

**STATE OF SOUTH CAROLINA**  
**REPORT**  
**OF THE**  
**STATE COMMISSION OF FORESTRY**  
**FOR THE YEAR**

**July 1, 1935 to June 30, 1936**

**H. A. SMITH, State Forester**



**COLUMBIA, S. C.**  
**September 1, 1936**

**PRINTED UNDER THE DIRECTION OF THE  
JOINT COMMITTEE ON PRINTING  
GENERAL ASSEMBLY OF SOUTH CAROLINA**



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## LETTER OF TRANSMITTAL

*To Hon. Olin D. Johnston, Governor and to the General Assembly of South Carolina:*

Sirs: Pursuant to Section 3 of the Act of Assembly, creating the State Commission of Forestry, approved April 26, 1927; which provides that the Commission shall "inquire into and make annual report upon forest conditions in South Carolina, with reference to the preservation of forests, the effect of the destruction of forests upon the general welfare of the State, and other matters pertaining to the subject of forestry and tree growth, including recommendations to the public generally as to reforestation," I have the honor to submit the report of the Commission for the period July 1, 1935, to June 30, 1936.

Your attention is respectfully directed to the increase in forest lands under protection from one million and a half acres last year to over two and a half million acres during the period of this Report; and to the fact that forest tree seedlings produced by Nurseries under the jurisdiction of the Commission, increased from seven and a half million in 1934-35 to over nineteen and three-fourths millions in 1935-36. I would also call your attention to the more than Six Hundred and Fifty-one Thousand Dollars (\$651,000.00) expended through the office of the Commission from Federal Funds in the furtherance of the work of the Emergency Conservation Corps program.

The construction of pulp mills now under way within South Carolina, emphasizes anew the necessity for an enlarged program of forest fire control and reforestation.

Respectfully submitted,

STATE COMMISSION OF FORESTRY,

B. S. MEEKS, Vice-Chairman.

**BALANCE SHEET  
THE STATE OF SOUTH CAROLINA**

**In Account With  
THE STATE COMMISSION OF FORESTRY**

**1928—1936**

**State Appropriations**

|   | Debit         | Credit |
|---|---------------|--------|
| Approximately 9 Years' Appropriations ..... | \$ 140,000.00 |        |

**Appropriations Other Than State for Forestry**

|  |               |                 |
|--|---------------|-----------------|
| CCC Camp Operation and Maintenance.....                    |               | \$14,000,000.00 |
| Expended this Office of State Forester .....               |               | 2,225,000.00    |
| Protective Association Assessments and Federal Funds ..... |               | 452,000.00      |
|  |               | <hr/>           |
| Total .....  | \$ 140,000.00 | \$16,677,000.00 |

**Tangible Assets**

|  |               |
|--|---------------|
| 30,000 Acres in 12 State Parks .....         | \$ 300,000.00 |
| Improvements on 12 State Parks .....         | 100,000.00    |
| Telephone Lines Connecting Fire Towers ..... | 100,000.00    |
| Fire Tower Farm Projects .....               | 175,000.00    |
| Forest Commission Inventory .....            | 5,000.00      |
|  | <hr/>         |
| Total Tangible Assets Only .....             | \$ 680,000.00 |

## THE STATE COMMISSION OF FORESTRY

B. S. MEEKS, Vice-Chairman, Columbia, S. C.

DR. E. W. SIKES, Clemson College, S. C.

L. C. WANNAMAKER, Cheraw, S. C.

W. L. RHODES, Estill, S. C.

## STATE FOREST SERVICE

H. A. SMITH, State Forester, Columbia, S. C.

N. T. BARRON, Asst. State Forester, Columbia, S. C.

W. C. HAMMERLE, Asst. State Forester, Columbia, S. C.

R. A. WALKER, Asst. State Forester, Columbia, S. C.

C. H. NELSON, Bookkeeper, Columbia, S. C.

MISS CAROLINE TAYLOR, Secretary, Columbia, S. C.

EITEL BAUER, District Forester, Spartanburg, S. C.

R. F. NEWCOMB, District Forester, Florence, S. C.

H. F. BISHOP, District Forester, Walterboro, S. C.

WAYNE STITT, District Forester, Aiken, S. C.

R. W. RIEGER, District Forester, Camden, S. C.

L. M. STALEY, Nurseryman, Camden, S. C.



# REPORT

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## ADMINISTRATION

During the fiscal year covered by this Report two new members of the Commission were appointed by Governor Johnston. W. L. Rhodes of Estill and L. C. Wannamaker of Cheraw, took office to succeed C. P. Cuthbert, whose term expired, and Paul V. Moore, who resigned. District Forester, W. C. Hammerle, was promoted to Assistant State Forester in charge of forest fire control, and R. A. Walker, Inspector in the Emergency Conservation Work, was promoted to Assistant State Forester in charge of State Parks. Four new District Foresters were appointed: R. W. Rieger, with headquarters in Camden, R. F. Newcomb, with headquarters in Florence, H. F. Bishop, with headquarters in Walterboro, and Wayne Stitt, with headquarters in Aiken. All District Foresters employed by the State Forestry Commission today, are technically trained men from forest schools of recognized standing.

The new set-up has materially increased the efficiency of the work of the Commission, has provided closer supervision, and more compact protection service. The necessity for such supervision may be recognized from the fact that we are today dealing with over two and one-half million acres under cooperative forest fire control, and are employing a total of five hundred and fifty-two (552) men in forest fire protection work. In addition to this number there are four hundred and fifty-three (453) men in volunteer forest fire protection crews who receive no pay, but who, because of good citizenship and their interest in conservation, are contributing their services to the cause. Captain C. H. Nelson was promoted from Clerk in the District Office under the Emergency Conservation Work, to the Columbia Office. The amount of office work, however, calls for additional permanent clerical help, and two temporary clerks have been employed almost constantly during the year.

Since the period of the last Report there has been constructed in Savannah, Georgia, a paper mill owned and operated by the Union Bag and Paper Company. The object of this mill for the present is to manufacture kraft paper, that is, the brown papers of the wrapping paper and paper bag type. Approx-

imately one-half of the buying radius of this mill will lie in South Carolina, including probably the Counties of Beaufort, Jasper, Hampton, Allendale, Colleton and possibly Bamberg and Barnwell, and may be extending even farther into the interior and up the Savannah River. It is understood that this Company is not buying land outright in South Carolina, but that it is contracting with property owners for long term delivery of timber from their lands. In Charleston the West Virginia Pulp & Paper Company announced early in the summer of 1936 its plan for the construction of a mill above North Charleston. Each of these mills will utilize approximately five hundred (500) cords of wood per day or the annual growth from more than five hundred (500) acres of land, even when that land is under protection and management. The West Virginia Pulp & Paper Company owns in South Carolina some 150,000 acres of forest land which has been in the process of acquisition over a period of ten years. These lands have been listed with the State Forestry Commission for protection since 1928. Their lands lie in Berkeley, Charleston, Dorchester, Colleton and Georgetown Counties, but the buying radius will in all probability be extended considerably beyond the Counties named, since it is assumed that they will retain their own lands for operation after they find difficulty in securing pulp wood from private sellers at a reasonable price. At the time this report is being written very definite rumors are in circulation to the effect that the International Paper Company is taking steps for the construction of a paper mill at Georgetown, which will mean that practically every County in the Pee Dee and Coastal areas of South Carolina, will have provided for them a market for pulp wood. The existence of these pulp mills may become a curse or a blessing to the State of South Carolina insofar as the landowners of South Carolina recognize the dangers which exist. Paper mills are coming South from the North because in the North they find themselves today in the centers of vast areas of devastation resulting to some extent at least from their own operations. They have mined their timber instead of producing timber as a crop. Cutting has been carried on without a view to reproduction. The annual cut has exceeded the annual growth. Such reproduction as has been secured, has been of inferior species and quality. Fires have added to the dev-



astation. The raw material for the paper mill is gone. Such a condition can very easily be reproduced in South Carolina. It is believed that the officials of the paper mills operating in South Carolina are going to encourage the proper handling of timber lands, to the end that they be assured of a continued source of raw material and that the conditions in the North not be duplicated. If, however, the landowners of South Carolina fail to heed that encouragement, they will cut over their forest lands clean instead of cutting the trees only at their point of financial maturity for paper pulp wood. They will cut the tall straight, most rapid growing trees and leave the stag headed, stunted trees of inferior form. They will cut the trees of the most valuable species and leave behind the inferior species which frequently are most prolific in seed production, and will thereby be most aggressive in the reseeding of the area. Under such practice it is entirely possible that over a comparatively few decades, the lower country of South Carolina will no longer rank highest among the timber producing areas of the United States. On the other hand, the landowners may heed the encouragement of the paper companies and if they do, they will first put their lands under adequate forest fire control in cooperation with the State and Federal Governments. They will sell pulp wood only from their salvaged material, that is, from thinnings, from trees of inferior species and form. They will plant up to rapid growing good species, areas which are not today restocking. There is urgent need for large scale demonstrations in forest practice along pulp wood producing lines. Our District Foresters are already laying plans for putting those demonstrations into effect, but there is a real need for a practical man to handle this program direct with the farmer and landowner in cooperation with the District Foresters and Agricultural Agents. That man to work with the farmer should be employed at the earliest possible moment to help outline a program and to assist an already over-burdened District Forester's personnel.

In addition to the possibilities in the production of wood pulp, a recent report of the Southern Forest Experiment Station, under the title of "The Quantity and Status of Naval Stores Timber in Survey Unit No. 1, South Carolina," emphasizes drastically the necessity for the need of educational work

among those naval stores operators and landowners and farmers who are operating turpentine trees for naval stores. According to this Report, practically one-half of the forest area within the ten counties covered by that Report is of the naval stores type. Seventy per cent. (70%) of the area being cut by turpentine operators, is leased land, land on which the operator is more concerned with the tree he is working than with the future production of trees of any sort. As a result of this situation, 43.4% of the trees worked, or that have been worked, are below nine inches in diameter in the face of recommendations of the National Forest Service, that ten inches represent the minimum size tree that can be conservatively worked for naval stores. 23.9% of the trees being worked within this area are under seven inches in diameter, breast high. 26% of the cups being worked today were worked by small landowners who sold the gum to the larger operators who distilled it and sold the products. There is a splendid opportunity here for a combination of conservative naval stores practice and pulpwood production. Upon the handling of these two industries, depends the future welfare of the producing power of the forest soil of lower South Carolina.



## FINANCIAL

The total expenditures of the South Carolina State Commission of Forestry for the fiscal year covered by this report amounted to One Hundred and Twenty-three Thousand, One Hundred and Thirty-Seven Dollars and Sixty-Four Cents (\$123,137.64). Of this amount Sixty-Four Thousand, Four Hundred and Fifty-Nine Dollars and Sixty-Seven Cents (\$64,459.67) were received from forest protective association assessments and the Federal Government. Ninety-Eight Thousand, Six Hundred and Five Dollars and Fourteen Cents (\$98,605.14) were expended for forest protection, Seven Thousand and Forty-Three Dollars and Seventy-Seven Cents (\$7,043.77) for Production and Distribution of Planting Stock, and the balance of Seventeen Thousand, Four Hundred and Eighty-Eight Dollars and Seventy-Three Cents (\$17,488.73) for other projects, including that portion of protection and Nursery production not reimbursable, for education, State Parks, etc. In addition to the above expenditures from State and Federal appropriations and from protective association assessments, there was expended through the office of the State Forester, Three Hundred and Ninety-Two Thousand, Six Hundred and Eighty Dollars and Fifty Cents (\$392,680.50) for the pay of supervisory personnel and the purchase of materials and equipment in the CCC camps engaged in forestry work upon State and private lands. At the same time there was expended through the office of the State Forester for the same purpose, Two Hundred and Fifty-Eight Thousand, Six Hundred, and Eighty-Seven Dollars and Sixty-Nine Cents (\$258,687.69) for the camps engaged in the development of South Carolina's State Parks. No part of these two last sums was concerned with the pay of the CCC boys, their food or clothes or the cost of, or the administration of, the CCC camps themselves. These expenditures were concerned solely with that part of the program under the administration of the State Forestry Commission. Thus, as a result of the \$50,000.00 appropriation by the Legislature for forestry and park work, there was expended from other sources within the State, as a result of the existence of the Forestry Commission, Seven Hundred and Twenty-Four Thousand, Five Hundred and Five Dollars and Eighty-Five Cents (\$724,505.85). The attached statements show the sources and disposition of all funds other



than Federal Emergency monies expended by the State Forestry Commission. Later on in this report, under the headings, of "State Parks" and "Emergency Conservation Work," will be found the expenditures through this office for each of the CCC camps under our jurisdiction.

## EXPENDITURES BY MAJOR PROJECTS

July 1, 1935—June 30, 1936

|   | State and<br>Federal | Private            | Total               |
|---|----------------------|--------------------|---------------------|
| Protection .....                        | \$59,511.62          | *\$39,093.52       | \$98,605.14         |
| Nurseries (Camden and Georgetown) ..... | 4,772.03             | 2,271.74           | 7,043.77            |
| Other .....                             | 17,488.73            | .....              | 17,488.73           |
|   | <u>\$95,088.82</u>   | <u>\$28,048.82</u> | <u>\$123,137.64</u> |

\*Includes \$18,596.15 spent direct by private agencies for Fire Control under State supervision.

## FINANCIAL STATEMENT

|  | Balance<br>June 30, 1935 | Receipts<br>Private | Federal Reimbursement<br>Sect. 2 | Reimbursement<br>Sect. 4 | State<br>Appropriation | Total              |
|--|--------------------------|---------------------|----------------------------------|--------------------------|------------------------|--------------------|
| State Fund .....                                   |                          |                     |                                  |                          | \$50,000.00            | \$50,000.00        |
| Federal Fund .....                                 | \$7,442.64               | \$24,650.51         | \$30,240.00                      |                          |                        | 62,333.15          |
| Revolving Fund .....                               | <u>4,379.02</u>          | <u>**8,413.05</u>   |                                  | <u>\$1,156.11</u>        |                        | <u>13,948.18</u>   |
| Funds available                                    |                          |                     |                                  |                          |                        |                    |
| during year .....                                  | \$11,821.66              | \$33,063.56         | \$30,240.00                      | \$1,156.11               | \$50,000.00            | \$126,281.33       |
| Expenditures State and Federal and Revolving ..... |                          |                     |                                  |                          |                        | <u>104,541.49</u>  |
| Balance .....                                      |                          |                     |                                  |                          |                        | \$21,739.84        |
| **Sale of Seedlings.                               |                          |                     |                                  |                          |                        |                    |
| Balance on Hand July 1, 1936:                      |                          |                     |                                  |                          |                        |                    |
| State .....  |                          |                     |                                  |                          |                        |                    |
| Federal .....                                      |                          |                     | \$13,689.55                      |                          |                        |                    |
| Revolving Fund .....                               |                          |                     | 8,050.29                         |                          |                        |                    |
| Balance .....                                      |                          |                     |                                  |                          |                        | <u>\$21,739.84</u> |

## JULY 1, 1935—JUNE 30, 1935

## STATE FUNDS:

|                                  |             |             |
|----------------------------------|-------------|-------------|
| Balance as of July 1, 1935 ..... |             |             |
| State Appropriation .....        | \$50,000.00 | \$50,000.00 |

## REVOLVING FUNDS:

|                                  |                 |                  |
|----------------------------------|-----------------|------------------|
| Balance as of July 1, 1935 ..... | \$4,379.02      |                  |
| Reimbursement Section 4 .....    | 1,156.11        |                  |
| Sale of Seedlings .....          | <u>8,413.05</u> | <u>13,948.18</u> |

## FEDERAL FUNDS:

|   |              |                    |
|---|--------------|--------------------|
| Balance as of July 1, 1935 .....          | \$7,442.64   |                    |
| Reimbursement Section 2 .....             | 30,240.00    |                    |
| Reimbursement for Expenditures Made ..... | .88          |                    |
| Reimbursement for Bad Checks .....        | <u>22.50</u> |                    |
| Dues Paid by Cooperators .....            | 24,627.13    | 62,333.15          |
| Total .....                               |              | \$126,281.33       |
| Expenditures .....                        |              | <u>104,541.49</u>  |
| Balance .....                             |              | <u>\$21,739.84</u> |

## Balance:

|                      |                 |                    |
|----------------------|-----------------|--------------------|
| State .....          |                 |                    |
| Federal Fund .....   | \$13,689.55     |                    |
| Revolving Fund ..... | <u>8,050.29</u> |                    |
|                      |                 | <u>\$21,739.84</u> |

\*\*Includes E. C. W. Sale of Seedlings.

## CAMDEN NURSERY—PRODUCTION COSTS

July 1, 1935—June 30, 1936

(Does not include prorated charges for supervision, office supplies, etc.)

## Expenditures:

|                                       |            |
|---------------------------------------|------------|
| Salaries .....                        | \$1,500.00 |
| Wages .....                           | 943.20     |
| Freight, Express and Deliveries ..... | 142.63     |
| Travel .....                          | 21.65      |
| Telegraph and Telephone .....         | 31.59      |
| Repairs .....                         | 96.85      |
| Office Supplies .....                 | 8.97       |
| Motor Vehicle Supplies .....          | 68.53      |
| Agricultural Supplies .....           | 237.43     |
| Other Supplies .....                  | 13.45      |
| Rents .....                           | 93.94      |
| Insurance .....                       | 23.95      |
| Office Equipment .....                | 3.68       |
| Motor Vehicle Equipment .....         | 3.00       |
| Agricultural Equipment .....          | 199.99     |
| Returned Checks Charged Off .....     | 9.00       |
| Refunds on Sale of Seedlings .....    | 10.05      |

---

\$3,407.91

## Receipts: (Based on Total Production of 1,548,561 Seedlings.)

Proceeds from Sale of Seedlings Produced this Year .....\$1,495.54

CFVCAECGMALBSECLNLECCELAINVMEJESACCCSSACCHHJVZCHICILCII



## ANNUAL REPORT—FINANCIAL STATEMENT SOUTH CAROLINA STATE FOREST SERVICE CLASSIFICATIONS FROM JULY 1, 1935 TO JUNE 30, 1936

|                                  | PERSONAL SERVICE |          |                  | CONTRACTUAL SERVICES            |            |                         |          | CONTRACTUAL              | SUPPLIES                     |            |             |               |              | FIXED CHARGES AND CONTRIBUTIONS |         |           | EQUIPMENT      |          |           |               |             | PERMANENT IMPROVEMENTS |                 |          | TOTAL |           |             |
|----------------------------------|------------------|----------|------------------|---------------------------------|------------|-------------------------|----------|--------------------------|------------------------------|------------|-------------|---------------|--------------|---------------------------------|---------|-----------|----------------|----------|-----------|---------------|-------------|------------------------|-----------------|----------|-------|-----------|-------------|
|                                  | Salaries         | Wages    | Special Payments | Freight, Express and Deliveries | Travel     | Telegraph and Telephone | Repairs  | Printing and Advertising | Water, Heat, Light and Power | Office     | Educational | Motor Vehicle | Agricultural | Other Supplies                  | Rents   | Insurance | Reimbursements | Office   | Household | Motor Vehicle | Educational | Agricultural           | Other Equipment | Lands    |       | Buildings | Contingent  |
| Columbia Office                  | \$16,805.08      | \$62.56  | \$102.25         | \$10.59                         | \$1,503.16 | \$616.16                | \$133.62 | \$763.61                 |                              | \$1,088.37 | \$12.80     | \$1,796.36    |              | \$1.07                          | \$13.45 | \$144.97  |                | \$399.89 |           | \$1,862.40    | \$63.27     | \$746.60               |                 |          |       | \$30.00   | \$27,091.21 |
| Piedmont District                | 2,919.84         |          |                  |                                 | 302.00     | 59.63                   | 17.70    |                          |                              | 45.95      |             | 564.14        |              |                                 | 1.00    | 24.70     |                | 13.96    |           | 427.00        |             |                        |                 |          |       | 25.36     | 4,302.88    |
| Pee Dee District                 | 2,328.91         |          |                  |                                 | 155.75     | 67.94                   | 17.25    |                          |                              | 198.40     |             | 199.23        |              |                                 | 250.65  | 21.70     |                | 3.50     |           | 507.40        |             |                        |                 |          |       | 24.70     | 3,988.43    |
| Wallerboro District              | 2,142.91         |          |                  |                                 | 72.45      | 45.80                   | 12.50    |                          |                              | 57.26      |             | 441.22        |              |                                 | 168.76  | 24.08     |                | 41.53    |           | 352.82        |             |                        |                 |          |       | 20.64     | 3,616.84    |
| Camden District                  | 1,881.52         |          |                  |                                 | 317.35     | 78.66                   |          |                          |                              | 32.50      |             | 301.55        |              |                                 | 85.00   | 26.75     |                | 249.29   |           | 613.35        |             |                        |                 |          |       | 25.00     | 3,634.97    |
| Aiken District                   | 2,046.98         |          |                  |                                 | 265.10     | 10.10                   | 10.07    |                          |                              | 22.97      |             | 295.46        |              |                                 | 32.00   | 26.66     |                | 36.93    |           | 633.02        |             |                        |                 |          |       | 25.00     | 3,495.29    |
| Educational Project              |                  |          |                  |                                 |            |                         |          |                          |                              |            | 303.22      |               |              |                                 | 180.00  |           |                |          |           | 1.00          | 547.14      | 26.88                  |                 |          |       |           | 1,148.24    |
| Camden Nursery                   | 1,500.00         | 913.20   |                  | 142.63                          | 21.65      | 31.59                   | 96.85    |                          |                              | 8.97       |             | 68.53         | \$237.43     |                                 | 13.45   | 33.24     | 23.25          |          | 3.68      | 3.00          |             |                        |                 |          |       | 19.05     | 3,407.91    |
| Georgetown Nursery               |                  | 4.00     |                  | 12.45                           |            | 40.70                   |          |                          |                              | 14.40      |             |               | 856.57       |                                 | 3.40    | 160.32    |                |          |           |               |             | 1,191.05               |                 | \$111.25 |       |           | 2,394.14    |
| Marlboro Nursery                 |                  |          |                  |                                 | 10.60      | .55                     |          |                          |                              |            |             |               |              |                                 | 1.65    |           |                |          |           |               |             |                        |                 |          |       | 12.80     |             |
| Aiken County F. P. A.            | 3,258.00         | 1,075.00 | 1.35             |                                 |            | 60.23                   |          | 33.60                    |                              | 57.79      |             | 1.50          |              | 259.72                          | 61.00   |           |                |          |           | 14.20         |             |                        | \$344.56        |          |       |           | 5,173.04    |
| Barnwell County F. P. A.         | 1,695.84         | 1,100.00 |                  |                                 |            |                         |          | 18.29                    |                              | 27.08      |             |               |              | 220.38                          |         |           |                |          |           | 13.50         |             |                        |                 |          |       |           | 3,446.41    |
| Lee County                       |                  |          |                  |                                 |            |                         |          | 9.29                     |                              |            |             |               |              |                                 |         |           |                |          |           |               |             |                        |                 |          |       | 9.29      |             |
| Kershaw County                   | 2,909.00         | 1,100.00 | 41.00            | 1.00                            |            | 65.66                   | 10.25    | 18.29                    |                              | 28.40      |             |               |              | 229.26                          |         |           |                |          | 2.69      |               |             |                        |                 |          |       | 367.92    | 4,900.23    |
| Sumter County                    | 4,627.99         | 1,625.00 | 75.00            |                                 |            | 108.01                  | 2.00     | 19.16                    |                              | 67.50      |             |               |              | 261.31                          | 19.75   |           |                |          |           | 71.98         |             |                        |                 |          |       |           | 6,983.61    |
| Florence County                  | 4,296.97         | 1,100.00 | 122.50           | 4.03                            | 8.48       |                         | 1.50     | 18.29                    |                              | 65.29      |             |               |              | 229.06                          |         |           |                |          | 20.00     |               |             |                        |                 |          |       |           | 6,327.98    |
| Georgetown County                | 1,925.00         | 550.00   | 60.00            |                                 | 10.00      | 46.25                   |          | 18.29                    |                              | 50.62      |             |               |              | 170.89                          |         |           |                |          |           |               |             |                        |                 |          |       |           | 3,032.51    |
| Latta F. P. A.                   | 1,103.17         | 21.80    | 64.85            |                                 | 2.32       |                         |          | 8.03                     |                              | 15.89      |             |               |              | 254.13                          |         |           |                |          |           |               |             |                        |                 |          |       | 8.00      | 1,699.96    |
| Nichols Forest F. P. A.          | 460.00           |          | 12.30            |                                 |            |                         |          | 2.33                     |                              | 2.14       |             |               |              | 88.87                           |         |           |                |          |           |               |             |                        |                 |          |       | 7.40      | 573.64      |
| 1st Clarendon F. P. A.           | 720.00           | 50.00    | 36.00            |                                 |            |                         |          | 8.45                     |                              | 7.82       |             |               |              | 39.35                           |         |           |                |          |           |               |             |                        |                 |          |       |           | 911.62      |
| Black River F. P. A.             | 433.50           | 420.00   |                  |                                 |            | 21.50                   |          | .60                      |                              | 1.27       |             |               |              | 2.25                            |         |           |                |          |           |               |             |                        |                 |          |       |           | 882.12      |
| Cook Tower Detection Unit        | 80.00            |          |                  |                                 |            |                         |          | .39                      |                              | .62        |             |               |              | 1.00                            |         |           |                |          |           |               |             |                        |                 |          |       |           | 82.01       |
| Cooper Tower Detection Unit      | 270.00           |          |                  |                                 |            |                         |          | .39                      |                              | .62        |             |               |              | .75                             |         |           |                |          |           |               |             |                        |                 |          |       |           | 271.76      |
| Carle Tower Detection Unit       |                  |          |                  |                                 |            |                         |          | .39                      |                              | .62        |             |               |              | 1.00                            |         |           |                |          |           |               |             |                        |                 |          |       |           | 2.01        |
| Lanes Tower Detection Unit       | 229.00           |          |                  |                                 |            |                         |          | .39                      |                              | .62        |             |               |              | .75                             |         |           |                |          |           |               |             |                        |                 |          |       |           | 231.76      |
| Aynor Tower Detection Unit       | 120.00           |          |                  |                                 |            |                         |          | .39                      |                              | .62        |             |               |              | 1.00                            |         |           |                |          |           |               |             |                        |                 |          |       |           | 122.01      |
| Loris Tower Detection Unit       | 120.00           |          |                  |                                 |            |                         |          | .39                      |                              | .62        |             |               |              | 1.00                            |         |           |                |          |           |               |             |                        |                 |          |       |           | 122.01      |
| Medale Tower Detection Unit      | 300.00           |          |                  |                                 |            |                         |          | .39                      |                              | .62        |             |               |              | .75                             |         |           |                |          |           |               |             |                        | 11.99           |          |       |           | 313.55      |
| Wampee Tower Detection Unit      | 120.00           |          |                  |                                 |            |                         |          | .39                      |                              | .62        |             |               |              | .75                             |         |           |                |          |           |               |             |                        |                 |          |       |           | 121.76      |
| Marion-Gresham Detection Unit    | 120.00           |          |                  |                                 |            |                         |          | .39                      |                              | .62        |             |               |              | .75                             |         |           |                |          |           |               |             |                        |                 |          |       |           | 131.76      |
| Irttoms Neck Detection Unit      | 120.00           |          |                  |                                 |            |                         |          | .39                      |                              | .62        |             |               |              | .75                             |         |           |                |          |           |               |             |                        |                 |          |       |           | 131.76      |
| Jasper County F. P. A.           | 699.00           | 300.00   | 24.00            | .52                             |            |                         | 3.00     | 8.24                     |                              | 12.25      |             |               |              | 111.22                          | 10.00   |           |                |          |           |               |             |                        | 26.69           |          |       |           | 1,155.93    |
| Edin F. P. A.                    | 840.00           | 330.00   |                  |                                 |            |                         |          | 8.24                     |                              | 7.50       |             |               |              | 4.64                            |         |           |                |          |           |               |             |                        | 3.79            |          |       | 14.50     | 1,208.67    |
| Hardesville F. P. A.             | 870.00           | 229.00   | 16.00            | .77                             |            |                         |          | 8.24                     |                              | 7.50       |             |               |              | 101.32                          | 10.00   |           |                |          |           |               |             |                        | 17.46           |          |       |           | 1,251.20    |
| Stokes F. P. A.                  | 890.00           | 330.00   | 28.55            | .77                             |            |                         |          | 8.29                     |                              | 10.50      |             |               |              | 130.39                          |         |           |                |          |           |               |             |                        | 19.62           |          |       |           | 1,419.03    |
| Adams Run Detection Unit         | 260.00           |          |                  |                                 |            |                         |          | .51                      |                              |            |             |               |              | .91                             |         |           |                |          |           |               |             |                        | 1.08            |          |       |           | 292.53      |
| Bonneau Detection Unit           | 87.50            |          |                  |                                 |            |                         |          | .51                      |                              |            |             |               |              | .04                             |         |           |                |          |           |               |             |                        | 1.08            |          |       |           | 89.16       |
| Cottagesville Detection Unit     | 260.00           |          |                  |                                 |            |                         |          | .51                      |                              |            |             |               |              | .91                             |         |           |                |          |           |               |             |                        | 1.08            |          |       |           | 262.53      |
| Oakley Detection Unit            | 187.33           |          |                  |                                 |            |                         |          | .51                      |                              |            |             |               |              | .04                             |         |           |                |          |           |               |             |                        | 1.08            |          |       |           | 188.90      |
| Okleece Detection Unit           | 190.00           |          |                  |                                 |            |                         |          | .51                      |                              |            |             |               |              | .91                             |         |           |                |          |           |               |             |                        | .96             |          |       |           | 192.41      |
| Ridgeville Detection Unit        | 249.00           |          |                  |                                 |            |                         |          | .51                      |                              |            |             |               |              | .91                             |         |           |                |          |           |               |             |                        | 1.08            |          |       |           | 242.56      |
| Scotta Detection Unit            | 240.00           |          |                  |                                 |            |                         |          | .51                      |                              |            |             |               |              | .91                             |         |           |                |          |           |               |             |                        | .96             |          |       |           | 242.41      |
| St. George Detection Unit        | 240.00           |          |                  |                                 |            |                         |          | .51                      |                              |            |             |               |              | .04                             |         |           |                |          |           |               |             |                        | .96             |          |       |           | 241.93      |
| Aiken F. P. A.                   |                  |          |                  |                                 |            |                         |          |                          |                              |            |             |               |              |                                 |         |           | \$624.13       |          |           |               |             |                        |                 |          |       | 624.13    |             |
| Caesar's Head F. P. A.           |                  |          |                  |                                 |            |                         |          | 2.18                     |                              |            |             |               |              |                                 |         |           | 1,292.79       |          |           |               |             |                        |                 |          |       |           | 1,294.97    |
| Carolina Fibre Company           |                  |          |                  |                                 |            |                         |          |                          |                              |            |             |               |              |                                 |         |           | 590.42         |          |           |               |             |                        |                 |          |       |           | 590.42      |
| Champion Fibre Company           |                  |          |                  |                                 |            |                         |          |                          |                              |            |             |               |              |                                 |         |           | 9.38           |          |           |               |             |                        |                 |          |       |           | 9.38        |
| Emory W. Clark Estate            |                  |          |                  |                                 |            |                         |          |                          |                              |            |             |               |              |                                 |         |           | 62.50          |          |           |               |             |                        |                 |          |       |           | 62.50       |
| Fairfield Protective Association |                  |          |                  |                                 |            |                         |          | 2.33                     |                              |            |             |               |              |                                 |         |           | 572.41         |          |           |               |             |                        |                 |          |       |           | 574.77      |
| Jasper F. P. A.                  |                  |          |                  |                                 |            |                         |          |                          |                              |            |             |               |              |                                 |         |           | 115.55         |          |           |               |             |                        |                 |          |       |           | 115.55      |
| Kershaw F. P. A.                 |                  |          |                  |                                 |            |                         |          |                          |                              |            |             |               |              |                                 |         |           | 413.11         |          |           |               |             |                        |                 |          |       |           | 413.11      |
| West Va. P. & P. Co., Charleston |                  |          |                  |                                 |            |                         |          |                          |                              |            |             |               |              |                                 |         |           | 3,398.83       |          |           |               |             |                        |                 |          |       |           | 3,398.83    |
| West Va. P. & P. Co., Georgetown |                  |          |                  | </                              |            |                         |          |                          |                              |            |             |               |              |                                 |         |           |                |          |           |               |             |                        |                 |          |       |           |             |



Applied Forestry and Forestry Education in South Carolina is under Mr. N. T. Barron, Assistant State Forester. Over 23,000 acres in South Carolina have been planted to forest trees during the period of this report, and 19,000,000 seedlings produced in Nurseries operated by the Commission. Thousands have been reached through fair exhibits, news items, and talks, and over 1,100 boys in the Vocational Agricultural High Schools of the State studied forestry in the class room and put into actual practice the principles learned there upon the 10 acre demonstration forests managed by the School.

## APPLIED FORESTRY

Twenty-three million forest tree seedlings were planted in South Carolina during the winter season of 1935-36. Eighty-two per cent, or 18,536,260 of the total forest tree seedlings planted were produced in the three nurseries operated by the State Forest Service, also, several hundred thousand forest tree seedlings were supplied to out of State agencies from these same nurseries. The State operated nurseries could not supply all the demand for the various agencies as some of them required more seedlings of specific species than could be supplied and others required species not grown in the State nurseries.

The three nurseries operated by the State Forest Service during the past fiscal year produced a total of 19,772,711 forest tree seedlings of principally the pine species. Table No. 1 on page 27 shows the production for each of the nurseries by species.

Georgetown Forest Tree Nursery (Georgetown County), Camden State Forest Tree Nursery (Kershaw County) and the Cleveland Nursery (Greenville County) were three nurseries producing last year. A fourth nursery of one acre at Bennettsville (Marlboro County), did not produce sufficient stock to report. This latter nursery was created only for an emergency period by the Marlboro County F. E. R. A. in cooperation with the State Forest Service. The pine seed, longleaf, was not planted until June and a "damping-off" disease destroyed practically all of the seedlings. The Georgetown Nursery produced 17,141,150 forest tree seedlings which were used mainly on Emergency Conservation Work projects and other Federal projects within the State. Table No. 2, page 28 shows the production and distribution by species of trees from the Georgetown Nursery.



Part of a 1,000 acre slash pine plantation planted in 1932. Photographed September 1936—Allendale County.



1,548,561 forest tree seedlings were produced at the Camden Nursery. The production was principally distributed to farmers, timberland owners and for demonstration plantings on State Parks and Forests. Table No. 3, page 29 shows the details of distribution from this nursery.

1,083,000 black locust seedlings were produced at the Cleveland Nursery by the State Forest Service for the Soil Conservation Service, the seed for this nursery having been supplied by the latter Service.

Additional forest tree plantations and refills were made on a number of the State Parks. This was the second year for planting on such areas. Table No. 4, page 30 shows the quantities by species used on the State Parks. Forest tree plantations are being established on State Parks for two reasons: Educational purposes and to establish new forests on the open areas not needed for playgrounds on the Parks or other such recreational and landscaping purposes.

An interesting feature of the reforestation work in the State during the last fiscal year was that of the Educational Civilian Conservation Corps forest tree planting project. 1,849,250 forest tree seedlings, principally pine, were planted on private lands by CCC boys in those counties in which forestry CCC camps were located. Approximately 1,500 CCC boys planted each 1,000 or more forest tree seedlings. This project was supervised by the State Forest Service in cooperation with the forestry Emergency Conservation Work project. Planting was done on private lands (depleted farm lands or devastated cut-over lands) within a twenty-five mile radius of eight State CCC camps. 181 landowners, principally farmers, availed themselves of this cooperative project. The purpose of this project was three-fold:

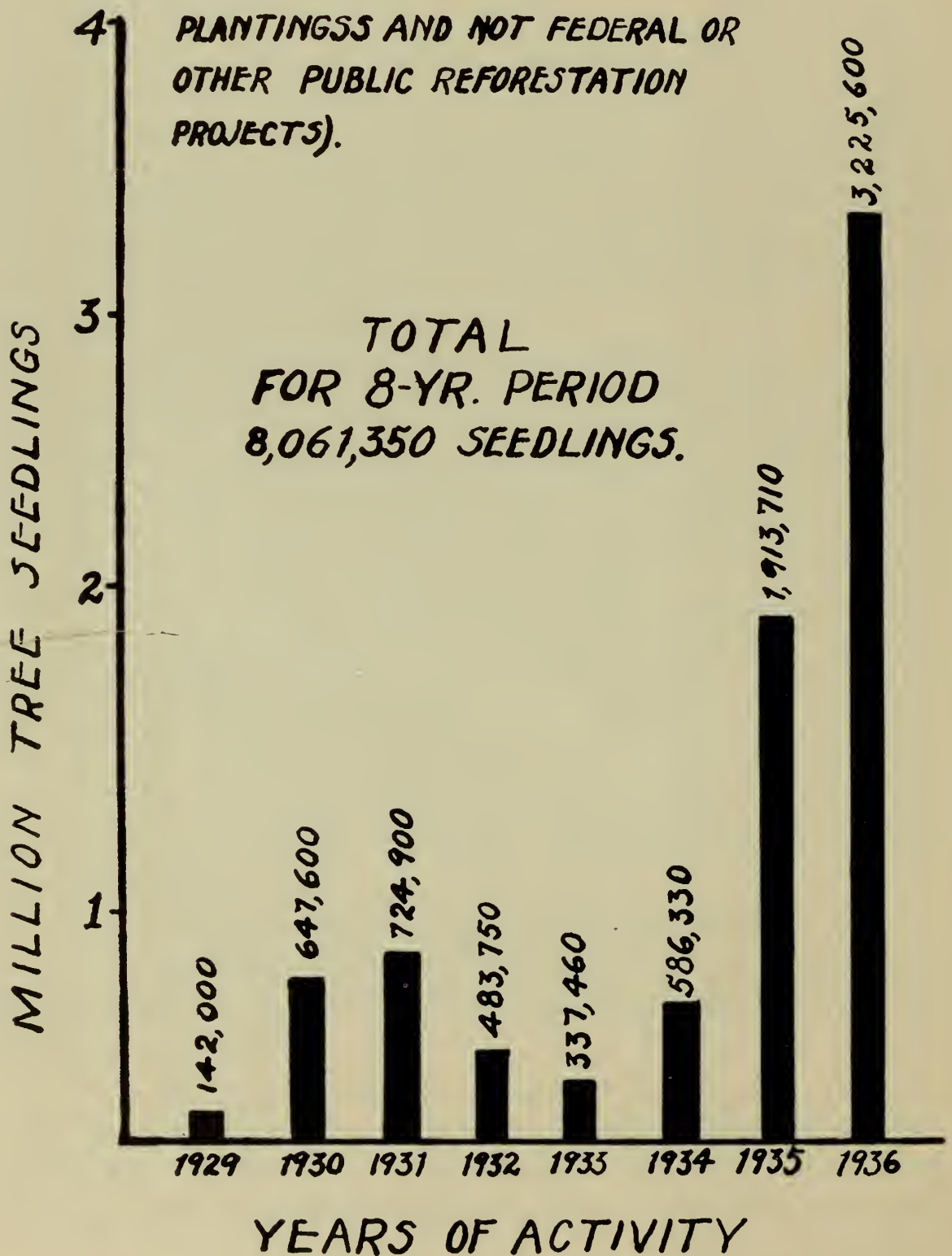
1. To instruct CCC boys in forest tree planting.
2. To establish demonstration forest tree plantings on as many sites as possible along well traveled highways for the benefit of the public.
3. To render a service at a minimum cost to as many landowners as possible who desire to reforest depleted farm lands and cutover lands not having sufficient seed trees left on them to reproduce a natural stand of trees. The 181 landowners

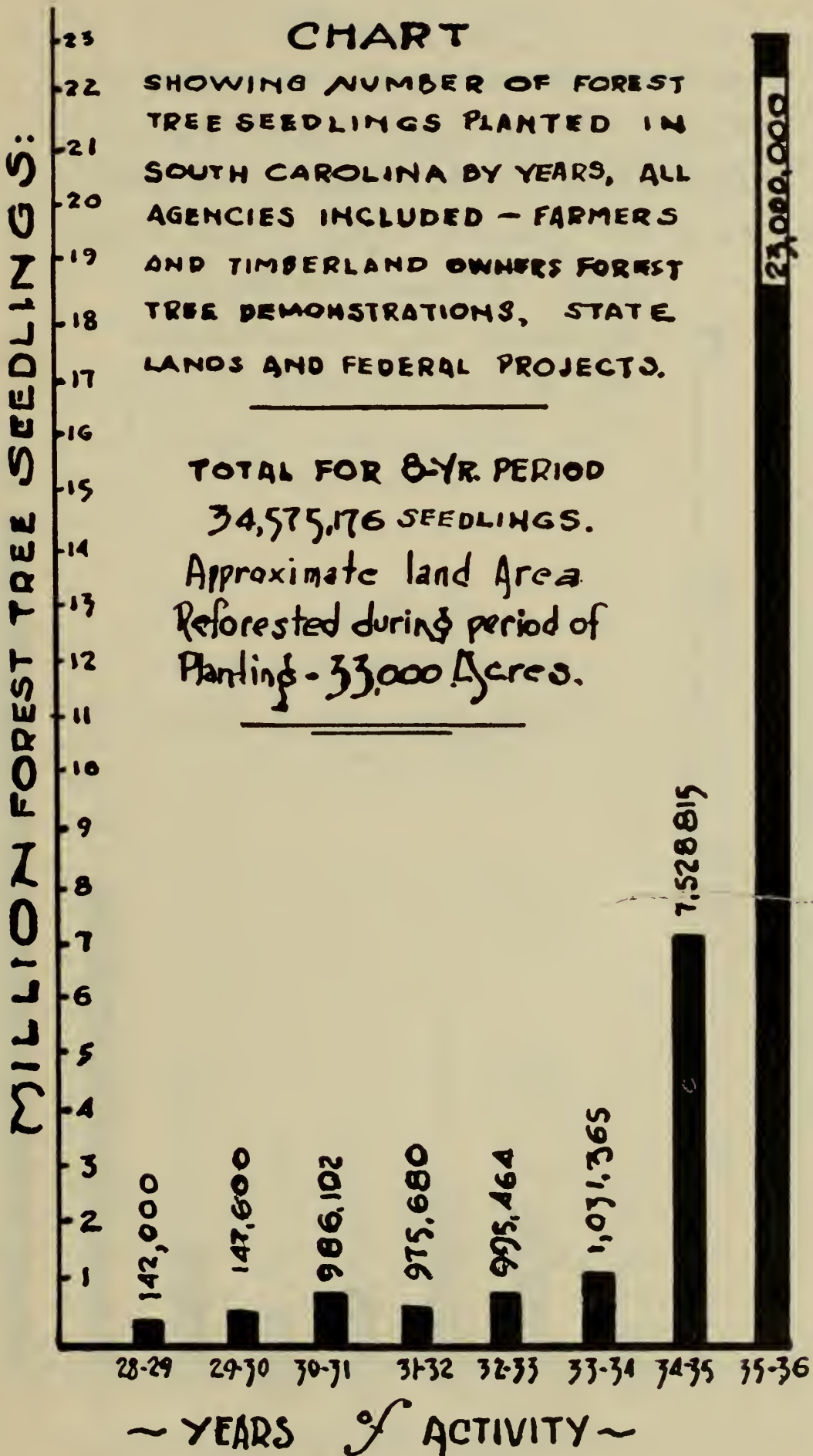
signed an agreement, prepared by the State Forest Service, to protect the planting and the resulting stand of trees from fire, trespass, and other destructive agents insofar as practicable, and further, to allow the trees which were planted to grow to a size large enough for merchantable forest products under a conservative system of forest land management as determined by the Forest Service.



**CHART**  
**SHOWING NUMBER OF FOREST**  
**TREE SEEDLINGS PLANTED BY**  
**FARMERS AND TIMBERLAND OWN-**  
**ERS IN SOUTH CAROLINA SINCE**

**1928 (INCLUDE "COMMERCIAL**  
**PLANTINGS AND NOT FEDERAL OR**  
**OTHER PUBLIC REFORESTATION**  
**PROJECTS).**



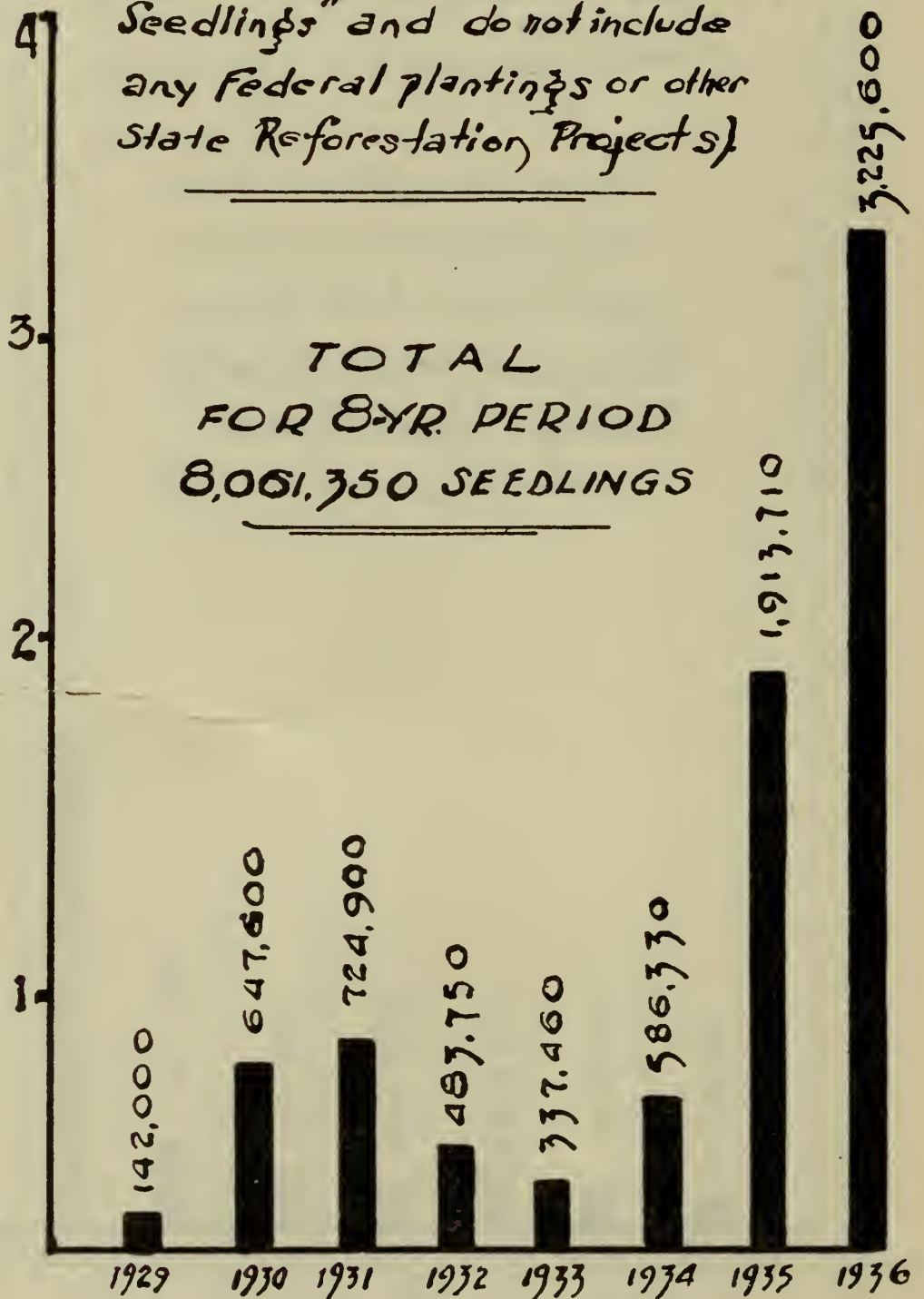


# CHART

SHOWING NUMBER OF FOREST  
TREE SEEDLINGS PLANTED BY  
FARMERS AND TIMBERLAND OWN-  
ERS IN SOUTH CAROLINA SINCE

1928. (Classed as "Commercial  
Seedlings" and do not include  
any Federal plantings or other  
State Reforestation Projects)

MILLION FOREST TREE SEEDLINGS:



- YEARS of ACTIVITY -



The Forest tree seed used in South Carolina nurseries was collected by the Civilian Conservation Corps camps under the direction of the State Forest Service. Practically all of the seed used was collected in South Carolina with the exception of the black locust seed and small amounts of yellow poplar, ash and shortleaf pine seed. The following table shows the number of bushels of pine cones by species collected in South Carolina during the period of this report:

| Species              | No. of Bushels of Cones |
|----------------------|-------------------------|
| Longleaf Pine .....  | 4,226                   |
| Loblolly Pine .....  | 2,816                   |
| Shortleaf Pine ..... | 173                     |
| Slash Pine .....     | 1                       |
| Jack Pine .....      | 5                       |
| <hr/>                |                         |
| Total .....          | 7,221 bushels           |

The pine seed was extracted from the cones and any quantities of seed not needed for immediate nursery use was carefully packed in sealed cans or bags and put in cold storage for future needs. Table No. 5, page 31 shows the amounts of forest tree seed handled by the State Forest Service during the period of this report.

Enlarged reforestation projects during the past fiscal year by the State Forest Service, Soil Conservation Service, Resettlement Administration and other Emergency Conservation Work projects resulted in more expansion of State forest nurseries over the year 1934 as follows:

1. The Georgetown Nursery was enlarged by seven acres; which brought the total acreage of this nursery up to forty-two acres.

2. The ten acre Cleveland Nursery in Greenville was established as a temporary nursery for locust only.

3. The Camden Nursery production was increased 41%.

The chart on page 23 shows the number of forest tree seedlings planted in South Carolina from 1928 to 1936 and is an indication of the increased interest in reforestation. The chart on page 24 shows the number of forest tree seedlings sold only to farmers and timberland owners during the period 1929

to 1936. This chart does not include any Civilian Conservation Corps reforestation projects or other Federal projects.

Form No. 6 on page 32 shows the complete distribution by species into counties of all forest tree seedlings produced in the State Forest Service nurseries during the past fiscal year.

Attached is a detailed report on certain research forest tree plantations having been established by the South Carolina State Forest Service beginning in the year 1932.

Also attached is a report on woodland and reforestation examination reports made during last fiscal year.



TABLE NO. 1  
FOREST TREE NURSERY PRODUCTION FROM S. C. STATE OPERATED NURSERIES  
Winter 1935-36

| Nursery          | Longleaf   | Slash     | Loblolly  | Locust    | Walnut | Grand Total<br>for Each<br>Nursery |
|------------------|------------|-----------|-----------|-----------|--------|------------------------------------|
| Georgetown ..... | 11,338,500 | 716,400   | 4,989,500 | 96,750    | ....   | 17,141,150                         |
| Camden .....     | 364,941    | 758,916   | 376,262   | .....     | 48,442 | 1,548,561                          |
| Cleveland .....  | .....      | .....     | .....     | 1,083,000 | ....   | 1,083,000                          |
| Total .....      | 11,703,441 | 1,475,316 | 5,365,762 | 1,179,750 | 48,442 | 19,772,711                         |

**Remarks:**

The production at the Georgetown Nursery for 1935 represents an increase of 71% over that of 1934.

The production at the Camden Nursery for 1935 represents an increase of 42% over that of 1934.

TABLE NO. 2  
 GEORGETOWN FOREST TREE NURSERY—GEORGETOWN, S. C.  
 PRODUCTION—17,141,150 FOREST TREE SEEDLINGS  
 Summary of Distribution (December 1935 to March 1936)

| Receiving Agency   | Species and Number |               |            | Total for Each Agency | Where Planted                           |
|--|--------------------|---------------|------------|-----------------------|---|
|  | Loblolly Pine      | Longleaf Pine | Slash Pine | Black Locust          |   |
| Soil Conservation Service<br>South Carolina .....            | 4,634,500          | 60,000        | 338,650    | ....                  | Piedmont Section, South Carolina        |
| Soil Conservation Service<br>Georgia .....                   | .....              | 2,275,000     | .....      | ....                  | Georgia SCS Projects                    |
| Resettlement Administration<br>South Carolina .....          | .....              | 6,500,100     | .....      | ....                  | Sumter and Chesterfield Counties, S. C. |
| S. C. State Parks and Forests and<br>E. C. W. Projects ..... | 355,000            | 2,503,400     | 377,750    | 96,750                | All Over the State                      |
| GRAND TOTALS .....   | 4,989,500          | 11,338,500    | 716,400    | 96,750                | 17,141,150                              |

Remarks:  
 The production of 17,141,150 forest tree seedlings at this nursery represents an increase of 71% over the year 1934.

TABLE NO. 3  
CAMDEN FOREST TREE NURSERY—CAMDEN, SOUTH CAROLINA  
PRODUCTION—1,548,561 FOREST TREE SEEDLINGS  
Summary of Distribution (December 1935 to March 1936)

| Distribution                           | Species and Number |               |               | Totals    | Remarks   |
|--|--------------------|---------------|---------------|-----------|---|
|  | Slash Pine         | Longleaf Pine | Loblolly Pine |           |   |
| Commercial Sales .....                 | 477,350            | 98,000        | 126,750       | 723,550   | Planted by Farmers and timberland owners in South Carolina  |
| Demonstration & Experimental Plantings | 49,966             | 6,941         | 19,512        | 84,561    | Planted by Schools, Civic Clubs and County Demonstrations in South Carolina   |
| State Lands .....                      | 93,000             | 235,000       | 120,000       | 462,750   | Planted on State Forest Parks in South Carolina   |
| Emergency Conservation Work & Others   | 138,600            | 25,000        | 110,000       | 277,700   | Used by Soil Conservation Service, U. S. Forest Service, Resettlement Administration & Civilian Conservation Corps Educational Project in S. C. |
| GRAND TOTALS .....                     | 758,916            | 364,941       | 376,262       | 1,548,561 |   |

CLEVELAND FOREST TREE NURSERY—CLEVELAND, S. C.  
PRODUCTION—1,083,000 BLACK LOCUST SEEDLINGS (ONLY)  
Summary of Distribution (December 1935 to January 1936)

|                                 |           |   |
|---------------------------------|-----------|---|
| Soil Conservation Service ..... | 1,073,000 | Planted in Piedmont Section of South Carolina           |
| State Lands .....               | 10,000    | Planted on Paris Mountain State Park, Greenville County |
| TOTAL .....                     | 1,083,000 |   |

TABLE NO. 4  
DEMONSTRATION FOREST TREE PLANTINGS ON STATE FOREST PARKS IN SOUTH CAROLINA—FISCAL YEAR (1935-36)  
Total Number Planted, 1,221,650

| Name of State<br>Forest Parks | Species and Number |                  |                  |                   |                 |                 |                  |          | Totals    |
|-------------------------------|--------------------|------------------|------------------|-------------------|-----------------|-----------------|------------------|----------|-----------|
|                               | Slash<br>Pine      | Longleaf<br>Pine | Loblolly<br>Pine | Shortleaf<br>Pine | Black<br>Locust | Black<br>Walnut | Yellow<br>Poplar | Chestnut |           |
| Givhans Ferry .....           | 150,000            | 200,000          | .....            | ....              | ....            | ....            | ....             | ....     | 350,000   |
| Poinsett .....                | 79,000             | 136,500          | .....            | ....              | ....            | ....            | ....             | ....     | 215,500   |
| Cheraw .....                  | .....              | 150,000          | .....            | ....              | ....            | ....            | ....             | ....     | 150,000   |
| Chester .....                 | 2,000              | 2,500            | 160,000          | ....              | 32,600          | 5,000           | ....             | ....     | 202,100   |
| Aiken .....                   | 100,500            | 109,000          | .....            | ....              | 4,000           | 4,000           | ....             | ....     | 217,500   |
| Paris Mountain .....          | 10,000             | 5,000            | 10,000           | 15,000            | 26,000          | 9,750           | 10,000           | *800     | 86,550    |
| GRAND TOTALS                  | 341,500            | 603,000          | 170,000          | 15,000            | 62,600          | 18,750          | 10,000           | 800      | 1,221,650 |

Note: The list does not include all of the State Parks.

\*The 800 Chestnut seedlings planted on Paris Mountain State Park represent several strains of supposedly "blight" resistant chestnut trees. They were supplied by the Soil Conservation Service to the S. C. State Forest Service and have been planted for experimental purposes.



TABLE NO. 5

**STATEMENT OF FOREST TREE SEED HANDLED BY STATE FOREST SERVICE**  
**During Period July 1, 1935 to June 30, 1936**

Seed Species—Amounts in Pounds

|  | Longleaf<br>Pine | Slash<br>Pine | Loblolly<br>Pine | Shortleaf<br>Pine | Yellow<br>Poplar | Ash  | Grand Totals |
|--|------------------|---------------|------------------|-------------------|------------------|------|--------------|
| Amt. of Seed on Hand July 1, 1935 ....                 | 5,749            | 1,643         | 3,254            | none              | none             | none | 10,646 lbs.  |
| *Amount of Seed Purchased .....                        | none             | none          | none             | 108               | 300              | 100  | 508 lbs.     |
| Amount of Seed Collected .....                         | 2,954            | none          | 1,991            | 51                | none             | none | 4,996 lbs.   |
| TOTALS....   | 8,703            | 1,643         | 5,245            | 159               | 300              | 100  | 16,150 lbs.  |
| Amount of Seed Sowed in S. C. State<br>Nurseries ..... | 7,317            | 391           | 1,623            | 145               | 300              | 100  | 9,876 lbs.   |
| Bal. of Seed on Hand June 30, 1936 .....               | 1,386            | 1,252         | 3,622            | 14                | none             | none | 6,274 lbs.   |

\* "Amount of Seed Purchased"—Seed shown under this heading was not actually purchased, but contributed by the Soil Conservation Service to the State Forest Service in order to produce additional seedlings for that agency.

**DISTRIBUTION OF SEEDLINGS PRODUCED BY COMMISSION OF FORESTRY IN THE  
COUNTIES OF SOUTH CAROLINA—1935-36**

| County             | Slash     | Longleaf  | Loblolly  | Walnut | Locust    | Totals     |
|--------------------|-----------|-----------|-----------|--------|-----------|------------|
| Abbeville .....    | 10,000    | .....     | 321,025   | .....  | .....     | 331,025    |
| Aiken .....        | 152,700   | 371,200   | 2,500     | 4,500  | 4,000     | 534,900    |
| Allendale .....    | 58,000    | 222,000   | .....     | 250    | 1,000     | 281,250    |
| Anderson .....     | 16,012    | 11,062    | 693,049   | 6      | 79,810    | 799,939    |
| Bamberg .....      | 5,000     | 10,000    | 5,000     | .....  | .....     | 20,000     |
| Barnwell .....     | 4,000     | 149,000   | .....     | .....  | .....     | 153,000    |
| Beaufort .....     | 101,900   | .....     | .....     | .....  | .....     | 101,900    |
| Calhoun .....      | 2,400     | .....     | .....     | .....  | 2,000     | 4,400      |
| Cherokee .....     | 3,000     | 3,000     | 310,025   | .....  | 100,810   | 416,835    |
| Chester .....      | 46,300    | 2,500     | 535,075   | 5,500  | 32,600    | 621,975    |
| Chesterfield ..... | 151,700   | 3,313,550 | 2,250     | 3,000  | .....     | 3,470,500  |
| Clarendon .....    | 43,500    | 64,500    | .....     | .....  | .....     | 108,000    |
| Colleton .....     | 63,000    | 45,500    | .....     | .....  | .....     | 108,500    |
| Darlington .....   | 21,000    | 40,700    | .....     | 5,000  | 500       | 67,200     |
| Dillon .....       | 6,600     | 5,000     | 300       | .....  | 1,000     | 12,900     |
| Dorchester .....   | 150,000   | 200,000   | .....     | .....  | .....     | 350,000    |
| Edgefield .....    | .....     | 1,000     | .....     | .....  | .....     | 1,000      |
| Fairfield .....    | 115,000   | 10,000    | 400,025   | .....  | .....     | 525,025    |
| Florence .....     | 22,430    | 49,215    | 5,280     | .....  | .....     | 76,925     |
| Georgetown .....   | 21,200    | 20,000    | .....     | .....  | .....     | 41,200     |
| Greenville .....   | 10,100    | 5,100     | 39,100    | 13,050 | 101,860   | 169,210    |
| Greenwood .....    | 34,000    | 5,000     | 401,025   | .....  | 155,810   | 595,835    |
| Hampton .....      | 67,000    | 33,500    | .....     | .....  | .....     | 100,500    |
| Horry .....        | 1,000     | 20,000    | .....     | .....  | .....     | 21,000     |
| Jasper .....       | 560       | .....     | .....     | .....  | .....     | 560        |
| Kershaw .....      | 36,500    | 191,050   | 22,000    | .....  | .....     | 249,550    |
| Lancaster .....    | 10,000    | 10,000    | 300,425   | 3,000  | 70,810    | 394,235    |
| Laurens .....      | 1,000     | .....     | 344,025   | 1,000  | .....     | 346,025    |
| Lee .....          | 1,000     | 21,000    | .....     | .....  | .....     | 22,000     |
| Lexington .....    | 5,000     | 34,000    | .....     | .....  | .....     | 39,000     |
| Marion .....       | .....     | 1,000     | .....     | .....  | .....     | 1,000      |
| Newberry .....     | 68,000    | 10,000    | 489,925   | .....  | 106,810   | 674,735    |
| Oconee .....       | 600       | .....     | 59,000    | .....  | 8,000     | 67,600     |
| Orangeburg .....   | 11,600    | 22,200    | .....     | 500    | 6,000     | 40,300     |
| Pickens .....      | 8,000     | .....     | 242,525   | .....  | 86,810    | 347,335    |
| Richland .....     | 15,000    | 76,400    | 60,000    | .....  | .....     | 151,400    |
| Saluda .....       | 1,000     | 2,500     | 3,000     | .....  | 3,000     | 9,500      |
| Spartanburg .....  | 1,000     | 10,600    | 415,974   | 4,400  | 55,110    | 487,084    |
| Sumter .....       | 227,200   | 3,517,450 | 21,000    | 7,400  | 1,700     | 3,774,750  |
| Union .....        | .....     | .....     | 450,525   | .....  | 20,810    | 471,335    |
| Williamsburg ..... | 51,000    | 2,000     | .....     | .....  | .....     | 53,000     |
| York .....         | 39,950    | 13,200    | 1,059,323 | .....  | 352,810   | 1,465,283  |
| Totals .....       | 1,583,252 | 8,493,227 | 6,182,376 | 47,606 | 1,191,250 | 17,497,711 |

*Research Work*

Research work in forestry, in general, has been carried on by the National Forest Service through the Forest Experiment stations of that Department. The lack of personnel within the organization of those stations, through shortage of funds and the tremendous territory covered by each, limits to a very large degree the number of projects which can be undertaken by them. It has long been felt necessary, therefore, that some research work along certain lines be undertaken by the Forestry Commission of South Carolina. From time to time, therefore, the Commission has established plots designed to answer several questions. These plots are in reality of the semi-research nature, in that, no attempt is made to go into the program along highly scientific lines, and in some cases an effort is made to combine demonstration with research work. Some forty Vocational Agricultural schools are today maintaining plots of various sorts. Some of those are fire plots in which one site is burned over each year, the other site carefully protected. Others are thinning plots where every tree is numbered and the annual increment carefully measured each year, and contrasted with similar areas of unthinned trees. In addition to the Vocational Agricultural school plots, other research areas have been set up as follows:

1. At the Sand Hills Agricultural Experiment Station near Pontiac, S. C., the four important species of Southern Pine were planted beneath scrub oak, each pine under three different systems of scrub oak treatment. For each species the scrub oak was cut away completely in one case; in a second case the tree was hacked and its top forced to the ground; and in the third, the scrub oak was not disturbed but the trees were planted beneath it.

2. On the Coe Plantation in Colleton County another research area was laid out for the purpose of determining the best spacing for longleaf pine for assistance in reforestation methods. In one area the trees were planted six feet apart in the rows with the rows six feet apart. In the second plot the trees were planted four feet apart in the rows with the rows four feet apart. In a third plot the trees were planted eight feet apart in the rows with the rows eight feet apart.



3. On the McTeer Plantation in Beaufort County a research plot similar to No. 2, was established, using slash pine instead of longleaf. The same spacing was used in the rows. The idea in all of these plantations is to determine the proper spacing by keeping careful record of the growth of the trees and the age at which the growth starts to fall off as a result of overcrowding.

4. The Rosemont Plot was established on the Rosemont Plantation in Laurens County and is very similar to Nos. 2 and 3, except that loblolly and shortleaf pine was used and that small areas of slash pine and longleaf pine were planted to determine their suitability for use on the Cecil clay hills of the Piedmont.

5. The Guess Research Plot was located upon the Guess Plantation in Bamberg County, S. C., and was very similar to the others except that slash pine only was used in planting and a different spacing was used. Here trees were planted in one plot, 15 feet apart in the rows with the rows 15 feet apart; another with the trees 11 feet apart in the rows and the rows 11 feet apart; another with trees  $7\frac{1}{2}$  feet apart in the rows with the rows  $7\frac{1}{2}$  feet apart, and a fourth plot with trees  $3\frac{3}{4}$  feet apart in the rows with the rows  $3\frac{3}{4}$  feet apart.

6. In the Graniteville Research Plots in Aiken County, S. C., in the year 1934, a more elaborate research plot was laid out to determine the best treatment of scrub oak where reforestation was desired upon sand hill scrub oak lands. Under this planting scrub oak was given thinning treatment and under-planted for each treatment with longleaf pine, slash pine and black locust.

7. The Ansell Research Plots on the Ansell Plantation in Pickens County was a Research and Demonstration of methods of utilizing worn out farm lands for timber production, using green ash spaced on one plot eight feet by ten feet, on another plot six feet by eight feet, on another plot five feet by five feet, and on another plot spacing trees eight by eight, and alternating the green ash with black locust. A fifth plot was here established with trees spaced eight feet by ten feet with alternate rows of green ash and black locust. A sixth plot was green ash spaced six feet by six feet. A seventh plot was black locust spaced four by four feet; and an eighth plot was green ash spaced six by six feet.



8. The Givhans Ferry State Park Research Plot included approximately ten acres in which alternate rows of slash pine, black walnut, green ash, red gum, black locust and yellow poplar were planted after the manner of mixed hardwood and pine forest.

9. The Ninth Research Plot is a demonstration research forest thinning made on the property of George A. Epting, Newberry, R. F. D., No. 3, in a wood lot consisting of approximately three and three-fourth acres of pure loblolly pine about 15 years of age. The object of this growth was to determine the best spacing for trees of that age. Two different species were used in the thinnings. One area was thinned so that trees were left approximately six feet apart; the other area so that trees were left approximately eight feet apart. A third plot was left unthinned as a check plot with which to compare the annual growth of all trees upon the other two thinned areas. It was the desire of the owner (and this desire is prevalent among most timber land owners) to have his stand opened up so as to permit access to remove pine straw and to increase growth to the maximum, but not to a sufficient density that weeds and grasses would come in to the stand. This plot is to be measured this year.

#### *Woodland and Reforestation Examinations*

Woodland examinations were made which covered 17,570 acres. These examinations were made by the District Foresters at the request of farm woodland owners and timberland owners who desired information as to the proper methods of handling their timbered properties. Two types of examinations were made, namely: Extensive examinations and (2) Intensive examinations. The extensive examinations were made in those cases where the property owner desired specific information on what procedure to take in thinning a young pine stand or what cutting practices to follow to improve an older stand, or what system of fire protection to use.

Intensive examinations were made where the property owner desired a reconnaissance survey of his whole property to determine what areas should remain in forest land or those open areas which should be forested and how they should best be handled. These examinations involved sketches of the property

and lengthily written reports. An example of this type of examination was made during the past fiscal year on the John de la Howe School properties in McCormick County. The examination covered the entire property of the school of 1,800 acres and a very intensive survey was made by the South Carolina State Forest Service in cooperation with the Appalachian Forest Experiment Station. The purpose of the examination was to gather forest data with which to make a twenty year management plan of the 1,100 acres to determine the amounts of wood products to remove yearly for the best utilization of the forest and still keep it in a good useful growing condition. The 1,100 acres of forest land is timbered mostly with virgin and second growth stands of principally shortleaf pine. The State Forest Service will act in advisory capacity to the School on any matters dealing with the management of these timbered acres.

Two hundred and eighty-five examinations were made on farm properties and timberland properties where the owners desired to reforest or plant in forest tree seedlings. Over 5,000 acres were covered in these examinations in 37 counties of the State.

## PUBLIC RELATIONS

*Vocational Agricultural Forestry Project*

This program was started in 1931 by the State Forest Service in cooperation with the State Department of Education through its division of Vocational Agriculture.

During last school year 1,103 boys enrolled in the Vocational Agriculture classes of 41 high schools of the State to study forestry.

The principle objective of this program is to teach farm boys the elementary, but fundamental principles of forestry practices that have practical and economical application for the better handling of farm woodlands. The teaching of this course is done by the Vocational Agricultural Teacher in the classroom and principles learned there are put into practice on ten-acre demonstration forests or sample plots. The photograph on page 38 shows a class of vocational agricultural students thinning out a dense loblolly pine stand on the Hillcrest School Forest, Sumter County.

The following table shows the number of boys taking forestry, doing "home forestry" project work, visitors to projects and adults doing forestry work as result of contact with the program:

|   |       |
|---|-------|
| 1. Number of schools handling project .....                                       | 41    |
| 2. Number of boys taking forestry course .....                                    | 1,103 |
| 3. Number of boys taking home forestry projects .....                             | 427   |
| 4. Number of visitors to school forestry projects .....                           | 1,160 |
| 5. Number of adults who did forestry work as a result of<br>school forestry ..... | 51    |

The "home forestry" project work is one of the most important parts of this program. A total of 427 boys took home projects and 358 completed them. The following table shows the four types of "home forestry" projects:

|  |     |
|--|-----|
| Seed Beds (for raising forest tree seedlings) .....                              | 121 |
| Forest Tree Plantations .....  | 21  |
| Fire-breaks (raked or plowed protection strips around for-<br>ested areas) ..... | 52  |
| Improvement Cuttings .....   | 164 |

To stimulate interest in the course the State Forest Service last school year gave cash prizes to an up-state and low-state school having done the best school forestry work; cash prize to one out-



standing Vocational Agriculture teacher in the State having taught the best work in forestry and one up-state and one low-state boy having done the best "home forestry" project work are awarded an educational trip outside of the State. Due to the keen competition among schools and teachers this last year it was found necessary in the judging of projects to award first and second prizes to two—up-state schools, two low-state schools and two teachers,—one from the up-state and one from the low-state. The following table gives the names and ratings:



Vocational agricultural school boys practice forest thinning upon demonstration school forest to provide revenue, remove inferior tree species and increase growth of remaining trees.—Hillcrest School, Sumter County.

#### Schools:

Up-State—1st place—Chester High School.

Up-State—2nd place—Lexington High School.

Low-State—1st place—Walterboro High School.

Low-State—2nd place—McClellanville High School.

#### Teachers:

Up-State—R. D. Poore—Walhalla High School.

Low-State—W. H. Wooten—Andrews High School.

#### Boys:

Up-State—Wesley Wingate—Rock Hill High School.

Low-State—Henry Hudson—Walterboro High School.



The interest in this course has increased, especially during the last two years, and now there are approximately ten additional schools requesting that the State Forest Service start them on this program as soon as possible.

### *Fair Exhibits*

Eighteen forestry exhibits were displayed at the State Fair and County Fairs during the Fall season of 1935. These exhibits were displayed at the following fairs. State Fair, Columbia; Spartanburg, Anderson, Rock Hill, Union, Florence, Sumter, Walterboro, Charleston, Orangeburg, Darlington, Greenwood, Laurens, Pickens, Bishopville, Camden, Greenville and Bennettsville.

The number of fairs at which forestry exhibits were shown was an increase of six over the year 1934.

The Civilian Conservation Corps assisted in the construction of the exhibits under the supervision of the State Forest Service. Two types of exhibits were mainly shown—"Woods Products Exhibit" and "Fire Protection Exhibit." The latter exhibit was a specially prepared relief map of South Carolina depicting the three different forest protection systems, namely: County Units, Association Units and Detection Units. The different units being shown in various colors. Miniature fire towers accurately located on the map served to show the tower system. A mechanically operated revolving drum, placed back of the map, had written statements explaining the cooperative forest fire protection system.

### *Lectures and Radio Talks*

Seventy-five lectures were made by the State Forest Service personnel this past fiscal year to farm organizations, civic and service clubs, schools and over radio. Several of the lectures were illustrated using slides on various phases of forestry and historical trees of South Carolina. Talks were given on the new State Parks and Forests.

The radio talks were made from Stations, WIS, Columbia; WFBC, Greenville, WCSB, Charleston and WBT, Charlotte, North Carolina.

Plans are under way to provide facilities for an intensive visual education program of forestry and State Park motion picture lectures throughout the State this year.

### *News Releases and Publications*

Over 200 articles on various phases of forestry and State Park work in South Carolina were released to newspapers in the State and out of State press by the South Carolina State Forest Service.

This number of news releases represented a 100% increase over the year 1934.

Two important publications were issued by the State Forest Service this past fiscal year: A "State Park" bulletin listing the names, locations, development features and purposes of the Parks being developed in the State.

The other publication being a booklet,—“The South Carolina Civilian Conservation Corps Forester.” This publication is to be used in the educational program in the State supervised CCC camps and was prepared by Emergency Conservation Work and published by the State Commission of Forestry.

Leaflets were published on four radio talks made by staff personnel of the State Forest Service. Subjects covered in these leaflets are: “The Economic Aspects of Forestry in South Carolina,” “Forest Fire Protection in South Carolina,” “State Parks in South Carolina” and “Reforestation in South Carolina.”

11,000 forest fire posters were printed in cooperation with the various forest protective associations cooperating with the State Forest Service.

### *Forestry Essay Contest*

“Forestry Phrase” contests were conducted in 409 grade schools and high schools. These contests were largely conducted in white and colored schools within or around Cooperative Forest Protection Units. Separate contests were held for white and colored schools.

Pupils in grades from the sixth through the eleventh were eligible for participation in the contest. The contest was based on the words "Prevent Woods Fires" and another "Save the Forests." Each letter in these words was used as the first letter of the first word in a phrase of not less than three words and not more than five words. It required that the phrases refer to forests, forestry, or the conservation of forest resources. The contestants were judged on the basis of subject matter, originality, neatness and legibility.

### *Distribution of Forestry Literature*

Over 50,000 pieces of forestry literature were distributed to individuals, various organizations, and schools principally within the State. This literature consisted of the Forestry Commission Annual Reports, State Park leaflet, printed radio addresses on different subjects of forestry in South Carolina, Conservation bulletins, "Stop Woods Fires" posters, Reforestation bulletins and others.

There were over 5,000 copies of the "State Parks" bulletin distributed both within the State and several States both in the South and North.

Over 5,000 forest fire posters were distributed principally within the Forest Protection Association units.

Forest Protection in South Carolina is handled by W. C. Hammerle, Assistant State Forester. His work is concerned with organizing groups of landowners into cooperative associations, the preparation of fire plans and budgets for each area, the collection of assessments, and the supervision through the District Foresters of the more than 500 individuals upon these areas who are employed in whole or part time in forest fire control.

The practicability of forest fire control in South Carolina is attested to by the fact that only 1.38% of the more than two and one-half million acres under cooperative fire control were burned over during the fiscal year.



## FOREST FIRE PROTECTION

### *Area Under Protection*

Cooperative forest fire protection work was provided on approximately one-fourth of the total forest area of South Carolina during the fiscal year. This represents the largest area under organized protection since cooperative protection work was initiated by the State Commission of Forestry in 1928.

At the beginning of the fiscal year 1935-36, there were 1,000,000 acres of forest land receiving intensive fire protection and an additional 500,000 acres receiving detection and reporting service only. In protecting this area there were organized under the jurisdiction of the Commission of Forestry sixteen (16) protective associations and eleven detection units. A total of four hundred and fifty-five (455) timberland owners and one county (Sumter) were cooperating financially with the Federal and State Governments in protecting this area.

During the year, five counties—Aiken, Barnwell, Florence, Georgetown, and Kershaw—entered county-wide forest fire protection work. As a result of this, five of the existing private protective associations were absorbed into the county-wide protective units. However, three of these old associations continued cooperation with the Commission for the purpose of constructing fire breaks and providing more intensive protection for their holdings. The actual forest area under protection during the fiscal year was 2,561,702 of which 2,367,692 acres were given intensive protection and 194,010 acres received extensive protection in the form of detection and reporting service to landowners. A total of six counties and 293 landowners in twenty-seven (27) units cooperated financially to the extent of \$33,861.09 in providing this protection service.

### *Protective Organization Personnel*

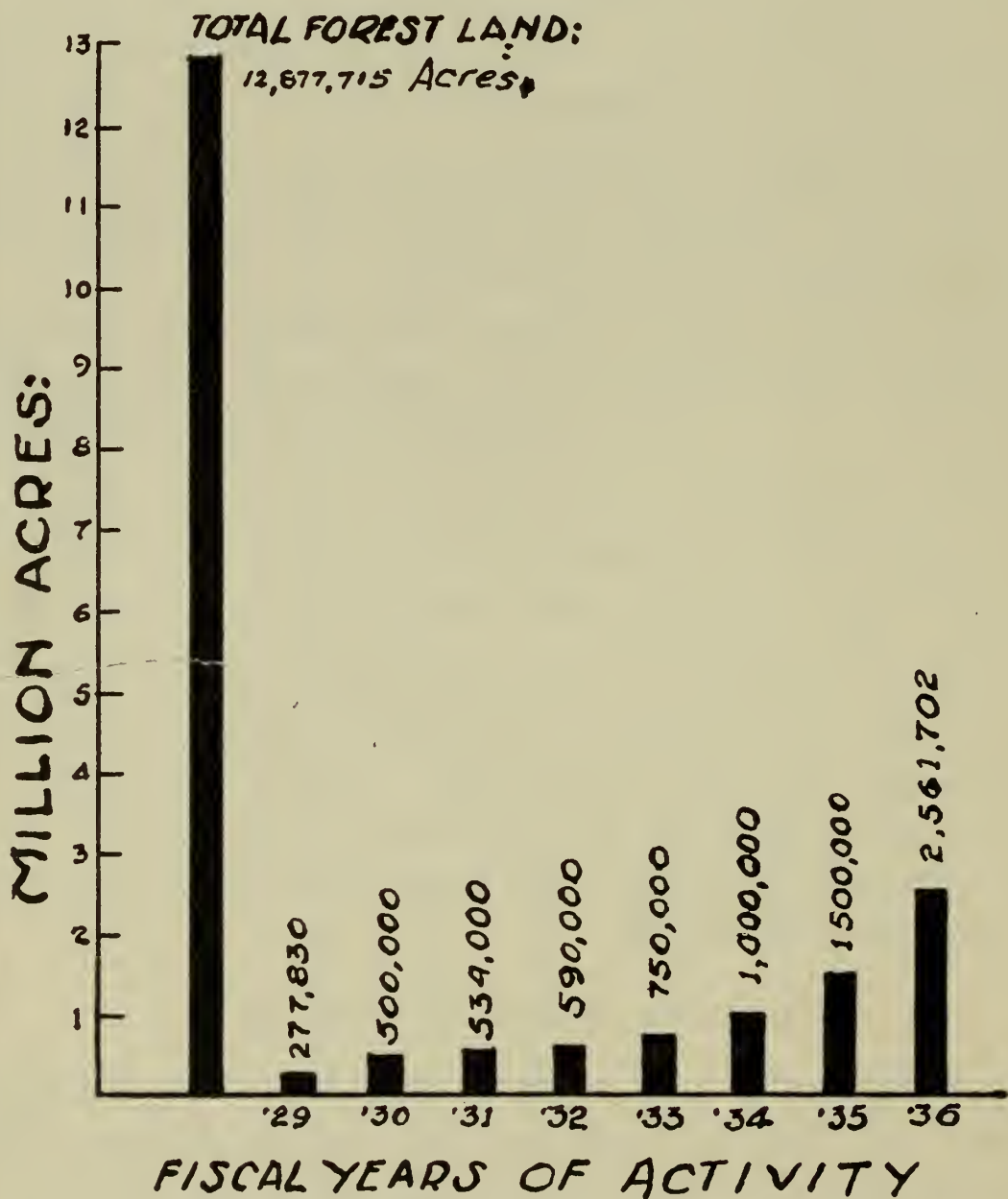
In protecting this area of forest land there were employed eighteen (18) rangers, twenty-five (25) wardens, forty-six (46) towermen, four hundred and ninety-seven (497) men in one hundred and sixty (160) retainer fee crews, and forty-one (41) men in nine (9) flexible fire fighting crews—making a total of 552 men actively engaged in fire protection work. In addition, 453 men were signed up in volunteer fire fighting crews on the va-

# PROGRESS CHART

## FOREST LANDS IN SOUTH CAROLINA

### UNDER

### ORGANIZED FOREST FIRE PROTECTION



rious units. Cooperating landowners also furnished their own employees without additional cost. Details as to the employment of these men by protective units are given in the paragraphs dealing with the individual units.





The results of 6 years of cooperative forest fire control. Part of a ten thousand acre tract of the Carolina Land Co. in Jasper County enlisted in the Jasper protective association.





90 Ft. Wood (Cypress Pole) Tower—Sumter County  
*Note:* Secondary tower used during periods of low visibility.

*Existing Protective Organizations*

(1) *Aiken County Association*: County-wide protection effective November 1935; 477,640 acres of woodland; one (1) County Ranger; three (3) County Wardens; three (3) towermen—two additional towermen will be employed next year at towers recently constructed; twenty (20) retainer fee crews composed of sixty (60) members. President—Monson Morris, Aiken, S. C.; Vice-President—E. P. Henderson, Bath, S. C.

(2) *Barnwell County Association*: County-wide protection effective November 1935; 166,626 acres of woodland; one (1) County Ranger; two (2) County Wardens; towers not constructed until end of year but will have three in operation next fiscal year; twenty-five (25) retainer fee crews composed of seventy-five (75) men. President—Edgar A. Brown, Barnwell, S. C.; Vice-President—Solomon Blatt, Barnwell, S. C.

(3) *Caesar's Head Association*: Private protective association composed of twelve (12) landowners and covering 43,467 acres of woodland in Greenville and Pickens Counties; one (1) Association Ranger; two (2) towermen; eight (8) retainer fee crews composed of thirty-six (36) men; cooperating since 1932. President—F. G. Hamblen, Greenville, S. C.; Vice-President—John L. Hawkins, Greenville, S. C.

(4) *Carolina Fibre Co. Association*: Private protective association composed of one member and covering 9,500 acres of woodland in Williamsburg County; two (2) wardens; one (1) towerman; company's woods and farm employees form fire fighting forces; cooperating since the fall of 1928. President—P. H. Rogers, Hartsville, S. C.

(5) *Estill Association*: Private protective association composed of seventeen (17) members and covering 21,302 acres of woodland in Allendale and Hampton Counties; one (1) Association Ranger; one (1) towerman; six (6) retainer fee crews composed of eighteen (18) men; cooperating since the fall of 1933. President—W. L. Rhodes, Estill, S. C.; Vice-President—W. C. Bryan, Fairfax, S. C.

(6) *Fairfield Association*: Association comprising one school district in Fairfield County at Jenkinsville and protecting 28,336 acres of woodland; one (1) ranger; one (1) towerman; forty-three (43) signed-up volunteer fire fighters; cooperating



since 1932. President—J. F. Yarborough, Jenkinsville, S. C.; Vice-President—W. L. Drummond, Jenkinsville, S. C.; Secretary-Treasurer—M. H. Sternenberg, Jenkinsville, S. C.

(7) *First Clarendon Association*: Private protective association composed of twenty-one (21) landowners and covering 22,895 acres in Clarendon County; one (1) ranger; one (1) towerman; four (4) retainer fee crew members; thirty-four (34) signed-up volunteer fire fighters; cooperating since 1934. President—G. T. Floyd, Manning, S. C.; Vice-President—P. G. Gourdine, Kingstree, S. C.

(8) *Florence County Association*: County-wide protection effective November 1935; 301,205 acres of woodland; one (1) County Ranger; three (3) County Wardens; three (3) towermen—additional towermen to be employed fiscal year 1936-37 at tower recently constructed near Timmonsville; twenty (20) retainer fee crews composed of sixty (60) members; three (3) flexible fire fighting crews of thirteen (13) men. President—W. Clyde Graham, Pamplico, S. C.; Vice-President—D. S. McCarthy, Florence, S. C.

(9) *Georgetown County Association*: County-wide protection effective January 1936; 499,614 acres of woodland (largest per cent—91%—of forest area of any county in South Carolina); one (1) County Ranger; three (3) County Wardens; three (3) towermen—additional towerman to be employed fiscal year 1936-37 at tower to be constructed south of Georgetown on Highway No. 17; twenty (20) retainer fee crews of sixty (60) men; three (3) flexible fire fighting crews composed of ten (10) men; seven (7) signed-up volunteer fire fighters. President—L. H. Siau, Georgetown, S. C.; Vice-President—L. T. Easley, Georgetown, S. C.

(10) *Hardeeville Association*: Private protective association composed of five (5) members and covering 29,800 acres of woodland in lower Beaufort County; one (1) ranger; one (1) towerman; four (4) retainer fee crews composed of twelve (12) members; three (3) signed-up volunteer fire fighters; cooperating since summer of 1933. President—J. C. McTeer, Hardeeville, S. C.; Vice-President—Lester Varn, Jacksonville, Florida.

(11) *Jasper Association*: Private protective association composed of four (4) members and covering 27,119 acres of wood-

land in Jasper County; one (1) ranger; one (1) towerman; six (6) retainer fee crews of sixteen (16) men; cooperating since 1932. President—J. Hoyt Langford, Gillisonville, S. C.; Vice-President—W. L. Rhodes, Estill, S. C.

(12) *Kershaw County Association*: County-wide protection effective November 1935; 271,106 acres of woodland; one (1) County Ranger; three (3) County Wardens; two (2) towermen—three additional towermen will be employed for the fiscal year 1936-37 at two towers constructed during last of this year and one to be constructed in fall of 1936; twenty (20) retainer fee crews composed of sixty (60) men. President—Henry Savage, Jr., Camden, S. C.; Vice-President—L. I. Guion, Lugoff, S. C.

(13) *Latta Association*: Private protective association composed of 101 landowners and covering 38,597 acres in Dillon and Marion Counties; one (1) ranger; one (1) warden; two (2) towermen; 172 signed-up volunteer fire fighters; cooperating since 1934. President—Dr. S. C. Henslee, Dillon, S. C.; Vice-President—H. N. Cousar, Dillon, S. C.; Secretary-Treasurer—Dr. Wade Stackhouse, Dillon, S. C.

(14) *Nichols Association*: Private protective association composed of sixty-two (62) landowners and covering 12,820 acres of woodland in Marion and Dillon Counties; one (1) ranger; one (1) towerman; 150 signed-up volunteer fire fighters; cooperating since 1934. President—Dr. W. L. Reaves, Mullins, S. C.; Vice-President—J. W. Smith, Mullins, S. C.; Secretary-Treasurer—W. G. Nichols, Nichols, S. C.

(15) *Stokes Association*: Private protective association composed of thirty-six (36) members and protecting 23,309 acres of woodland in Colleton County; one (1) ranger; one (1) towerman; six (6) retainer fee crews composed of eighteen (18) members; twenty-four (24) signed-up volunteer fire fighters; cooperating since 1934. President—M. P. Howell, Walterboro, S. C.; Vice-President—J. W. Williams, Ruffin, S. C.

(16) *Sumter County Association*: County-wide protection since fall of 1934 (First county in South Carolina to include entire county in forest fire protection); one (1) County Ranger; three (3) County Wardens; three (3) towermen; twenty-five (25) retainer fee crews composed of seventy-five (75) men; three



(3) flexible fire crews of eighteen (18) members; twelve (12) signed-up volunteer fire fighters. President—M. S. Boykin, Sumter, S. C.; Vice-President—S. K. Nash, Sumter, S. C.

(17) *West Virginia Pulp and Paper Co.*: Private protective association of one member covering 150,000 acres in Berkeley, Dorchester, Charleston and Colleton Counties; three (3) rangers; five (5) wardens; four (4) towermen; three (3) retainer fee crew members; cooperating since fall of 1928. President—C. P. Cuthbert, Charleston, S. C.

(18) *Detection Units*: Ten units composed of eighteen (18) landowners and covering a total of 194,010 acres of forest land for which detection and reporting service only is rendered. All fire fighting is performed entirely by tenants and employees of the property owners. Each unit employs one (1) towerman. These units are located in Berkeley, Dorchester, Colleton, Charleston, Jasper, Hampton, Williamsburg, and Horry Counties. This type of fire protection service to landowners was initiated in the fall of 1934.

#### *National Forests—Protection*

In addition to the forest fire protection provided by the State and Federal Governments through private and county associations, the Federal Government through the U. S. Forest Service has under protection at present 363,764 acres in four units of the South Carolina and Croatan National Forest. These lands are located in Union, Chester, Fairfield, Newberry, Laurens, Abbeville, McCormick, Edgefield, Greenwood, Saluda, Berkeley, Charleston and Oconee Counties.

#### *Proposed Protection*

Increased interest in forest fire control work was indicated during the year by the number of requests from landowners and county officials. The legislative delegations of both Lee and Richland Counties have provided funds for including their respective counties in county-wide forest fire protection work during the fiscal year 1936-37. It is also proposed that Dillon County enter county-wide protection during the 1936-37 fiscal year.

Interest in fire control work and plans for entering protection in the near future were initiated by landowners, county officials or both in the following cases:

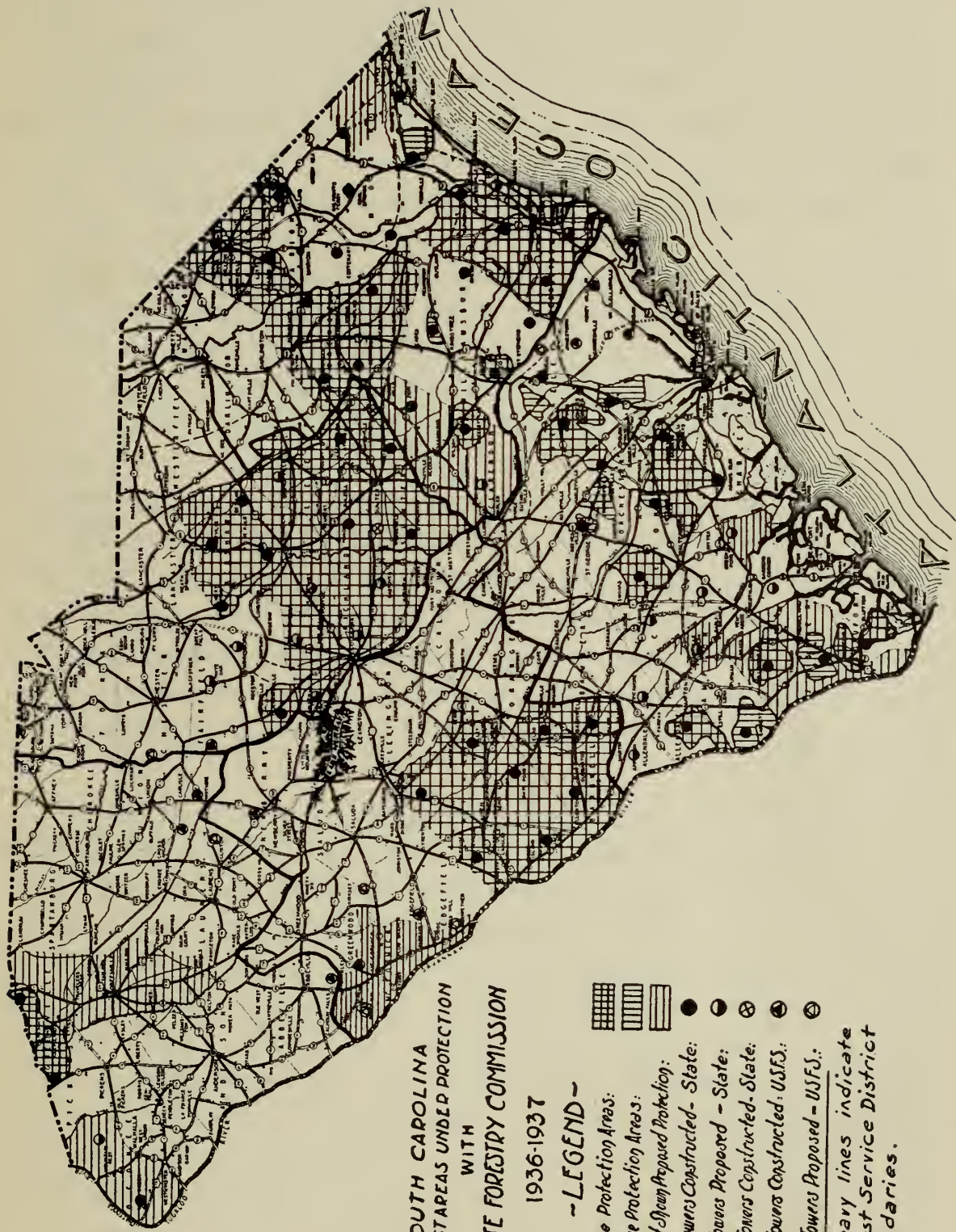
|                            |                                   |
|----------------------------|-----------------------------------|
| McCormick County           | Clarendon County                  |
| Oconee County (Upper Half) | Colleton County (Green Pond Sec.) |
| Greenville County          | Hampton County (Cummings Sec.)    |
| Jasper County              | Horry County (Loris-Wampee Sec.)  |
| Richland County            | Dillon County                     |

The forest areas under protection for the fiscal year 1936-37, and the areas where interest in future protection has been indicated are shown on the map on page 53 of this report.

### *Forest Fire Statistics*

Accurate data as to the acreage burned on the *extensive* protection units is not available due to the fact that the Commission cooperates only in detecting and reporting fires—the actual fire fighting being handled entirely by the landowners. On the *intensive* protection units, however, records are kept as accurately as possible and the data from these units have been compiled for this report.







On the seventeen intensive protective associations a total of 967 fires were suppressed during the year. The cooperating area burned was held down to 32,666.47 acres or 1.38% of the total area under intensive protection. The size of the average fire was 33.78 acres. Barnwell County had the least number of fires (67) of the county units while the Carolina Fibre and Nichols Associations with six (6) fires each had the least number of the private associations. Sumter County, which has been under county-wide protection for two years had the lowest per cent (0.9%) of woodland burned and the smallest acreage (18.2) per average fire of the county units. The Carolina Fibre Company Association in Williamsburg County had the lowest per cent (0.3%) of woodland burned and the smallest average (4.0) per average fire of the private associations. This area has been under cooperative protection for nine years. The Caesar's Head Association had the highest per cent. (4.9%) of woodland burned of any of the units. This area suffered a hurricane on March 17th, which uprooted considerable timber increasing the fire hazard. This was followed by a period of dry weather and extremely high winds making it exceptionally difficult to control the forest fires which occurred. All of the county-wide protection units had less than 1.75% of their total woodland area burned.

Of the 967 fires suppressed during the year only two or 0.2% of the total were caused by lightning. All of the rest—99.8% were man-caused and therefore could have been prevented. Two hundred fires or 20.7% of the total were classed as "debris burning" fires and burned the largest acreage of any of the causes. These are fires caused by farmers, tenants and others burning off fields, fence rows, rights-of-way, trash, etc. With proper care all of these fires could have been prevented from spreading to adjoining woodlands. "Incendiary" was second in number of fires with 20% of the total. This indicates that there is still considerable wilful and deliberate burning of other people's property for selfish, personal reasons. Railroads and lumbering operations were responsible for only 4% each of the total number of fires. Generally it is thought that these two causes are responsible for most forest fires but records indicate that their responsibility is limited to a small percentage.

Over 75% of the fires suppressed occurred in February, March, April, and May with the greatest number (31.3%) occurring in March. Fires occurred on protected areas in some sections of the State during every month in the year with the exception of September. The largest average area per fire occurred during the months of October and June. In both of these months extremely dry weather, with relatively high winds, for all or part of the month made fires harder to suppress than in the other months.

More detailed data concerning forest fire records for the fiscal year will be found on pages 56, 57, 58, 59, and 60.

**TABLE NO. 1**  
**SUMMARY OF REPORTED FIRES FOR INTENSIVE PROTECTED AREAS IN**  
**SOUTH CAROLINA**

July 1, 1935—June 30, 1936

| Protection Area (Intensive)   | Area Protected<br>(Acres) | No. Fires | Area Burned<br>(Acres) | Percent Burned | Average Size Fire<br>(Acres) |
|-------------------------------|---------------------------|-----------|------------------------|----------------|------------------------------|
| Aiken County *                | 477,640                   | 162       | 8,085.37               | 1.7            | 49.9                         |
| Barnwell County *             | 166,626                   | 67        | 2,883.25               | 1.7            | 43.0                         |
| Caesar's Head Association     | 43,467                    | 27        | 2,134.75               | 4.9            | 79.1                         |
| Carolina Fibre Company        | 9,500                     | 6         | 24.00                  | 0.3            | 4.0                          |
| Estill Association            | 21,302                    | 24        | 120.75                 | 0.6            | 5.0                          |
| Fairfield Association         | 28,336                    | 15        | 461.50                 | 1.6            | 30.8                         |
| 1st Clarendon Association     | 22,895                    | 9         | 937.00                 | 4.1            | 104.1                        |
| Florence County *             | 301,205                   | 138       | 3,130.00               | 1.04           | 22.7                         |
| Georgetown County **          | 499,614                   | 78        | 5,558.00               | 1.1            | 71.3                         |
| Hardeeville Association       | 29,800                    | 10        | 234.25                 | 0.8            | 23.4                         |
| Jasper Association            | 27,119                    | 35        | 1,175.25               | 4.3            | 33.6                         |
| Kershaw County *              | 271,106                   | 128       | 3,341.50               | 1.2            | 26.1                         |
| Latta Association             | 38,597                    | 29        | 556.00                 | 1.4            | 19.1                         |
| Nichols Association           | 12,820                    | 6         | 120.00                 | 0.9            | 20.0                         |
| Stokes Association            | 23,309                    | 50        | 715.25                 | 3.1            | 14.4                         |
| Sumter County                 | 244,356                   | 116       | 2,110.25               | 0.9            | 18.2                         |
| W. Va. P. & P. Co.—Charleston | 150,000                   | 67        | 1,079.35               | 0.7            | 16.1                         |
| Totals                        | 2,367,692                 | 967       | 32,666.47              | 1.38           | 33.78                        |

\* County-wide Protection November 1935-June 1936—8 months.

\*\* County-wide Protection January-June 1936—6 months.

**TABLE NO. 2**  
**CLASSIFICATION BY SIZE**  
**July 1, 1935—June 30, 1936**

| Size of Fire             | No. of Fires | Percent by<br>Number | Area Burned<br>(Acres) | Average Size of<br>Fire (Acres) |
|--------------------------|--------------|----------------------|------------------------|---------------------------------|
| Class A: 0-¼ Acres       | 37           | 3.8                  | 7.47                   | 0.20                            |
| Class B: ¼- 10 Acres     | 505          | 52.2                 | 2,133.25               | 4.22                            |
| Class C: 10-100 Acres    | 360          | 37.2                 | 12,801.75              | 35.56                           |
| Class D: 100-500 Acres   | 53           | 5.5                  | 9,189.00               | 173.33                          |
| Class E: 500- over Acres | 12           | 1.3                  | 8,535.00               | 711.25                          |
| Totals                   | 967          | 100.0                | 32,666.47              | 33.78                           |



TABLE NO. 3  
CLASSIFICATION BY CAUSE  
July 1, 1935—June 30, 1936

| Cause                | No. of Fires | Percent by Number | Area Burned (Acres) | Average Size of Fire (Acres) |
|----------------------|--------------|-------------------|---------------------|------------------------------|
| Lightning .....      | 2            | 0.2               | 34.00               | 17.00                        |
| Railroads .....      | 39           | 4.0               | 1,381.00            | 35.41                        |
| Campers .....        | 35           | 3.6               | 1,242.25            | 35.49                        |
| Smokers .....        | 158          | 16.3              | 4,664.90            | 29.52                        |
| Debris Burning ..... | 200          | 20.7              | 7,411.12            | 37.06                        |
| Incendiary .....     | 193          | 20.0              | 4,914.95            | 25.47                        |
| Lumbering .....      | 39           | 4.0               | 1,744.25            | 44.72                        |
| Miscellaneous .....  | 115          | 11.9              | 4,389.75            | 38.17                        |
| Unknown .....        | 186          | 19.3              | 6,884.25            | 37.01                        |
| Totals .....         | 967          | 100.0             | 32,666.47           | 33.78                        |

TABLE NO. 4  
SUMMARY OF FIRES BY MONTHS  
July 1, 1935—June 30, 1936

| Month           | No. of Fires | Percent by Number | Area Burned (Acres) | Average Size of Fire (Acres) |
|-----------------|--------------|-------------------|---------------------|------------------------------|
| July .....      | 4            | 0.4               | 12.00               | 3.00                         |
| August .....    | 4            | 0.4               | 6.00                | 1.50                         |
| September ..... | .....        | .....             | .....               | .....                        |
| October .....   | 13           | 1.4               | 760.25              | 58.48                        |
| November .....  | 30           | 3.1               | 362.75              | 12.09                        |
| December .....  | 69           | 7.1               | 2,295.45            | 33.27                        |
| January .....   | 63           | 6.5               | 1,643.75            | 26.09                        |
| February .....  | 123          | 12.7              | 3,969.95            | 32.28                        |
| March .....     | 302          | 31.3              | 11,754.25           | 38.92                        |
| April .....     | 155          | 16.0              | 5,005.82            | 32.30                        |
| May .....       | 151          | 15.6              | 4,024.00            | 26.65                        |
| June .....      | 53           | 5.5               | 2,832.25            | 53.44                        |
| Totals .....    | 967          | 100.0             | 32,666.47           | 33.78                        |

TABLE NO. 5  
SUMMARY OF FIRES BY PROTECTION UNIT AND CLASS  
Fiscal Year 1935-1936 (Cooperating Area Only)

| UNIT                                  | Class A<br>(0-1/4 Ac.) |        | Class B<br>(1/4-10 Ac.) |          | Class C<br>(11-100 Ac.) |           | Class D<br>(101-500 Ac.) |       | Class E<br>(Over 500 Ac.) |       |
|---------------------------------------|------------------------|--------|-------------------------|----------|-------------------------|-----------|--------------------------|-------|---------------------------|-------|
|                                       | No.                    | Area   | No.                     | Area     | No.                     | Area      | No.                      | Area  | No.                       | Area  |
| Aiken County *                        | 8                      | 1.87   | 78                      | 262.5    | 59                      | 2,183     | 14                       | 2,741 | 3                         | 2,897 |
| Barnwell County *                     | 2                      | 0.5    | 37                      | 293.75   | 27                      | 2,239     | 1                        | 350   | .....                     | ..... |
| Caesar's Head Association             | 2                      | (neg.) | 6                       | 26.5     | 10                      | 170.25    | 4                        | 400   | 5                         | 1,538 |
| Carolina Fibre Company                | .....                  | .....  | 6                       | 24       | .....                   | .....     | .....                    | ..... | .....                     | ..... |
| Estill Association                    | 3                      | 0.5    | 17                      | 44.25    | 3                       | 76        | 1                        | ..... | .....                     | ..... |
| Fairfield Association                 | .....                  | .....  | 5                       | 22.5     | 9                       | 239       | 1                        | 200   | .....                     | ..... |
| First Clarendon Association           | .....                  | .....  | 2                       | 15       | 4                       | 72        | 2                        | 250   | 1                         | 600   |
| Florence County *                     | 5                      | 1      | 66                      | 331      | 62                      | 1,962     | 5                        | 836   | .....                     | ..... |
| Georgetown County **                  | .....                  | .....  | 25                      | 112      | 42                      | 1,751     | 9                        | 1,595 | 2                         | 2,100 |
| Hardeeville Association               | .....                  | .....  | 5                       | 9.25     | 4                       | 185       | 1                        | 40    | .....                     | ..... |
| Jasper Association                    | 2                      | 0.5    | 23                      | 40.75    | 5                       | 72        | 5                        | 1,062 | .....                     | ..... |
| Kershaw County *                      | 4                      | 0.5    | 74                      | 259      | 45                      | 1,157     | 4                        | 525   | 1                         | 1,400 |
| Latta Association                     | 5                      | 1      | 17                      | 69       | 5                       | 166       | 2                        | 320   | .....                     | ..... |
| Nichols Association                   | .....                  | .....  | 3                       | 15       | 3                       | 105       | .....                    | ..... | .....                     | ..... |
| Stokes Association                    | 5                      | 1.5    | 25                      | 71.25    | 20                      | 642.5     | .....                    | ..... | .....                     | ..... |
| Sumter County                         | .....                  | .....  | 69                      | 366.25   | 45                      | 1,429     | 2                        | 315   | .....                     | ..... |
| West Virginia P. & P. Co., Charleston | 1                      | 0.1    | 47                      | 171.25   | 17                      | 353       | 2                        | 555   | .....                     | ..... |
| Totals                                | 37                     | 7.47   | 505                     | 2,133.25 | 360                     | 12,801.75 | 53                       | 9,189 | 12                        | 8,535 |

\* County-wide Protection November 1935-June 1936—8 months.

\*\* County-wide Protection January-June 1936—6 months.

TABLE NO. 6  
SUMMARY OF FIRES BY PROTECTION UNIT AND CAUSE  
Fiscal Year 1935-36 (Cooperating Area Only)

| UNIT                             | Lightning |        | Railroads |          | Campers |          | Smokers |          | Debris Burning |          | Incendiary |          | Lumbering |          | Miscel. |          | Unknown |          |
|----------------------------------|-----------|--------|-----------|----------|---------|----------|---------|----------|----------------|----------|------------|----------|-----------|----------|---------|----------|---------|----------|
|                                  | No.       | Area   | No.       | Area     | No.     | Area     | No.     | Area     | No.            | Area     | No.        | Area     | No.       | Area     | No.     | Area     | No.     | Area     |
| Aiken County *                   | ...       | ...    | 2         | 77       | 2       | 230      | 36      | 2,121.5  | 50             | 2,124.87 | 9          | 208.25   | 9         | 566.25   | 14      | 1,280.25 | 40      | 1,477.25 |
| Barnwell County *                | 1         | 34     | 3         | 206.5    | 7       | 281      | 14      | 784      | 20             | 967.5    | 5          | 82       | 2         | 100      | 5       | 193      | 10      | 235.25   |
| Caesar's Head Association        | 1         | (neg.) | ...       | ...      | 2       | 0.25     | 6       | 114      | 10             | 786      | 6          | 1,179.5  | ...       | ...      | ...     | ...      | 2       | 55       |
| Carolina Fibre Company           | ...       | ...    | ...       | ...      | ...     | ...      | 1       | 6        | ...            | ...      | 1          | 2        | ...       | ...      | ...     | ...      | 4       | 16       |
| Estill Association               | ...       | ...    | 1         | 0.5      | ...     | ...      | 4       | 1.15     | 1              | 4        | 2          | 5.1      | 1         | 2        | 12      | 77.75    | 3       | 30.25    |
| Fairfield Association            | ...       | ...    | 8         | 370      | ...     | ...      | 1       | 25       | 5              | 47.5     | ...        | ...      | 1         | 19       | ...     | ...      | ...     | ...      |
| First Clarendon Association      | ...       | ...    | ...       | ...      | ...     | ...      | ...     | ...      | 1              | 10       | ...        | ...      | 1         | 12       | 7       | 915      | ...     | ...      |
| Florence County *                | ...       | ...    | 1         | 1.0      | 3       | 150      | 26      | 367      | 39             | 958      | 15         | 367      | 3         | 358      | 21      | 505      | 30      | 424      |
| Georgetown County **             | ...       | ...    | ...       | ...      | 3       | 270      | 7       | 73       | 10             | 304      | 15         | 906      | ...       | ...      | 13      | 393      | 30      | 3,612    |
| Hardeeville Association          | ...       | ...    | ...       | ...      | ...     | ...      | 5       | 80.25    | 4              | 114      | ...        | ...      | 1         | 40       | ...     | ...      | ...     | ...      |
| Jasper Association               | ...       | ...    | 10        | 486      | 1       | 2        | 3       | 30.25    | 1              | 2        | ...        | ...      | 15        | 624      | 1       | 25       | 4       | 6        |
| Kershaw County *                 | ...       | ...    | 11        | 127      | 10      | 206      | 32      | 818      | 22             | 1,605    | 24         | 279.75   | 4         | 14       | 9       | 111      | 14      | 180.75   |
| Latta Association                | ...       | ...    | ...       | ...      | ...     | ...      | 1       | 0.5      | 7              | 16.5     | 17         | 528      | 1         | 4        | 2       | 5        | 1       | 2        |
| Nichols Association              | ...       | ...    | ...       | ...      | ...     | ...      | ...     | ...      | ...            | ...      | ...        | ...      | ...       | ...      | 6       | 120      | ...     | ...      |
| Stokes Association               | ...       | ...    | ...       | ...      | ...     | ...      | 3       | 32.75    | 5              | 79       | 22         | 221.75   | ...       | ...      | ...     | ...      | 20      | 381.75   |
| Sumter County                    | ...       | ...    | 3         | 113      | 7       | 103      | 15      | 145.5    | 21             | 337.25   | 37         | 907      | 4         | 5        | 9       | 102      | 23      | 397.5    |
| West Va. P. & P. Co., Charleston | ...       | ...    | ...       | ...      | ...     | ...      | 4       | 66       | 4              | 55.5     | 38         | 228.6    | ...       | ...      | 16      | 662.75   | 5       | 66.5     |
| Totals                           | 2         | 34     | 39        | 1,381.00 | 35      | 1,242.25 | 158     | 4,664.90 | 200            | 7,411.12 | 193        | 4,914.95 | 39        | 1,744.25 | 115     | 4,389.75 | 186     | 6,884.25 |

\* County-wide Protection November 1935-June 1936—8 months.  
\*\* County-wide Protection January-June 1936—6 months.



TABLE NO. 7

SUMMARY OF FIRES BY PROTECTION UNIT AND MONTH  
Fiscal Year 1935-36 (Cooperating Area Only)

| UNIT                           | July '35 |      | August |      | Sept. |      | October |        | Nov. |        | December |          | Jan. '36 |          | Feb'yry |          | March |           | April |          | May |          | June '36 |          |
|--------------------------------|----------|------|--------|------|-------|------|---------|--------|------|--------|----------|----------|----------|----------|---------|----------|-------|-----------|-------|----------|-----|----------|----------|----------|
|                                | No.      | Area | No.    | Area | No.   | Area | No.     | Area   | No.  | Area   | No.      | Area     | No.      | Area     | No.     | Area     | No.   | Area      | No.   | Area     | No. | Area     | No.      | Area     |
| Aiken County *                 | ..       | .... | ..     | .... | ..    | .... | ..      | ....   | 2    | 26     | 5        | 117      | 3        | 215      | 28      | 1,209.25 | 54    | 3,761.75  | 23    | 842.12   | 38  | 1,683.25 | 9        | 231      |
| Barnwell County *              | ..       | .... | ..     | .... | ..    | .... | ..      | ....   | 4    | 96.75  | 13       | 920      | 3        | 168      | 8       | 752.25   | 19    | 552.25    | 6     | 107      | 8   | 157      | 6        | 160      |
| Caesar's Head Association ..   | ..       | .... | ..     | .... | 1     | 1.5  | ..      | ....   | ..   | ....   | 5        | 0.25     | ..       | ....     | 2       | 2.0      | 7     | 1,502     | 6     | 514      | 5   | 105      | 1        | 10       |
| Carolina Fibre Company ....    | ..       | .... | ..     | .... | ..    | .... | ..      | ....   | ..   | ....   | 1        | 6        | 3        | 12       | ..      | ....     | 2     | 6         | ..    | ....     | ..  | ....     | ..       | ....     |
| Estill Association .....       | 2        | 3    | ..     | .... | ..    | .... | 2       | 0.5    | 1    | ....   | 4        | 4.5      | ..       | ....     | 3       | 33       | 5     | 69        | 3     | 3.75     | 3   | 5        | 1        | 2        |
| Fairfield Association .....    | ..       | .... | ..     | .... | ..    | .... | ..      | ....   | 2    | 5      | ..       | ....     | ..       | ....     | 2       | 75       | 2     | 55        | 2     | 225      | 4   | 63       | 3        | 38.5     |
| First Clarendon Association .. | ..       | .... | ..     | .... | ..    | .... | ..      | ....   | 1    | 150    | ..       | ....     | ..       | ....     | 1       | 600      | 4     | 52        | 3     | 135      | ..  | ....     | ..       | ....     |
| Florence County *              | ..       | .... | ..     | .... | ..    | .... | ..      | ....   | 4    | 12.0   | 13       | 408.0    | 9        | 121.0    | 21      | 252.0    | 38    | 908       | 24    | 489      | 18  | 715      | 11       | 225      |
| Georgetown County **           | ..       | .... | ..     | .... | ..    | .... | ..      | ....   | ..   | ....   | ..       | ....     | 20       | 696      | 9       | 248      | 25    | 1,329     | 23    | 1,785    | ..  | ....     | 1        | 1,500    |
| Hardeeville Association .....  | ..       | .... | ..     | .... | 1     | 0.75 | ..      | ....   | ..   | ....   | 1        | 0.5      | ..       | ....     | 2       | 50       | 3     | 175       | 1     | 4        | 2   | 4        | ..       | ....     |
| Jasper Association .....       | ..       | .... | ..     | .... | 6     | 756  | 2       | 2      | 4    | 2.25   | 7        | 22       | 4        | 2.25     | 7       | 22       | 6     | 11        | 2     | 12.5     | 3   | 340      | 1        | 0.5      |
| Kershaw County *               | ..       | .... | ..     | .... | ..    | .... | ..      | ....   | 7    | 11     | 9        | 184.7    | 7        | 257      | 8       | 69.95    | 33    | 1,676     | 23    | 453.35   | 38  | 606.5    | 3        | 83       |
| Latta Association .....        | ..       | .... | ..     | .... | ..    | .... | ..      | ....   | ..   | ....   | 2        | 240      | 3        | 5        | 2       | 6        | 14    | 56        | 2     | 35       | 4   | 34       | 2        | 180      |
| Nichols Association .....      | ..       | .... | ..     | .... | ..    | .... | ..      | ....   | ..   | ....   | 1        | 3        | 1        | 50       | 2       | 55       | 2     | 12        | ..    | ....     | ..  | ....     | ..       | ....     |
| Stokes Association .....       | ..       | .... | ..     | .... | 2     | 0.5  | ..      | ....   | ..   | ....   | 1        | 1.5      | 4        | 34.5     | 6       | 105      | 26    | 484.5     | 4     | 18.5     | 5   | 35.25    | 2        | 35.5     |
| Sumter County .....            | ..       | .... | ..     | .... | ..    | .... | ..      | ....   | 5    | 57     | 8        | 95       | 5        | 82       | 15      | 163.5    | 45    | 940       | 19    | 266.5    | 10  | 172      | 9        | 334.25   |
| W. Va. P. & P. Co., Cha'ston   | 2        | 9    | 4      | 6    | ..    | .... | 1       | 1      | 2    | 3      | 2        | 286      | 1        | 1        | 7       | 327      | 17    | 194.75    | 14    | 115.1    | 13  | 104      | 4        | 32.5     |
| Totals .....                   | 4        | 12   | 4      | 6    | ..    | .... | 13      | 760.25 | 30   | 362.75 | 69       | 2,295.45 | 63       | 1,643.75 | 123     | 3,969.95 | 302   | 11,754.25 | 155   | 5,005.82 | 151 | 4,024.00 | 53       | 2,832.25 |

\*County-wide Protection November 1935-June 1936—8 months.

\*\*County-wide Protection January-June 1936—6 months.

South Carolina's CCC camps engaged in forestry work on State and privately owned lands are under the immediate supervision of R. A. Conard, Director ECW. Mr. Conard is an employee of the Federal Government and in his capacity as Director of ECW is charged with the construction of projects conceived, planned, and located by the Forest Commission. In the operation of the 17 camps assigned us during the fiscal year covered by this report, a total of 154 camp months were used and over \$392,000 were expended through the office of the State Forester.

## EMERGENCY CONSERVATION WORK

During the year seventeen camps were assigned for forestry work on State-owned and private land. However, this number was gradually reduced during the first part of 1936 so that by April only eight camps were left.

The end of this fiscal year also marked the end of the third year of the CCC. During the first year it was not anticipated that the organization would be continued indefinitely and as a result there was an effort to get a quantity of work accomplished with less emphasis placed on the quality. During the second year the supervisory organization of the Emergency Conservation Work was enlarged and better standards of work were established.

The work, therefore, that was done during this fiscal year was in all phases of a higher type. For example, the roads, or truck trails, constructed compare favorably with the better class county roads and the bridges and culverts were designed for ten-ton loading and built of the most durable materials available.

In addition to the Aiken State Forest, which was started during the previous year, work on three additional State Forests was commenced. One is located in Oconee County, one in Greenville County and the third in Lee County. In all of these forests many features of a recreational nature have been constructed in addition to the fire protection, timber stand improvement and other forestry developments.

Last December the Director of ECW in Washington issued instructions that more emphasis must be placed on the educational program in the CCC camps. In accordance with this order a special assistant, Mr. D. Y. Lenhart, was put on in this department to work in cooperation with the Army educational service in enlarging the educational program in our camps. The supervisory personnel in each camp was drafted into this work, especially for vocational and forestry training. Mr. Lenhart prepared a booklet "The South Carolina Conservation Corps Forester" which was published by the State Forestry Commission, and it is contemplated in a month or so to start giving the enrollees a definite course in the elements of forestry.

Last October the Regional Forester authorized the installation of a Central Repair Shop for handling the heavy repair work



on our trucks, tractors and other equipment. This shop was placed at Sumter in November and has resulted in a great saving in the maintenance of our equipment. In addition to three mechanic foremen, who have general charge of the work, sixteen enrollees from Camp P-88, Lee County, are employed there. Incidentally, this is proving a valuable asset to the vocational training of these enrollees.

In May we received permission to install a small concrete pipe plant, which is located at Camp P-63, Sumter County. This plant makes 15-inch, 18-inch, and 24-inch pipe which is used by all of the camps under our jurisdiction in connection with truck trail construction.

The Central Warehouse, located near Camden, which was constructed last year, has proved very serviceable.

During the year great emphasis has been placed on the Safety Program. Safety meetings have been held in all camps once a week. These meetings are under the joint direction of the Company Commander and Superintendent and are attended by the foremen, leaders, assistant leaders, and truck drivers. Frequently the entire company attends.

In June a timber type survey was started of all counties in which camps are located. Later it is intended to extend this into other counties with the object of ultimately covering the whole State. The maps made from these surveys will prove valuable to the State Forester in planning forest fire protection work.

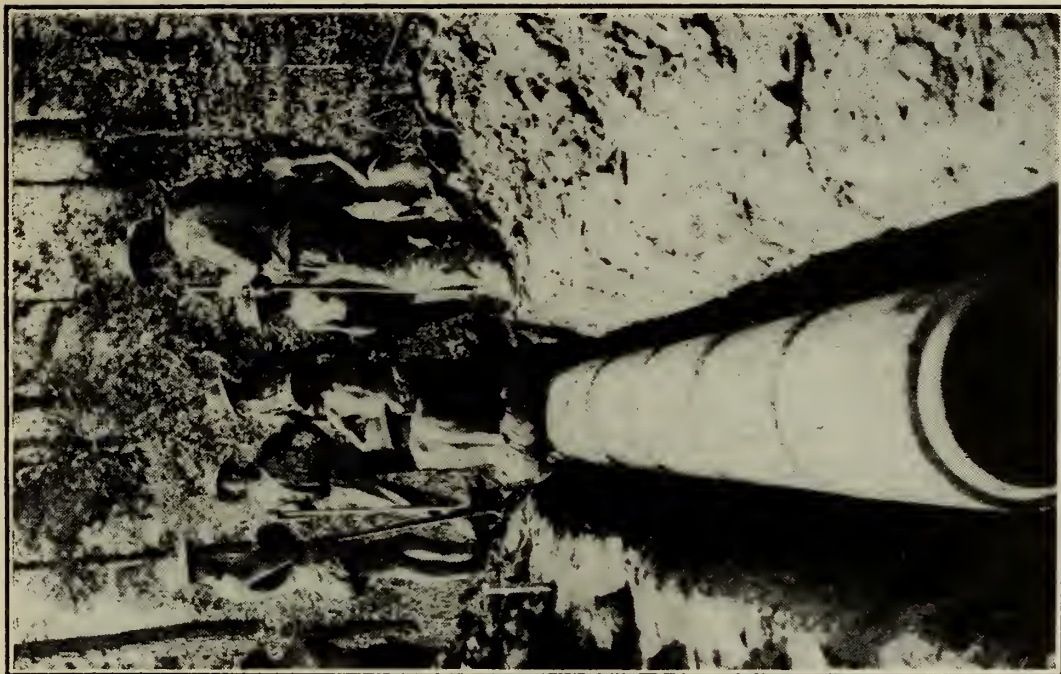
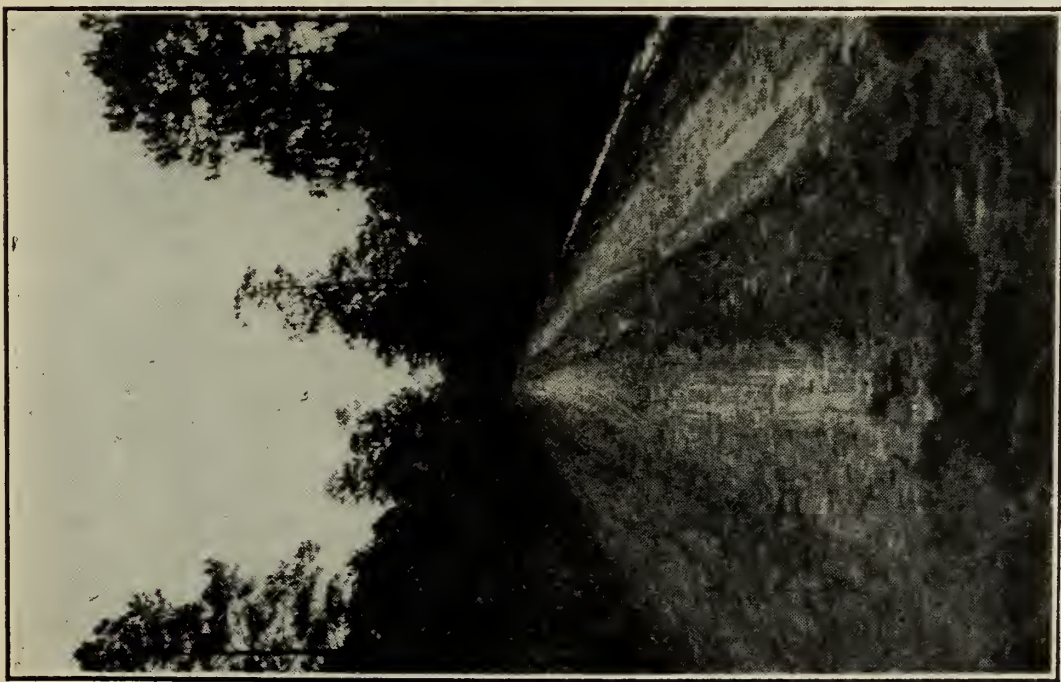
It is evident from the many inspection trips made to the camps that a high standard of morale among the enrollees is being maintained. The boys appear to be well fed, reasonably contented and display a serious minded attitude toward their work which is very gratifying. Credit for this should be given both to the Army officials and to our own supervisory personnel. The Company Commanders seem to take great pride in the appearance and operation of the camps and our superintendents and foremen show an equal pride in turning out work projects of a high order.

This office has received full cooperation from the Army officials of District "I" and District "B" without which many of our projects would have been seriously handicapped.

It is evident that the record made by the CCC program has reacted favorably on the public. Wherever an expression of

opinion has been obtained it has been uniformly high in its praise of the organization.

Following are two statements, one showing the cost of supervision, materials and equipment for the various camps for the year ending June 30, 1936, and the other showing the amounts of the various types of work accomplished.



Type of Truck Trails constructed by CCC camps for transportation and Fire Control upon forest protective association areas—Georgetown County. Note permanency of construction materials used. Concrete pipe manufactured in the CCC camp.



**STATE OF SOUTH CAROLINA  
REPORT ON EXPENDITURES\* BY CCC CAMPS  
EMERGENCY CONSERVATION WORK**

Period July 1, 1935 to June 30, 1936

| Camp No.            | County     | Period  |          | Amount               |
|---------------------|------------|---------|----------|----------------------|
|                     |            | From    | To       |                      |
| P-51                | Greenville | 7-1-35  | 6-30-36  | \$ 27,427.93         |
| P-53                | Florence   | 7-1-35  | 1- 8-36  | 11,741.62            |
| P-56                | Berkeley   | 7-1-35  | 4-28-36  | 20,978.31            |
| P-57                | Marion     | 7-1-35  | 10-24-35 | 7,764.27             |
| P-60                | Dorchester | 7-1-35  | 10-22-35 | 6,626.09             |
| P-61                | Georgetown | 7-1-35  | 6-30-36  | 21,870.27            |
| P-63                | Sumter     | 7-1-35  | 6-30-36  | 26,933.05            |
| P-64                | Beaufort   | 7-1-35  | 10-18-35 | 5,057.63             |
| P-68                | Colleton   | 7-1-35  | 10-24-35 | 7,204.74             |
| P-70                | Barnwell   | 7-1-35  | 6-30-36  | 33,844.32            |
| P-71                | Richland   | 7-1-35  | 6-30-36  | 35,647.77            |
| S-74                | Aiken      | 7-1-35  | 6-30-36  | 32,327.17            |
| S-75                | Oconee     | 7-1-35  | 6-30-36  | 39,257.12            |
| P-87                | Kershaw    | 7-1-35  | 1-15-36  | 11,600.91            |
| P-88                | Lee        | 7-1-35  | 6-30-36  | 23,843.96            |
| Columbia Office     | Richland   | 7-1-35  | 6-30-36  | 62,514.94            |
| Central Repair Shop | Sumter     | 11-1-35 | 6-30-36  | 18,040.40            |
| Total               |            |         |          | <u>*\$392,680.50</u> |

\* Includes only supervisory personnel and materials and equipment. Does not include pay of CCC boys, their food or clothes, nor construction or operation of the camps.

# REPORT OF WORK ACCOMPLISHED AT FORESTRY CCC CAMPS

July 1, 1935 to June 30, 1936

## STRUCTURAL IMPROVEMENTS—

### Bridges:

|                            |    |
|----------------------------|----|
| Foot—Number built .....    | 3  |
| Vehicle—Number built ..... | 40 |

### Buildings:

|   |    |
|---|----|
| Barns—Number built .....                    | 5  |
| Bathhouses—Number built .....               | 2  |
| Cabins, over-night—Number built .....       | 1  |
| Dwellings—Number built .....                | 5  |
| Equip. & Sup. St. Houses—Number built ..... | 5  |
| Latrines and toilets—Number built .....     | 1  |
| Lodges—Number built .....                   | 1  |
| Lookout Towers—Number built .....           | 12 |
| Shelters, other—Number built .....          | 2  |
| Other Buildings—Number built .....          | 4  |

### Dams:

|  |       |
|--|-------|
| Imp. & Lge. Division Dams—Number built ..... | 1     |
| Earth Filled—Cubic Yards built .....         | 6,402 |
| Rock Filled—Cubic Yards built .....          | 3,625 |
| Excavation, Earth—Cubic Yards built .....    | 3,484 |
| Excavation, Rock—Cubic Yards built .....     | 220   |
| Masonry—Cubic Yards built .....              | 23    |
| Riprap—Cubic Yards built .....               | 320.1 |
| Steel—Cubic Yards built .....                | 2,402 |

### Sewage and Waste Disposal Systems:

|   |       |
|---|-------|
| Dis. Tanks & C'Pools—Number built ..... | 2     |
| Sewer Lines—Lin. Ft. ....               | 2,800 |
| Telephone Lines—Miles ....              | 200.9 |

### Water Supply Systems:

|  |       |
|--|-------|
| Fountains, drinking—Number built ..... | 3     |
| Open Ditches—Lin Ft. ....              | 4,200 |
| Pipe or Tile Lines—Lin. Ft. ....       | 1,703 |
| Storage Facilities—Gallons .....       | 4,500 |

### Other Structural Improvements:

|   |     |
|---|-----|
| Camp Stoves or Fireplaces—Number built .....    | 15  |
| Seats—Number built .....                        | 38  |
| Signs, Markers & Monts.—Number built .....      | 104 |
| Table and Bench Combinations—Number built ..... | 14  |
| Toolboxes—Number built .....                    | 25  |
| Miscellaneous—Number built .....                | 31  |

## TRANSPORTATION IMPROVEMENTS—

## Roads:

|                          |       |
|--------------------------|-------|
| Truck Trails—Miles ..... | 218.3 |
| Minor—Miles .....        | 13.0  |
| Foot—Miles .....         | 7.8   |
| Horse—Miles .....        | 0.2   |

## EROSION CONTROL—

|                          |     |
|--------------------------|-----|
| Area Treated—Acres ..... | 3.5 |
|--------------------------|-----|

## Treatment of Gullies:

|  |    |
|--|----|
| Check Dams, Permanent—Number built ..... | 50 |
| Seeding and Sodding—Square Yards .....   | 75 |

## FLOOD CONTROL, IRRIGATION AND DRAINAGE—

## Clearing and Cleaning:

|  |        |
|--|--------|
| Channels—Square Yards .....                                  | 12,000 |
| Excavation, Channels, Canals and Ditches—Earth, Cu. Yd. .... | 4,678  |

## FOREST CULTURE—

|   |         |
|---|---------|
| Field Planting or Seeding (trees) Acres ..... | 2,386.7 |
| Forest Stand Improvements—Acres .....         | 201.5   |
| Nurseries—Man-days .....                      | 32,685  |

## Tree Seed Collection:

|                                |        |
|--------------------------------|--------|
| Conifers (cones)—Bushels ..... | 15,215 |
|--------------------------------|--------|

## FOREST PROTECTION—

|                                      |       |
|--------------------------------------|-------|
| Fighting Forest Fires—Man-days ..... | 2,409 |
| Fire Breaks—Miles .....              | 2,495 |

## Fire Hazard Reduction:

|  |       |
|--|-------|
| Trailside—Miles .....                      | 39.4  |
| Other—Acres .....                          | 314   |
| Fire Presuppression—Man-days .....         | 1,894 |
| Fire Prevention—Man-days .....             | 724   |
| Tree and Plant Disease Control—Acres ..... | 0.3   |
| Tree Insect Pest Control—Acres .....       | 45    |

## LANDSCAPE AND RECREATION—

|   |          |
|---|----------|
| Beach Improvement—Acres .....                     | 7.6      |
| General Clean-up—Acres .....                      | 19,968.5 |
| Lake or Pond Site Clearing—Acres .....            | 47.9     |
| Landscaping, Undifferentiated—Acres .....         | 11.7     |
| Moving and Planting Trees and Shrubs—Number ..... | 16,719   |

## Obliteration:

|  |       |
|--|-------|
| Roads—Miles .....                                      | 0.2   |
| Parking Areas and Parking Overlooks—Square Yards ..... | 4,900 |
| Public Picnic Ground Development—Acres .....           | 232   |



|  |       |
|--|-------|
| Razing Undesirable Structures—Number .....                   | 9     |
| Seed Collection, Flowers, Grasses and Shrubbery .....        | 1,600 |
| Seeding or Sodding—Acres .....                               | 7.5   |
| Soil Preparation (Top soiling, fertilig., fitg., etc.)—Acres | 15    |
| Vista or Other Selective Culg. or Effect—Acres .....         | 250   |

## OTHER ACTIVITIES—

## Emergency Work:

|  |     |
|--|-----|
| Search or Rescue of Persons—Man-days ..... | 255 |
|--|-----|

## Maps:

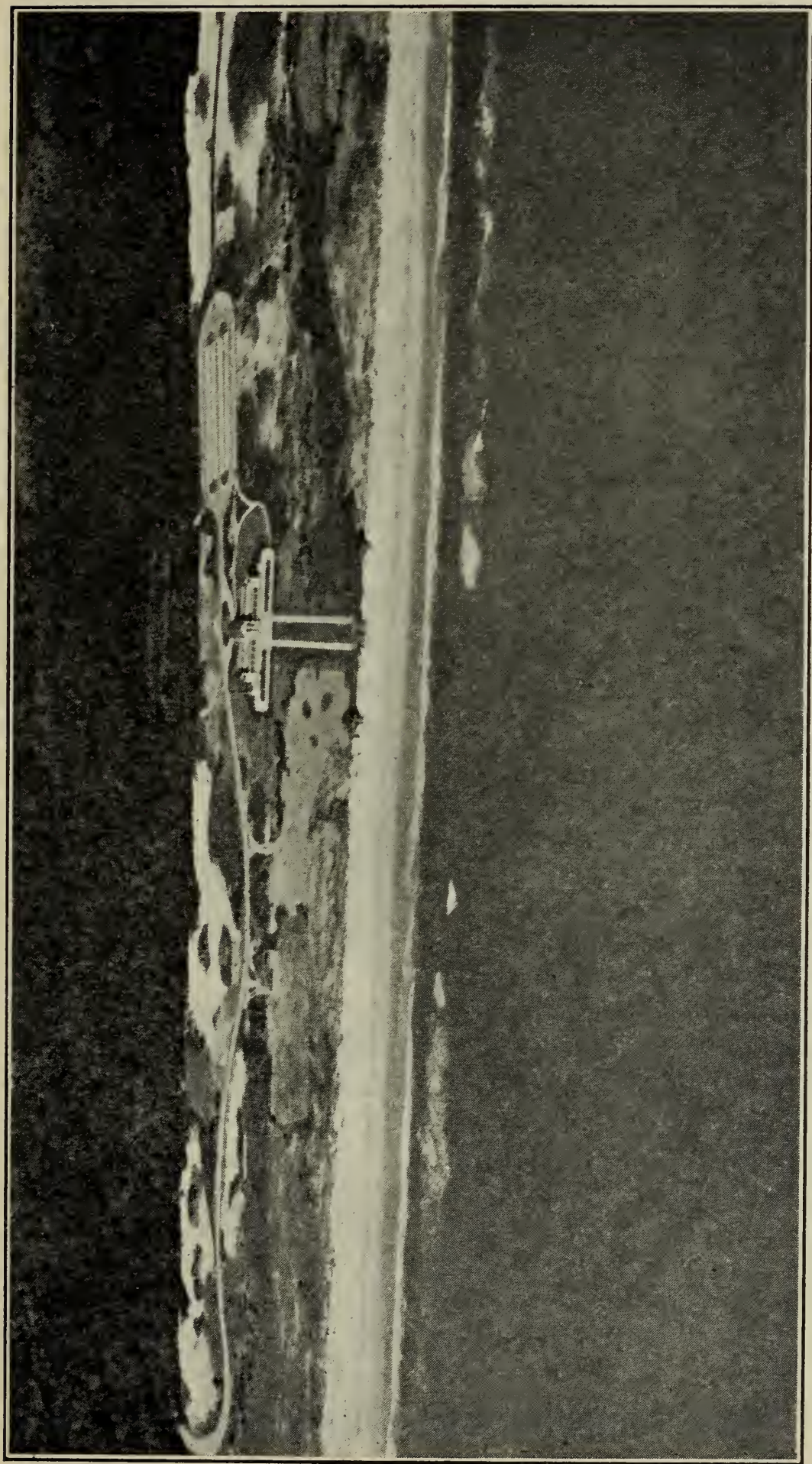
|  |       |
|--|-------|
| Type, Topographic, etc.—Man-days .....               | 151   |
| Marking Boundaries—Miles .....                       | 16.5  |
| Preparation and Transportation of Materials—Man-days | 9,734 |

## Surveys:

|   |          |
|---|----------|
| Lineal—Miles .....                        | 476.4    |
| Topographic—Acres .....                   | 25,901.5 |
| Type—Acres .....                          | 200      |
| Total Man-days Employed Fiscal Year ..... | 357,178  |

The development of South Carolina State Parks is being carried on by the Civilian Conservation Corps Camps under the supervision of the National Park Service. The State Forest Service is the procurement office and Park Authority for the State and is represented by Assistant State Forester, R. A. Walker. His work includes the planning of projects and the supervision of construction work upon the areas. Eight camps are located upon seven park areas and one park, Givhans Ferry, has a sub-camp finishing up work left by a camp transferred to another location.





Myrtle Beach State Park, Horry County, showing beach area including parking area, bath house and boardwalk.



## SOUTH CAROLINA STATE PARKS

Development work on South Carolina State Parks was continued under the CCC Camp program in cooperation with the National Park Service. There are indications that the National Government will cooperate financially with States in the operation of State Park areas.

The only particularly new development in the State Park program was the Wayside Park program under the supervision of the National Park Service and in which this office cooperates only to the extent of approving plans. When this program was set up we were requested by the National Park Service to recommend locations for Wayside Parks upon specified highways. The Resettlement Administration through the National Park Service was willing to buy small areas of approximately 20 to 50 acres for the development of Wayside Parks with WPA labor. Some twelve areas were recommended upon the highways designated by the Park Service and areas in Greenville, Greenwood, Aiken, Colleton, Kershaw, Cherokee, Marlboro and Georgetown Counties were tentatively approved. During the year a special office to handle this sort of work was opened in Columbia under the jurisdiction of D. F. Roll, a representative of the Resettlement Administration. Later on work was started on the Greenville and Greenwood units. Toward the end of the fiscal year the Resettlement Administration program on these Parks was taken over by the National Park Service. Some time later Mr. Roll resigned his position and left the State, but he was replaced by Mr. Louis Roth and plans for development of the areas are being carried forward.

At the Cheraw State Park the Resettlement Administration, now handled entirely by the National Park Service, has practically completed the acquisition of some 8,000 acres of land as an extension to the present Cheraw State Park. There is engaged upon the area today one CCC camp and several hundred WPA laborers in the development of the recreational features upon the area. These features include a three hundred acre clear water lake, two group camps for the accommodation of such organized groups as Boy Scouts, Girl Scouts, Farm Women, 4-H Clubs and Future Farmers. In addition a bathhouse and bathing beach is contemplated together with vacation cabins, picnic grounds, nature study trails and the usual Park improvements.

At Givhans Ferry State Park (formerly Edisto State Park) the CCC camp was moved out and replaced several months later with a side camp from the camp at Edisto Beach. This smaller group is engaged in the finishing up of developments not completed by the original camp. These include the caretaker's house, bathhouse and pavilion, five vacation cabins, the formal entrance, the shelter on the bank of the river, the picnic area and the bathing beach.

At the Poinsett State Park in Sumter County the bathhouse and pavilion, caretaker's residence, picnic shelter, and rest shelter together with several nature study trails have been completed. Work is continuing upon the construction of a public camp ground, landscaping and the improvement of swimming facilities.

Myrtle Beach State Park at Horry County it is expected will be opened at least in part during the coming summer. The bathhouse and part of the boardwalk have been completed together with a rest shelter, two play ground areas and the custodian's residence. Work is continuing on five vacation cabins and the landscaping and upon one picnic area, and additional picnic area and additional cabins and extension of the boardwalk are being planned.

Table Rock State Park. At this Park in Pickens County five vacation cabins are under way and the bulk of the work upon the core wall of the dam has been completed, several miles of foot trail make Table Rock Mountain accessible even to the average climber and an attractive entrance way has been constructed to the entrance to the Park.

At the Aiken State Park in Aiken County the custodian's residence, barbecue area, two picnic areas, a bathhouse and three small lakes have been constructed. Work is proceeding with the construction of another fishing lake upon the property, the completion of which will practically complete the Park. Some 250 acres have been planted to forest tree seedlings upon poor farm lands upon the area.

Edisto Beach State Park in Charleston County. Here two cabins have been completed and plans laid for the construction of several more, one picnic shelter and picnic area have been completed and plans have been submitted for a bathhouse to accommodate the general public.

At the Chester State Park plans have been practically approved for a concession building, one picnic area has been constructed and the breast of the old dam has been redesigned and built. Plans call for the construction of caretaker's house, additional picnic areas, foot trails and rest shelters.

Paris Mountain State Park lying some seven miles from the Greenville city line has had constructed the custodian's house, parking area, bathhouse, picnic area and several miles of road which make two additional lakes available to the general public, upon one of which plans are being made for the construction of a group camp for under-privileged children of the industrial section of the State.

Lee County State Park has been increased in acreage from approximately 1,000 acres to 2,800 acres. Two small picnic areas have been designed and are being built, a custodian's residence, a small lake and fish hatcheries are being designed for construction in the near future. Considerable forestry work is contemplated upon this area which will represent a natural demonstration in hardwood forest management in the bottom lands of South Carolina.

At the Oconee State Park five vacation cabins have been completed together with the dam which forms a 20 acre lake, several miles of foot trail, the custodian's residence, one picnic shelter, two picnic areas, and the parking area, combination bathhouse and boat house under construction and public camp area is also planned. Considerable forestry work is contemplated upon this area to give demonstrations in intensive forest management upon the mountain hardwoods of this State.





One Of Numerous Waterfalls, Table Rock State Park, Pickens County.

State Parks promise to be one of the State's most popular programs. The interest in them has been manifested within the State by the thousands which weekly visit even the incompletd areas and the applications already received for the use of facilities under construction. The interest, however, is not confined to people within the State. The office of the Park Service has been swamped with requests for articles on S. C. State Parks from magazines of outdoor life, travel magazines, map companies, and such trade journals as the Standard Oil Company magazine, and the Ford Motor Company periodicals.

The following table shows the location of State Park Camps and the expenditures at each during the year covered by this report.

A record table shows the work accomplished by the camps by specific projects.

**TOTAL EXPENDITURES\* THROUGH STATE FOREST COMMISSION AT STATE PARK CAMPS**

**July 1, 1935 to June 30, 1936**

| Camp No.           | County       | From    | To      | Amount       |
|--------------------|--------------|---------|---------|--------------|
| SP-1               | Chesterfield | 7-1-35  | 6-30-36 | \$ 34,513.36 |
| SP-2               | Dorchester   | 7-1-35  | 2- 9-36 | 22,295.59    |
| SP-3               | Sumter       | 7-1-35  | 6-30-36 | 23,014.18    |
| SP-4               | Horry        | 7-1-35  | 6-30-36 | 40,608.06    |
| SP-5               | Pickens      | 8-22-35 | 6-30-36 | 29,081.55    |
| SP-6               | Pickens      | 8-26-35 | 6-30-36 | 25,554.48    |
| SP-7               | York         | 7-25-35 | 6-30-36 | 26,756.57    |
| SP-8               | Charleston   | 8-21-35 | 6-30-36 | 26,193.66    |
| SP-9               | Chester      | 7-27-35 | 6-30-36 | 21,637.23    |
| Procurement Office |              |         |         | 9,033.01     |

Total ..... \* \$258,687.69

\* Includes expenditures for supervisory personnel and materials and equipment. Does not include pay of Army personnel or CCC boys or food, clothes or any of the expenses of general camp operations.



**TOTAL WORK STATE PARKS AND RECREATIONAL  
DEMONSTRATION PROJECTS (Continued)**

**For Period July 1, 1935 to June 30, 1935**

| Project Name                              | Recreational Demonstration<br>Projects | State<br>Parks |
|---|--|----------------|
| Foot Bridges (No.) .....                  | .....                                  | 1              |
| Vehicle Bridges—(No.) .....               | .....                                  | 3              |
| Barns (No.) .....                         | .....                                  | 2              |
| Bathhouses (No.) .....                    | .....                                  | 1              |
| Cabins (No.) .....                        | 27                                     | 14             |
| Combination Buildings (No.) .....         | .....                                  | 3              |
| Contact Stations (No.) .....              | .....                                  | 1              |
| Dwellings (No.) .....                     | 1                                      | 3              |
| Garages (No.) .....                       | 5                                      | 11             |
| Latrines (No.) .....                      | .....                                  | 8              |
| Shelters (No.) .....                      | .....                                  | 10             |
| Miscellaneous Buildings (No.) .....       | 2                                      | 12             |
| Concrete Dams (Cubic Yds.) .....          | 801                                    | 567            |
| Earth Fill Dams (Cubic Yds.) .....        | 7,750                                  | .....          |
| Earth Excavation Dams (Cubic Yds.) .....  | 11,825                                 | 4,401          |
| Rock Excavation Dams (Cubic Yds.) .....   | .....                                  | 718            |
| Steel Dams (Pounds) .....                 | 18,100                                 | 925            |
| Guard Rails (Rods) .....                  | .....                                  | 224            |
| Power Lines (Miles) .....                 | .....                                  | 3.6            |
| Disposal Fields (Sq. Yds.) .....          | .....                                  | 647            |
| Disposal Tanks (No.) .....                | .....                                  | 9              |
| Incinerators (No.) .....                  | .....                                  | 1              |
| Sewer Lines (Lin. Ft.) .....              | .....                                  | 2,340          |
| Telephone Lines (Miles) .....             | .....                                  | 15.6           |
| Drinking Fountains (No.) .....            | .....                                  | 6              |
| Open Ditches (Lin. Ft.) .....             | .....                                  | 1,150          |
| Pipe Lines (Lin. Ft.) .....               | .....                                  | 17,535         |
| Storage Tank (Steel Elevated) (No.) ..... | .....                                  | 1              |
| Storage Reservoir (No.) .....             | .....                                  | 1              |
| Open Fire Places (No.) .....              | .....                                  | 16             |
| Portals (No.) .....                       | .....                                  | 1              |
| Stone Walls (Rods) .....                  | .....                                  | 35             |
| Table & Bench Combination (No.) .....     | .....                                  | 12             |
| Truck Trails (Miles) .....                | 3.1                                    | 2.1            |
| Park Roads (Miles) .....                  | .....                                  | 13.9           |



**TOTAL WORK STATE PARKS AND RECREATIONAL  
DEMONSTRATION PROJECTS (Continued)**

**For Period July 1, 1935 to June 30, 1935**

| Project Name                                      | Recreational Demonstration<br>Projects | State<br>Parks |
|---|--|----------------|
| Foot Trails (Miles) .....                         | .....                                  | 3.0            |
| Stream Bank Protection (Sq. Yds.) .....           | .....                                  | 44             |
| Seeding and Sodding (Sq. Yds.) .....              | .....                                  | 9,900          |
| Quarrying Rock (Tons) .....                       | .....                                  | 1,500          |
| Misc. Erosion Control Work (Man-days) .....       | 2,130                                  | 4,946          |
| Cleaning and Clearing Ditches (Sq. Yds.) .....    | .....                                  | 1,000          |
| Excavating Channels and Ditches (Cu. Yds.) .....  | .....                                  | 400            |
| Masonry Water Control Structures (Cu. Yds.) ..... | .....                                  | 151.3          |
| Culverts (No.) .....                              | .....                                  | 33             |
| Field Planting (Seedlings) (Acres) .....          | 140                                    | 297            |
| Fighting Forest Fires (Man-days) .....            | .....                                  | 2,500          |
| Fire Breaks (Miles) .....                         | 2                                      | 8              |
| Fire Hazard Reduction—Roadside (Miles) .....      | .....                                  | 2.5            |
| Fire Hazard Reduction—Trailside (Miles) .....     | .....                                  | 3              |
| Fire Hazard Reduction—Other (Acres) .....         | 3,200                                  | 603            |
| Fire Presuppression (Man-days) .....              | .....                                  | 53             |
| Fire Prevention (Man-days) .....                  | .....                                  | 1,382          |
| Beach Improvement (Acres) .....                   | .....                                  | 90             |
| Fine Grading (Sq. Yds.) .....                     | .....                                  | 189,716        |
| Lake Site Clearing (Acres) .....                  | 68                                     | 41             |
| Landscaping Undifferentiated (Acres) .....        | .....                                  | 311            |
| Moving and Planting Trees and Shrubs (No.) .....  | 10,000                                 | 23,947         |
| Obliteration Roads (Miles) .....                  | .....                                  | 3.4            |
| Obliteration Borrow Pits (Man-days) .....         | .....                                  | 2,836          |
| Parking Areas (Sq. Yds.) .....                    | .....                                  | 48,881         |
| Public Camp Ground Development (Acres) .....      | .....                                  | 5              |
| Public Picnic Ground Development (Acres) .....    | .....                                  | 0.3            |
| Razing Undesirable Structures (No.) .....         | .....                                  | 1              |
| Seeding and Sodding (Acres) .....                 | .....                                  | 8.1            |
| Soil Preparation (Acres) .....                    | .....                                  | 80             |
| Vista Cutting (Acres) .....                       | .....                                  | 10             |
| Board Walks (Lin. Ft.) .....                      | .....                                  | 2,068          |
| Lake and Pond Development (Man-days) .....        | .....                                  | 922            |
| Cover Planting and Seeding (Acres) .....          | .....                                  | 87             |
| Seed Collecting (Man-days) .....                  | .....                                  | 62             |

**TOTAL WORK STATE PARKS AND RECREATIONAL  
DEMONSTRATION PROJECTS**

**For Period July 1, 1935 to June 30, 1936**

| Project Name                                       | Recreational Demonstration<br>Projects | State<br>Parks |
|--|--|----------------|
| Education, Guide & Contact Work (Man-days) .....   |  | 75             |
| Eradication Poisonous Plants (Acres) .....         |  | 734            |
| Insect Control (Acres) .....                       |  | 150            |
| Topographic Mapping (Man-days) .....               |  | 65             |
| Mosquito Control (Acres) .....                     |  | 240            |
| Preparation & Transport. Materials (Man-days) .... | 2,085                                  | .....          |
| Lineal Survey (Miles) .....                        | 16                                     | .....          |

