (c), the infected Eastern States are grouped according to the degree and condition of infection in each group of States and movement of five-leafed pines from the more lightly infected areas is permitted into the more heavily infected areas. In Washington and Oregon the blister rust situation does not warrant movement of five-leafed pines out of or into these States.

REGULATION 3. Indicates restrictions on the movement of European black currant plants.

Under this regulation European black currant plants are permitted movement under State inspection made between August 15 and September 30 preceding shipment, and other requirements of Regulation 5(b), when within the area comprised by a group of twelve central, and more especially southern, States. No interstate movement is permitted whatsoever between any States other than those listed.

NOTE: This regulation carries out the thought which was explained and fully discussed at the public hearing of June 30, 1925, relative to the necessity of outlawing, so far as could be, and at least prohibiting interstate movement of, European black currant plants (Ribes nigrum L.) except as to a central and more particularly southern group of States in which there is no likelihood of any considerable white pine development. It is hoped that the growth and utilization of this plant will be discontinued. Each shipment of European black currant stock moved interstate within the designated area must bear a certificate showing that the plants, and premises where grown, were inspected between August 15 and September 30 preceding shipment, by the nursery inspector of the State where the shipment originated, and found free from blister rust.

REGULATION 4. Indicates the restrictions on the movement of currant and gooseberry plants other than European black currant.

(a) Prohibits interstate movement of all currant and gooseberry plants (except European black currants already covered in Regulation 3) from all States except (1) upon compliance with requirements of Regulation 5(c), including inspection and certification by the State where the shipment originates, and (2) upon compliance with the requirement that a permit from the State of destination accompany the shipment when the shipment is consigned to a State having a legally established blister rust control area.

(b) Prohibits the movement of all currant and gooseberry plants from the infected States or designated portions thereof (seven counties

in Oregon) except as to the movement of cultivated red and white currant, mountain (or alpine) currant and cultivated gooseberry plants authorized under conditions indicated in Paragraphs (a), (b), (c), (d), and (e) of Regulation 4, restricted, however, by the requirements of Regulation 5 (c) and (d).

NOTE: The inspection and certification required in Regulation 4 (a) and (b) will necessarily have to be made in large part, or altogether, by State inspectors duly authorized to act for the United States Department of Agriculture. For some years past certain States have made a fall inspection of currant and gooseberry stock in the nurseries of these States and such inspection must now be arranged for in each infected State from which interstate shipment of cultivated red and white currant, mountain (or alpine) currant, and cultivated gooseberry plants are made.

REGULATION 5. Indicates the certification, permit and marking requirements as a condition of interstate transportation.

(a), (b), and (c). These three paragraphs state the general requirements applying to all States, including infected States, from which any movement of the quarantined plants is permitted. The requirements for interstate movement of five-leafed pines, European black currants, and all kinds of currant and gooseberry plants are given separately as a matter of convenience to shippers of these plants.

(d) The requirements for the interstate movement of cultivated red and white currant, mountain currant and cultivated gooseberry plants apply only to the infected States or parts thereof designated in Regulation 4. Interstate shipments of these plants from any designated infected State or county must comply with the general requirements of Regulation 5(c) and must also bear a Federal permit tag of specified form. The use of the Federal permit tag is prohibited from May 16 to September 30 inclusive, each year, except for shipments from Washington and the designated counties of Oregon where its use is prohibited from April 16 to October 31, inclusive, each year.

REGULATION 6. Makes inspection permissible at place of shipment, destination or any point enroute of any nursery stock offered for movement interstate which contains or may contain plants prohibited or restricted in interstate movement under this quarantine.

NOTE: The inspection provided for under this regulation is the same type of inspection which has hitherto been carried out by the Office of Blister Rust Control of the Bureau of Plant Industry, United States Department of Agriculture, in cooperation with the Federal Horticultural Board.

REGULATION 7. Indicates the penalties for violation of the regulations under this quarantine.

In addition to prosecution of violators of this quarantine, permits

and certificates issued by the Federal Horticultural Board may be withdrawn and also the right to attach State permits and certificates as a condition of interstate shipment of plants restricted in movement under this quarantine, and further permits and certificates refused to any shipper who violates the rules and regulations.

REGULATION 8. Makes the customary provision for the movement of restricted plants by the United States Department of Agriculture for experimental or scientific purposes.

REPORT OF WHITE PINE BLISTER RUST CONTROL WORK  
SLAB CITY TRACT - HARVARD FOREST  
1944

Field work to control the spread of the blister rust disease in white pine plantations of experimental value was carried on during the summer. It was feared that changed conditions brought about by the hurricane of 1938 might have been favorable to the regeneration of wild ribes (currant and gooseberry bushes), the alternate host plants of the fungus causing the disease. The work this year was confined to the Slab City tract, where the distribution of these plantations made control work necessary on almost the entire area.

One man employed by the Harvard Forestry School, who was experienced in ribes eradication work, was assigned to assist the District Leader, Blister Rust Control, U. S. Department of Agriculture, in scouting the area to locate ribes. The greater part of the area covered had been severely affected by the hurricane and the subsequent salvage operations. Since experience has shown that such disturbances sometimes result in the temporary establishment of ribes plants outside their usual habitats, the scouting work was more intensive than that regularly performed. Areas from which hurricane debris had not been cleared were covered with difficulty.

Wild gooseberries (R. hirtellum), skunk currants (R. glandulosum) and escaped red currants (R. sativum) were found. Gooseberries were scattered along stone walls and grew in concentrations along moist runs and in some of the swales. Concentrations of skunk currants were found on both sides of the Swift River and in a swamp on the south portion of the tract. Plants of this species were also located on rocky land between a brook and the state highway about 2000 feet north of Quaker Drive. These undoubtedly became established since 1938, and had made tremendous growth. Although the bushes were

scattered singly, each covered a considerable area because of its trailing habit of growth. Only a few escaped red currants were found.

It did not appear that hurricane action had resulted in any appreciable increase in the wild ribes population in this section of the Harvard Forest, however, there was ample evidence that the resultant opening of the forest cover had permitted a great number of ribes to rapidly increase their growth and thus become a greater menace.

The two men, working together, destroyed the scattered bushes as they were found in the course of the scouting work. The locations of ribes concentrations were indicated on a map and left for more intensive working. As more help became available a crew was formed and given training in ribes eradication methods. The crew, consisting of Harvard Forest employees, worked under the direct supervision of the man who assisted in the scouting. Ribes eradication work was performed at odd times during the summer when the men could be spared from more pressing forest activities. All of the ribes concentrations within infecting range of the plantations were destroyed by the crew. The work of the crew was inspected by the District Leader and found satisfactory.

A statistical summary of the work follows:

Acreage covered by scouting	221	
Acreage covered by crew	57	
Total acreage covered		278
Man hours scouting (Forest employee only)	52	
Man hours crew (Forest employees only)	264 $\frac{1}{2}$	
Total man hours (" " " )		316 $\frac{1}{2}$
Ribes destroyed by scouts	266	
Ribes destroyed by crew	1,445	
Total number ribes destroyed		1,711

The District Leader, Blister Rust Control, U. S. Department of Agri-

culture, spent 60 hours on scouting work and 5 hours checking the work completed by the crew.

A map giving further details of the work is appended.

*William Clave*

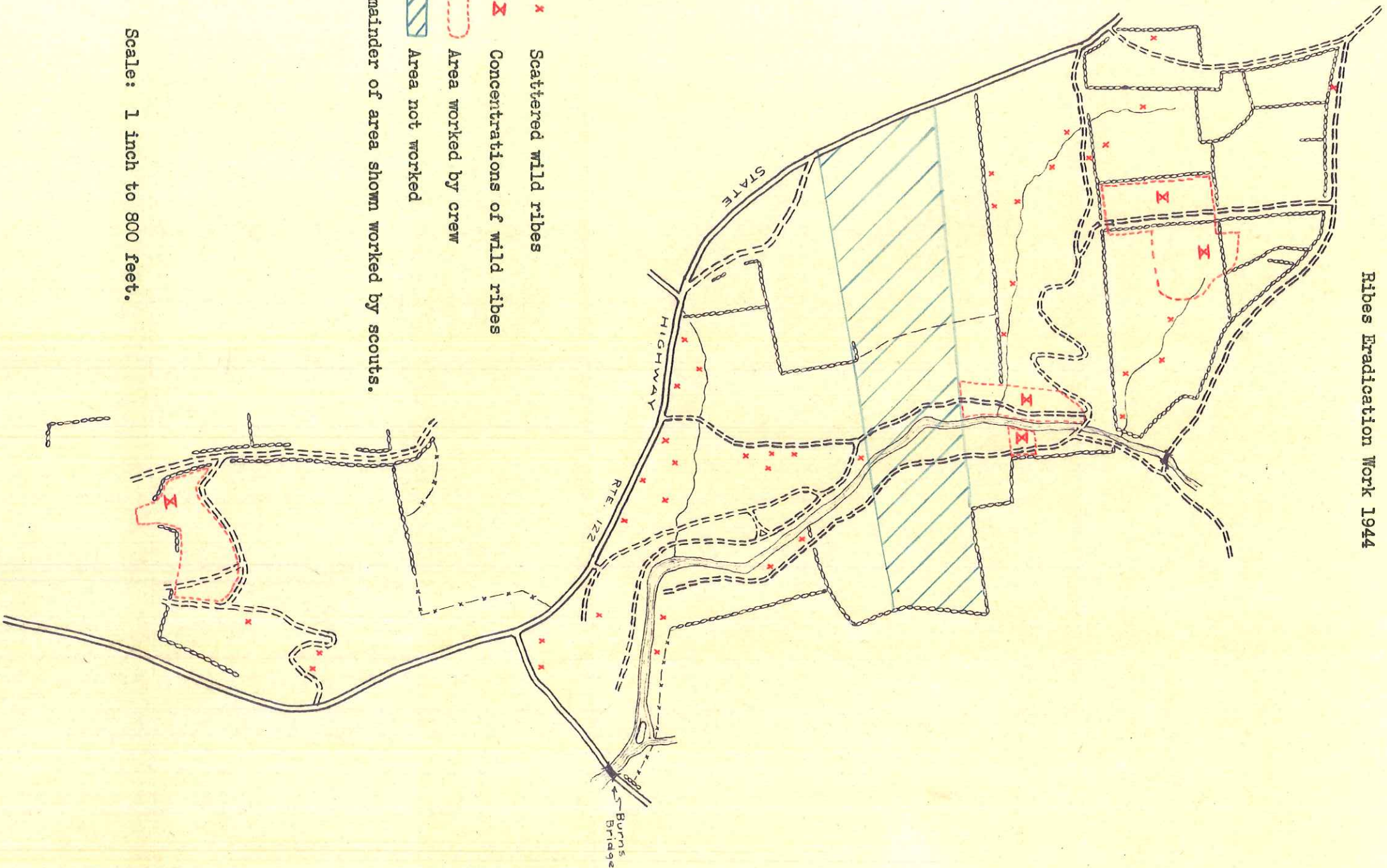
William Clave  
District Leader  
Blister Rust Control.

March 17, 1945.

WHITE PINE BLISTER RUST CONTROL

SIAB CITY TRACT - HARVARD FOREST

Ribes Eradication Work 1944



## Stagnation of White Pine

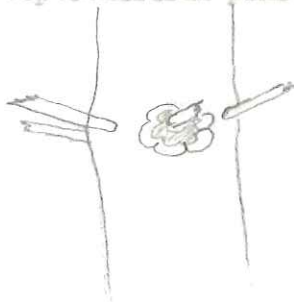
The following interesting vigor-pathogen relationships were revealed in conversation with J.R. Hansbrough, Pathologist, Northeastern Forest Experiment Station. (Sept 13, 1946)

There are two almost infallible indications of stagnation of white pine, which when observed serve as a signal for thinning.

### 1. Presence of *Septobasidium pinicola*.

*Septobasidium pinicola* appears as a brownish, grayish, lichen-like growth on the bark, particularly around the bases of dead limbs. The size and frequency of the growths is more or less proportional to the degree of suppression of the tree. This organism is saprophytic to very mildly parasitic in nature and does not penetrate the wood.

*Septobasidium pinicola*



### 2. Presence of woolly aphid.

Woolly aphid may be observed as an occasional individual on both white pine and norway spruce in almost any stand. However, the presence of this insect in appreciable numbers on white pine is an indication of stagnation. Normally, the insect causes no damage, but heavy infestations may seriously weaken the tree. The aphid provides entry for a secondary infection, an ascomycete, which is mildly parasitic and readily thrown off by healthy trees. Seriously stagnated individuals on the other hand may support such large colonies of aphids and be so heavily attacked by secondary infection, that the tree may be girdled and killed. The presence of the secondary infection may be determined by observing hair-like fruiting bodies when examining the bark with a hand lens.

UNITED STATES DEPARTMENT OF AGRICULTURE  
AGRICULTURAL RESEARCH ADMINISTRATION  
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

41 Tremont St. Boston, Mass.

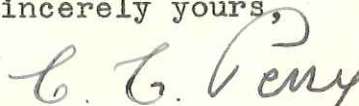
June 16, 1949

Dr. Hugh M. Raup  
Director, Harvard Forest  
Petersham, Massachusetts

Dear Dr. Raup:

At the request of Mr. Stephens I have prepared the enclosed brief memorandum re blister rust control work which was performed this spring on the Harvard Forest and immediate environs. If there are any additional details in which Mr. Stephens is interested, please let me know.

Sincerely yours,



C. C. Perry, State Leader  
Blister Rust Control

Enc.  
CCP:MEC

Bureau of Entomology and Plant Quarantine  
United States Department of Agriculture  
in cooperation with  
Massachusetts Department of Agriculture

MEMORANDUM RE  
WHITE PINE BLISTER RUST CONTROL WORK  
HARVARD FOREST, PETERSHAM, MASS.  
1949

June 15, 1949

C. C. Perry, State Leader

## Background

The first white pine blister rust control effort in the town of Petersham dates back to 1917 when, in an emergency move to prevent early spread of the disease, all cultivated currants and gooseberries (ribes) were removed in three groups of towns in Massachusetts. One of these groups included the town of Petersham where 1,540 cultivated bushes were destroyed as a precautionary measure.

In 1918, a limited amount of work in the eradication of wild ribes was undertaken on an experimental basis in the town of Barre extending over the line into Petersham. The records were kept on a town block basis, and the figures for the portion on the Harvard Forest were not segregated.

In June 1919, thru the interest of the late Professor Fisher, Forest funds were made available for cooperative control work and the entire Forest was covered intensively. During this work infection on ribes was reported as very light. No infection on pine was noted altho no intensive inspection of the pines was undertaken.

### Prospect Hill Tract:

On the Prospect Hill Tract, ribes were not numerous. In fact, they were relatively scarce except for one area of skunk currants in the protective zone. On the 759 acres in the Forest, plus 260 acres in protection zones, 2,026 gooseberries, 555 red or black currants and 4,900 skunk currants were destroyed.

### Meadow Water Tract:

On the Meadow Water Tract, altho land types are distinct-

ly ribes types, relatively few bushes were present. On 611 acres in the Forest, plus 427 acres in protection zones, 4,929 gooseberries; 2,211 red or black currants and 16 skunk currants were uprooted.

#### Slab City Tract:

The narrow confines of the Swift River Valley section of the Slab City Tract, is a very favorable site for skunk currants. On this tract, on 356 acres in the Forest, and 61 acres in the protection zones, 3,648 gooseberries, 177 red or black currants and 22,754 skunk currants were destroyed.

In 1944, thru the interest of Mr. Spurr, re-work was performed in a portion of the Slab City Tract in the further protection of a number of plantations where infected pine had been found. A relatively small area of 278 acres was involved in this work, and 1,711 ribes uprooted. These were mostly skunk currants with a few smooth gooseberries.

#### 1949 Control Activities

In the spring of 1949, inspection disclosed the persistence of a few "hot spots" in the Swift River Valley where skunk currants had recurred and where infection on young pines has been taking place within the last few years. It seemed best, therefore, to give some attention to these locations this spring. Accordingly, the land immediately along the river and associated brook bottoms was rescouted and the ribes uprooted. In addition to this work in the environs of the Swift River Valley, one area in the Prospect Hill Tract and small areas in three compartments in the Tom Swamp Tract were scouted.

The results of the 1949 work on the Forest are recorded below:

<u>Prospect Hill Tract</u>	<u>Compartment</u>	<u>Ribes</u>	<u>Manhours</u>
	III	15	24
<u>Tom Swamp Tract</u>	VI	0	3
	VII	0	1
	VIII	0	4
	IX	10	8
<u>Slab City Tract</u>	I	42	5
	II	13	5
	III	720	20
	IV	5	14
	V	124	20
	VI	579	44
	VII	63	13
	VIII	123	10
	IX	52	22
	X	<u>965</u>	<u>43</u>
		2711	236

In addition to the work on the Forest, 1106 acres on adjoining property were covered and 8,746 skunk currants were uprooted.

As a result of the 1949 control work, it is clear that if white pine reproduction is to succeed in the immediate vicinity of the Swift River, the skunk currant sites must be inspected periodically. A policy of watchfulness will be advisable to protect the pines that succeed in competing with the associated hardwoods.

41 Tremont St. Boston, Mass.  
June 15, 1949.

*C. C. Perry*  
C. C. Perry, State Leader