

# MAINE STATE LEGISLATURE

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STATE OF MAINE

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TWENTY-FIFTH  
BIENNIAL REPORT  
OF THE  
FOREST COMMISSIONER  
RAYMOND E. RENDALL



1943-1944



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TWENTY-FIFTH  
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**STATE OF MAINE**  
**FOREST SERVICE**  
**(Land Office)**  
**Augusta**

July 1, 1945

Honorable Horace Hildreth  
Governor of Maine

Dear Governor Hildreth:

In accordance with Section 14, Chapter 32, of the Revised Statutes of 1944, I have the honor to transmit herewith the Twenty-fifth Biennial Report for the years 1943-1944.

Respectfully yours,

**RAYMOND E. RENDALL,**  
Forest Commissioner

## MAINE FOREST SERVICE PERSONNEL

December 31, 1944

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### Forest Commissioner

Raymond E. Rendall, Augusta

### Supervisors

#### Forestry District

George A. Faulkner, Ellsworth

George H. Gruhn, Augusta

Harry G. Tingley, Island Falls

Rex E. Gilpatrick, Augusta

#### Organized Towns

Austin H. Wilkins, Augusta

### State Entomologist

Henry B. Peirson, Augusta

#### *Assistant Entomologist*

Robley W. Nash, Augusta

#### *Laboratory Entomologist*

Auburn E. Brower, Augusta

#### *Laboratory Technician*

James L. Bean, Augusta

### Blister Rust Control Agent

Walter O. Frost, Augusta

#### *District Agents*

Harrington G. Bradbury, Belfast

Daniel S. Curtis, North Bridgton

Martin G. Calderara, Auburn

### Draftsman

Thaddeus L. Martin, Augusta

### Secretary to Commissioner

Lillian E. Tschamler, Augusta

### Chief Clerk

Lillian J. Coleman, Augusta

### Accountants

Blanche L. Violette, Augusta

Kathryn F. Larkin, Augusta

### Stenographers

Mabel C. Rowell, Augusta

Marion Blair, Augusta

### Clerk

Elsie Chase, Gardiner

## HONOR ROLL

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### Maine Forest Service Personnel in Armed Forces

Robert Blackmore  
Norman Botting  
Charles Carswell  
Claude Chambers  
William Conley  
William J. Covey  
Earl F. Crabb  
John Dyer, Jr.  
E. C. Fernald  
Oscar Gagnon  
Charles A. Gleason, Jr.  
William Gleason  
Owen Grant  
B. L. Hadley  
Thomas Hilman  
Ewart Hodgins  
A. L. Jones  
Lawrence Lowell  
Gilbert Marquis  
Ivan McPheters  
Nestor A. Nelson  
Frank Porter  
Warren Pressley  
Carl E. Tracy  
Philip Tribou  
Philip R. Violette  
Helon Wilson  
Victor Wilson  
Ivan N. Wood



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## IN MEMORIAM

During the biennium 1943-1944 the Maine Forest Service suffered the loss of six men close in its work and ideals. They all could be depended upon in any emergency in their various capacities. Their names are listed in this report as a tribute to their loyalty to the Service and faithfulness in the advancement of protection and preservation of Maine forests.

Hugh Morse—watchman on Frye Mt.  
March 23, 1910—May 25, 1943

Blaine S. Viles—forester and lumberman.

He was State Forest Commissioner 1913-15  
June 22, 1879—Sept. 9, 1943

Elmon B. McDaniels—watchman on Sabattus Mt.  
Sept. 22, 1909—Sept. 30, 1943

Edward L. Lahar—watchman at Opportunity Farm  
March 23, 1886—Sept. 30, 1943

William B. Deering—lumberman and conservationist  
1881—Jan. 5, 1944

Jerome O. Lynch—pulp mill and forest landowner executive  
1865—Feb. 21, 1944

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The years of 1943 and 1944 have been trying years for the Maine Forest Service. Regular protection against fire, insects, and disease has been carried on in spite of handicaps due to war conditions. Curtailment of much needed equipment, loss of men, increased costs, federal war regulations, and the extreme fire hazardous weather of 1944 have all contributed to try the mettle of our personnel. However, the challenge has been met and the Service has functioned, not only on its regular program but assisted in all defense activities such as Aircraft Warning Service, Forest Fire Fighters Service under the Office of Civilian Defense, protected critical areas, cooperated with the OPA in stabilizing prices of forest products, and the WPB in maintaining a maximum of forest production. Public contacts have been made with forest and woodlot owners to encourage adoption of proper forest cutting practices.

During this period, the Maine Forestry District, which has functioned since 1909 as an independent corporate body, has been placed under the administrative code. This has caused a complete change of administrative procedure both in office and field work, which has added the burden common to any transition.

Attention has been given to the planning of forestry projects which can be initiated to partially absorb postwar employment needs and bring about a better protection of Maine forests.

### FOREST FIRE RECORD---MAINE

(Figures rechecked, revised, and supersede all former tabulations)

Year	Maine Forestry District			Organized Towns			Total for State		
	No.	Acreage	Damage	No.	Acreage	Damage	No.	Acreage	Damage
1903 .....	136	200,232	\$761,588	209	67,355	\$186,000	345	267,587	\$947,588
1904 .....	31	6,958	12,655	No record			31	6,958	12,655
1905 .....	109	14,737	40,518	33	5,579	23,105	142	20,316	63,623
1906 .....	56	7,250	19,488	11	371	1,540	67	7,621	21,028
1907 .....	16	2,324	5,257	17	2,200	9,310	33	4,524	14,567
1908 .....	126	98,691	361,796	111	43,439	257,020	237	142,130	618,816
1909 .....	68	27,083	63,734	89	11,945	32,965	157	39,028	96,699
1910 .....	18	267	935	12	581	1,906	30	848	2,841
1911 .....	127	99,654	289,052	75	11,423	48,303	202	111,077	337,355
1912 .....	63	16,198	57,452	36	4,042	14,096	99	20,240	71,548
1913 .....	74	9,327	28,477	120	20,887	148,365	194	30,214	176,842
1914 .....	105	8,311	14,467	52	7,405	14,840	157	15,716	29,307

## FOREST COMMISSIONER'S REPORT

Year	Maine Forestry District			Organized Towns			Total for State		
	No.	Acreage	Damage	No.	Acreage	Damage	No.	Acreage	Damage
1915	80	14,472	22,776	76	11,185	55,340	156	25,657	78,116
1916	54	8,257	9,460	18	3,359	10,305	72	11,616	19,765
1917	19	147	1,334	9	311	800	28	458	2,134
1918	58	3,820	7,291	21	5,118	70,600	79	8,938	77,891
1919	85	4,352	6,305	19	668	2,625	104	5,020	8,930
1920	118	34,558	143,753	47	5,245	42,155	165	39,803	185,908
1921	250	56,947	404,555	112	11,883	112,560	362	68,830	517,115
1922	164	19,198	106,001	52	2,190	8,775	216	21,388	114,776
1923	132	62,407	289,845	49	7,932	51,521	181	70,339	341,366
1924	158	38,401	101,986	62	1,956	11,802	220	40,357	113,788
1925	73	2,328	14,058	42	3,725	29,060	115	6,053	43,118
1926	83	3,717	34,068	61	8,495	18,113	144	12,212	52,181
1927	60	9,096	103,649	49	2,524	25,705	109	11,620	129,354
1928	27	1,562	1,965	37	622	4,070	64	2,184	6,035
1929	90	1,323	11,363	78	1,142	33,394	168	2,465	44,757
1930	129	11,678	39,316	134	21,631	104,545	263	33,309	143,861
1931	92	562	1,580	134	4,245	51,417	226	4,807	52,997
1932	164	36,343	50,731	157	6,484	19,076	321	42,827	69,807
1933	165	5,299	7,259	116	9,995	41,568	281	15,294	48,827
1934	165	130,293	385,126	101	6,077	36,538	266	136,370	421,664
1935	220	14,582	28,001	81	4,246	9,557	301	18,828	37,558
1936	84	179	13,270	52	1,461	7,025	136	1,640	20,295
1937	162	1,358	12,191	100	4,355	18,023	262	5,713	30,214
1938	92	5,210	7,815	81	10,929	25,706	173	16,139	33,521
1939	128	2,914	15,757	159	4,519	20,953	287	7,433	36,710
1940	120	523	3,681	120	3,588	19,255	240	4,111	22,936
1941	157	12,847	82,543	324	27,503	428,797	481	40,350	511,340
1942	97	1,785	2,853	128	3,208	8,780	225	4,993	11,633
1943	36	244	4,157	93	6,924	35,753	129	7,168	39,910
1944	147	12,162	121,773	261	12,041	157,094	408	24,203	278,867

### Fire Protection

1943 and 1944 proved to be contrasting years. In 1943 there were only 129 fires burning a total of 7,168 acres, while in 1944 there were 408 fires burning a total of 24,203 acres. In the absence of drought conditions forest fire danger was at a minimum in 1943. Quick detec-

tion of fires and prompt action of suppression crews made possible the good record. The season of 1944 was marked by long periods of drought. Heavy snow fell in November 1943 before the ground became thoroughly frozen. Heavy damage was caused in the woods through snow breakage and trees were bent over so that the tops were frozen to the ground. Subsequent snowstorms in January of 1944 increased the damage. Many of the bent trees never straightened up in the spring. This, together with heavy top and branch breakage, added to the problem of forest fire fighting. In spite of a winter of deep snow there was little or no frost in the ground. The snow melted quickly in the spring and the soil dried out much sooner than normally; thus, ground conditions became favorable for fire and remained so for the entire season. Practically all fires developed into a deep burning ground-fire type. The most prolonged drought condition occurred in Washington County. It was so severe that green leaves fell prematurely because of lack of sufficient moisture. Lightning was the cause of about 20% of our fires causing a major threat in a dry time.

Two bans were proclaimed by Governor Sewall in an effort to reduce the fire hazard caused by human carelessness and produce a moral effect on the general public. These were the twelfth and thirteenth, since this protective measure became law in 1922. The proclamations suspended open season for fishing in inland waters except when fishing from boats, and prohibited all smoking or the building of any and all fires out of doors in the woods. They were in force for 18 days, June 2 to 20, 1944, and 21 days, August 16 to September 5, 1944, respectively.

All private, state, and federal agencies have cooperated to the fullest extent in the forest fire protection program during the past two years.

The Province of Quebec continued cooperation with our warden force in the controlled burning of slash along the border, and on the eastern border of Maine, New Brunswick has cooperated in joint patrolling during hazardous periods.

The Army and Navy and Air Transport Command cooperated in every way possible, although their actual services could only be used when all other facilities had been used up.

Special recognition should be given to the CAP and Army planes who reported in fire locations. The messages were radioed in to the nearest airport and relayed by radio to the Augusta State Police headquarters and then communicated by telephone to the Forest Commissioner. It is interesting to note that Army planes reported fires

by latitudes and longitudes and had to be converted in this office to either azimuths or bearings.

Auxiliary agencies as the Red Cross, OCD, FBI, State Guard, State Police, Fish and Game Department, and others all gave their support in forest fire control work.

Blue line agreements were drawn up with the U. S. Forest Service for the White Mountain National Forest area in Maine. There was a complete understanding as to plans of action such as moving of equipment, men, and communications.

Similar agreements were made with the New Hampshire Forest Service relative to border towns on the Maine-New Hampshire line.

The State Park Commission continued its policy to deputize fire wardens of this department to handle fires on their park areas. Working agreements were drawn up and action plans agreed upon.

A vigorous campaign has been conducted in cooperation with the U. S. Forest Service in distributing fire warning signs, posters, stamps, cards, and book marks. Our annual pocket-size calendar showing the fire months of April to October in red and the other months in green has again been distributed throughout the state.

A new feature was tried out in 1944 by including in the Service's annual directory a brief forest fire manual outline. It is written in the layman's language and is purely elementary and is intended only as a guide.

Forest fire exhibits were set up at the Bangor, Skowhegan, and Topsham fairs.

### MAINE FORESTRY DISTRICT

The fire record in the Maine Forestry District for 1943 shows it to have been an exceptional year. The 36 fires were the smallest number to occur since 1926 and previous to that date, 1915. Only in 1936 and 1917 were acreages burned less than this year's 244 acres.

All of the key personnel was available at the beginning of 1943 and continued on through this and the 1944 season. There was a noticeable scarcity of regular fire fighters and nearly all men employed for this work were recruited from lumber camps.

Several telephone lines were rebuilt and due to the favorable season, many miles of the lines were brushed out and trails cleaned. Many of our old camps were reconstructed to make better living quarters. A new camp and storehouse was built at Nicasious Lake.

Expenditures for tools and supplies have been curtailed since surpluses were built up in 1942 in anticipation of priority problems and

war needs and fire suppression demands were light. The service of furnishing organized towns with back pumps, although reimbursement was received, was discontinued in order to strictly conform with the administrative code.

Due to the length of the 1944 fire hazard season, very little new construction work was undertaken. A work shop was built at Princeton and necessary repairs were made on tower cabins. Five miles of new telephone line was run from Whiting to Marion which was about half the proposed or needed distance. Ten miles of line was rebuilt along the new Brownville-Millinocket highway. Necessary road repair and maintenance was begun on the so-called LaCroix road from Lac Frontiere to Churchill Lake between Clayton Lake and Umsaskis Lake.

At the beginning of the 1943 season the Beechcraft airplane with a 330 H.P. Jacobs engine was sold and a used Piper Cub Coupe with a 65 H.P. Continental engine was purchased. This was traded for a Taylorcraft with a 65 H.P. Continental engine in 1944. Supplementing the District-owned plane, three Cub planes which were leased for AWS were retained for coverage of regular fire protection work during 1944. This work consists of transportation of personnel to their posts and the hauling of supplies and equipment to inaccessible areas. Although no regular patrols are made, the planes do function for detection on their work trips and when they are used by the supervisors and wardens in carrying out their administration duties. Regular flights are made after all lightning storms and the planes are in constant service during the suppression of fires.

Fire suppression costs for 1944 exceed figures for every year since 1921. Only 1921 and 1935 were there appreciable number more fires. Acreage burned was below the average for a twenty year period. The curtailment of expenditures shown in 1943 was continued during 1944. All payroll and equipment costs have increased due to war conditions. This increase, together with the excessive suppression costs, has caused a deficit for the first time in several years, of approximately \$6,000. Although an increase in the District tax rate was recommended, no action was taken.

## MAINE FORESTRY DISTRICT

## Financial Statement

1943

## Receipts

Balance on hand January 1, 1943.....			\$ 17,835.02
1943 Assessment.....		133,519.49	
Federal Cooperation.....		59,721.76	
Miscellaneous:			
Sale of Pumps.....	\$ 3,081.63*		
Sale of Beechcraft.....	13,868.56	16,950.19	
Total Receipts.....			\$228,026.46
Forestry District tax abatements.....	\$288.60		
Forestry District tax charge-off.....	215.14	503.74	\$227,522.72

## Disbursements

Chief Wardens.....		\$30,979.78	
Deputy Wardens.....		546.20	
Supervision.....		15,501.83	
Patrolmen.....		40,726.73	
Watchmen.....		34,674.97	
Improvements.....		15,569.18	
Tools and Supplies.....		3,081.63*	
Tools and Supplies.....		16,371.36	
Fire Suppression.....		2,582.60	
Administration.....		8,311.46	
Miscellaneous.....		3,261.28	171,607.02

Balance on hand January 1, 1944..... \$55,915.70

\*This amount includes disbursements and reimbursements for fire fighting equipment furnished to towns and individuals as a part of our program of cooperation in forest fire prevention.

## EXPENDITURES BY WATERSHEDS

	St. John	Penobscot	Kennebec	Andros-coggin	Machias	Totals
Chief Wardens.....	\$9,392.37	\$9,193.80	\$6,697.77	\$1,184.15	\$4,511.69	\$30,979.78
Deputy Wardens.....	35.00	278.35		76.85	156.00	546.20
Supervision.....	5,544.56	4,607.63	1,878.94	925.52	2,545.18	15,501.83
Patrolmen.....	11,734.86	13,186.47	7,006.74	5,707.37	3,091.29	40,726.73
Watchmen.....	7,455.20	12,500.72	8,411.50	1,695.00	4,612.55	34,674.97
Improvements.....	5,363.24	3,902.87	2,769.00	1,847.46	1,686.61	15,569.18
Tools and Supplies.....	615.72	616.46	615.70	615.70	618.05	3,081.63
Tools and Supplies.....	5,579.23	4,003.83	3,396.15	2,072.40	1,319.75	16,371.36
Fire Suppression.....	225.72	433.79	1,331.60	335.00	256.49	2,582.60
Administration.....	1,674.20	1,658.55	1,661.15	1,658.77	1,658.79	8,311.46
Miscellaneous.....	1,067.25	1,143.89	194.44	118.14	737.56	3,261.28
Totals.....	\$48,687.35	\$51,526.36	\$33,962.99	\$16,236.36	\$21,193.96	\$171,607.02

MAINE FORESTRY DISTRICT

Financial Statement

1944

Receipts

Balance on hand January 1, 1944.....	\$ 55,915.70		
1944 Assessment.....	133,993.98		
Federal Cooperation.....	76,587.69		
Baxter State Park 1943-1944.....	3,012.00		
Total Receipts.....	\$269,509.37		
Bills Receivable.....	320.63		
		\$269,830.00	
Forestry District tax abatements.....	\$302.16		
Forestry District tax charge-off.....	501.82	803.98	\$269,026.02

Disbursements

Chief Wardens.....	\$34,694.54		
Deputy Wardens.....	1,067.50		
Supervision.....	16,126.87		
Patrolmen.....	51,319.39		
Watchmen.....	40,768.63		
Improvements.....	18,365.02		
Tools and Supplies.....	21,927.54		
Fire Suppression.....	73,661.00		
Administration.....	10,846.17		
Miscellaneous.....	6,118.07	274,894.73	
Overdrawn January 1, 1945.....			\$5,868.71

EXPENDITURES BY WATERSHEDS

	St. John	Penobscot	Kennebec	Andros-coggin	Machias	Totals
Chief Wardens.....	\$11,059.97	\$11,288.51	\$6,637.21	\$1,090.12	\$4,618.73	\$34,694.54
Deputy Wardens.....	212.50	495.00	155.00		205.00	1,067.50
Supervision.....	6,087.04	4,529.96	1,877.89	926.55	2,705.43	16,126.87
Patrolmen.....	16,008.33	15,502.99	7,857.97	6,586.93	5,363.17	51,319.39
Watchmen.....	10,267.45	14,016.43	7,920.75	2,549.00	6,015.00	40,768.63
Improvements.....	6,513.96	5,225.35	3,253.68	939.66	2,432.37	18,365.02
Tools and Supplies.....	5,025.27	6,046.02	3,944.95	2,718.36	4,192.94	21,927.54
Fire Suppression.....	4,669.73	11,227.79	35,663.43	16,316.47	5,783.58	73,661.00
Administration.....	2,164.55	2,208.60	2,125.75	2,223.21	2,124.06	10,846.17
Miscellaneous.....	1,841.24	1,828.30	1,502.01	250.36	696.16	6,118.07
Totals.....	\$63,850.04	\$72,368.95	\$70,938.64	\$33,600.66	\$34,136.44	\$274,894.73



## MAINE FORESTRY DISTRICT FIRE RECORD 1943

Location	Date	Acreage	Cause	Damage
<b>Aroostook County</b>				
Reed Pl. . . . .	May 8	25	Unknown . . . . .	\$25.00
T. 1, R. 4, WELS, NW ¼ . . . . .	May 19	2	Smoking . . . . .	2.00
T. 14, R. 6, WELS . . . . .	May 22	.....	Incendiary . . . . .	.....
T. 4, R. 3, WELS . . . . .	June 12	.....	Incendiary . . . . .	.....
T. 10, R. 4, WELS, NE ¼ . . . . .	June 25	.....	Lightning . . . . .	.....
T. A. R. 2, WELS . . . . .	July 1	.....	Lightning . . . . .	.....
T. 11, R. 7, WELS, SE ¼ . . . . .	July 14	.....	Lightning . . . . .	1.00
T. 12, R. 17, WELS . . . . .	July 15	.....	Lightning . . . . .	.....
Winterville Pl. . . . .	July 24	.....	Lightning . . . . .	.....
T. 14, R. 8, WELS . . . . .	Sept. 23	.....	Campfire . . . . .	.....
Winterville Pl. . . . .	Oct. 13	70	Smoking . . . . .	.....
<b>Hancock County</b>				
T. No. 8, SD . . . . .	June 12	4	Incendiary . . . . .	4.00
<b>Oxford County</b>				
"C" Surplus . . . . .	June 5	11	Lightning . . . . .	.....
<b>Penobscot County</b>				
T. A. R. 7, WELS . . . . .	April 27	3	Brush Burning . . . . .	.....
Stacyville Pl. . . . .	May 15	20	Brush Burning . . . . .	.....
T. 2, R. 8, WELS . . . . .	May 25	8	Railroad . . . . .	16.00
T. 2, R. 9, NWP . . . . .	June 23	25	Lumbering . . . . .	385.00
Indian No. 4, NE ¼ . . . . .	July 15	.....	Lightning . . . . .	.....
T. 3, R. 1, NBPP . . . . .	July 20	.....	Campfire . . . . .	15.00
Grand Falls Pl. . . . .	Aug. 13	.....	Incendiary . . . . .	.....
<b>Piscataquis County</b>				
T. 8, R. 10, WELS, SW ¼ . . . . .	July 12	.....	Lightning . . . . .	.....
T. 8, R. 10, WELS, SE ¼ . . . . .	July 14	.....	Lightning . . . . .	1.00
T. 10, R. 10, WELS, SW ¼ . . . . .	July 27	.....	Lightning . . . . .	.....
Gore A 2, WELS . . . . .	Aug. 14	.....	Smoking . . . . .	15.00
Gore A 2, WELS . . . . .	Sept. 5	.....	Smoking . . . . .	50.00
<b>Somerset County</b>				
T. 4, R. 4, NBKP, So. ¼ . . . . .	July 15	3	Lumbering . . . . .	3,600.00
T. 4, R. 7, BKP, WKR . . . . .	July 27	.....	Campfire . . . . .	.....
Spaulding . . . . .	Aug. 28	.....	Campfire . . . . .	.....
Chase Stream . . . . .	Sept. 25	.....	Campfire . . . . .	15.00
Prentiss . . . . .	Sept. 28	.....	Campfire . . . . .	.....
Lower Enchanted . . . . .	Oct. 12	20	Lumbering . . . . .	25.00
Upper Enchanted . . . . .	Oct. 15	.....	Campfire . . . . .	.....
<b>Washington County</b>				
Grand Lake Stream Pl. . . . .	May 10	3	Smoking . . . . .	.....
T. 8, R. 3, NBPP . . . . .	May 23	20	Incendiary . . . . .	.....
Indian Twp. . . . .	May 23	.....	Smoking . . . . .	2.00
T. 8, R. 4, and T. 8, R. 3, NBPP . . . . .	May 23	30	Smoking . . . . .	.....
Lambert Lake . . . . .	Aug. 3	.....	Smoking . . . . .	1.50

MAINE FORESTRY DISTRICT FIRE RECORD 1944

Location	Date	Acreage	Cause	Damage
<b>Aroostook County</b>				
Macwahoc Plantation	April 29	5	Unknown	
Nashville Plantation	May 6	10	Miscellaneous	
T. 11, R. 4, WELS	May 6	1	Smoking	
Silver Ridge Township	May 20	1	Smoking	
T. 14, R. 15, WELS	May 22	1	Smoking	
Westmanland Plantation	May 24	1	Unknown	5.00
T. 3, R. 2, WELS (Forkstown)	May 25	5	Lumbering	8,625.00
T. 11, R. 4, WELS, NW 1/4	May 30	2	Smoking	10.00
T. A, R. 5, WELS (Molunkus)	June 6	1	Miscellaneous	2.00
T. 16, R. 10, WELS	June 12	1	Lightning	
Westmanland Plantation	July 2	1	Smoking	
Westmanland Plantation	July 3	1	Smoking	
T. 12, R. 8, WELS, SE 1/4	July 3	1	Smoking	
T. 20, R. 11 & 12, WELS	July 5	1	Lightning	
T. 15, R. 15, WELS	July 5	250	Lightning	13,250.00
T. 19, R. 12, WELS	July 5	5	Lightning	100.00
T. 18, R. 10, WELS	July 6	300	Campfire	300.00
T. 17, R. 11, WELS	July 8	2	Smoking	
T. 3, R. 2, WELS	July 20	1	Smoking	1.00
T. 15, R. 15, WELS	July 19	40	Lumbering	3,200.00
Reed Plantation	July 19	1	Brush Burning	
T. 15, R. 12, WELS	July 26	1	Lightning	
T. A, R. 5 (Molunkus), WELS, (Medway-Molunkus fire, only Molunkus acres shown, other under Org. Towns)	Aug. 5	1000	Lightning	1,710.00
Reed Plantation	Aug. 5	2	Lightning	
Westmanland Plantation	Aug. 12	1	Smoking	
Westmanland Plantation	Aug. 12	1	Smoking	
T. 3, R. 2, (Forkstown) WELS	Aug. 13	1	Smoking	
T. 10, R. 3, WELS	Aug. 14	3	Campfire	6.00
T. 7, R. 4, WELS	Aug. 15	2	Smoking	
T. 4, R. 3, WELS	Aug. 15	2	Smoking	40.00
<b>Franklin County</b>				
Seven Ponds, Chain of Ponds and Mass. Gore	Aug. 11	2325	Smoking	55,085.00
T. 4, R. 2, BKP, WKR, (Crocker-town)	Aug. 18	2	Lightning	
T. 4, R. 2, BKP, WKR, (Crocker-town)	Aug. 20	1	Lightning	
No. 6 Township	Oct. 20	2	Smoking	
Letter "E" Township	Nov. 1	3	Smoking	
<b>Hancock County</b>				
Township No. 9, SD	April 30	160	Smoking	
Township No. 41, MD—Township No. 4, ND	July 1	1000	Lightning	1,000.00
Township No. 3, ND	July 7	3	Lumbering	915.00
Township No. 16, MD	July 19	4	Smoking	35.00
Township No. 8, SD	July 22	3	Smoking	600.00
Township No. 28, MD	Aug. 5	1	Lightning	10.00
Township No. 4, ND	Aug. 8	1	Lightning	5.00
Township No. 3, ND	Aug. 8	1	Lightning	
Township No. 41, MD	Aug. 8	2	Lightning	5.00
Township No. 10, SD	Aug. 10	2	Campfire	
Township No. 16, MD	Aug. 11	3900	Lumbering	7,650.00
(Eastbrook-No. 16 Fire only No. 16 acres shown; other under Org. Towns)				
Plantation No. 33, MD	Aug. 12	2	Lightning	
Township No. 3-4, ND	Aug. 15	100	Lightning	100.00
<b>Oxford County</b>				
Township "C"	May 27	131	Smoking	5,000.00
Magalloway Plantation	Aug. 8	15	Smoking	200.00

Location	Date	Acreage	Cause	Damage
<b>Penobscot County</b>				
T. 3, R. 8, WELS	May 17	....	Smoking	.....
T. 2, R. 9, WELS	May 19	....	Miscellaneous	.....
T. 7, R. 7, WELS	May 30	100	Smoking	180.00
T. 2, R. 6, WELS	May 30	4	Railroad	4.00
T. 2, R. 9, NWP	July 7	.2	Smoking	.....
T. A, R. 7, WELS	July 15	.1	Smoking	.....
T. 7, R. 8, WELS, NW ¼	Aug. 1	....	Lightning	.....
Drew Plantation	Aug. 3	....	Unknown	.....
Lakeville Plantation	Aug. 5	....	Lightning	.....
T. 2, R. 9, NWP	Aug. 5	2	Lightning	10.00
T. 5, R. 1, NBPP	Aug. 5	....	Lightning	.....
T. 3, R. 1, NBPP	Aug. 13	1	Lightning	15.00
No. 3, Indian Purchase NW ¼	Aug. 15	.1	Smoking	.....
<b>Piscataquis County</b>				
Williamsburg	May 21	5	Smoking	25.00
T. 1, R. 9, WELS, NE ¼	May 22	.2	Smoking	.....
T. 3, R. 5, BKP, EKR, (Little Squaw)	May 29	2	Campfire	200.00
Gore A2, R. 13 & 14, WELS	May 30	1200	Smoking	2,360.00
T. 2, R. 12, WELS	June 12	10	Lightning	200.00
T. 6, R. 15, WELS	June 13	30	Lightning	60.00
Williamsburg	June 14	1	Smoking	5.00
T. 2, R. 10, WELS	June 30	.2	Campfire	1.00
Bowerbank	July 1	.2	Smoking	.....
T. 3, R. 12, WELS	July 2	5	Lightning	6.00
Birch Island	July 4	.5	Campfire	50.00
T. 3, R. 10, WELS	July 9	.2	Lightning	.....
T. 3, R. 12, WELS	July 9	.2	Lightning	.....
Gore A2, R. 13 & 14, WELS	July 15	1	Smoking	20.00
T. 4, R. 9, WELS	July 18	8	Smoking	40.00
T. 2, R. 12, WELS	July 30	1.5	Lightning	10.00
T. 6, R. 10, WELS, NE ¼	Aug. 1	....	Lightning	.....
T. 3, R. 12, WELS	Aug. 2	.2	Lightning	.....
T. 5, R. 10, WELS, SE ¼	Aug. 2	....	Campfire	.....
T. 2, R. 12, WELS	Aug. 4	.5	Lightning	6.00
Big Squaw Mt.	Aug. 13	1	Campfire	50.00
T. 3, R. 13, WELS	Aug. 16	.5	Lightning	5.00
T. 2, R. 13, WELS	Aug. 16	2	Lightning	.....
T. 3, R. 13, WELS	Aug. 16	.7	Lightning	10.00
T. 2, R. 13, WELS	Aug. 16	.2	Lightning	.....
T. 8, R. 12, WELS	Aug. 16	....	Lightning	.....
T. 2, R. 10, WELS	Aug. 17	.1	Lightning	.....
Spencer Bay	Aug. 17	1.5	Lightning	20.00
T. 8, R. 12	Sept. 3	....	Lightning	.....
<b>Somerset County</b>				
Moscow	April 21	....	Miscellaneous	.....
Moscow	May 20	15	Smoking	.....
T. 3, R. 7, BKP, WKR, (Long Pond)	May 28	1	Campfire	.....
T. 3, R. 1, NBKP, (Long Pond)	June 3	....	Railroad	.....
The Forks Plantation	June 12	....	Lightning	.....
Moose River Plantation	June 13	....	Lightning	.....
T. 1, R. 5, BKP, EKR, (Moxie Gore)	July 5	2	Lightning	50.00
Caratunk Plantation	July 7	.2	Smoking	25.00
T. 4, R. 4, NBKP, (Prentiss)	July 7	1	Campfire	2.00
West Forks	July 15	.2	Unknown	7.00
T. 5, R. 1, NBKP, (Attean)	July 16	....	Miscellaneous	.....
T. 1, R. 4, BKP, WKR, (Bowtown)	July 16	3	Lightning	.....
T. 6, R. 17, WELS	July 26	.2	Campfire	.....
T. 3, R. 1, NBKP, (Long Pond)	Aug. 13	100	Campfire	200.00
T. 4, R. 6, BKP, WKR, (Hobbs-town)	Aug. 11	80	Lumbering	560.00
T. 3, R. 4, NBKP	Aug. 13	.5	Campfire	.....
T. 4, R. 17, WELS	Aug. 14	.2	Smoking	160.00
T. 3, R. 3, NBKP, (Alder Brook)	Aug. 15	350	Smoking	17,700.00
Dead River Plantation	Aug. 16	1	Lightning	.....
<b>Washington County</b>				
Marion	May 1	100	Railroad	.....
Lambert Lake Plantation	May 3	....	Railroad	.....
Wesley	May 3	.2	Miscellaneous	.....
Township No. 24, MD	May 15	.5	Brush Burning	.....
Marion	May 21	....	Campfire	.....
Township No. 27, ED	May 23	.2	Brush Burning	.....

MAINE FORESTRY DISTRICT

Location	Date	Acreage	Cause	Damage
Lambert Lake	May 24	.....	Miscellaneous	.....
Edmonds	May 25	.....	Campfire	.....
Codyville Plantation	May 26	1	Smoking	3.00
Township No. 26, ED	May 28	3	Lightning	65.00
Township No. 29, MD	May 28	.2	Campfire	1.00
T. 10, R. 3, NBPP	May 30	10	Railroad	2.50
Wesley	June 9	.5	Smoking	.....
Marion	June 11	.....	Lightning	.....
Township No. 35, MD, Hancock County, Township No. 36, MD, Washington County	June 12	150	Lightning	.....
Township No. 18, MD	June 13	.....	Railroad	.....
Township No. 19, ED	June 14	.....	Brush Burning	.....
Marion	June 14	.5	Miscellaneous	5.00
T. 7, R. 2, NBPP, (Kossuth)	July 11	.....	Lightning	.....
T. 6, R. 1, NBPP	July 11	2	Lightning	.....
T. 7, R. 2, NBPP, (Kossuth)	July 16	1	Lightning	2.00
Township No. 41, MD—No. 4, ND Hancock County—Township No. 5, ND Washington County	July 18	507	Lightning	700.00
Northfield	July 19	1	Lumbering	.....
T. 1, R. 1, TS, (Dyer Township)	July 20	12	Smoking	755.00
Township No. 5, ND	July 22	.....	Lightning	.....
Township No. 19, ED	July 24	3	Campfire	13.50
Talmadge	Aug. 5	.....	Lightning	.....
Brookton	Aug. 5	.....	Lightning	.....
T. 7, R. 2, NBPP (Kossuth)	Aug. 10	.....	Campfire	6.00
Township No. 27, ED	Aug. 10	.....	Campfire	.....
Cooper	Aug. 12	1	Smoking	.....
Township No. 6, ND (Hinckley)	Aug. 14	12	Lightning	140.00
Edmonds	Aug. 14	150	Smoking	240.00
Plantation No. 14	Aug. 14	.2	Smoking	5.00
Brookton	Aug. 16	.2	Campfire	.....
Cooper	Sept. 12	.2	Smoking	.....

**SUMMARY OF FOREST FIRES FOR 1943-44  
BY MONTHS, COUNTIES AND CAUSES  
Maine Forestry District**

	No. of Fires		Acreage		Damage	
	1943	1944	1943	1944	1943	1944
<b>By Months:</b>						
April .....	1	3	3	165.0		
May .....	9	30	108	1,587.0	\$ 45	\$16,480.50
June .....	5	15	40	193.2	389	273.00
July .....	11	41	3	2,155.7	3,617	21,081.50
August .....	4	54	...	8,056.2	16	83,938.00
September .....	4	2	...	...	65	...
October .....	3	1	90	2.0	25	...
November .....	..	1	..	3.0	...	...
	37	147	244	12,162.1	\$4,157	\$121,773.00
<b>By Counties:</b>						
Aroostook .....	11	30	97	1,620.5	28	27,249.00
Franklin .....	..	5	..	2,330.3	...	55,085.00
Hancock .....	1	13	4	5,174.4	4	10,320.00
Oxford .....	1	2	11	146.0	...	5,200.00
Penobscot .....	7	13	56	107.4	416	209.00
Piscataquis .....	5	29	...	1,271.7	66	3,068.00
Somerset .....	7	19	23	556.1	3,640	18,704.00
Washington .....	5	36	53	955.7	3	1,938.00
	37	147	244	12,162.1	\$4,157	\$121,773.00
<b>By Causes:</b>						
Lightning .....	10	54	11	3,096.3	2	17,479.00
Railroad .....	1	6	8	114.0	16	6.50
Campfire .....	7	20	...	413.0	30	829.50
Smokers .....	8	45	105	4,495.7	70	82,489.00
Debris Burning .....	2	4	23	..	...	...
Incendiary .....	5	..	24	...	4	...
Lumbering .....	3	6	48	4,024.5	4,010	20,950.00
Miscellaneous .....	..	8	..	11.7	...	7.00
Unknown .....	1	4	25	6.2	25	12.00
	37	147	244	12,162.1	\$4,157	\$121,773.00

**CLASS OF FIRES--1944**

Acres	No. of Fires	%
5 or less .....	119	81.0
6-10 .....	4	2.7
11-50 .....	6	4.1
51-100 .....	5	3.4
101-1000 .....	8	5.4
Over 1000 .....	5	3.4
	147	100.0%

## Aircraft Warning Service

Reference was made in the 1942 report to participation in the Aircraft Warning Service in cooperation with the U. S. Forest Service under the direction of the U. S. Army. Maine was considered a vulnerable state and we were asked to establish observation posts at points too inaccessible for inclusion in the volunteer civilian program.

The following eleven tower sites and seven camps, designated for observation posts and manned on April 15, 1942, continued in operation until October 31, 1943:

### **Aroostook County**

Allagash camp  
Daaquam camp  
Hedgehog Mt.  
Howe Brook Mt.  
Mitchell Mt.  
Oxbow camp  
Round Mt.  
St. Pamphile camp  
Stockholm Mt.  
Umsaskis camp

### **Franklin County**

Snow Mt.

### **Oxford County**

Aziscoos Mt.

### **Penobscot County**

Camp Colby  
Lawler Hill

### **Piscataquis County**

Tramway camp

### **Somerset County**

Green Mt.

### **Washington County**

Pirate Hill  
Washington Bald Mt.

The four forest supervisors were charged with the task of changing the facilities at the above points, which had accommodated one man for summer duties, to year around accommodations for three or more men. This meant the hiring of skilled workers and laborers for construction work. The problem of attaining the desired materials within the specified time was not an easy one. Some parts of the state still had four feet of snow so that material brought to observation points had to be hauled in with horse drawn sleds or on back packs using snowshoes. It was necessary to obtain beds, springs, mattresses, blankets, sheets, pillow cases, dishes, cooking utensils, and other camp furnishing including food supplies and equipment.

Each observation post was given a code name and number. Observers were given instruction in plane identification. All aircraft seen or heard was reported directly to a filter center set up in Bangor. Such calls had priority for clear use of wire. Chief wardens assisted the supervisors in the administration and inspection of the observation posts, telephone lines, and switchboards.

The six new observation posts constructed in eastern Maine were located at the following places, but were never manned:

**Hancock County**

Bull Hill

Great Pond

**Penobscot County**

Poplar Tavern

**Washington County**

McLean Mt.

Shattiggy Ridge

Wesley Mt.

Our facilities and equipment have been increased by the following purchased from the United States after cessation of AWS:

Quantity	Item
6	Camps, frame
4	Camps, log
9	Towers, with cabin, 20'-30'
7	Woodsheds
5	Toilets, frame
6	Axes, cruising
46	Axes, single bit
5	Bags, water
11	Baskets, pack, canvas covered
375	Blankets, bed, wool, assorted
2	Blocks, pulley
5	Boilers, wash
13	Bunks, double-deck steel, w/2 springs
20	Cans, 5-gallon
30	Chairs, kitchen type
1	Chopper, food
1	Clamp, Linesman's
5	Clocks, alarm
21	Coils, repeating
1	Connector, Linesman's
2	Drums, steel, 55 gallon
7	Flashlights, hand
9	Flies, tent
10	Hammers, claw, miscellaneous
24	Hammers, striking
2	Heaters, auto, gasoline
3	Heaters, auto, hot water
4	Heaters, oil
3	Kettles, tea, copper
18	Kits, first-aid, 20-men
20	Lamps, Aladdin, mantle type wick
42	Lamps, oil
18	Lanterns, electric, headlight
19	Locks, pad
75	Mattresses, all sizes
4	Ovens, drum
107	Pillows, bed
4	Pliers, miscellaneous
2	Pumps, gasoline dispensing
1	Pump, pitcher
2	Saws, carpenter's, hand
19	Saws, crosscut
3	Saws, buck
1	Saw, hack, adjustable
1	Scythe, weed

196	Sheets, bed, assorted
1	Shovel, long handle, round point
50	Shovels, snow, steel
3	Sleds, hand
62	Snowshoes, pairs, with harness
79	Spreads, Bangor and heavy winter
51	Springs, angle iron, cot and bed
14	Stoves, cook, with brass coil
43	Stoves, heating, cast iron
1	Stove, Atlantic wood cook No. 8 w/tank
14	Stoves, sheet iron
5	Telephones, portable
6	Telephones, desk sets
11	Telephones, wall
9	Tents
16	Tubs, wash, galvanized

### ORGANIZED TOWNS

The requirements and contributions of the forests of Maine to the war effort made forest fire protection in 1943-44 of vital concern to all the people of Maine. In the organized towns the existing fire protection plan was intensified in an effort to better safeguard the 6,000,000 acres of forest lands against fire.

#### Emergency Forest Fire Planning

The continuation of the war prompted immediate action to provide some kind of a master fire plan to meet the possible threat of wholesale sabotage of the forests. This called for the coordinated effort of all protective agencies. Proper officials representing private, town, state, and federal interests met to draw up such an action plan. Represented also were the Red Cross, O. C. D., State Guard, F. B. I., First Service Command, Army and Navy authorities, C. A. P., and other auxiliaries. Out of a series of group meetings emerged a plan in which each agency recognized its duty to perform in event of a major fire or series of fires.

Eight critical areas, six of which fringed the entire coastline of the state, were mapped and established as in need of special fire protection. Projects were written up for each with emphasis placed upon vital defense plants; army and navy observation posts; camps and bases; industrial areas; and forested areas with slash hazards and logging operations.

From available funds additional storehouses, lookout towers, camps, and telephone lines were constructed; new equipment purchased; and personnel increased.



The fire records for 1943-44 reflect to some extent how important the pre-season fire planning proved out on actual fires and especially those which occurred in 1944.

### Fire Record

Year	No. of Fires	Acres Burned	Damage	Percentage
1943	93	6,924	\$ 35,753	.11 of 1%
1944	261	12,041	150,094	.188 of 1%

### Training Schools

As in other fields, forest fire suppression work has a technique all its own. On every fire a definite plan of strategy must be worked out. To supervise such plans of action calls for trained men.

In preparation for the two fire seasons of 1943-44 forest fire training schools were held with several protective agencies. This work was started in the spring of 1943 when all district wardens were called in to Augusta for a three day school. Two specialists from the U. S. Forest Service aided Supervisor Austin H. Wilkins in conducting the lecture courses and field demonstrations. Each warden was required to qualify as an instructor to conduct similar training schools with groups in their respective districts. Later on in the season, refresher courses were held at different storehouses. Problems were worked out and case studies made of actual fires.

Special classroom training courses were held for selected non-commissioned officers of the 705th M. P. at Camp Keyes, Augusta. This came at the request of the First Service Command where military restrictions were still in effect in 1943 along our seacoast. Later, the entire battalion was given a field exercise. Tools from emergency caches were used. On two occasions the battalion was alerted for forest fire suppression duty but was not called out. The additional benefit in training service men is when they return to private life they may sometime use their knowledge of fire fighting.

Various meetings were held with volunteer fire departments where lectures were given and group discussions conducted. These were generally supplemented with instructive moving pictures and proper use of tools and organization of crews.

At the request of the Adjutant General's office, special training schools were held for the State Guard Battalions throughout the state. Classes were held at the various armories and later followed up with full company field exercises. On two occasions this training proved

very valuable as units of the State Guard were mobilized to assist in suppressing the Bethel and Lincolnville forest fires. It is expected that such training will become a regular part of State Guard curriculum.

The climax of all forest fire training schools came in a combined demonstration command post exercise held in May 1943 at the Lewiston Armory and sponsored by the First Service Command. All related protective agencies took part in the exercise with high ranking military officers acting as umpires. In preparation for this exercise four major forest fire stories were written up in this office. From this information incidents or situations were created and had to be answered by the players. Written messages were transmitted by couriers.

This inside exercise was later followed up by a combined field demonstration in September of 1944. Actual miles of fire lines were constructed by the State Guard in suppressing imaginary fires. Messages were transmitted from the fire line to headquarters via field radio sets. The exercise brought out the striking fact of how protective agencies can be coordinated to successfully cope with a major forest fire situation.

### **Fire Danger Stations**

The value of the seven established fire danger stations in the organized towns becomes more apparent each year. During the regular season the daily forecasts of the fire danger class day now form the basis for stepping up the normal fire control organization when conditions begin to get hazardous. It is the warning signal for fire wardens to take certain prevention measures already drawn up in an action plan.

Considerable work has yet to be done in this field but it is most encouraging to note the increasing acceptance of the daily forecasts by local town fire wardens. From compiled statistics there appears to be a definite correlation between fire occurrence and fire danger class day predictions. When further studies are completed by the U. S. Forest Service it is expected that such factors as the possibility of fires starting, rate of spread of fire, suppression costs, and damage can be more definitely ascertained from fire danger class day forecasts. This new phase of fire control will continue to receive support in our forest fire program.

In 1944 one station established a record of recording twenty-one consecutive days of a class 4 fire danger day. This is a class day in

which the fire hazard is high and likelihood that fires will start from all smokers' material and spread rapidly. The table below lists the fire danger class day together with inflammability and fire behavior for each class:

<b>Fire Danger Classes</b>	<b>Inflammability and Fire Behavior</b>
1	NONE: Fires will not start from ordinary fire-brands, nor will brush pile fires or campfires spread beyond immediate edge.
2	LOW: Fires will start from matches, camp and brush fires, and spread slowly to moderately fast.
3	MEDIUM: Fires will start from such smokers' materials as matches and pipe heels, and from brush and camp fires, and spread rapidly as they increase in size.
4	HIGH: Fires will start from all smokers' materials (except cigarettes), locomotive sparks, and camp and brush fires, and spread rapidly with some crowning.
5	EXTREME: Explosive conditions under which fires will start from all ordinary fire brands, spread rapidly, burn fiercely, crown and spot readily.

The rigid military censorship of weather data, especially wind direction, and fire danger class day predictions was lifted in the spring of 1944. Prior to this, all such information was regarded as confidential and could only be transmitted among the personnel in veiled language. The lifting of this military ban again made it possible for this office to release useful weather and fire danger information over the radio, telephone, and in the press.

Daily weather telegrams and maps from the U. S. Weather Bureau at Boston were again sent to the Forest Commissioner's office.

The Maine Forest Service was pleased to learn that three fire danger stations in the organized towns received a high rating by the U. S. Forest Service for recording the basic data for the daily forecasts.

The following stations were in operation during 1944:

<b>Station</b>	<b>Location</b>
Ossipee Mt.	Waterboro
Opportunity Farm*	New Gloucester
Mt. Ararat	Topsham
Mt. Hill	Jefferson
Frye Mt.	Montville
Chase Hill	Canaan
Bear Mt.	Hartford

\*Relocated from Sabattus Mt.—Lovell

**Personnel**

In the expansion program for the eight critical areas, additional wardens were employed together with an assistant supervisor. These new men provided the necessary coverage for fire control work in areas too large for one warden to handle. During the 1944 season, fires were more quickly reached with proper tools and equipment because of the increased personnel.

The roster for the seasons of 1943-44 stood at one supervisor, one assistant supervisor, eleven district fire wardens, six deputy fire wardens, and sixteen lookout watchmen.

The number of watchmen will be increased by two in 1945 as a result of two new towers now under construction.

Plans are set up to continue the emergency forest fire protection program for the duration and in the postwar days.

**Equipment**

In addition to the property of lookout towers, storehouses, telephone lines, and camps, the state has a sizeable investment in forest fire fighting equipment in the organized towns.

**INVENTORY OF SMALL TOOL EQUIPMENT IN ORGANIZED TOWNS  
DECEMBER 31, 1944**

Fire Dist.	Axes	Shovels	Mattocks	Pails	Pumps	Power Pumps	Linen Hose	Rubber Hose
1	12	20	10	15	46	2	500'	3,150'
2	10	13	8	8	14	2	250	1,800
3	18	49	18	21	34	3	500	3,250
4	17	31	17	21	42	3	300	3,400
5	13	31	10	22	23	1	2,600	400
6	15	29	21	15	27	3	400	2,250
7	18	50	11	8	28	3	500	2,700
8	22	54	26	14	34	2	2,600	2,250
9	12	30	18	14	25	1	....	1,750
10	5	9	5	10	16	1	....	1,500
11	6	21	8	4	11	1	....	1,600
<b>Total ..</b>	<b>148</b>	<b>337</b>	<b>152</b>	<b>152</b>	<b>300</b>	<b>22</b>	<b>7,650'</b>	<b>24,050'</b>

The war to a large extent has speeded up the purchases to provide support for the critical areas. This was done from state appropriations and federal allotments.

Considerable equipment was acquired from CCC caches through the U. S. Forest Service. Much of it was distributed among the wardens to augment their present inventories. In addition four 150-man emergency tool caches were located at strategic points within the critical areas and were used on the bad fires in 1944.

Considerable new construction work was done in 1943-44 as part of the intensified forest fire program in the critical areas. The following standard 24' x 24' storehouses were constructed in 1943: Gray, Hancock, Whiting, Dover-Foxcroft, and Norridgewock.

An auxiliary storehouse, 14' x 18', was constructed at North Berwick in 1943 and another at Lovell in 1944.

Lookout tower cabins were rebuilt on Ossipee and Mt. Zircon and roof repairs on Mt. Blue and Sabattus.

In the fall of 1944 a new 65' wooden-modern steel ring connector tower was erected on High Cut Hill in Garland, Penobscot County.

Another new 41' wooden-modern steel ring connector tower was started in 1944 on Mt. Harris, Dixmont, Penobscot County, but will not be completed until 1945.

Approximately six miles of new telephone lines will be constructed for the two new towers mentioned above.

Over six miles of woods lines were repaired resulting from winter damage of 1943-44.

A new three mile metallic pole line was constructed in 1943 from the S. D. Warren storehouse in Brighton to the top of Kelley Mt.

## ORGANIZED TOWNS

### Financial Statement

1943

#### Receipts

Balance on hand January 1, 1943.....	\$3,717.22	
1943-44 Appropriation.....	21,516.00	
Federal Cooperation.....	15,500.00	
Miscellaneous.....	2,381.19	\$43,114.41

#### Disbursements

District Wardens (Salary).....	\$12,325.50	
District Wardens (Expense).....	2,058.97	
Watchmen (Salary).....	12,474.03	
Watchmen (Expense).....	698.31	
Supervisor (Salary).....	3,125.04	
Supervisor (Auto Mileage expense) . . . . .	839.60	
Supervisor (Expense).....	221.19	
Equipment.....	1,267.86	
Improvements.....	2,938.35	
Miscellaneous (Publicity, reports, etc.).....	281.36	\$36,280.21

Balance January 1, 1944.....		\$6,834.20
(Expense of fire fighting by towns—\$4,436.75)		

ORGANIZED TOWNS

27

1944

**Receipts**

Balance on hand January 1, 1944.....	\$6,834.20	
1944-45 Appropriation.....	19,016.00	
Federal Cooperation.....	15,000.00	
Miscellaneous.....	3,059.40	\$43,909.60

**Disbursements**

District Wardens (Salary).....	\$13,765.50	
District Wardens (Expense).....	2,259.70	
Watchmen (Salary).....	11,813.75	
Watchmen (Expense).....	1,113.15	
Supervisor (Salary).....	3,250.00	
Supervisor (Auto Mileage expense).....	985.94	
Supervisor (Expense).....	313.31	
Equipment.....	1,282.49	
Improvements.....	2,546.85	
Miscellaneous (Publicity, reports, etc.).....	520.93	\$37,851.62

  

Balance January 1, 1945.....		\$6,057.98
(Expense of fire fighting by towns—\$45,528.55)		

## ORGANIZED TOWNS FIRE RECORD 1943

Location	Date	Acreage	Cause	Damage
<b>Androscoggin County</b>				
Poland .....	April 9	5	Campfire .....	\$40.00
Turner .....	May 15	2	Unknown .....	5.00
Leeds .....	July 14	.....	Lightning .....	.....
Poland .....	July 19	.....	Campfire .....	.....
Leeds .....	July 19	5	Smoking .....	154.50
<b>Arroostook County</b>				
Westfield .....	Aug. 5	.....	Campfire .....	.....
<b>Cumberland County</b>				
Yarmouth .....	April 10	65	Brush Burning .....	250.00
North Yarmouth .....	April 24	45	Brush Burning .....	3,020.00
North Yarmouth .....	April 25	65	Brush Burning .....	35.00
Gray .....	April 25	20	Brush Burning .....	.....
E. Brunswick .....	April 27	3	Brush Burning .....	.....
Westbrook .....	May 14	6	Smoking .....	.....
New Gloucester .....	May 15	75	Brush Burning .....	.....
Naples .....	May 19	.....	Brush Burning .....	.....
South Portland .....	Oct. 9	25	Miscellaneous .....	.....
<b>Hancock County</b>				
Lamoine .....	April 24	3	Miscellaneous .....	.....
Amherst .....	June 9	25	Smoking .....	8,730.00
Hancock .....	June 12	20	Lumbering .....	.....
<b>Kennebec County</b>				
Chelsea .....	April 18	4	Unknown .....	.....
Augusta .....	April 23	23	Burning Brush .....	375.00
Augusta .....	April 23	60	Railroad .....	800.00
Litchfield .....	April 25	17	Brush Burning .....	.....
Pittston .....	May 11	7	Brush Burning .....	.....
Litchfield .....	May 15	10	Smoking .....	.....
Augusta-Vassalboro .....	June 5	20	Railroad .....	.....
Augusta .....	July 14	.....	Lightning .....	.....
Readfield .....	July 17	1	Railroad .....	3.00
<b>Knox County</b>				
Rockland .....	April 27	300	Brush Burning .....	.....
<b>Lincoln County</b>				
Jefferson .....	April 24	6	Brush Burning .....	.....
Waldoboro .....	April 25	40	Brush Burning .....	.....
Waldoboro .....	April 29	3	Brush Burning .....	.....
Waldoboro .....	May 11	5	Brush Burning .....	5.00
Boothbay .....	July 4	1	Unknown .....	50.00
Warren .....	July 19	2	Unknown .....	15.00
<b>Oxford County</b>				
Lovell .....	April 29	3	Brush Burning .....	.....
Stoneham .....	May 17	3	Brush Burning .....	.....
Oxford .....	June 3	.....	Smoking .....	.....
Lovell .....	July 3	.....	Smoking .....	.....
Hartford .....	Sept. 25	.....	Unknown .....	.....
<b>Penobscot County</b>				
Enfield .....	July 11	.....	Campfire .....	.....
Holden .....	July 14	.....	Lumbering .....	.....
<b>Piscataquis County</b>				
Dover-Foxcroft .....	May 9	15	Brush Burning .....	.....
<b>Sagadahoc County</b>				
Arrowsic .....	April 8	12	Brush Burning .....	.....
Phippsburg .....	April 8	3	Brush Burning .....	.....
Bowdoin .....	April 23	40	Smoking .....	.....
Richmond .....	April 25	10	Brush Burning .....	.....
Topsham .....	April 27	3	Railroad .....	.....
Arrowsic .....	April 27	3	Brush Burning .....	.....
Topsham .....	April 27	21	Smoking .....	20.00
Bowdoin .....	July 2	2	Brush Burning .....	.....
Bath .....	July 17	15	Unknown .....	.....

ORGANIZED TOWNS

Location	Date	Acreage	Cause	Damage
<b>Somerset County</b>				
Smithfield	May 20	.....	Lumbering	.....
Norridgewock	June 5	1	Brush Burning	.....
Solon	Aug. 2	1	Unknown	.....
<b>Waldo County</b>				
Prospect	April 29	.....	Incendiary	.....
Thorndike	May 11	50	Incendiary	75.00
Burnham	June 6	.....	Railroad	1.00
<b>York County</b>				
Waterboro	April 10	1	Unknown	450.00
Sanford	April 10	1	Unknown	.....
Sanford	April 10	7	Brush Burning	.....
Sanford	April 10	3	Unknown	.....
Sanford	April 10	10	Brush Burning	.....
Shapleigh	April 11	12	Miscellaneous	.....
Hollis	April 23	2250	Incendiary	.....
Sanford	April 23	1	Unknown	.....
York	April 23	3	Miscellaneous	10.00
Buxton	April 24	50	Smoking	175.00
Buxton	April 25	1	Brush Burning	10.00
Hollis	April 25	100	Miscellaneous	150.00
South Berwick	April 26	215	Unknown	2,800.00
North Kennebunkport	April 26	12	Railroad	40.00
Kennebunk	April 26	225	Railroad	200.00
Kennebunk	April 26	625	Railroad	3,350.00
Wells	April 26	200	Railroad	5,860.00
Wells	April 26	110	Railroad	960.00
Wells	April 26	7	Railroad	50.00
Wells	April 26	205	Railroad	3,150.00
Wells	April 26	75	Railroad	520.00
Wells	April 26	200	Railroad	845.00
Hollis	April 29	.....	Smoking	.....
Sanford	May 2	10	Unknown	.....
Waterboro	May 9	3	Brush Burning	.....
South Berwick	June 5	.....	Railroad	.....
Wells	June 5	1	Railroad	.....
Sanford	June 5	25	Unknown	.....
Limerick	June 12	.....	Smoking	.....
Sanford	June 14	2	Unknown	.....
South Berwick, Elliot, York	July 16	1500	Lumbering	3,600.00
Kennebunkport	July 16	2	Smoking	.....
Limington	Aug. 2	5	Incendiary	5.00
Limington	Aug. 3	.....	Incendiary	.....
Berwick	Aug. 13	18	Unknown	.....
Limington	Aug. 19	.....	Incendiary	.....
Alfred	Sept. 20	.....	Smoking	.....



## ORGANIZED TOWNS --- FIRE RECORD 1944

Location	Date	Acreage	Cause	Damage
<b>Androscoggin County</b>				
Durham	April 23	68	Smoking	\$45.00
Lewiston	May 20	110	Incendiary	200.00
Poland	June 2	3.5	Lumbering	
Durham	June 4	.2	Smoking	
Turner	June 6	3	Unknown	25.00
Greene	June 5	3	Smoking	8.00
Poland	June 9	3	Smoking	
Turner	June 9	3	Smoking	3.00
Turner	June 13	2.5	Brush Burning	
Poland	June 13	5	Smoking	350.00
Turner	July 19	2	Smoking	10.00
Turner	Aug. 12		Smoking	
Durham	Aug. 14	1.5	Smoking	53.00
Poland	Aug. 23	2.5	Lumbering	2.00
Poland	Aug. 29	5	Smoking	1,455.00
<b>Aroostook County</b>				
Dyer Brook	May 21	1	Smoking	
Island Falls	May 21	5	Smoking	
Haynesville-Bancroft	May 21	15	Smoking	10.00
Van Buren	May 21	200	Brush Burning	1,550.00
St. John Plantation	May 23	.6	Lumbering	
New Sweden	May 24	1	Brush Burning	5.00
Ludlow	May 29	150	Unknown	300.00
Crystal	May 21		Unknown	
Connor	May 26	350	Unknown	1,500.00
Linneus	May 31	.2	Smoking	4.00
<b>Cumberland County</b>				
Yarmouth	April 7	3	Brush Burning	
Portland	April 19	6	Unknown	5.00
Harpswell	April 23	5	Brush Burning	200.00
Brunswick	April 28	10	Miscellaneous	141.00
Otisfield	April 28	10	Brush Burning	
Harpswell	April 29	61	Miscellaneous	323.50
Brunswick	April 29	3	Smoking	.50
New Gloucester	April 30	6.5	Miscellaneous	2.00
New Gloucester	May 1	10	Miscellaneous	25.00
Freeport	May 17	.3	Unknown	
Gray	May 19	.3	Smoking	
Freeport	May 19	.3	Brush Burning	
Raymond	May 20	8	Unknown	10.00
Yarmouth	May 20	.2	Railroad	1.50
Yarmouth	May 20	.2	Railroad	
Bridgton-Naples	May 20	5	Unknown	
Harpswell	May 21	7	Unknown	201.00
Freeport	May 25	10	Railroad	
Scarboro	May 26	9	Incendiary	4.50
Scarboro	May 26	10	Unknown	50.00
Scarboro	May 26	2	Railroad	
Otisfield	May 27	80	Lightning	40.00
Otisfield	May 27	2	Lightning	25.00
Brunswick	May 29	2	Railroad	30.00
Pownal	May 29	3	Miscellaneous	14.00
Brunswick	May 30	.3	Railroad	
Westbrook	May 30	.3	Incendiary	
Gray	May 31	.5	Lightning	
Westbrook	June 4	1.5	Smoking	2.00
Westbrook	June 6	35	Lightning	75.00
Bridgton	June 7	1	Smoking	
Pownal-Freeport	June 30	10	Smoking	5.00
Pownal	July 5	1	Lumbering	
Gray	July 18	.5	Miscellaneous	
Cumberland	July 19	.2	Unknown	
Gray	Aug. 8	1.5	Lumbering	3.00
Harpswell	Aug. 10	.5	Smoking	.50
Scarboro	Aug. 17	4	Railroad	10.00
Otisfield	Aug. 17	1	Lightning	5.00
Naples	Aug. 18	2	Campfire	2.00
Pownal	Aug. 23	3.2	Lightning	10.00
New Gloucester	Aug. 29	2.5	Lumbering	6.00

MAINE FORESTRY DISTRICT

Location	Date	Acreage	Cause	Damage
<b>Franklin County</b>				
Jay	May 16	1	Railroad	1.00
Industry	June 8	1	Miscellaneous	10.00
Weld	July 8	10	Smoking	500.00
Farmington	Aug. 11	2.5	Lumbering	512.00
Salem	Aug. 14	45	Lumbering	1,772.50
<b>Hancock County</b>				
Lamoine	April 20	100	Brush Burning	635.00
Lamoine	April 21	1	Brush Burning	50.00
Ellsworth	April 29	2	Brush Burning	.....
Ellsworth	April 30	3	Brush Burning	.....
Ellsworth	April 30	25	Unknown	10.00
Surry	May 2	3	Smoking	6.00
Ellsworth	May 5	5	Brush Burning	.....
Franklin	May 16	5	Brush Burning	.....
Mt. Desert	May 20	50	Smoking	380.00
Penobscot-Orland	May 21	1754	Smoking	8,400.00
Winter Harbor	May 28	90	Brush Burning	185.00
Deer Isle	May 30	25	Lumbering	387.50
Winter Harbor (Ironbound Island)	May 31	450	Incendiary	9,150.00
Surry	June 4	.5	Smoking	5.00
Lamoine	June 9	.5	Smoking	2.00
Dedham-Lucerne	July 7	.2	Railroad	.....
Winter Harbor	July 18	500	Incendiary	9,225.00
Sullivan	Aug. 7	4	Railroad	200.00
Trenton	Aug. 9	.2	Miscellaneous	.50
Orland	Aug. 9	1	Smoking	.....
Eastbrook—Org. Towns—No. 16 MFD (Eastbrook only listed here)	Aug. 11	1200	Smoking	12,256.00
<b>Kennebec County</b>				
Litchfield	April 19	1	Miscellaneous	1.00
Belgrade	May 2	10	Brush Burning	1,076.00
Augusta	May 20	15	Railroad	5.00
Chelsea	May 29	.5	Brush Burning	.....
West Gardiner	June 9	2.5	Smoking	10.00
Clinton	June 9	.....	Railroad	10.00
Sidney	July 18	2.5	Lumbering	15.00
Readfield	Aug. 20	1	Miscellaneous	2.00
<b>Knox County</b>				
St. George	April 23	10	Brush Burning	5.00
Warren	May 18	10	Miscellaneous	113.00
Washington	May 31	3	Incendiary	40.00
Friendship	June 5	2	Unknown	10.00
Rockland	Aug. 10	3	Lumbering	350.00
<b>Lincoln County</b>				
Jefferson	April 29	12	Smoking	300.00
Bristol	April 30	5	Unknown	35.00
Jefferson	May 4	.5	Smoking	.....
Somerville Plantation	May 4	1	Miscellaneous	505.00
Newcastle	May 5	10	Lumbering	150.00
Jefferson	May 24	15	Lumbering	3,260.00
Bristol	June 6	1	Smoking	25.00
Bremen	July 15	12	Unknown	120.00
<b>Oxford County</b>				
Denmark	May 19	40	Brush Burning	5,150.00
Hartford	May 13	12	Railroad	.....
Peru	May 19	1.5	Miscellaneous	3.00
Bethel	May 20	180	Lumbering	44,800.00
Hebron	May 21	1	Campfire	.....
Paris	May 23	.5	Brush Burning	.....
Paris	May 26	3	Unknown	15.00
Hartford	May 28	1.5	Smoking	5.00
Roxbury	May 29	310	Smoking	8,870.00

## FOREST COMMISSIONER'S REPORT

Location	Date	Acreage	Cause	Damage
Mexico	June 2	1	Smoking	1.00
Gilead	June 2	10	Lumbering	40.00
Hartford	June 7	.1	Smoking	
Hartford	June 13	.1	Unknown	
Roxbury	July 4	.5	Unknown	5.00
Lovell	July 4		Lightning	
Paris	July 16	1	Lightning	10.00
Buckfield	Aug. 12		Lightning	
Sumner	Aug. 12	.5	Lightning	3.00
Canton	Aug. 12	.1	Lightning	
Hartford	Aug. 14	.1	Railroad	
Hartford	Aug. 15	1	Railroad	1.00
Sumner	Aug. 15	1	Railroad	
Hartford	Aug. 17		Lightning	
Hartford	Aug. 17		Lightning	
Milton Plantation	Aug. 17		Lightning	
<b>Penobscot County</b>				
Holden	May 26	2	Smoking	17.50
Old Town	May 29	100	Smoking	100.00
Plymouth	June 2	20	Campfire	1,600.00
Argyle	June 4	1	Incendiary	2.00
Brewer	June 5	25	Miscellaneous	75.00
Argyle	June 5	1	Incendiary	5.00
Bradley	June 6	403	Smoking	650.00
Kingman	July 2	1	Railroad	5.00
Clifton	July 15	7	Campfire	35.00
Carmel	Aug. 12	6	Lightning	38.00
Hudson	Aug. 13	200	Campfire	1,200.00
Clifton — Penobscot Co. Amherst—Hancock Co.	Aug. 13	1798	Smoking	19,034.00
LaGrange	Aug. 14	150	Campfire	3,680.00
Eddington	Aug. 14	3	Smoking	30.00
Garland	Aug. 15	.2	Lightning	10.00
Glenburn	Aug. 18	18	Unknown	300.00
Medway—Org. Towns—Molunkus, MFD (Medway listed only)	Aug. 5	1210	Lightning	3,630.00
<b>Piscataquis County</b>				
Guilford	June 18	.2	Campfire	2.00
Sebec-Milo	Aug. 13	125	Miscellaneous	1,851.00
<b>Sagadahoc County</b>				
Topsham	April 5	12	Railroad	6.00
Georgetown	April 20	35	Brush Burning	10.00
Bowdoin	May 1	4	Brush Burning	
Topsham	May 1	1.5	Smoking	33.50
Topsham	May 2	100	Railroad	110.00
Richmond	May 4	30	Smoking	30.00
West Bath	May 4	25	Brush Burning	
Topsham	May 14	2	Railroad	2.00
Topsham	May 17	.2	Smoking	
Georgetown	May 18	14	Smoking	7.00
Topsham	May 19	.2	Miscellaneous	.50
West Bath	May 29	20	Smoking	150.00
West Bath	May 29	15	Miscellaneous	15.00
Phippsburg	June 3	15	Miscellaneous	7.00
Topsham	Aug. 5	.5	Railroad	.50
Bowdoin	Aug. 8	2.5	Lumbering	50.00
Bowdoin	Aug. 8	2	Lumbering	31.00
West Bath	Aug. 13	2	Lightning	20.00
Arrowsic	Aug. 20	.5	Smoking	.50
<b>Somerset County</b>				
Pittsfield	May '20	5	Smoking	25.00
Skowhegan	June 17	2	Smoking	10.00
Canaan	June 17	.5	Brush Burning	
Harmony	July 1	1	Unknown	5.00
Cornville	July 2	2	Smoking	10.00
Palmyra	Aug. 13	3	Lightning	910.00

MAINE FORESTRY DISTRICT

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Location	Date	Acreage	Cause	Damage
<b>Waldo County</b>				
Prospect	April 19	.5	Brush Burning	
Belfast	April 22	10.5	Brush Burning	
Belfast	April 23	.5	Brush Burning	
Northport	April 30	15	Unknown	
Montville	May 5	2.5	Miscellaneous	
Monroe	May 19	25	Unknown	75.00
Lincolnville	May 20	700	Lumbering	5,000.00
Palermo	May 21	26	Brush Burning	76.00
Winterport	May 21	1	Brush Burning	
Prospect	May 25	1	Brush Burning	
Northport	May 28	1	Unknown	5.00
Burnham	May 29	15	Railroad	100.00
Stockton Springs	June 2	17	Smoking	795.25
Brooks	July 7	1	Smoking	
Lincolnville	July 9	1.5	Lightning	117.00
Frankfort	Aug. 9	2	Smoking	
Searsport	Aug. 16	.2	Smoking	
<b>Washington County</b>				
Baileyville	April 22	8	Brush Burning	
Lubec	May 10	5	Unknown	2.50
Trescott	May 14	10	Brush Burning	5.00
Trescott	May 16	10	Unknown	50.00
Calais	May 16	100	Unknown	100.00
Columbia Falls	May 19	2	Smoking	2.00
Pembroke	May 19	20	Brush Burning	10.00
East Machias	May 20	2	Lumbering	50.00
Milbridge	May 20	15	Miscellaneous	20.00
Lubec	May 21	2	Miscellaneous	
Machias	May 21	80	Smoking	125.00
Addison	May 21	4	Smoking	
Steuben	May 22	.2	Brush Burning	
Lubec	May 23	40	Brush Burning	80.00
Trescott	May 23	10	Unknown	10.00
Crawford	May 27	.5	Lightning	
Charlotte	July 20	1	Smoking	80.00
Addison	July 20	1	Smoking	
Vanceboro	July 20	6	Incendiary	30.00
Lubec	July 25	1	Smoking	
Steuben	Aug. 10	2	Miscellaneous	10.00
Cherryfield	Aug. 12	4	Smoking	
Addison	Aug. 17	.5	Smoking	1.00
Jonesport	Aug. 20	1	Campfire	
<b>York County</b>				
Sanford	April 19	6	Smoking	3.00
Sanford	April 28	7.5	Miscellaneous	
Sanford	April 28	8	Smoking	
Sanford	April 29	75	Smoking	241.50
Kennebunk	May 12	35	Railroad	125.00
Limerick-Waterboro	May 19	30	Smoking	85.00
Old Orchard	May 19	3	Campfire	
Wells	May 20	43	Railroad	75.00
Biddeford	May 20	8	Brush Burning	
Wells	May 21	1	Railroad	5.00
Wells	May 21	53	Railroad	650.00
Springvale	May 21	2	Smoking	5.00
Springvale	May 21		Smoking	
Sanford	June 3	3	Brush Burning	
Waterboro	June 6	1	Lumbering	
Sanford	June 6	2.5	Smoking	
Berwick	June 9	2	Smoking	10.00
Kennebunk	June 18	1	Smoking	
York	July 8	2	Smoking	
York	July 9	1	Unknown	
North Berwick	July 9	8	Unknown	16.00
Parsonsfield	July 24	2	Lumbering	
Kennebunk	Aug. 7	.2	Miscellaneous	
Sanford	Aug. 10	.1	Smoking	
Sanford	Aug. 11	1	Smoking	
Limington	Aug. 12	1	Miscellaneous	
North Berwick	Aug. 14	1	Miscellaneous	5.00
Biddeford	Aug. 19	5	Miscellaneous	
Limington	Aug. 20	.2	Smoking	
Biddeford	Aug. 21	4	Smoking	20.00
Lyman	Aug. 22	8	Smoking	58.00

**SUMMARY OF FOREST FIRES FOR 1943-44 BY  
MONTHS, COUNTIES, AND CAUSES**  
**Organized Towns**

	No. of Fires		Ac reage		Damage	
	1943	1944	1943	1944	1943	1944
<b>By Months:</b>						
April.....	47	29	5,067	509.5	\$23,110	\$2,013.50
May.....	10	104	105	5,544.9	85	93,617.50
June.....	14	38	175	583.6	8,731	3,737.25
July.....	14	26	1,528	565.4	3,822	10,183.00
August.....	6	58	24	4,834.0	5	47,522.50
September.....	2	6	.....	3.4	.....	20.00
October.....	1	.....	25	.....	.....	.....
November.....	.....	.....	.....	.....	.....	.....
December.....	.....	.....	.....	.....	.....	.....
	94	261	6,924	12,040.8	\$35,753	\$157,093.75
<b>By Counties</b>						
Androscoggin.....	5	15	12	212.2	199	2,151.00
Aroostook.....	1	10	.....	722.8	.....	3,369.00
Cumberland.....	9	42	304	316.9	3,305	1,191.50
Franklin.....	.....	5	.....	59.5	.....	2,795.50
Hancock.....	4	21	48	4,219.4	8,730	40,892.00
Kennebec.....	9	8	142	32.5	1,178	1,119.00
Knox.....	1	5	300	28.0	.....	518.00
Lincoln.....	6	8	57	56.5	70	4,395.00
Oxford.....	5	25	6	564.9	.....	58,903.00
Penobscot.....	1	17	.....	3,945.2	.....	30,411.50
Piscataquis.....	1	2	15	125.2	.....	1,853.00
Sagadahoc.....	9	19	109	281.4	20	473.00
Somerset.....	3	6	2	13.5	.....	960.00
Waldo.....	3	17	50	819.7	76	6,168.25
Washington.....	.....	24	.....	325.2	.....	575.50
York.....	37	37	5,879	317.9	22,175	1,318.50
	94	261	6,924	12,040.8	\$35,753	\$157,093.75
<b>By Causes:</b>						
Lightning.....	2	22	.....	1,349.5	.....	4,893.00
Railroad.....	16	26	1,744	313.6	15,779	1,337.00
Campfire.....	5	19	5	384.3	40	6,519.00
Smokers.....	13	77	159	6,112.5	9,079	54,229.25
Debris Burning.....	28	36	747	682.0	3,695	9,037.00
Incendiary.....	6	12	2,305	1,087.4	80	18,857.50
Lumbering.....	3	21	1,520	1,014.1	3,600	56,429.00
Miscellaneous.....	5	29	143	323.3	160	3,143.50
Unknown.....	16	28	301	774.1	3,320	2,648.50
	94	261	6,924	12,040.8	\$35,753	\$157,093.75

MAINE FOREST FIRE STATISTICS—1943

Causes	Organized Towns			Maine Forestry Dist.			Total		
	No.	%	Area	No.	%	Area	No.	%	Area
Lightning . . . . .	2	2	.....	10	28	11	12	9	11
Railroad . . . . .	16	17	1,744	1	3	8	17	13	1,752
Campers . . . . .	4	4	5	6	17	.....	10	8	5
Smoker . . . . .	13	14	159	8	22	105	21	16	264
Debris Burning . . . . .	28	30	747	2	5	23	30	23	770
Incendiary . . . . .	6	7	2,305	5	14	24	11	9	2,329
Lumbering . . . . .	3	3	1,520	3	8	48	6	5	1,568
Miscellaneous . . . . .	5	6	143	.....	.....	.....	5	4	143
Unknown . . . . .	16	17	301	1	3	25	17	13	326
	93	100	6,924A.	36	100	244A.	129	100	7,168A.
	.11 of 1% 6,270,000 A.			.0024 of 1% 10,000,000 A.			.04 of 1% 16,270,000 A.		

MAINE FOREST FIRE STATISTICS—1944

Causes	Organized Towns			Maine Forestry Dist.			Total		
	No.	%	Area	No.	%	Area	No.	%	Area
Lightning . . . . .	22	8	1,350	54	37	3,096	76	19	4,446
Railroad . . . . .	26	10	314	6	4	114	32	8	428
Campers . . . . .	10	4	384	20	14	413	30	7	797
Smokers . . . . .	77	30	6,113	45	30	4,496	122	30	10,609
Debris Burning . . . . .	36	14	682	4	3	1	40	9	683
Incendiary . . . . .	12	5	1,087	.....	.....	.....	12	3	1,087
Lumbering . . . . .	21	8	1,014	6	4	4,025	27	7	5,039
Miscellaneous . . . . .	29	11	323	8	5	12	37	9	335
Unknown . . . . .	28	10	774	4	3	6	32	8	780
	261	100	12,041A.	147	100	12,163A.	408	100	24,204A.
	.192 of 1% 6,270,000 A.			.12 of 1% 10,000,000 A.			.149 of 1% 16,270,000 A.		

## INSECT CONTROL

The past two years have been very favorable for most insects which hibernate out of doors due to the late springs. In 1943 extremely low temperatures did kill many insects which pass the winter above the snow line such as those on the trunks and branches of trees and in nests. In 1944 there was very little winter killing.

In spite of war conditions the interest in insect control has remained high as indicated by the many inquiries received. There has been a notable increase in insects destructive to food and other stored products.

A number of cooperative projects have been carried on with such agencies as boys' and girls' camps, Public Health Service, National Park Service, owners of plantations, sawmills, and particularly during the past two years with owners of birch stands infested with the bronzed birch borer.

Due to the practically complete coverage of the spruce regions with parasites of the European Spruce Sawfly and the fact that the outbreak is pretty well under control only a small amount of parasite rearing work has been done.

The most serious problem facing the spruce-fir forests is the eastward spread of the spruce budworm from Ontario and Quebec. A great deal of time and thought is being given to this problem by all agencies connected with forest protection in the Northeast.

Supervisors of fire protection and fire wardens continue to send in periodic insect collections which has aided greatly in picking up outbreaks before they become widespread. Other states are following this practice and it is being recommended for National adoption. Many of our most serious forest insects never would have got a foothold if this type of service could have been established before.

Personal calls during the biennium have been very much limited to help conserve on travel in cooperation with the war effort.

### Forest and Shade Tree Insects

(1) **Alder flea beetle** (*Altica bimarginata*) was especially abundant during 1943 through central and eastern Maine causing widespread browning of the foliage due to skeletonizing of the leaves. (*Altica ambiens alna*) was abundant in Fairfield.

(2) **Arbor vitae leaf miner** (*Argyresthia thuiella*). This insect together with several other leaf miners of arbor vitae seem to be on the decrease.

(3) **Fall webworm (*Hyphantria cunea*)**. Brown ash was defoliated in the area near Springfield. In 1944 it was quite generally abundant on birches, elms, and willows in the state.

(4) **Balsam twig aphid (*Mindarus abietinus*)**. This aphid which causes the needles on balsam fir to curl was generally abundant in 1943 and 1944.

(5) **Balsam woolly aphid (*Adelges picea*)**. Killing of balsam fir by this European insect has been the cause of considerable alarm in many sections of the state—notably along the coast and in eastern and central Maine. Sixteen sample plots have been established and are checked each year. In the winter of 1942-3 there was heavy winter killing but the outbreak built up again somewhat in 1943 and the following winter there was very little winter killing. New records of its occurrence were received from Lower Cupsuptic, Tarratine, Westport, and Oxbow. An examination of the plots this year by Dr. Brower indicates that in general the insect is on the decrease.

(6) **Fir sawfly (*Neodiprion abietis*)**. This insect is unfortunately called the "Spruce Sawfly" in some American literature although it feeds almost exclusively on balsam fir. A number of outbreaks occurred at New Harbor, Pemaquid Harbor, and on nearby islands in 1943. Quite a number of trees were dead indicating that the outbreak had started before 1943. The green larvae prefer the old foliage, many had just started feeding on July 20. The infestation seems to hold to individual trees. Some infested trees were cut in an effort to control the outbreak. Most of the cocoons are spun on the branches. The small cocoon parasite ***Microplectron fuscipennis*** was released in the area and destroyed 42% of the cocoons in the duff, but none in the trees. The fir sawfly was received from many points in Maine during 1944. Some diseased larvae have been collected.

(7) **Beech scale (*Cryptococcus fagi*)** was found during the past two years in areas to the north and west of its previous known distribution in the state, records of it being obtained from Daigle, Kokadjo, Appleton, Eustis, T. 3, R. 4, W.B.K.P., Adamstown, and Albany. The accompanying nectria disease was also found in Albany. This disease is building up quite rapidly at Bar Harbor. The twice-spotted lady beetle (***Chilocoris bivulneris***) is common in the heavier infestations and two adults of the Lampyrid beetle (***Lucidota corrusca***) were found feeding on the scale at Bar Harbor. Information from the fire wardens in the east and central part of the state where the



scale is doing the most damage shows that of the merchantable beech approximately 36% is dead and 21% dying.

(8) **Birch case bearer (*Coleophora salmani*)**. This insect which first appeared in epidemic form on Mt. Desert Island about 1926 has gradually spread along the coast particularly to the east and is now quite abundant in the vicinity of Pembroke.

(9) **Birch leaf skeletonizer (*Bucculatrix canadensisella*)** was generally common to abundant over the state. A severe outbreak of this occurred in the fall of 1944 over a wide area extending from Waldoboro to south of Brunswick. White and gray birch stands for miles appeared as if scorched by fire due to the feeding of this insect.

(10) **Birch sawfly (*Arge* sps.)**. Defoliation of birch in several sections of northern Maine were reported in both 1943 and 1944.

(11) **Birch leaf miner (*Fenusa pusilla*)**. This insect which mines in the leaves of gray, white, and cut-leaf birch has been quite prevalent during the past two years.

(12) **Bronzed birch borer (*Agrilus anxius*)**. Damage to white and yellow birch by the bronzed birch borer became more extensive and severe in 1944. Injury in the Kennebec Valley is now severe and has increased in the sections west to the New Hampshire boundary. For a detailed account of the problem from 1941 through 1943 Bulletin No. 13 and its supplement No. 1 of the Maine Forest Service should be consulted. The conclusions arrived at from the 1944 notes taken on the twenty-six study plots bear out what was said in these publications and recommendations remain the same.

Both yellow and white birch are being severely damaged; major injury is to trees left from past cuttings or with trees that are dominant, especially old trees; severe damage occurs to mature, uncut stands, particularly those on poor sites; stands which have become opened up by killing of the large, dominant birches are now suffering injury to the remaining, smaller trees; younger stands of even height and well stocked are being attacked although injury for the most part is light.

The dominant class of trees has the highest percentage of trees injured, severely damaged, and dead as well as the greatest percentage of those trees showing an increase in injury; with these percentages dropping down through the classes to the suppressed trees with one exception (Table 1). Plots located in the younger, thrifty, fully

stocked stands from merchantable size down show the least damage and least increase from year to year. Injury to the trees increases from year to year for the major part steadily and without big jumps.

TABLE 1

Class	% of trees injured	% of trees severely injured	% of trees dead	% of trees with increased injury in 1944
Dominant.....	79	44	18	21
Co-dominant.....	58	23	8	18
Intermediate.....	34	19	9	12
Suppressed.....	23	10	5	9

Records have been kept for the total number of trees attacked on the plots each year which show that although there is still an increase, the relative increase from year to year in percentage of trees attacked has been dropping (Table 2). This may indicate a lessening in attack or on the other hand might be that the greater part of the more favored trees had already been attacked. The percentage of trees showing an increase in injury from one year to the next has dropped (Table 2)—this with the previous statement indicates a lessening in the severity of the trouble.

TABLE 2

Year	% of trees attacked	% increase over previous year	% trees having increased injury over previous year
1941.....	51.1	.....	.....
1942.....	65.4	14.3	41.
1943.....	72.7	7.3	23.
1944.....	74.8	2.1	21.

The percentage of trees showing increased injury from one year to the next furthermore rises directly and rapidly with the previous extent of injury which tends to show that those trees having  $\frac{1}{2}$  or more of the crown dead will probably continue to die.

Chief fire wardens have made estimates of the extent of the damage in their respective districts which have been averaged and are given in Table 3 for the state, which shows that the percentage of dying trees dropped from 1943 to 1944. This ties in with the other statements and figures given above.

TABLE 3

	1943		1944	
	Dead	Dying	Dead	Dying
Yellow Birch.....	18.7%	26.6%	30.2%	25.6%
White Birch.....	19.8%	23.8%	33.6%	19.4%

The volume of yellow birch in the state is way above that of white birch so that the actual loss of yellow birch is much higher.

Increment cores from trees on twenty of the plots in 1944 were averaged and showed an increase on fourteen plots and a decrease on six plots for the 1944 growth compared to that of 1943.

Birch stands should be examined carefully each year and any stands showing little or no damage should be left uncut for future supply. Cutting should be carried on in the hard hit stands while they are still in merchantable condition and in any of the susceptible stands which are showing advanced injury.

(13) **Eastern tent caterpillar (*Malacosoma americana*)**. The tents of this insect appearing in the early spring on cherry and apple have been very numerous and the cause of many inquiries. The eradication of these neglected roadside trees will do much to eliminate the trouble.

(14) **Elm flea beetle (*Haltica ulmi*)**. This insect has been very prevalent in central Maine chewing holes in the leaves and skeletonizing them.

(15) **Elm leaf beetle (*Galerucella xanthomelaena*)**. Severe browning and dropping of elm leaves has been common during the past two years on elm shade trees in central Maine. The insects start feeding almost as soon as the leaves appear in the spring and again in August and September. The adults chew holes in the leaves and the grubs skeletonize the lower surface of the foliage. An unusual warm spell in December 1944 which lasted only a few days seemed to cause the hibernating beetles to appear in houses on windows as if spring had come. The out of doors temperature reached 52°.

(16) **European elm leaf miner (*Kaliopfenusa ulmi*)**. This introduced insect seems to prefer Scotch, English, and camperdown elms but occasionally attacks the native elm. During 1944 several reports of injury in central Maine were received.

(17) **Fall cankerworm (*Alsophila pomataria*)**. A severe outbreak occurred in early June in Houlton in which eighty per cent of the elms were defoliated. A small number of other leaf feeders were also present. Larvae were practically full grown June 12.

(18) **Hemlock looper (*Ellopiia fiscellaria*)**. Specimens are sent in by the wardens quite generally through the state usually beaten from spruce or fir. No real infestation has been reported for a number of years.

(19) **False hemlock looper** (*Neptia canosaria*) is quite commonly received from the northern two-thirds of the state usually from spruce.

(20) **Flat-headed hemlock borer** (*Melanophila fulvoguttata*). This beetle is of primary importance in stands of old or weakened trees. This past year it killed some hemlock in York County that had been weakened by gipsy moth feeding and slow growth from age. The grub of the beetle tunnels beneath the bark making wide galleries which girdle the trees.

(21) **Juniper scale** (*Diaspis carueli*). These small, glistening, white scales are found on the foliage of juniper, particularly ornamental varieties, and were reported from a number of places in 1944.

(22) **Larch case bearer** (*Coleophora laricella*). In 1943 a very heavy infestation occurred through eastern and northern Maine and larch appeared as if scorched by fire in early July. In 1944 a similar condition prevailed. In one section of Hartland it was reported that fifty per cent of the larch had been killed by repeated defoliations by this insect which mines in the needles.

(23) **Larch sawfly** (*Lygaeonematus erichsoni*). This insect, which in the past has destroyed so much larch, is being sent in by the wardens in only very small numbers.

(24) **Green-striped maple worm** (*Anisota rubicunda*). During 1944 only two reports of this insect in epidemic form were reported, one from Bath and one from Township 30.

(25) **Sugar-maple borer** (*Glycobius speciosus*). This insect seems to be quite generally on the increase particularly in old shade trees. It is so generally prevalent that the planting of sugar maple is not advisable if a long-lived tree is desired.

(26) **Galls. The Maple bladder gall** which appears as pouch-like elevations, and *Erinium* which appears as a sugar coated area on the leaves were very common on soft maples in 1944. A new bud gall of maple causing enlarged woody growths was reported this year which has not as yet been identified.

(27) **Mountain-ash sawfly** (*Pristiphora geniculata*). This defoliating insect was very prevalent through eastern Maine from Machias to Perry and was also reported from central Maine in 1943. During 1944 it was again reported from a number of places. It is believed to be of European origin.

(28) **Oak leaf skeletonizer (*Acordulecera* sp.)** skeletonized pin oak at Castine in 1944. The grubs skeletonize both sides of the foliage.

(29) **Oak twig pruner (*Hypermallus villosus*)**. During July 1944 many reports of oak twigs being cut off and falling to the ground were received. This injury is caused by a beetle the grubs of which tunnel in and cut off the twigs and then hibernate therein during the winter. The insect was particularly prevalent from Boothbay through to Topsham and Harpswell.

(30) **European pine shoot moth (*Rhyacionia buoliana*)**. In 1944 this insect was reported for the first time in Maine. It was causing serious damage to a red pine plantation in Harpswell. Control measures were started immediately by the owners of the property. During 1945 further measures to control the insect will be undertaken and scouting in the area to determine amount of spread needs to be done. The insect first mines in the needles and then tunnels into the buds destroying them before they mature. They also bore into the tender new shoots.

(31) **Mound building ants (*Formica exsectoides*)**. A number of calls have been received in regard to controlling these ants which build large conical mounds and destroy the tree growth to a distance of fifteen feet around them. Often these ant colonies consist of dozens of nests with ten thousand or more ants to a nest.

(32) **Pine needle scale (*Chianaspis pinifoliae*)**. This white scale-like insect has been quite abundant during the past two years particularly on ornamental pines.

(33) **Pitch pine leaf miner (*Paralechia pinifoliella*)**. This insect caused widespread browning of pitch pine in southern Maine during 1944.

(34) **Red pine sawfly (*Neodiprion nanulus*)**. This sawfly which attacks red pine is present in a number of places in the state. The area at Passadumkeag has been under surveillance for a number of years. The infestation here has been getting lighter. Feeding was underway May 29, 1944.

(35) **Red turpentine beetle (*Dendroctonus valens*)**. This large bark beetle frequently kills weakened trees around cuttings and portable mills. They seem to be attracted to such areas by the odor of fresh pitch. One such outbreak was reported and investigated in Smithfield.

(36) **White-pine weevil (*Pissodes strobi*)**. This destructive insect of white pine remains very common in plantations and was particularly heavy during 1944. It is estimated that the loss from this insect alone in Maine amounts to over 10,000,000 board feet each year.

(37) **Forest tent caterpillar (*Malacosoma disstria*)**. Large areas of poplar were defoliated in northern Maine during June of 1944. The caterpillars were so thick that even the underbrush was being fed upon. The outbreak was particularly heavy across the border in Quebec and New Brunswick where whole hillsides appeared stripped of foliage from along the St. John River.

(38) **Satin moth (*Stilpnotia salicis*)**. This European insect caused heavy defoliation of poplar in Corinna.

(39) **Black-headed budworm (*Peronia variana*)**. This insect is quite numerous at Bar Harbor and has caused some injury to spruce on the mainland in past years.

(40) **European Spruce Sawfly**. Annual reports concerning this insect from 1938 through 1942 appear either in the biennial reports of the Forest Commissioner or as separate publications in the off years. For 1943 a brief mimeographed report was made which will be given in more detail here along with the 1944 work.

The infestation decreased in 1943 throughout almost all of the state although some of the lighter infestations in northern Maine remained the same and increases occurred at Sangerville, Bristol, Walpole, and Harpswell with considerable numbers of larvae still present on No. 6 Mt. in Appleton and on Spencer Mt. In 1944 there seemed to be a general but light increase over the state. From Katahdin west to Coburn Gore larvae were most numerous, although in no places did outbreaks occur. The plot on 9, R. 5 was continued where from twenty 1 sq. ft. plots of duff only one good cocoon was found in 1943 and in 1944 from ten such plots no live cocoons were obtained. Beatings of six trees, however, in September 1944 gave two, fifth stage healthy and robust larvae per tree. At Bar Harbor, however, a noticeable increase has occurred. The infestation is heavier than it has ever been. About 100 larvae per tree was obtained from each of several trees in August of 1944 and in the fall 2,000 good cocoons were collected for the purpose of maintaining our parasite breeding stock and having good cocoons on hand.

The fire protective force continued beating trees to get sawflies from spruce, in 1943 sending in over 600 samples to our laboratory and in 1944 over 700 samples. This was of prime importance in giving a detailed picture of the status of the sawfly. Cocoons collected in the duff were also sent in.

(41) **Microplectron fuscipennis**. In 1943 an estimate of 1,605,-849 parasites of this species were reared of which 1,517,984 were liberated in the field, the remainder being used for breeding purposes of which 200 parasitized cocoons were held over winter for the purpose of maintaining breeding stock. The releases were divided into 156 colonies and placed mainly by the fire wardens in the following towns, each colony consisting of 10,000 parasites:

Town	Colonies	Town	Colonies	Town	Colonies
16 R. 5 . . . . .	10	4 R. 5 NBKP . . .	5	Ripley . . . . .	1
Masardis . . . . .	1	Lowelltown . . . .	5	Dexter . . . . .	1
8 R. 5 . . . . .	2	Appleton . . . . .	20	Garland . . . . .	1
7 R. 5 . . . . .	2	Johnson Mt. . . .	10	St. Albans . . . .	1
D R. 2 . . . . .	10	Andover . . . . .	5	Corinna . . . . .	1
Cary . . . . .	5	T. No. 6 . . . . .	5	Exeter . . . . .	1
Amity . . . . .	5	Grafton . . . . .	½	Waldoboro . . . .	2
Carroll . . . . .	5	Pleasant Ridge . .	4	Bremen . . . . .	1
Webster . . . . .	5	Wellington . . . .	1	Bristol . . . . .	4
Roque Bluffs . . .	4	Parkman . . . . .	1	Pemaquid . . . . .	5
2 R. 13 . . . . .	10	Sangerville . . . .	1	Chamberlain . . .	3
Little W. . . . .	5	Harmony . . . . .	1	New Harbor . . . .	4
Askwith . . . . .	5	Cambridge . . . . .	1	So. Bristol . . . .	2

The releases in 1943 bring the number of **Microplectron** placed in the woodlands of Maine to the total of 227,691,615. In addition to this 14,637,587 were reared and used in the breeding and experimental work. The 1943 rearing work was conducted by J. L. Bean and maintained at a high efficiency in that an average of 29.9 parasites emerged from each cocoon of which 80.1% were females. These figures are based on the total number of cocoons used in the rearing work.

With the 1943 releases, this parasite has been colonized in all towns roughly north and east of a line drawn from Stow to Concord, Newport, Howland, and thence down along the Penobscot River to the coast. South of this line many other towns have been colonized.

In 1944 no releases of **Microplectron** were made. Breeding work was confined to replenishing the stock saved from 1943 whereby the parasitized cocoons, which had been held over were removed from refrigeration, and allowed to yield their parasites. These parasites were then put in with unparasitized cocoons of both the European spruce sawfly and the red pine sawfly and allowed to oviposit in them. This

has given us 865 freshly parasitized cocoons which will be held over for any future needs along with 2600 unparasitized cocoons of which 1860 were newly collected in the fall of 1944.

(42) **Microcryptus basizonus.** For the rearing of this species in 1943 eggs were transplanted into 2853 live sawfly cocoons of which 2646 after incubation were shipped to the field for the parasites to emerge, the remainder being used for breeding stock and of which 500 were saved as a supply for future rearing. The field releases were made in two equal colonies, one on Spencer Mt. and one on No. 6 Mt. in Appleton. Some unused breeding stock cocoons were put out in Grafton from which about fifty adult parasites were expected to emerge to make an approximate total release of 1200 parasites for 1943, and a grand total of 87,544 individuals of this species released to date. No releases were made in 1944.

(43) **Other parasites.** No rearing or releases of other species of parasites were made in 1943 or 1944.

(44) **Parasite recoveries.** Several places were sampled for recovery of the parasite **Microplectron fuscipennis** from sawfly cocoons with the following results. In 1943 from two plots at Stockholm which is a new recovery point 20% of the good cocoons contained the parasites, from two plots at Connor 75% contained parasites, areas in the Bar Harbor region had 14% of the cocoons parasitized. At Harpswell no recovery was made. Twenty plots on T. 9, R. 5 yielded only one good cocoon, unparasitized; but of the empty cocoons 1.6% had been parasitized previously by **Microplectron**.

In 1944 from ten plots on T. 9, R. 5, no live cocoons were found. Of the empty ones collected 7% showed previous attack by **Microplectron**. From the lot of cocoons collected at Bar Harbor in the fall of 1944 for future rearing work, parasites were recovered during the process of renewing our **Microplectron** stock. No percentages were taken as it was desired to keep all cocoons possible for the future.

No additional recoveries of **Microcryptus basizonus** were made in either year. Dissection of the empty cocoons collected from T. 9, R. 5 showed one cocoon in 1943 and one in 1944 to have been parasitized by this or a closely related species. This parasite has been liberated in the area. Some native parasites were also recovered but as yet have not been identified.

Larval collections were examined as they came in from the wardens for presence of the wilt disease both years. Only one collection was



found to contain diseased larvae in 1943 and none in 1944. Examinations were also made for this disease in the field. The disease was in general less common and virulent than in previous years which may have been due to a natural lessening of its occurrence or due to presence of fewer of the host larvae. No disease was found by field examination in the following places: Townships 22, 30, 36, 37 and 43 (Middle Division); T. 4, R. 3; T. 9, R. 5; T. 11, R. 7; and T. 11, R. 8. In 1943 in T. 14, R. 6 25% of the few larvae found were diseased; and in T. 15 and 16, R. 10 along the lower Allagash 40% of the larvae collected were diseased which was much less than previously.

Predatory bugs which attack the larvae were present in fewer numbers in 1943 and less in 1944 while predatory insects and mammals which attack the cocoons seemed of their usual abundance. **Spruce budworm (*Archips fumiferana*)**. This insect which has repeatedly ravaged the spruce-fir forests of the Northeast is again appearing as a threat in the form of an extensive outbreak moving from Ontario across Quebec towards Maine. During the 1910-1919 series of outbreaks in Maine over 27,000,000 cords of spruce and fir were killed and over 200,000,000 cords were killed in eastern Canada.

Maine, New Hampshire, Vermont, New York, the U. S. Bureau of Entomology, the U. S. Forest Service, and the Canadian government including the eastern Provinces are uniting in an effort to meet the threat that is continually nearing our border.

The forest insect detection service in the state has been concentrated on the spruce budworm. Not only are the wardens increasing their collections from spruce and fir but the running of light traps to catch any possible flight of moths into the state has been intensified. Budworm collections to date are as follows: (1941) 12 moths, Augusta; 1 pupa, Ashland. (1942) 1 larva, 11, R. 8, Bigelow, Rumford, Lake Moxie; 6 moths, Augusta, 12 moths, Rockport. (1943) No larvae found; 1 moth, Greenville, Ashland, Fort Kent. (1944) 1 larva 17, R. 4; 19, R. 12; 2, R. 13; two larvae 15, R. 5; 1 pupa 8, R. 5; 1 moth each from Oquossoc and Greenville, two moths, Seboomook. Our present program calls for establishing six forest insect ranger districts with a man in charge of each to work with and help the wardens, to cover areas not ordinarily covered by the fire warden force and to be free to make collections in times when the wardens are tied up with fire protection work. It is also planned to make surveys from the air each year during June and July of areas containing a high percentage of fir. At this time of year defoliation shows up as brown tips quite

easily from the air. The work is planned so that observations will be made early in the season for the larvae, later in the season for pupae, and moths, and then for eggs. It is planned to do considerable work in summer cuttings where it is easy to observe possible feeding in the crowns.

The U. S. Forest Service and U. S. Bureau of Entomology have established plots in eastern Maine to study the effects of the budworm in different forest types. It is planned to establish similar plots in north central and western Maine. Everything possible will be done to make a good type map of the state showing where the stands of mature balsam fir are and an effort will be made to have the owners cut as many of these stands as possible. It is believed by practically all who have studied the problem during the past twenty to thirty years that the real solution lies in a means of forest management that will handle our balsam stands on a short rotation. It is hoped that areas can be established right away in Maine where mature and slow growing balsam will be removed.

Airplane spraying with "D.D.T." gives promise of success particularly in localized outbreaks. This relatively new insecticide is still in the experimental stage and is not yet available to the public. The U. S. Bureau of Entomology in cooperation with the Canadian Division of Entomology plan extensive experiments this year in Ontario and Quebec. The results of this work will be very valuable to Maine. Cooperation with these federal agencies is planned.

Some work is also being done by the federal and Canadian entomological departments in collecting and rearing parasites from the West which attack a variety of the budworm there and transplanting them to the East. The possibility of cutting or girdling trees in infested areas has been tried with apparently some success in localized outbreaks. A ten year study of this by the Maine Forest Service is about to be published.

Maine's problem at the present time is to:

- a. Intensify the insect detection service so as to spot any infestations as soon as they appear.
- b. Keep informed of all research in Canada on control through management and spraying, through organizations of those working on the problem, and through news letters.
- c. Encourage every possible effort to immunize our forests by cutting slow growing and mature balsam fir particularly in areas where it makes up a considerable portion of the stand.

d. Bring together information from existing type maps and cruising records, and from aerial photographs so as to construct a base map upon which our prevention and control program can be based.

e. Build access roads making it possible to reach areas now difficult to operate.

f. Educate the public, particularly those connected with woods work, as to the nature of budworm outbreaks, so that they can assist in the detection work.

Maine has already done a great deal along these lines. Two of our entomologists have been in Ontario and Quebec acquainting themselves with the problem. Two strong organizations have been working on the problem, one consisting of federal, state, and industry representatives from New England, New York, and Canada, and the other made up of Maine timberland owners. A circular describing the insect with a colored plate has been printed by the department and given wide circulation. Many news items have been given the newspapers throughout the state. Much work has been done on type maps, experimental plots, and special surveys. Many meetings have been attended where plans for control were being worked out. A map has been prepared showing the opening date of balsam buds throughout the state which will be valuable in detection work and future spraying programs. Another map on wind currents during July when moth flight takes place has been prepared with help from the U. S. Weather Bureau.

(45) **Yellow-headed spruce sawfly (*Pikonema alaskensis*)**. This insect is continually on the decline due largely to native parasites attacking eggs, larvae, and cocoons.

A great many varieties of insects feeding on spruce have been received from samples sent in by the wardens and it is hoped later that a list and description of these can be made for those interested. Such insects as the spruce autographa, dotted line looper, chamelon caterpillar, northern smoky, and grey spruce tussock are particularly common.

### **Forest Products**

Each year brings many inquiries in regard to insects working in the timbers of houses, barns, and log cabins. During the past two years, carpenter ants, powder post beetles, ambrosia beetles, and the blue pine borer have been very common. In many cases owners of prop-

erty have suspected that the damage was being caused by termites but Maine fortunately is too far north to be troubled to any extent by these.

With the increased amount of logging there have been many cases where owners were unable to get logs out of the woods and into mill ponds or lakes before time for borers to attack them. As the result of experimental work which the department had carried on we were able to help many of these men save their logs. Stacked lumber was also damaged by borers where it was sawed round-edged during the summer in excess of one inch in thickness.

### **Tree Diseases**

Many cases of tree diseases have been reported during the past two years. In general these reports have had to do with shade trees. Some of the most commonly reported are elm leaf spot, maple wilt, willow scab or blight, ash rust spread from marsh grass, and false mistletoe on spruce. This last organism has been very destructive on white spruce along the coast from Pemaquid to Boothbay and also on Monhegan Island. In 1944 one new area in East Boothbay was reported where over seventy per cent of the old growth white spruce was being killed and had to be cut. Very little damage occurred to red spruce back from the shore.

In 1943 considerable beech and some other hardwoods were killed in the Bridgton, Naples, Fryeburg area due to extreme low winter temperatures. In both 1943 and 1944 many exposed maples and white pine were injured by extreme weather conditions which caused a browning of foliage.

In the spring of 1944 severe frost injury occurred over wide areas from Rangeley, Jackman, Greenville, Ripogenus to Vassalboro. Much of the poplar had the new tips blackened, white birch was hit to some extent. In spots the foliage of alder, beech, and maple was browned on the edges. New tips of spruce and fir were browned.

### **Forest Insect Survey**

The forest insect survey has been continued and stressed and will be given added emphasis this coming season. In this work the fire wardens are supplied with a 6 x 9 foot sheet of cloth, mailing tubes, and report blanks. They beat trees at regular intervals, put the insects, which fall onto the cloth laid beneath the selected trees, into

a mailing tube along with a completed report blank, and mail to the entomological laboratory at Augusta. Here all material is identified and recorded, and information obtained on the distribution and abundance of species, trend of infestations, presence of parasites, predators, and diseases of larvae.

The survey work is concentrated to obtain information on the spruce budworm, European spruce sawfly, and larch sawfly although data on all species sent in are recorded. Wardens are assigned definite dates on which to make collections, the dates in the several districts being staggered so that collections come to Augusta in smaller lots, extending from the first of June through mid-September. There were 651 reports received in 1943 and 761 in 1944.

During the past year each district was visited at least once by one of the entomologists for the purpose of instruction. Each warden was supplied with a spruce budworm circular, a large Riker Mount prepared at the laboratory containing specimens of the more common insects, and a mimeographed insect description for aid in identification.

Moths of the spruce budworm are readily attracted to light at night. In order to supplement the collecting work of the larvae by the wardens it was felt that insect light traps would be of value in giving us information on abundance of the moths within an area and to pick up any possible flight into the area. These traps are so designed as to attract the moths to the light whereupon they hit against a baffle plate and drop into an attached container below, containing cyanide gas which kills them. In 1943 and 1944 traps were operated at Ashland, Millinocket, Greenville, Eustis, Jackman, Cupsuptic, and Princeton, and U. S. Customs Service border stations. At the same time companies having power dams and the U. S. Customs Service at their border stations cooperated in the project in having their night attendants gather moths in killing jars as the moths flew in and came to rest around lights which are on during the night. The killed moths were put in prepared containers between sheets of cellucotton and shipped to the laboratory. The collecting work was carried on from June 25 to July 25 when budworm moths are in flight. More light trap work is planned for next year in the general region between Jackman and Fort Kent.

During the past two years light traps were run by Viles Wing, Eustis; Waylan Williams, Cupsuptic; Mrs. Arthur Holden, Jackman; Rita Conley, Greenville; Edgar Carr, Millinocket; Harold Weeks, Ashland; and Francis Abbott, Kelleyland. A. F. Stevens, Wyman

Dam; Herbert Johnson, Seboomook Dam; and Joe McInnis, Ripogenus Dam sent in collections of moths attracted to lights. The following men at U. S. Customs stations also sent in collections: J. A. Smith, Jackman; M. G. McGee, Coburn Gore; M. A. Whitten, Fort Kent; Ralph Haraden, Houlton; and Frank Reed, Vanceboro.

### Miscellaneous Entomological Services

Probably as many inquiries were received in regard to household insects attacking food, furniture, animals, and books as from any other source. War conditions when people are living under crowded conditions, and often have a surplus of food products, have aggravated conditions. Some unusual situations have arisen in regard to houses and factories being infested by mites which have migrated into buildings from birds' nests. In one place a house was infested by a tropical rat mite (*Liponyssus bacoti*). In another place a high school was infested by swallow bugs (*Cimexopsis nyctalis*) which appear very similar to bed bugs. They had apparently migrated into the building behind blackboards from nests of chimney swifts.

For quite a number of years there has been a growing interest in mosquito control around summer colonies, hotels, and boys' and girls' camps. In several cases groups have organized to finance work around their own places with advice from this department. This past year a cooperative arrangement was entered into whereby the department furnished collecting material and directions and the various camps sent in mosquitoes collected at various times of day and at various locations such as in buildings, in the woods, or in the open. Twenty-two camps, and several individuals cooperated. These mosquitoes are now being identified so as to know just which ones are most troublesome in the various regions. The location and prevalence of mosquitoes capable of carrying disease are also being noted. Some of this work was started about ten years ago.

Cooperation with other departments and the answering of inquiries in regard to general insects, diseases, and identification of plant materials is continued. A good reference library and card catalogue is maintained and kept as up to date as possible. Many inquiries are received in regard to ornamental plants, lawns, vegetable and flower gardens. Inquiries are also received for information on the control of spiders, bats, and squirrels which get into houses.

## Publications

During the past two years the following publications appeared:

(1) "Field Book of Destructive Forest Insects" (Fifth Edition Revised) by H. B. Peirson, 1943. This is a 25 page booklet describing the more common forest insects with methods of control.

(2) "Damage by the Bronzed Birch Borer in Maine" by R. W. Nash. Maine Forest Service Bulletin No. 13, 1943. This twelve page paper was published to help owners of birch in determining susceptible types, as well as those which should be salvaged first, to describe the nature of the damage, and methods of combatting it.

(3) "Winter Killing of Hardwoods" by R. W. Nash. Journ. of Forestry Vol. 41, No. 11, pp 841-842, Nov. 1943. A description and explanation of the dying of beech, white ash, red maple, red oak, and witch hazel in low areas where temperatures dropped to 39° below zero in February 1943 in the vicinity of Bridgton and Fryeburg.

(4) "Maine Forest Insect Survey" (16 p. mimeograph 1944) by A. E. Brower. This publication was primarily to help the fire warden force in identification and contains descriptions of insects most commonly found.

(5) "The Spruce Budworm in Maine" by H. B. Peirson. Maine Forest Service Circular No. 5, 1944. This contains a colored plate of the insect, with descriptions of the various life stages and methods of control and prevention of outbreaks.

(6) "Forest Insect Notes" a Monthly News Letter appearing from May through September to acquaint forest landowners with insect and disease conditions.

(7) "Status of Bronzed Birch Borer Damage in 1943" by R. W. Nash. Supplement 1 to Bulletin No. 13, Maine Forest Service, 1944. Mimeographed.

## WHITE PINE BLISTER RUST CONTROL

The National Defense program continues to designate the protection of our national resources as a vital factor in the war effort. Throughout our country, wherever white pine grows, blister rust control work is being conducted.

White pine is of great commercial and aesthetic importance to owners and to the state. For years, nearly two-thirds of the timber cut in Maine has been white pine. Thousands of workers are furnished employment in logging, milling, and the manufacturing of this tree. The protection of such a great natural asset from diseases, fire, and insects is essential in order to maintain the prosperity of the region. Demand for white pine lumber is great, millions upon millions of feet being required for war purposes, including the crating of tank parts, shell cases, machine parts, firearms, ammunition, cantonments, etc. During the past several years there has been a steadily growing demand for white pine in the manufacture of paper pulp and fabricated building materials. This extraordinary demand will undoubtedly continue during and following the post-war period. Only a comparatively small amount of old growth pine remains; however, there is a large acreage of younger growth, which if given adequate protection to maturity, will keep Maine among the top ranking white pine producing states.

We have repeatedly stated that our future supply of white pine depends largely upon the application of forestry practices, which includes blister rust control, i. e., the removal of all *Ribes* plants within infection distance of white pine trees. This disease is present in every pine town in the state. It can be controlled; it will never be entirely stamped out, but it can be and is being checked to the extent that a future supply of white pine lumber is assured. This condition exists where control work has been practiced. However, there are thousands of acres in many towns still needing examination for the presence of *Ribes* plants.

Blister rust control is conducted under a cooperative agreement between the Forest Commissioner and the Bureau of Entomology and Plant Quarantine of the U. S. Dept. of Agriculture, in which they cooperate with towns and pine owners, in addition to furnishing the necessary supervision. During the past two years, additional federal funds have been allotted to Maine under the Lea Act, to be used for *Ribes* eradication purposes. These funds were instrumental in increasing town cooperation, in that town funds were supplemented on a liberal basis.



### Town Cooperative Funds

In 1943, 53 towns made \$10,005. available  
 " 1944, 55 " " 9,972. "  
 " " 1 owner " 100. "

During this biennium, there was such an acute shortage of labor that we were unable to find crew men in some towns. In 1943, no work was performed in six towns appropriating \$1,400.00, and in 1944, no work was performed in thirteen towns appropriating \$2,272.00. In the 1943 and 1944 blister rust control seasons, work was conducted by 60 towns in 13 counties, the towns expending \$15,699.02. One private owner in Sullivan spent \$49.60. The following table shows appropriations and expenditures by towns:

County and Towns	1943		1944	
	Appropriated	Expended	Appropriated	Expended
<b>Androscoggin</b>				
Lisbon .....	\$300.00		*\$300.00	
Mechanic Falls .....	250.00	\$249.98	250.00	\$250.25
Webster .....	200.00	200.00	200.00	200.13
Wales .....			100.00	100.08
<b>Cumberland</b>				
Brunswick .....	200.00	200.27	200.00	199.95
Cape Elizabeth .....	200.00			
Casco .....	300.00			
Freeport .....	300.00	306.56	300.00	300.00
Raymond .....			200.00	
<b>Franklin</b>				
Chester ville .....	100.00	100.50		
Temple .....	100.00	99.50	100.00	99.10
Wilton .....	200.00	199.10		
Strong .....			100.00	99.70
Weld .....			200.00	198.91
Salem .....			100.00	99.11
<b>Hancock</b>				
Bucksport .....	100.00	99.75	100.00	98.45
Ellsworth .....	400.00	398.54	400.00	318.99
Franklin .....	200.00	210.75		
Surry .....			200.00	198.40
Orland .....			200.00	199.64
<b>Kennebec</b>				
Sidney .....	200.00	200.68	200.00	200.20
Winslow .....	200.00	200.50	100.00	
Litchfield .....	200.00	188.45	200.00	199.46
Manchester .....	110.00	112.75	100.00	
Monmouth .....	200.00	193.78		
Readfield .....	250.00	249.50	250.00	249.72
West Gardiner .....	100.00	101.00	100.00	99.89
Winthrop .....			300.00	39.68
Farmingdale .....			100.00	100.10
<b>Knox</b>				
Appleton .....	50.00	49.77		
Rockport .....	200.00		*200.00	
Union .....	200.00	198.00	200.00	199.64

ORGANIZED TOWNS

County and Towns	1943		1944	
	Appropriated	Expended	Appropriated	Expended
<b>Lincoln</b>				
Whitefield.....	200.00	195.30		
Bristol.....	200.00	176.51	200.00	
Wiscasset.....	200.00		*200.00	
<b>Oxford</b>				
Bethel.....	200.00	195.30		
Buckfield.....	100.00	100.00	100.00	98.40
Denmark.....	200.00	28.00	*172.00	
Peru.....	200.00	182.75		
Sumner.....	50.00	49.77	100.00	104.08
Paris.....			200.00	206.00
Woodstock.....			100.00	105.60
<b>Penobscot</b>				
Greenbush.....	100.00	95.69	100.00	99.82
Lee.....	200.00	198.40	200.00	199.53
Mattawamkeag.....	200.00			
Carmel.....			100.00	
Bradley.....			200.00	
<b>Sagadahoc</b>				
Topsham.....	100.00	100.19	100.00	99.82
<b>Somerset</b>				
Madison.....	200.00	200.19		
Anson.....	150.00	201.00		
Skowhegan.....	200.00	202.00		
Brighton.....	200.00	200.64	200.00	200.93
Fairfield.....			200.00	199.97
Moscow.....			200.00	200.88
<b>Waldo</b>				
Freedom.....			200.00	198.40
Burnham.....	200.00	204.60	200.00	200.20
Jackson.....	100.00	99.63		
Lincolnville.....	200.00	196.35	200.00	196.54
Northport.....	200.00	200.00	200.00	
Searsmont.....	200.00	199.93	200.00	195.92
Searsport.....	200.00	198.56	200.00	196.54
Troy.....	200.00	199.28	200.00	
<b>York</b>				
Buxton.....	100.00	100.80	100.00	100.03
Hollis.....	250.00	204.90	200.00	195.40
Eliot.....	95.00	86.90	100.00	99.90
Kittery.....	300.00	298.80	300.00	292.64
N. Berwick.....	300.00	296.67	300.00	297.52
S. Berwick.....	200.00	198.20	200.00	199.28
York.....	200.00	192.16	200.00	198.32
<b>Washington</b>				
Cherryfield.....			100.00	
Totals.....	\$10,005.00	\$8,361.90	\$9,972.00	\$7,337.12

\*Held over from 1943

During this biennium, blister rust control work was conducted in 68 towns; 1,544,833 Ribes plants were removed from 158,172 acres, thereby rendering protection to 54,002 acres of pine lands.

	1943	1944
No. towns worked in . . . . .	48	50
“ acres worked . . . . .	84,651	73,521
“ acres pine protected . . . . .	29,427	24,575
“ Ribes destroyed . . . . .	690,212	854,621
Labor cost to Fed. Government . . . . .	\$12,279.89	\$20,366.30
“ “ “ Towns . . . . .	8,361.90	7,337.12
“ “ “ Individuals . . . . .	—	49.60
“ “ “ State . . . . .	5,899.09	2,889.44
Total Ribes eradication cost . . . . .	\$26,540.88	\$30,642.46
Per acre cost . . . . .	\$0.31	\$0.42
Ribes per acre . . . . .	8	12

Average per acre cost \$0.36

Included in the above figures are 39,740 acres of initial, and 118,432 acres of reeradication control work.

### Treatment of Infected Pines

White pine trees infected with the blister rust may be saved if given the proper treatment at the proper time. Treatment consists of removing infected branches, and cutting out affected bark on the trunks. Treatment is not practical unless the Ribes within infection range have been destroyed. Canker removal work is not recommended, other than for saving pines with considerable value from an ornamental or aesthetic viewpoint. Very little of the work was conducted under our supervision during the past two years, although advice and demonstrations were given to many estate and cottage owners.

### Pine Infection Conditions

Blister rust infection on pines is found throughout the length and breadth of the state, from Kittery to Fort Kent and from Eastport to Fryeburg; in fact wherever white pine grows. Young trees, especially, have been hard hit. Damage to commercial size trees is now very pronounced. Studies show that the greater part of the older trees were attacked 10 to 20 years ago. Sample plots and strip lines show infection running to ninety per cent. The amount of infection varies

in different localities, and is influenced by the number of original infection centers, the distribution and amount of pine, association of pine and Ribes, climatic conditions, and the application of control measures.

In areas where Ribes have been effectively eradicated, very few or no recent pine infections are found. This is conclusive evidence that our control work has been effective, and that the disease is under control in many towns. The amount of blister rust infection occurring on Ribes and pines varies with weather conditions, being heavy in years of abundant rainfall, and lighter in years of sub-normal precipitation.

A study to show the occurrence of blister rust and the extent of damage to certain stands of merchantable pine, was conducted in the fall of 1943 by Dr. Rusden, of the Bureau of Entomology & Plant Quarantine, U. S. Dept. of Agriculture, in the town of Brighton. By the addition of a strip-line in very young pine that had been protected adjacent to a similar strip in unprotected large pine, we were also able to show the effectiveness of Ribes eradication in the control of the rust. In merchantable pine three rod-wide strips, totaling 74 chains in length, were run, on which 307 trees with a volume of 45,339 board feet were examined. 50 per cent of the trees comprising 50 per cent of the volume, were found infected; 45 per cent had trunk cankers, of which 32 trees were alive, 3 had killed tops, and 10 were dead.

One strip line, 24 chains long and with 324 young pines averaging 5 feet in height, showed only 9 infected trees, or 2.5%. Most of these young trees had seeded in since the destruction of Ribes.

Two other strips with a combined length of 32 chains were run in mixed young to medium aged pine not having the Ribes plants removed until 1943. Of the 677 pines, 229 or 34 per cent were infected with 257 cankers. 162 of the cankers originated in 1930 or earlier, while 95 or 37 per cent originated from 1931 to 1939.

### **Present Status of Blister Rust Control Work**

The present net blister rust control area (pine plus protective zone) comprises 2,491,995 acres, of which 960,715 acres is pine land, in 308 towns in 15 counties. (Aroostook is not included, and only one town in Washington County). Initial control work has been completed on 86.4 per cent of this area and 33.3 per cent has been reworked once. Nearly 220,000 acres have been placed on a maintenance basis, i. e., the Ribes have become so scarce through eradication that danger from the disease appears negligible for an indefinite period.

There are two objectives in our blister rust control work: (1) To establish control on 338,461 acres which have not been initially protected; and (2) to reexamine 1,180,714 acres initially worked prior to 1939, to see if Ribes plants have staged a come-back, and to destroy them if found in menacing numbers.

As stated earlier, we will never be able to stamp out the blister rust, but we can control it. Continued control work is essential. Pine owners should annually inspect their pine lands and destroy all Ribes plants. The disease kills young pines quickly, but all age classes are affected, and need protection to assure an adequate future supply of white pine.

## STATE FOREST NURSERY

The State Forest Nursery located at the University of Maine in Orono has had high operating expenses during the past two years because of advances in labor costs. When the University is functioning normally, the 20 to 40 forestry students taking the course in Nursery Practice do a great deal of the transplanting, packing, and shipping as laboratory exercises, so that one man from the middle of April until the middle of October, with a little part-time help, can do the rest of the work. Last season three men were employed full-time for several months to run the Nursery.

Because of the decreased demand for planting stock it has been possible to rehabilitate much of the Nursery which had been overworked for many years. Successive crops of buckwheat followed by winter rye have been sowed and plowed under. Peat is being used in varying quantities on the level part of the Nursery which is in stock every year to note its effect on tree development. It is hoped that this may be a satisfactory substitute for green manure.

Transplanting was carried on to a small extent all summer to determine the feasibility of other than spring planting. If stock develops satisfactorily, late summer and early fall transplanting will relieve some of the pressure of spring work.

Shipments of nursery stock have decreased considerably because of the limited amount of planting now being done by farmers. This is due to the cessation of payments for tree planting under the agricultural conservation program and the increased pressure of work more essential to the war effort.

Planting on town forests has continued. Litchfield, Turner, Detroit, and Troy are planting a small acreage every year and the Auburn Water District is continuing its planting program. There will undoubtedly be a great increase in town forest planting after the war.

For the biennium red (Norway) pine continues to lead in the number of trees planted, followed by white pine and white spruce, Norway spruce, balsam fir, and Scotch pine. With increasing interest in planting for Christmas trees, balsam fir will become more popular.

Experience has shown that all of these species can be grown successfully in plantations but some cultural work may have to be done with any of them, and particularly with white pine and Norway spruce, to insure satisfactory development.

## PLANTINGS INDICATED BY PURCHASE ORDERS

Species	Number of Trees	
	1943	1944
Red Pine . . . . .	25,925	15,575
White Pine . . . . .	24,350	11,750
Scotch Pine . . . . .	1,200	2,000
Norway Spruce . . . . .	5,475	12,350
Red Spruce . . . . .	50	.....
White Spruce . . . . .	14,700	11,700
Balsam Fir . . . . .	.....	3,000
White Birch . . . . .	.....	50
White Ash . . . . .	.....	338
Larch . . . . .	150	.....
Total . . . . .	71,850	56,763

**Public Lots**

In 1891 the office of Forest Commissioner was created and the State Land Agent was made Forest Commissioner. He was charged with the care and preservation of forest lands which specifically included fire protection. Other duties were the superintendence, sale, and settlement of the public lands and execution of deeds in behalf of the state as authorized by the legislature. The Forest Commissioner, together with the Governor and Council constitute a board under whose direction all surveys of land shall be made. Field notes of such surveys are deposited in the Forest Commissioner's office. There are today only a few remnants of the so-called public domain so that the Land Office is still in existence but duties of the office are practically nil with the exception of lands reserved for public uses. These lands, commonly known as public lots or school lots, are held in trust until the township in which they are located is incorporated. With some exceptions there has been reserved in each wild land town and organized plantation 1,000 acres. The three preceding reports record statistical information in regard to these lots, from which all income is credited to a permanent fund for the benefit of the schools.

Lands forfeited for non-payment of taxes, not otherwise sold, are bid for by the Forest Commissioner in behalf of the state. No provision for jurisdiction of such lands was made until 1942 since when the Forest Commissioner is charged to report to the legislature the status and condition of lands and make recommendations pertaining to them.

The Forest Commissioner is admonished by law to institute an inquiry into the extent to which the forests of the state are being destroyed by wasteful cutting and to ascertain as to the diminition of the wooded surface of the land, etc.

### **Benjamin C. Jordan Fund**

The income from this fund is offered as prize money for the encouragement of proper cultivation of forest lands. Prizes shall be one hundred and twenty-five dollars as first prize, the second prize seventy-five dollars, and the third prize fifty dollars. Following are the rules governing the competition:

Rule 1. Each lot shall consist of one parcel of not less than ten acres in somewhat regular shape and shall be accurately surveyed and plotted.\*

Rule 2. The majority of said trees shall not be less than five feet nor more than thirty feet high and not less than five nor more than thirty years old when the prize is awarded.

Rule 3. Said forest may consist of any of the following kinds of trees, but other circumstances and conditions being equal, preference shall be given in the following order: White Pine, White Oak, Hickory, Chestnut, Hackmatack, White Ash, Yellow Oak, Red Oak, Bass, Hemlock, Spruce, Norway Pine, Pitch Pine, Cedar, Fir, Poplar, Birch, Maple, Beech, and Elm.

Rule 4. All competitors for the prizes shall file in the office of the State Forest Commissioner, their intention to compete, together with a correct and definite survey and plan of the lot and when such notice has been filed, said lot shall be eligible although the ownership may have been changed. During the period from January first, nineteen hundred and twenty-seven to December thirty-first, nineteen hundred and thirty-one, all entries shall be made on or before June thirtieth, nineteen hundred and twenty-nine. Entries in contest periods on and after January first, nineteen hundred and thirty-two shall be made during the first year of the period.

Rule 5. Myself and heirs shall have the same right as others to compete for the prizes. The same lot cannot be entered in more than one contest.†

Rule 6. In awarding prizes, other circumstances being‡ equal, the following conditions shall be considered in the order named: (a) Right

\*The phrase "accurately surveyed and plotted" is interpreted to be equivalent to a plan or sketch of the area which will show the boundaries and can be easily identified. No expense need be involved.

†"The same lot cannot be entered in more than one contest" shall apply to any and all contestants.

‡The phrase "other circumstances being equal" means that variation in age of stands will cause a, b, c, and f to vary accordingly.



number of trees per acre. (b) Even distribution over whole lot. (c) Health and thriftiness of trees. (d) Adaptation of the varieties of trees to the soil in which they stand. (e) Uniformity of size of trees. (f) Size of trees. (g) Size of lot.

There are seven contestants in the present period ending December 31, 1946, when prizes will be awarded.

### **Lumber Industry Production Committee**

On July 13, 1943, Senator Owen Brewster arranged a meeting of the pulp and lumber interests of Maine to consider the matter of ceiling prices on forest products and the need for additional labor for forest production and agricultural harvesting. Washington representatives of the OPA, WPB, and the War Manpower Commission were present. It was estimated that from 8,000 to 10,000 more men were needed to fill the labor demands. Men obtained for the potato harvest would be released after October 15 for forest work. Supplementing a special committee composed of pulp interests, the meeting authorized the Forest Commissioner to select a committee of lumbermen to work with him in obtaining some adjustment of ceiling prices and be active in making the necessary contacts in obtaining of labor. A meeting was held in the Forest Commissioner's office on July 20 of the following committee members:

Robert E. Cleaves, Jr., Chairman, Portland  
Lester S. Crane, Whitneyville  
Kenneth S. Hancock, Casco  
Rand S. Stowell, Dixfield  
Farnham W. Smith, St. Francis  
Samuel W. Collins, Caribou  
Joseph G. Deering, Biddeford

This committee met with representatives of the federal Truman Committee and discussed the effect of ceiling prices and labor in the curtailment of lumber production vital to the war effort. Several meetings were held during the year and as a result of the committee activity, favorable adjustments were obtained in ceiling prices and service was rendered in effecting replacement schedules filed with the State Selective Service Board.

Informal meetings were held at various points with lumber manufacturers in order to curb black market practices and aid in interpreting OPA regulations.

## Forest Products Laboratory

Early in 1944, in cooperation with the Maine Development Commission, representatives from the pulp, hardwood, and long lumber industries were called together in Augusta to discuss the need for a forest products laboratory to obtain a better and greater utilization of our manufacturing plants.

Through the efforts of Senator Brewster, Governor Sewall arranged for a joint Maine Congressional delegation meeting. The delegation and members of our representative group conferred with the Secretary of Agriculture, as a result of which it was the concensus of opinion that a study should be made to prove a justified need for the establishment of a laboratory in the Northeast. A sum of money was appropriated for such a study under the direction of the Northeastern Forest Experiment Station of the U. S. Forest Service. Following is a quotation from one Station report:

“Probably in no other state in the Union do forests play such an important role in industrial life as in the State of Maine. Wood-using industries lead all other industries in the total value of products, number of employees, and in amount of payroll. In 1940 Maine’s more than 700 wood-using establishments employed over 21,000 persons whose annual payroll exceeded \$25,000,000. These figures, in comparison with all other industries in the state, constitute a third of the total number of manufacturing establishments, number employed, and amount of payroll. Nor do these figures include the logging industry, the book binding and printing and publishing industries, which would bring the total number supported by the forest and its products to well over 40,000. Wood industries with investments exceeding \$180,000,000 represent two-thirds of the total capital investments in Maine’s manufacturing industries, and turn out products valued at approximately \$115,000,000 annually.”

Every effort will be made to obtain a laboratory and the following men are keeping in close touch with the program:

D. B. Demeritt, Head, Department of Forestry, University of Maine,  
Orono, Maine

A. D. Nutting, Forestry Specialist, Extension Service, University  
of Maine, Orono, Maine

Arthur Stowell, Dixfield, Maine

G. M. Blakeley, Berst-Forster-Dixfield Co., Oakland, Maine

P. H. Chadbourne, P. H. Chadbourne Co., Bethel, Maine

B. H. Booker, U. S. Gypsum Co., Lisbon Falls, Maine

George Bearce, Maine Seaboard Paper Co., Bucksport, Maine

Ernest F. Jones, Great Northern Paper Co., Bangor, Maine

Robert E. Cleaves, Jr., 142 High Street, Portland, Maine

Marshall Reed, Roxbury, Maine

### State Park Commission

During the war biennium of 1943-44 the State Park Commission has kept the five State Parks open to the limited public use for those who could avail themselves of the facilities under gasoline rationing. Only necessary maintenance has been pursued with limited personnel.

On July 1, 1943, eight historic forts and two memorials came under the administration of this commission. The areas now administered are:

#### State Parks

Aroostook County  
 Bradbury Mt.  
 Lake St. George  
 Mt. Blue  
 Sebago Lake

#### Memorials

Fort Baldwin  
 Fort Edgecomb  
 Fort Knox  
 Fort McClary  
 Fort O'Brien  
 Fort Popham  
 Fort St. Georges  
 Fort William Henry  
 John Paul Jones  
 Mare Point

Governor Sewall and the Executive Council approved the acceptance of additional lands at Aroostook County State Park and an area to make the Salmon Falls State Park on the Saco River in Buxton, York County. These generous gifts from the Presque Isle Merchants' Association and the Appalachian Mt. Club will probably be consummated in the near future.

Through the cooperation of the Post War Planning Commission, funds were made available to do some needed planning for future public recreation in "Vacationland."

## EXTENSION FORESTRY

Farm woodlots are an important part of Maine's agriculture. They provide more income than any other crop on many farms and are only surpassed by potatoes in total state income of farm crops taken directly from the soil.

A state-wide Farm Forestry Program is provided through the University of Maine Agricultural Extension Service. A. D. Nutting, Extension Forester, serves as State Leader working through the County Agricultural Agent in each county. Mr. Nutting was assisted by R. I. Ashman for five months during 1944. The Extension Service confines its field of forestry endeavor largely to woodland management and market phases with farm woodlot owners. The program is closely coordinated with the work of the Maine Forest Service: fire, insect, and disease prevention and control in farm areas.

The past two years have been a period of great demand for farm forest products. Nearly any kind of wood has been salable whenever put into pulpwood, bolts, or logs. At times, during the period, cutting costs and ceiling prices have been out of line. Farmers have made a major contribution to timber production throughout the war period in Maine. Due to constantly changing needs, market regulations and prices, farmers have needed to keep informed and be as near up to date as possible. The Extension Service has provided farmers and others through "Forestry Facts" a means of securing a summary of the conditions affecting farm forest products. About 2500 copies of this publication are sent out quarterly to farmers and others who request it. Through this publication, woodlot owners have been encouraged to put their woodlot in order to grow another crop as well as harvest the present one. They have been urged to cut only mature or over-crowded trees leaving the young healthy trees to grow. It has been pointed out that much of the dying birch, beech, and fir could and should be salvaged.

In addition to "Forestry Facts" as a means of keeping woodlot owners informed, field meetings, timber marking demonstrations, and personal contacts have been made to promote sound woodlot management. Newspapers and radios have been used to keep people informed.

During the winter 1943-44, a series of eleven joint meetings were held in farm sections of the state to inform woodlot owners about the protection work of the Maine Forest Service and major forest prob-

lems were discussed. These meetings were conducted by the Forest Commissioner and Extension Forester under the auspices of the County Agent and Farm Bureau.

The Extension Service aided several towns in their Town Forest Program. Most notable success was the town of Troy which cleared a net profit of \$4,000 and planted 175 acres of old fields and pastures to forest trees from 1940 to 1944 and 1,000 acres of tax delinquent lands. Rising and good markets made it possible for this town to remove formerly culled trees at a profit and at the same time provide for better woodland in the future. Waterford, and several other towns, were encouraged and aided in selective cutting of timber on the town "poor farm."

Assistance was given maple syrup growers through a yearly series of meetings and calls on orchard care, ceiling price regulations, grading and marketing. 4-H Clubs were assisted in tree planting programs and general forest management. The U. S. Forest Service Farm Forester in Saco Valley and the Soil Conservation Service Farm Forester in Piscataquis County have assisted through advice and suggestions in their projects. The number of war agencies that have been given help are numerous. Some of them are: OPA, WPB, TPWP, War Activities Committee, Periodical Publishers Wood Production Committee, War Man Power, and Farm Labor.

The following Maine Farm Forestry publications are available through the Extension Service: "Management of the Maine Farm Woods," "Forest Planting in Maine," "Renovating the Pine Woodlot for Continuous Production," and "Forestry Facts."

## **Postwar Planning**

Suggested projects for postwar planning as submitted for incorporation in the report of the Maine Development Commission to the 92nd legislature:

- A. Forest Survey
  1. Complete forest type mapping of all species
    - a. Ground work
    - b. Aerial photography
    - c. Land classification for proper land use
  2. Line cruise estimate
    - a. Merchantable softwoods
    - b. Merchantable hardwoods
    - c. Acreage of immature growth
    - d. Growth studies

**B. Forest Economy**

1. Forest regulation
  - a. Working plans
  - b. Cutting practice rules
  - c. Adaptation of proper species (to new uses)
  - d. Research
2. Cooperation of industry
  - a. Creation of industries based on new forest products (research)
  - b. Encouragement of improved and closer utilization; improvement of the small mill
  - c. Classification of man-power
  - d. Establishment of 100 homes for forest labor
3. Equitable tax adjustment studies
  - a. Tax method applicable to growing timber
  - b. Equalization of timber tax
4. Fire protection
  - a. Expansion of Maine Forestry District (Investigations and public relations work)
  - b. Creation of organized town forest fire fund

**C. Forest and Woodlot Improvement**

1. Silvicultural plans
  - a. Timber stand improvement
    - (1) Weeding
    - (2) Thinning
    - (3) Pruning
2. Slash disposal
3. Elimination of dead trees

**D. Forest Products Access Roads**

1. Permanent truck trails
2. Logging or woods roads

**E. Increased Fire Suppression and Prevention Facilities**

1. Relocation of 10 towers
2. Visibility and map studies for all towers
3. Construction of 50 additional lookout towers to give complete state coverage
4. Construction of 500 miles of telephone line
5. Construction of 50 watchman cabins
6. Construction of 25 warden cabins
7. Construction of 25 storehouses
8. Development of 10 seaplane bases
9. Introduction of radio
10. Development of 100 lunch ground sites along routes of travel
11. Construction of 1000 water holes in proximity to forest growth

**F. Reforestation**

1. Idle and waste lands
  - a. Barren lands
  - b. Unproductive farm lands, 50,000 A.
  - c. Burned lands, 10,000 A.
2. Understocked forest land
3. Roadside beautification
  - a. Individual tree planting
  - b. Plantations of trees and shrubs
  - c. Thinning and pruning of roadside stands
  - d. Care of state public trees
  - e. Care and maintenance of trees and shrubs in State Park

- G. Development of State and Community Forests
  - 1. Public reserved lots
  - 2. Tax delinquent lands
  - 3. Purchase of non-income producing property
- H. Boundary Line Survey
  - 1. All publicly owned land
    - a. Federal, state, county, town
    - b. Public reserved lots
    - c. Tax delinquent lands
- I. Stream Improvement
  - 1. Rebuilding of all dams to conserve water flow
  - 2. Clean streams of debris
  - 3. Planting and other flood control measures
- J. Increased Insect and Disease Control
  - 1. Organized personnel for detection
    - a. Sample plots
    - b. Insect and disease research, including laboratory work
  - 2. Insect and disease survey
  - 3. Intensification of white pine blister rust eradication work
    - a. Mapping
- K. State Building
  - 1. Construction of forestry and forest products exhibition building (100 x 150—two story), including material. Building would contain all native woods of the state and exhibits portraying history of forest industries of the state

The Maine Development Commission prepared the following for submission to the legislature:

Commissioner Rendall has developed a comprehensive program of desirable projects, substantially all of which could be undertaken almost immediately upon its authorization and need.

**State-wide Forest Survey** would provide basic information upon which efficient planning, administration, development and use of our 16,270,000 acres of forest ground is dependent. The work, essentially aerial photography, is already partially completed by various federal agencies and in conjunction with ground checks would serve to make available accurate maps and estimate volumes of forest growth.

The **Study of Forest Economy** would embrace plans for the regulation of cutting forest growth to insure a perpetuation of yield, all phases of forest protection, and equitable tax adjustment studies. This basic material obtained by the survey will be used in planning the future proper use of forests. Industry will cooperate, and existing industries will be expanded and new ones created because of the definite facts determined.

The **Forest and Woodlot Improvement** project includes such work as weeding out inferior species, thinning of dense stands, and pruning of merchantable growth to improve quality. Slash disposal and the elimination of dead trees is particularly important in the reduction of fire hazard and the improvement of forest soil.

The **Forest Products Access Roads** project will be divided into two parts and would not duplicate any projects which might be submitted by the highway or other state departments: (1) Permanent truck trails similar to those constructed under the CCC program which could be used by the traveling public; (2) Logging or woods roads which would run from inaccessible areas to the truck trails.

The **Increased Fire Suppression and Prevention Facilities** project would provide fire lookout towers that should be constructed to complete the coverage of our forest areas, together with facilities such as telephone lines, warden cabins and storehouses, and seaplane bases.

The **Reforestation** project will make it possible to intensify the reclaiming of our idle and waste lands which will be justified after the completion of a state-wide protection system. It would also be possible to replenish gaps in our understocked forest land and to work on roadside beautification.

The **Development of State and Community Forests** project would enable the improvement of public reserved lots where the state retains title to stumpage and to state-held tax delinquent lands.

The **Boundary Line Survey** project would cover all state-owned land and lands owned by counties and towns. Cooperation might be made available to private owners.

**Increased Insect and Disease Control** studies are necessary to develop methods of control and a survey should be completed to determine what insects and diseases are prevalent in our forests. All necessary control work should be kept current.

Consideration should be given to a stream improvement project which would be limited to the clearing of debris and the building of dams to aid in the driving of forest products with due consideration to the fish and game conservation program. Protective planting on the shores of lakes and streams is needed in many places to aid in the control of water flow.



For future consideration a **State Building** in which to exhibit all native woods of the state and in which to portray the history of forest industries of the state. This building could also be used for the same purpose by such departments as Inland Fisheries and Game, Sea and Shore Fisheries, Department of Agriculture, State Highway Commission, Department of Health and Welfare, State Park Commission and possibly others.

<b>Proposed Projects</b>	<b>Estimated Cost</b>	<b>Estimated Man-hours</b>
READY-TO-GO:.....	\$6,571,934	9,657,944
State-wide forest survey.....	925,000	800,000
Study of forest economy.....	311,800	126,200
Forest and woodlot improvement.....	1,500,000	4,000,000
Forest products access roads.....	1,600,000	2,400,000
Increased fire suppression and prevention facilities.....	340,362	263,352
Reforestation.....	1,051,760	1,397,760
Development of state and community forests	343,200	80,000
Boundary line survey.....	210,560	244,080
Increased insect and disease control.....	289,252	346,552
NOT READY-TO-GO:		
State Building.....	81,000	42,880

### TREE SURGERY

During the past two years there has been a continued increase in the total number of licensed arborists, although a few men were newly licensed and some renewals made for men whose licenses had lapsed. Twenty-six men let their licenses lapse while nine were added, leaving at present sixty licensed arborists. Eleven examinations were given in the past two years. Through the courtesy of the principal of the Presque Isle High School and the Superintendent of Portland schools men in those respective places were allowed to take their written examinations in those offices to save the time and expense of coming to Augusta. Due to the abnormal times, the Board has lately granted examinations more or less as applications came in, mainly for the purpose of supplying tree men in sections of the state where no licensed men were located at the time.

Considerable time has been spent in checking unlicensed men and tracing licensed men for poor work, severe overcharging for duties performed, and falsification of work for which one license was revoked by the Board for refusal of the man to appear and answer charges. Three court cases occurred for infractions of the law by unlicensed men. One of these resulted in a jail sentence for failure to pay the court fine. Two cases were turned over to the State Police for prosecution.

The Tree Surgery Board has ruled that licensed men joining the Armed Services will not be subject to renewal fees until they return to civilian work.

The list of licensed men follows:

**MAINE FOREST SERVICE—State House, Augusta, Maine**  
**as of July 1, 1945**  
**LICENSED TREE SURGEONS**

Name	Address	License No.	Licensed to Do			License Expires
			Spraying	Pruning	Cavity Work	
Abbot, Chester	Cape Neddick	115	x	x	x	July 1, 1946
Aborn, Willard, G.	51 Upland Way, Barrington, R. I.	77	x	x	x	April 1, 1946
Aldrich, Leon	Pond St., Westwood, Mass.	130		x	x	April 1, 1946
Aycock, Thomas W.	105 Lowell St., Peabody, Mass.	96	x	x	x	April 1, 1946
Babb, George W.	RFD 1, Gray	168		x		April 1, 1946
Barnes, Carl S.	Box 516, Holliston, Mass.	97	x	x	x	April 1, 1946
*Bartlett, F. A. Tree Expert Co.	Cambridge, Mass.					
Benner, Alfred L.	2 Main St., Rockland	98	x	x	x	July 1, 1946
Billings, Ralph E.	Falmouth Foreside, RFD 4, Portland	2	x	x	x	July 1, 1946
Bissler, C. H.	436 Park Sq. Bldg., Boston, Mass.	91	x	x	x	April 1, 1946
Bolick, C. B.	436 Park Sq. Bldg., Boston, Mass.	117	x	x	x	July 1, 1946
Boothby, Earl C.	Limerick	100	x	x	x	April 1, 1946
Bowden, Adelbert	Castine	180	x	x	x	July 1, 1946
Brown, Arthur E.	Bar Harbor	179	x	x	x	April 1, 1946
Brown, Harry	111 Holland St., Lewiston	145	x	x	x	April 1, 1946
*Davey Tree Expert Co.	436 Park Sq. Bldg., Boston, Mass.					
*Dodge Associates	Wenham, Mass.					
Dow, Clarence	Bar Harbor	171	x	x		April 1, 1946
Edney, Louis C.	Main St., Searsport	7		x	x	July 1, 1946
Franke, Wm. A.	30 Cameron St., Brookline, Mass.	66	x	x	x	April 1, 1946
*Frost, H. L., and Higgins Co.	20 Mill St., Arlington, Mass.					
Goodall, George W.	100 Brentwood St., Portland	32	x	x	x	July 1, 1946
*Goodall Tree Expert Co.	100 Brentwood St., Portland					
Goodwin, Albion	17 Columbia St., Augusta	185	x			Sept. 16, 1946
Goodwin, John B.	9 Pleasant St., Waldoboro	8		x		July 1, 1946
Gray, Harold	141 South St., Milltown	158		x	x	April 1, 1946

LICENSED TREE SURGEONS (Continued)

Name	Address	License No.	Licensed to Do			License Expires
			Spraying	Pruning	Cavity Work	
Griffiths, Stephen L.	Leighton Road, Augusta	67	x	x	x	April 1, 1946
Hamel, Lewis	100 Brentwood St., Portland	33	x	x	x	July 1, 1946
Harmon, W. L.	Fall River, Mass.	40	x	x	x	July 1, 1946
Higgins, E. W.	20 Mill St., Arlington, Mass.	135	x	x	x	April 1, 1946
Jameson, John H.	779 Hammond St., Bangor	12	x	x	x	July 1, 1946
Keene, Roy D.	20 Mill St., Arlington, Mass.	56	x	x	x	April 1, 1946
King, Roland L.	Oxford Hotel, Skowhegan	14		x	x	Sept. 1, 1946
Linnell, Rodney S.	Peru	125		x	x	July 1, 1946
Lord, Daniel	Parsonsfield, P.O. Kezar Falls	165	x			April 1, 1946
*Lucas, John, Tree Expert Co.	179 Sheridan St., Portland					
Madden, James E.	3 Sylvia Road, Portland	183		x		Nov. 1, 1945
Maddocks, Royden K.	49 Moody St., Portland	46	x	x	x	July 1, 1946
Maddox, Elmer L.	E. Monmouth, Route 1, Winthrop	19		x	x	July 1, 1946
Maddox, Wesley	Brown St., Kennebunk	153		x	x	April 1, 1946
McCarthy, Charles	180 Blake St., Lewiston	20		x		Sept. 1, 1946
McClaine, E. L.	RFD 1, Rockland, Box 123B	105	x	x	x	April 1, 1946
McInnis, James V.	70B State St., Brewer	71		x	x	April 1, 1946
McSherry, Thomas E.	Fryeburg	52	x	x	x	Oct. 1, 1945
Messer, Albert R.	12 Washburn St., Houlton	47		x	x	July 1, 1946
Mores, Carl D.	RFD 5, Portland	48	x	x		July 1, 1946
Nealley, Charles H.	4 Bell St., Belfast	70	x	x	x	July 1, 1946
*N. E. Forest Service, Inc.	20 Kilby St., Boston, Mass.					
*N. E. Tree Expert Co., Inc.	539 Smithfield Ave., Pawtucket, R.I.					
Oatway, Hubert	9 Union St., Augusta	141	x	x		April 1, 1946
Quinn, Albert	RFD 1, Rockland	74	x	x	x	April 1, 1946
Rainey, Isaac W.	Phippsburg	181		x	x	April 1, 1946
Robarts, Myron	135 Washington St., Camden	50	x	x	x	July 1, 1946
Robbins, Lester	28 Valley St., Bath	25	x	x	x	July 1, 1946

MISCELLANEOUS

**LICENSED TREE SURGEONS (Concluded)**

Name	Address	License No.	Licensed to Do			License Expires
			Spraying	Pruning	Cavity Work	
Shand, Charles L. ....	4 Ash St., Bar Harbor .....	58		x	x	April 1, 1946
Sherman, Robert C. ....	3 Howard St., Kittery .....	27		x	x	July 1, 1946
Smith, Clarence L. ....	40 Cobb St., Portland .....	81	x	x	x	April 1, 1946
Soucier, Albenie .....	91 Dyer St., Presque Isle .....	184	x	x	x	April 1, 1946
Stackhouse, Arthur .....	22 Fredric, Portland .....	88	x	x	x	Sept. 1, 1946
Stevens, John H. ....	N. Berwick Rd., Sanford .....	177	x	x	x	April 1, 1946
Tamke, H. J. ....	539 Smithfield Ave., Pawtucket, R.I. ....	73	x	x	x	April 1, 1946
Thorne, Charles .....	RFD 5, Augusta .....	182		x		April 1, 1946
Watson, Myles S. ....	Newington, N. H. ....	69	x	x	x	April 1, 1946
Wheaton, Archie .....	RFD No. 1, Wiscasset .....	143		x	x	April 1, 1946
*White & Franke, Inc. ....	30 Cameron St., Brookline, Mass. ....					
White, J. Cooke .....	20 Mill St., Arlington, Mass. ....	53	x	x	x	Oct. 1, 1945
Wright, Byron .....	100 Brentwood St., Portland .....	83		x	x	April 1, 1946

\*Companies having licensed representatives.

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LOOKOUT TOWERS---MAINE FORESTRY DISTRICT

Name of Tower	Location	County	Year tower first established	Material	Tower height (feet)	Year of replacement	Material	Tower height (feet)	Elevation of Mt. (feet)
Abram	Mt. Abram, BKP WKR	Franklin	1924 (Rebuilt in 1926)	Steel	20				4,049
Allagash	T 7, R 14 WELS	Piscataquis	1916	Wood		1924	Steel	27	Unsurveyed
Aziscoos	Lincoln Pl.	Oxford	1910 (Relocated in 1919—wood)	Wood	10	1929	Steel	24	3,215
Beetle	T 7, R 10, WELS	Piscataquis	1913 (Rebuilt in 1917—wood)	Wood	12				Unsurveyed
Bigelow	Dead River Pl.	Somerset	1905	Wood		1917	Steel	38	4,088
Borestone	Elliottsville Pl.	Piscataquis	1913 (House on ledge)	Wood					1,600
Boundary Bald	T 4, R 3, NBKP	Somerset	1911 (Rebuilt in 1914—wood)	Wood		1937 (Steel from Naval Radio Tower, Bar Harbor)	Steel	35	3,000
Burnt	T 5, R 10, WELS	Piscataquis	1924	Steel	40				Unsurveyed
Carr Pond	T 13, R 8, WELS	Aroostook	1925	Steel	48				1,390
Chase	Mt. Chase Twp.	Penobscot	1909	Wood		1917	Steel	16	Unsurveyed
Clear Lake	T 10, R 11, WELS	Piscataquis	1929	Steel	24				1,855
Coburn	T 3, R 6, BKP WKR (Upper Enchanted)	Somerset	1910	Wood		1914 (Cab rebuilt in 1938— crushed by ice)	Steel	24	3,718
Cooper	Cooper	Washington	1913 (Rebuilt in 1925—wood)	Wood	18	1937 (Steel from Naval Radio Tower, Bar Harbor)	Steel	80	Unsurveyed
Deasey	T 3, R 7, WELS	Penobscot	1929 (House on ledge)	Wood					Unsurveyed
DeBoulie	T 15, R 9, WELS	Aroostook	1920-21	Steel	12	1929-30 (Cab rebuilt in 1937— struck by lightning)	Steel	48	1,898
Deer	T 4, R 2, WBKP (Crockertown)	Oxford	1926	Steel	39				3,455
Depot	T 14, R 16, WELS	Aroostook	1909	Wood		1914	Steel	60	1,300
Dill Ridge	Lakeville Pl.	Penobscot	1927	Steel	48				948
Doubletop	T 3, R 10, WELS	Piscataquis	1913	Wood		1917-18	Steel	48	3,600
Flagstaff	Flagstaff Pl.	Somerset	1917	Steel	50				2,497
Green	T 4, R 18, WELS	Somerset	1913	Logs		1920 (Relocated from east to west peak)	Steel	48	1,500
Hardwood	T 9, R 18, WELS	Somerset	1916	Steel	75				1,300
Hedgehog	T 15, R 6, WELS	Aroostook	1914	Steel	24				1,594
Horse	T 6, R 8, WELS	Penobscot	1917	Steel	15				Unsurveyed
Horseshoe	T 11, R 10, WELS	Aroostook	1935	Wood	20				2,052
Howe Brook	T 8, R 3, WELS	Aroostook	1930	Steel	75				1,458
Indian Hill	Grand Lake Stream Pl.	Washington	1934	Wood	30				782
Kibbie	T 1, R 7, WBKP (Skinner Town)	Franklin	1906 (Rebuilt in 1914—steel)	Wood		1926	Steel	14	3,638

Kineo	Days Academy Grant	Piscataquis	1910	Wood	1917-18	Steel	64	1,800
Lawler Hill	T 2, R 6, WELS	Penobscot	1914	USGS Poles	28	1931	Steel	60
				(Lookout house only)		(Relocated from Hunt Mt.)		768
Lead	T 28 MD	Hancock	1910	Wood		1914	Steel	36
Little Russell	T 5, R 16, WELS	Somerset	1920	Steel	48			Unsurveyed
Mattamiscontis	T 3, R 9, NWP	Penobscot	1914	Wood		1917	Steel	48
May	Island Falls	Aroostook	1920	Steel	48			920
				(Erected by landowners— purchased by MFD—1942)				
Millinocket Hill	Millinocket	Penobscot	1934	Wood	30			Unknown
Mitchell	Haynesville	Aroostook	1918	Wood	36	1927	Wood	36
Moxie Bald	T 2, R 3, BKP EKR	Somerset	1910	Wood		1919	Steel	12
Musquacook	T 14, R 12, WELS	Aroostook	1925	Steel	60			1,500
Musquash	Topsfield	Washington	1913	Wood		1928	Steel	36
Norway Bluff	T 9, R 9, WELS	Piscataquis	1914	Steel	24			Unsurveyed
Nulhedus	T 4, R 17, WELS	Somerset	1914	Steel	60			Unsurveyed
Number 4	T A, R 13, WELS (French Town)	Piscataquis	1913	Wood		1925	Steel	48
Number 5	T 6, R 7, BKP WKR (Appleton)	Somerset	1933	Steel	47			3,168
Number 9	T D, R 2, WELS	Aroostook	1914	Wood		1919	Steel	36
				(New tower built in 1915—wood)				1,638
Oak Hill	T 8, R 5, WELS	Aroostook	1924	Steel	75			1,096
Old Spec	Grafton	Oxford	1914	Wood		1919	Steel	36
Otter Lake	T 3, R 4, WELS	Aroostook	1911-12	Wood		1918	Steel	48
				(Only lookout trees)				595
Passadumkeag	Grand Falls Pl.	Penobscot	1919	Steel	36			1,463
Peaked	T 30, MD	Washington	1931-32	Steel	36			1,200
Pirate Hill	T 11, R 3, NBPP	Washington	1925	Steel	60			Unsurveyed
Pleasant Pond	The Forks Pl.	Somerset	1910	Wood		1917	Steel	24
Pocomoonshine	Princeton	Washington	1917	Wood	58	1934	Steel	73
Priestly	T 10, R 13, WELS	Piscataquis	1910	Wood	22	1929	Steel	24
				(Caboose on top of 12 logs)				1,900
Ragged	Indian No. 4	Penobscot	1909-10	Wood		1917-18	Steel	36
Rocky	T 17, R 12, WELS	Aroostook	1907	Wood		1920-21	Steel	48
				(Built by landowners) (Rebuilt in 1917—wood)				1,400
Round	T 11, R 8, WELS	Aroostook	1909	Wood		1918	Steel	48
				(Rebuilt in 1916—wood)				2,147
Sabao	T 41, MD	Hancock	1937	Steel	36			1,087
Saddleback	Sandy River Pl.	Franklin	1913	Steel	36			4,116
				(Cab rebuilt in 1938—crushed by ice)				
Schoodic	T 9, SD	Hancock	1914	Wood		1920	Steel	24
Snow	T 2, R 5, WBKP	Franklin	1910	Wood		1914	Steel	24
Soper	T 8, R 12, WELS	Piscataquis	1909	Wood		1924	Steel	27
				(Rebuilt in 1916—wood)				Unsurveyed
Soubunge	T 4, R 11, WELS	Piscataquis	1918	Wood		1919	Steel	12
Spencer	T 2, R 13, WELS	Piscataquis	1906	Wood		1927	Steel	12
Spoon	T 8, R 7, WELS	Penobscot	1916	Wood	30	1936	Steel	50
				(15' added in 1920)				Unsurveyed



Name of Tower	Location	County	Year tower first established	Material	Tower height (feet)	Year of replacement	Material	Tower height (feet)	Elevation of Mt. (feet)
Squa Pan	T 11, R 4, WELS	Aroostook	1917-18	Wood	26	1926	Steel	48	1,460
Squaw	T 2, R 6, BKP EKR	Piscataquis	1905 (Log cabin structure)	Wood		1919	Steel	12	3,209
Stockholm	Stockholm WELS	Aroostook	1924	Steel	75				974
Three Brooks	T 15, R 6, WELS	Aroostook	1914	Steel	48				1,578
Trout	T 2, R 9, WELS	Piscataquis	1931 (Relocated from Black Cat Mt.)	Steel	60				1,420
Tumbledown	T 5, R 6, BKP WKR	Somerset	1910	Wood		1914	Steel	24	3,542
Wadleigh	T 1, R 12, WELS	Piscataquis	1927	Steel	36				1,000
Washington Bald	T 42, MD	Washington	1918	Wood	55	1934	Steel	70	1,100
Wesley	Wesley	Washington	1910	Wood		1938	Steel	50 (Steel from Naval Radio Tower, Bar Harbor)	Unsurveyed
West Kennebago	T 4, R 4, WBKP	Oxford	1911	Wood		1914	Steel	24	3,705
White Cap	T 7, R 10, NWP (Bowdoin College Grant)	Piscataquis	1906 (Rebuilt in 1914—peeled logs 20')	Wood		1920	Steel	24	3,707
Whitney Hill	Macwahoc Pl.	Aroostook	1929	Steel	73				610
Williams	T 2, R 7, BKP WKR (Misery)	Somerset	1911	Wood		1914	Steel	48	2,395
<b>LOOKOUT TOWERS---ORGANIZED TOWNS</b>									
Ararat	Topsham	Sagadahoc	1931	Steel	47				255
Agamenticus	York	York	1918	Steel	24	1934	Steel	47	692
Bear	Hartford	Oxford	1934 (Steel came from old Agamenticus tower)	Steel	40				1,207
Blue	Avon	Franklin	1931	Steel	4				3,187
Chase Hill	Canaan	Somerset	1931	Steel	47				780
Dedham Bald	Dedham	Hancock	1920	Steel	60				1,261
Frye	Montville	Waldo	1931	Steel	14				1,140
Green	Effingham	Carroll, N. H.	1922 (Relocated from Cedar Mt., Parsonsfield, Me.)	Steel	47				1,907
Harris	Dixmont	Penobscot	1944-45 (Erected with modern steel ring connectors)	Wood	41				1,233
High Cut Hill	Garland	Penobscot	1944-45	Wood	65				955
Kelley	Brighton Pl.	Somerset	1925	Steel	50				1,700
Mountain Hill (Haskell Hill)	Jefferson	Lincoln	1931	Steel	47				493
Opportunity Farm	New Gloucester	Cumberland	1942 (Relocated from Blackstrap Hill)	Steel	47				493
Ossipee	Waterboro	York	1918	Steel	24				1,050
Pleasant	Denmark	Oxford	1920	Steel	48				2,007
Ridley Hill	Shapleigh	York	1942 (Erected with modern steel ring connectors)	Wood	65				740
Sabattus	Lovell	Oxford	1939	Steel	60				1,280
Zircon	Milton Pl.	Oxford	1921-22	Steel	60				2,240