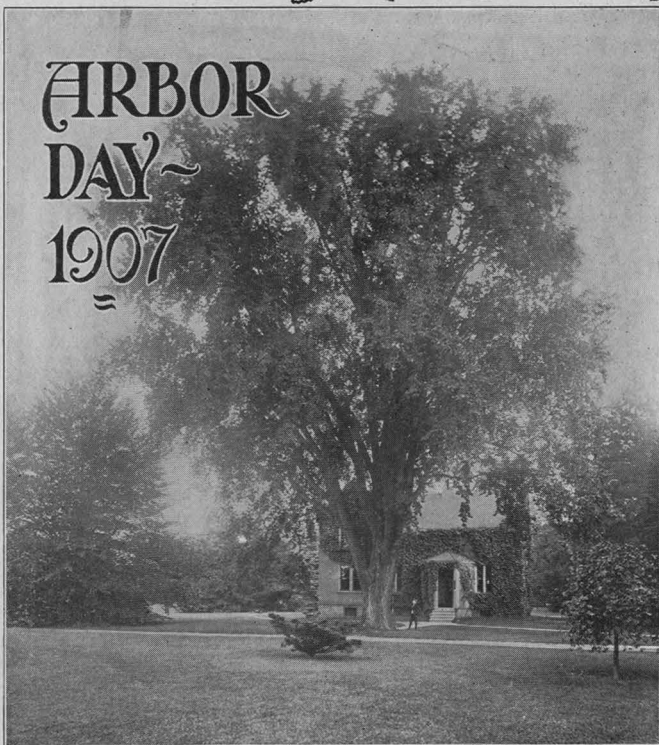


Third Annual Report
of the
Shade Tree Commission
of the
CITY OF NEWARK
New Jersey



1906

ARBOR DAY~ 1907

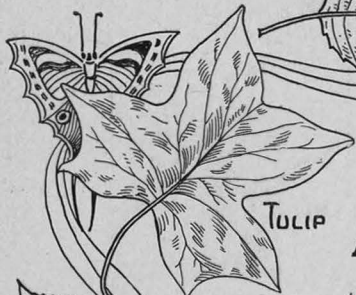


-The Tree-



LOVE thee when thy swelling buds appear,
 And one by one their tender leaves unfold,
 As if they knew that warmer suns were near,
 Nor longer sought to hide from winter's cold ;
 And when with darker growth thy leaves are seen
 To veil from view the early robin's nest,
 I love to lie beneath thy waving screen,
 With limbs by summer's heat and toil oppress'd :
 And when the autumn winds have stript thee bare
 And round thee lies the smooth, untrodden snow,
 When naught is thine that made thee once so fair,
 I love to watch thy shadowy form below,
 And through thy leafless arms to look above
 On stars that brighter beam when most we need their love

—Jones Very.



TULIP



CAROLINA
POPLAR



LOMBARDY
POPLAR



LIQUID-
AMBER



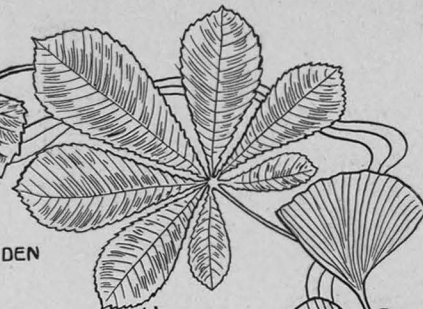
ELM

NORWAY MAPLE



SYCAMORE

AMERICAN LINDEN



HORSE-
CHESTNUT



GINGKO



HONEY
LOCUST



SILVER
MAPLE



ANY fool can destroy trees. They can not run away; and if they could, they would still be destroyed,—chased and hunted down as long as fun or a dollar could be got out of their bark hides, branching horns, or magnificent bole backbones. Few that fell trees plant them; nor would planting avail much towards getting back anything like the noble primeval forests. During a man's life only saplings can be grown, in the place of the old trees—tens of centuries old—that have been destroyed. It took more than three thousand years to make some of the trees in these Western woods,—trees that are still standing in perfect strength and beauty, waving and singing in the mighty forests of the Sierra. Through all the wonderful, eventful centuries since Christ's time—and long before that—God has cared for these trees, saved them from drought, disease, avalanches, and a thousand straining, leveling tempests, and floods; but he cannot save them from fools,—only Uncle Sam can do that.

John Muir.

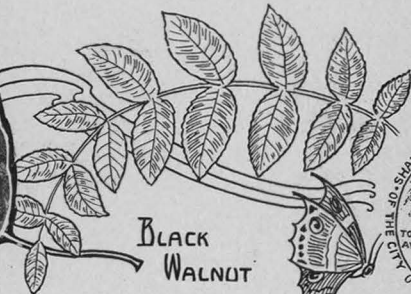
DEAR little tree that we plant today,
What will you be when we're old and gray?
The savings bank of the squirrel and mouse,
For robin and wren an apartment house,
The dressing-room of the butterfly's ball,
The locust's and katydid's concert hall,
The schoolboy's ladder in pleasant June
The schoolgirl's tent in the July moon,
And my leaves shall whisper them merrily
A tale of the children who planted me.

—Anon.

THE SHADE TREE COMMISSION

OF THE CITY OF NEWARK

sends this leaflet to the Children of Newark
that they may learn to love trees.



BLACK
WALNUT



HICKORY

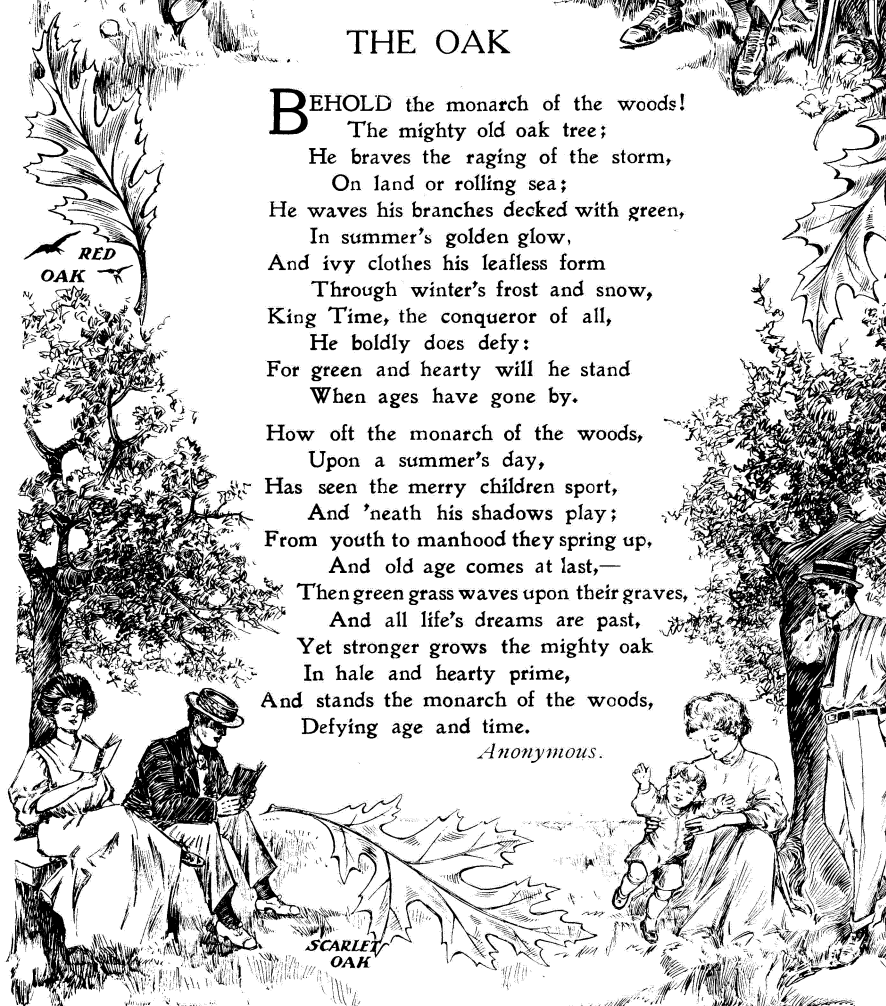


THE OAK

BEHOLD the monarch of the woods!
 The mighty old oak tree;
 He braves the raging of the storm,
 On land or rolling sea;
 He waves his branches decked with green,
 In summer's golden glow,
 And ivy clothes his leafless form
 Through winter's frost and snow,
 King Time, the conqueror of all,
 He boldly does defy:
 For green and hearty will he stand
 When ages have gone by.

How oft the monarch of the woods,
 Upon a summer's day,
 Has seen the merry children sport,
 And 'neath his shadows play;
 From youth to manhood they spring up,
 And old age comes at last,—
 Then green grass waves upon their graves,
 And all life's dreams are past,
 Yet stronger grows the mighty oak
 In hale and hearty prime,
 And stands the monarch of the woods,
 Defying age and time.

Anonymous.



SHADE TREE COMMISSION

OF NEWARK—NEW JERSEY

SPECIFICATIONS ADOPTED FOR THE SELECTION OF TREES

TREES WHICH DIE
ARE REPLACED
WITHOUT CHARGE

OUR TREES ARE PRUN-
ED SPRAYED AND FED
REGULARLY BY TRAIN-
ED HORTICULTURISTS

WELL DEVELOPED
HEADS AND GOOD
LEADERS

HEAD TO BEGIN NOT
LESS THAN SEVEN NOR
MORE THAN EIGHT
FEET ABOVE GROUND

HOSE TO PRE-
VENT CHAFING

SELECT VARIETIES
WHICH THRIVE IN
NEWARK. CONSULT
THE SHADE TREE
OFFICE FOR ADVICE

TREES WITH STRAIGHT
TRUNKS—ANNUALLY
TRANSPLANTED, FREE
FROM DISEASES OR
INJURIOUS INSECTS

GALVANIZED WIRE
GUARD SIX FEET
HIGH, HALF INCH MESH

CHESTNUT STAKE 2½
INCHES IN DIAMETER
8 FEET LONG

AT LEAST TWO INCH-
ES IN DIAMETER ONE
FOOT ABOVE GROUND

IN THIS WAY WE
FINISH THE CUT IN
CEMENT SIDEWALKS

WELL DEVELOPED
FIBROUS ROOTS

PIT FOR POPLARS
27 CUBIC FEET

PIT OF 56 CUBIC FEET
(5600 POUNDS) REPLACED
WITH TOPSOIL OR OTH-
ERWISE ENRICHED



TREES ARE NOT NATIVES OF THE CITY — THIS SUBSOIL-
ING IS NECESSARY TO HELP THEM LIVE UNDER ARTIFICIAL
CONDITIONS

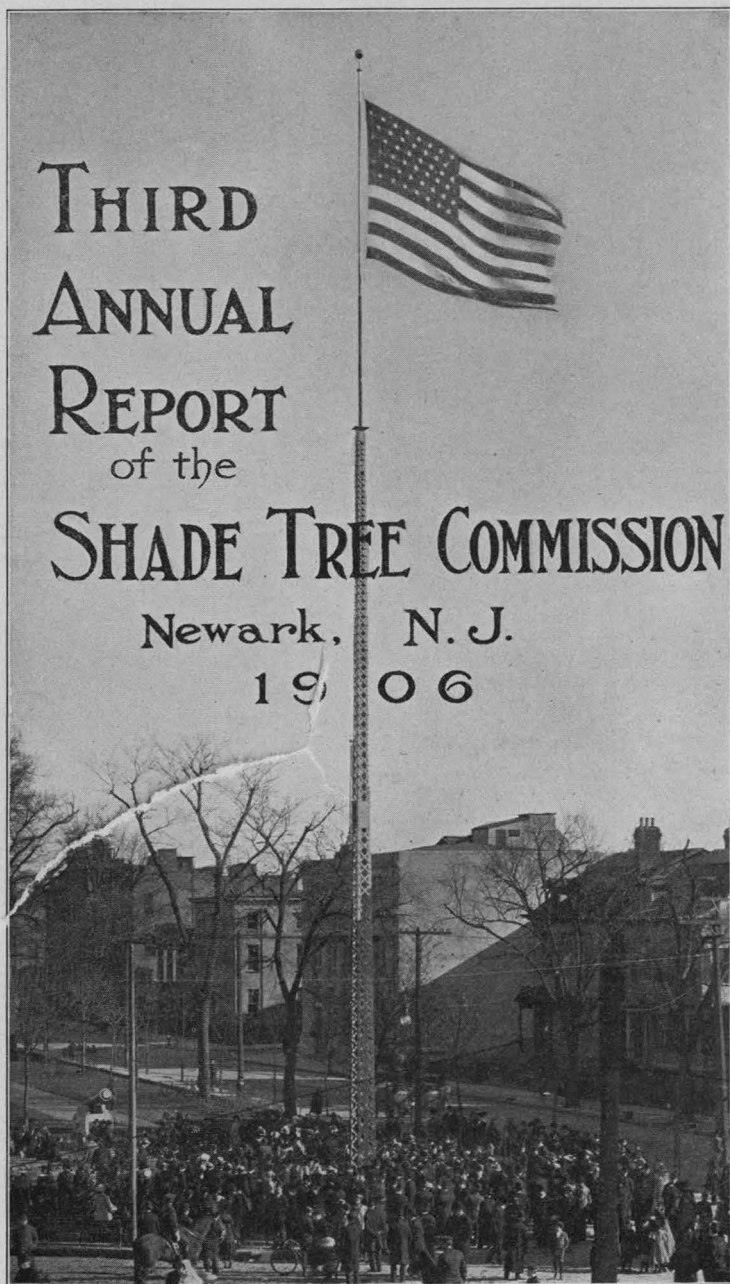
THIRD
ANNUAL
REPORT

of the

SHADE TREE COMMISSION

Newark, N. J.

1906



Why are ye working so fast and fleet
O Humankind?
We are building cities for those whose feet
Are coming behind.

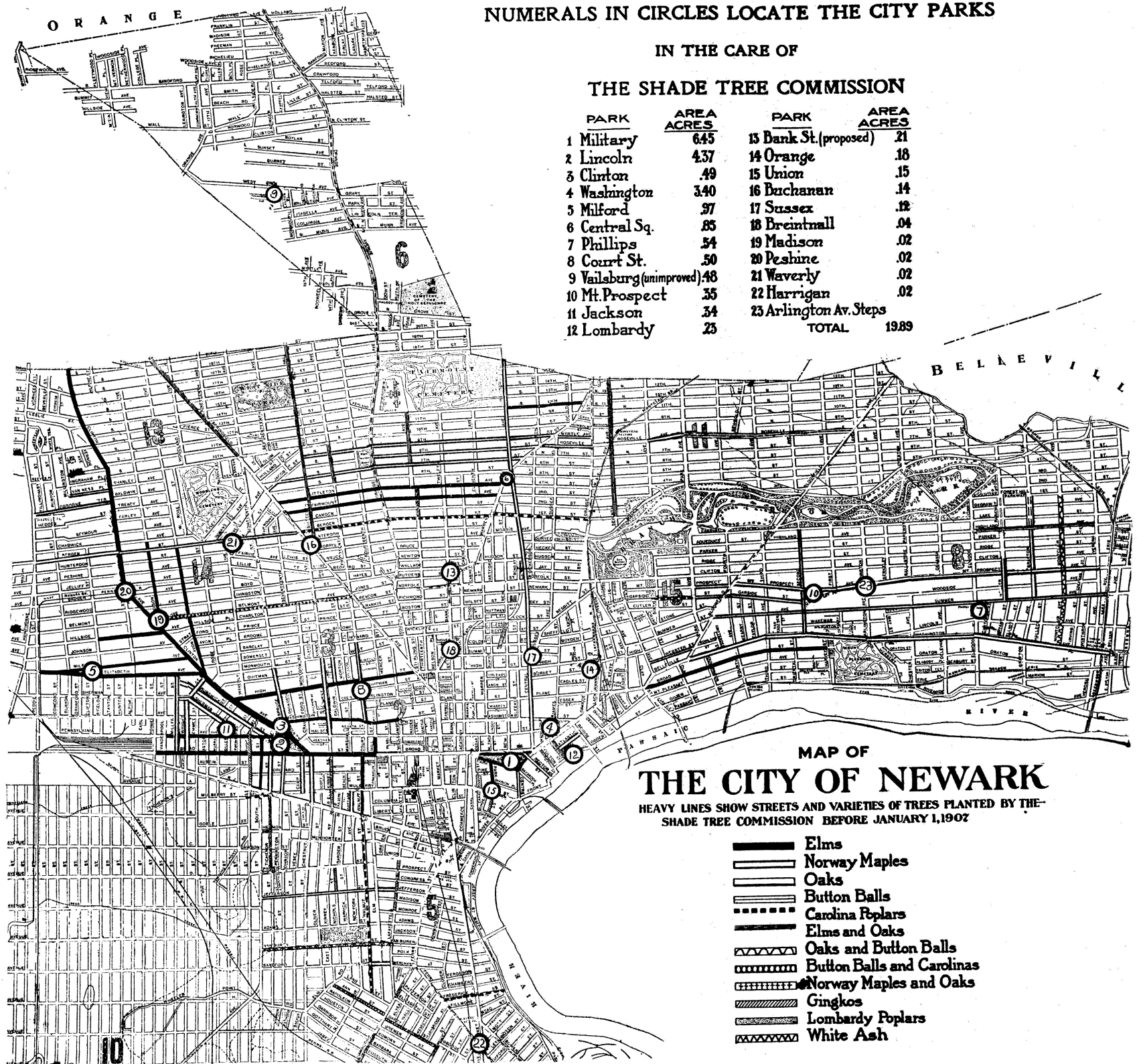
ROBERT BUCHANAN.

NUMERALS IN CIRCLES LOCATE THE CITY PARKS

IN THE CARE OF

THE SHADE TREE COMMISSION

PARK	AREA ACRES	PARK	AREA ACRES
1 Military	645	13 Bank St.(proposed)	.21
2 Lincoln	437	14 Orange	.18
3 Clinton	.49	15 Union	.15
4 Washington	340	16 Buchanan	.14
5 Milford	.97	17 Sussex	.12
6 Central Sq.	.85	18 Breimnall	.04
7 Phillips	.54	19 Madison	.02
8 Court St.	.50	20 Peshine	.02
9 Vailsburg (unimproved)	.48	21 Waverly	.02
10 Mt. Prospect	.35	22 Harrigan	.02
11 Jackson	.34	23 Arlington Av. Steps	.02
12 Lombardy	.23	TOTAL	1989



THIRD ANNUAL REPORT

OF THE

SHADE TREE COMMISSION

*To the Honorable, the Mayor and Common Council of the
City of Newark, N. J.*

GENTLEMEN :—The Shade Tree Commissioners beg leave to submit herewith their Third Annual Report.

The past year has been the most active in the history of the Commission. In the care and improvement both of the city parks and the trees of the city streets there has been progress.

The cordial support given by the Common Council, the experience gained in previous years, and the increased efficiency of the force, have enabled us to greatly enlarge both Park and Street work.

THE CITY PARKS.

We have nineteen and a half acres of lawns, shrub and flower beds. These grounds, the estate of all the citizens, need daily attention. The activities which demonstrate more particularly the effort to enhance the value of these parks to the people may be stated succinctly as follows :—An area of 26,141 square feet has been subsoiled to a depth of two feet, and supplied with shrubbery. We have planted 35 trees, 3,927 shrubs, one car-load of Laurel (*Kalmias*) and 8,180 bulbs.

The following improvements were effected during the year:—The apex, which was entirely barren, was reclaimed. Paths were laid, subsoiling was done, flowers, hedges and trees were planted. The Jubilee stone in the apex was raised and recut to show the following inscription:

THE
CITIZENS OF NEWARK
IN GRATEFUL COMMEMORATION
OF THE FIFTIETH ANNIVERSARY
OF AMERICAN INDEPENDENCE
HAVE ON THIS 4TH DAY OF JULY
A. D. 1826 DEPOSITED THIS STONE
AS THE FOUNDATION
OF A MONUMENTAL MEMORIAL
HERE TO BE ERECTED
AND
WHEN THE DILAPIDATIONS OF
TIME SHALL DISCOVER THIS
INSCRIPTION TO FUTURE
GENERATIONS
MAY THE LIGHT OF THE
GOSPEL ILLUMINATE THE
WHOLE WORLD.

RESTORED 1906.

These improvements in the apex, also the placing there of two additional cannons, became contributory to the exercises of Memorial Day. Throughout the rest of the park dead and dying trees were removed and replaced with living ones. Shrubbery beds were planted according to diagrams which accompany this report on pp. 9 to 11. From April to August, these beds of rare and beautiful shrubs will

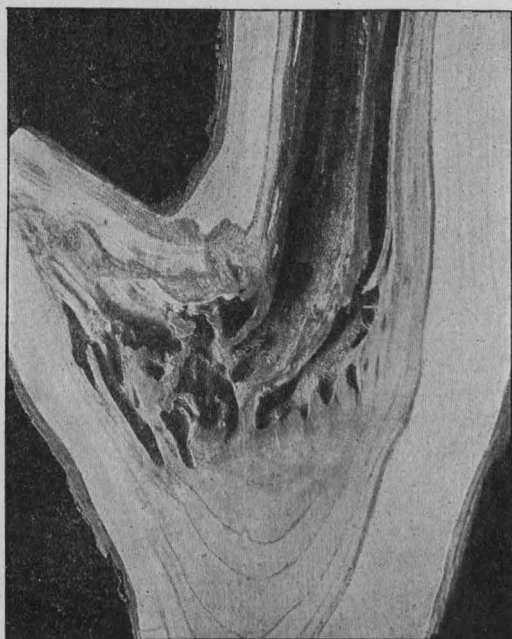
chronicle the season's progress in a succession of blooms and throughout the Winter furnish beds of color in berry and foliage.

The numbers who thronged Military Park, including a great many women and children during shopping hours, showed that the people appreciate their breathing place. The grass was more luxuriant than for years, and the trees were successfully protected against insects and kept in foliage. Summer evenings the benches were filled and the paths were alive with all classes of people. The postponed band concerts given by the Common Council Committee were held as usual, and were attended by thousands. The seating capacity was more than doubled during the past season, a number of the two hundred new benches having been distributed in this park.

A steel lattice-work flag-pole 112 feet in height was reared on the spot formerly occupied by the old Liberty-pole. The new pole was dedicated with appropriate ceremonies on Thanksgiving Day.

One of the most interesting activities of the year was the work undertaken at Military Park to preserve such trees as were partially decayed.

This process of removing the decayed portions of trees and filling the cavities with cement is rapidly being adopted as a means of tree preservation. The decayed wood is entirely removed and the cavity treated with creosote and coated with tar. Then cement, colored with lamp black, is tamped into the opening and rounded out. It is essential that the surface of the cement be below the cambium, which is a zone of cells between the bark and wood from which new tissues are made. When this precaution is taken, the bark will grow over the mortar and hide it from view. We plan to give the same treatment to all park trees that need it. The cuts on pp. 6 and 7 illustrate this work.



Showing decay caused by improper pruning.

WASHINGTON PARK.

This park was extensively re-sodded, sidewalks raised, shrubs planted and improvements made in accordance with diagram on pp. 11

and 12 of this report.

LINCOLN PARK.

Lincoln Park remains as popular as ever to the children of the neighborhood. They romp on the green, take comfort from the grateful shade and summer coolness, and, in brief, enjoy the park hugely.

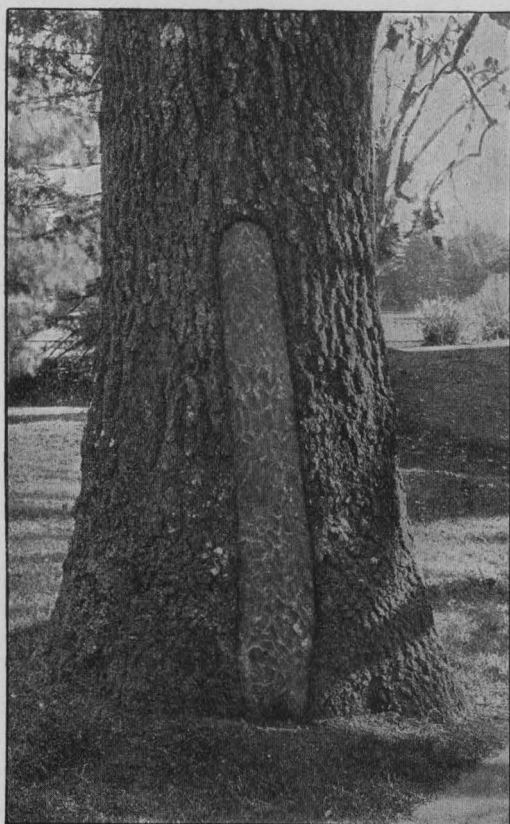
This park, too, was extensively sodded, and in it, as well as in Clinton Park adjoining, shrubbery was planted, walks were raised and repaired, and dead trees removed.

CENTRAL
SQUARE PARK.

(At junction of Central Avenue and Warren Street.) Here, a new walk was laid. Dead trees were replaced. Fertilizer was applied to the grass and the routine duties of maintenance were systematically performed.

ORANGE PARK.

(At corner Orange and High Street.) A new walk was laid.



Showing appearance after treatment.

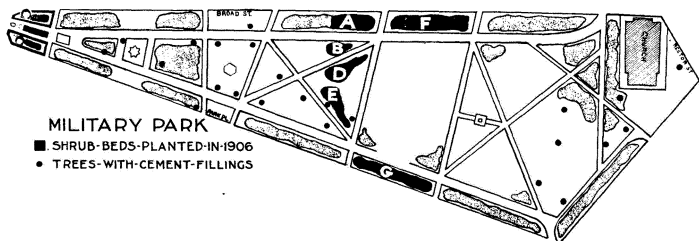
(At corner Clinton and Madison Avenues.) A number of new shrubs and plants were transferred to this triangle from the Wallace estate by courtesy of the Board of Education. This planting worked a considerable improvement.

(At junction of Milford and Elizabeth Avenues.) Here, trees were planted to fill the gaps along the curb, and general improvements were effected. The promptness with which the snow-shovelling has been done in this and other outlying greens brought repeated comment of approval.

(At junction of Pennsylvania and Sherman Avenues.) In this small green, also, trees were planted along the curb. A number of dangerous trees were removed and replaced with living trees of more durable varieties.

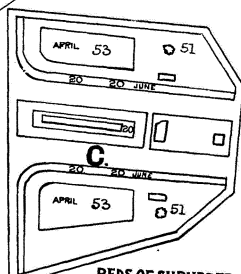
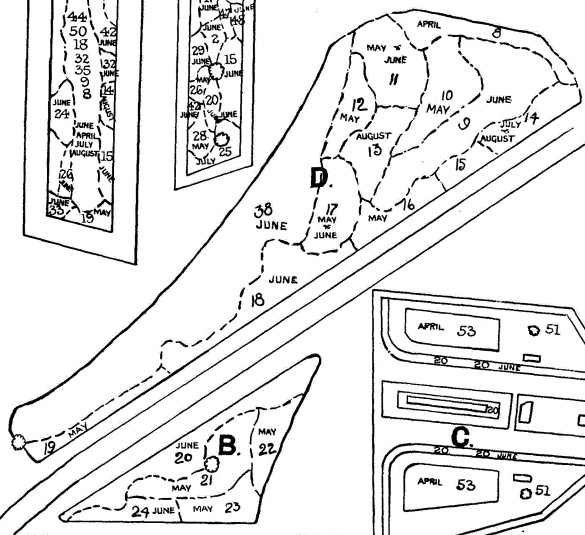
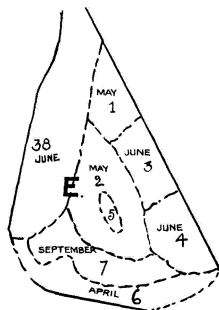
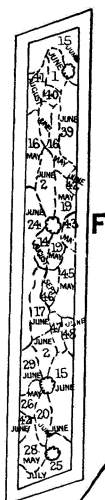
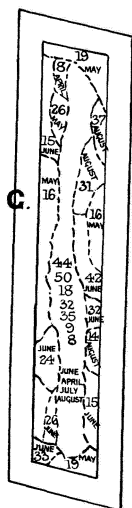
(At junction of Mt. Prospect Avenue and Mt. Prospect Pl.) Trees were planted along the curb and routine maintenance work punctually performed.

(At junction of Sussex and Central Avenues.) This park was planted with a large variety of oak trees according to a plan prepared for the department by Dr. Grace E. Cooley, professor at the High School of our city and an authority on arboriculture.



MILITARY PARK

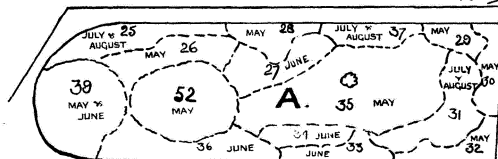
- SHRUB-BEDS-PLANTED-IN-1906
- TREES-WITH-CEMENT-FILLINGS



BEDS OF SHRUBBERY PLANTED IN MILITARY PARK

The beds may be located by the corresponding letters of the alphabet on the park map -

The shrubs may be identified by corresponding numbers on opposite page - The month named gives the season of bloom.



BROAD

ST.

SHRUBBERY PLANTED IN MILITARY PARK.

No.	SPECIES	COMMON NAME.
1	‡ <i>Cornus paniculata</i> .	Dogwood
2	‡ <i>Cornus Florida</i>	Flowering Dogwood
3	§ <i>Philadelphus Avalanche</i>	Mock Orange
4	‡ <i>Euonymus Americana</i>	Burning Bush
5	Cut Leaf Birch	
6	§ <i>Forsythia viridissima</i>	Golden Bell
7	<i>Tamarix sinensis</i>	Tamarisk
8	§ <i>Forsythia viridissima</i>	Golden Bell
9	· § <i>Deutzia crenata</i> f. p.—	Deutzia
10	Bechtel's Crab	Bechtel's Crab
11	§ <i>Diervilla Floribunda</i>	Diervilla
12	<i>Cercis Japonica</i>	Judas Tree
13	<i>Aralia Mandschurica</i>	Hercules Club
14	‡ <i>Symphoricarpos racemosus</i>	Snowberry
15	† <i>Ligustrum Regelianum</i>	Privet
16	§ <i>Spiraea Van Houttei</i>	Spirea
17	§ <i>Viburnum plicatum</i>	Japanese Snowball
18	† <i>Ligustrum Ibota</i>	Japanese Privet
19	‡ <i>Berberis Thunbergii</i>	Barberry
20	† <i>Ligustrum Ibota</i>	Japanese Privet
21	*‡ <i>Cornus Florida</i>	Flowering Dogwood
22	§ <i>Kerria Japonica</i>	Kerria
23	*‡ <i>Cornus elegantissima</i>	Dogwood
24	‡ <i>Rosa, rugosa alba and rubra</i>	Roses
25	‡ <i>Symphoricarpos vulgaris</i>	Snowberry
26	*‡ <i>Cornus elegantissima</i>	Dogwood
27	§ <i>Rubus odorata</i>	Flowering Raspberry
28	† <i>Ligustrum Regelianum</i>	Privet
29	§ <i>Spiraea Reevesi</i> f.g.	Spirea
30	‡ <i>Berberis Thunbergii</i>	Barberry
31	§ <i>Hydrangea p.g.</i>	Hydrangea
32	† <i>Deutzia Lemoinei</i>	Deutzia
33	† <i>Ligustrum Regelianum</i>	Privet
34	‡ <i>Rosa rugosa</i>	Rose
35	† <i>Ligustrum Amurense</i> and †* <i>Cornus Florida</i>	Privet Flowering Dogwood
36	§ <i>Diervilla Eva Rathkea</i>	Diervilla
37	‡ <i>Symphoricarpos racemosus</i>	Snowberry
38	†§ <i>Kalmia Latifolia</i>	Mountain Laurel
39	§ <i>Paeonies</i>	
40	*‡ <i>Sambucus Nigra Aurea</i>	Golden Elder

II

*Denotes brilliant bark
‡Denotes fine berries
†Denotes beautiful foliage
§Denotes beautiful flowers

BROAD ST.

WASHINGTON PLACE

BEDS OF SHRUBBERY PLANTED IN WASHINGTON PARK

The beds may be located by the corresponding letters of the alphabet on the park map.

The shrubs may be identified by the corresponding numbers on opposite page - The month named gives the season of bloom.

NEW WALK CONSTRUCTED

WASHINGTON ST.

O

1, 33, 6, 34, 35 MAY, JUNE, JULY

M.

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779,

NO.	SPECIES	COMMON NAME
1	‡Berberis Thunbergii	Barberry
2	†Mahonia Aquifolia	Mahonia
3	†Forsythia Suspensa	Golden Bell
4	§Deutzia Flora Plena	Deutzia
5	§Clethra Alnifolia	Spice Bush
6	‡Symphocarpus Racemosus	Snowberry
7	‡Viburnum Molle	Snowball
8	§Exorchora Grandiflora	Pearl Bush
9	*Cornus Stolonifera Alba	Dogwood
10	§Syringa Persica	Persian Lilac
11	†Ligustrum Amurense	Privet
12	*Salix Aurea	Golden Willow
13	§Deutzia Lemoinei	Deutzia
14	§Diervilla Sessifolia	Weigela
15	‡§Rosa, Rugosa, Alba, Lucida	Roses
16	‡Viburnum Sieboldii	Snowball
17	§Hydrangea p.g.	Hydrangea
18	*Euonymus Europæus	Waxberry
20	§Forsythia Suspensa and Viridissima	Golden Bell
21	§Spiræ Van Houttei	Spirea
22	§Diervilla Variegata	Variegated Weigela
23	§Azalea Aborescence	Azalea
24	§Spiræa Thunbergii	Meadowsweet
25	‡Viburnum Lentana	Snowball
26	†Hypericum Densiflorum	St. John's Wort
27	†Syringa Vulgaris	Lilac
28	§*Cornus Florida Rubra	Dogwood
29	‡Pyrus Arbutifolia	Choke Berry
30	§Rhus Cottinus	Smoke Tree
31	§Philadelphus Coronarius	Mock Orange
32	§Rhodotypos Kerriodes	Rhodotypos
33	§‡Rosa Multiflora Jap.	Rose
34	§Aralia Pentaphylla	Hercules Club
35	§Aralia Spinosa	Hercules Club

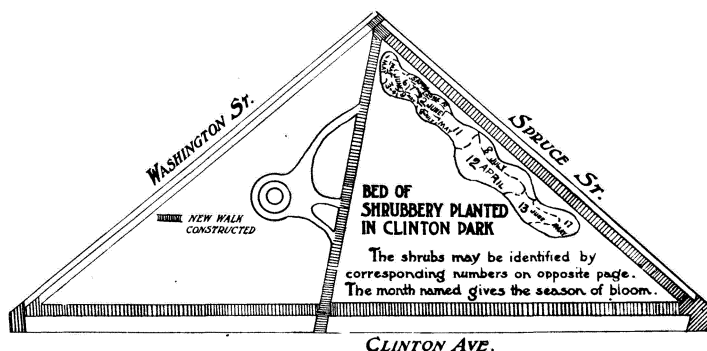
*Denotes brilliant bark

‡Denotes fine berries

†Denotes beautiful foliage

§Denotes beautiful flowers

DIAGRAM AND LIST SHOWING
SHRUBBERY PLANTED IN CLINTON PARK.



No.	SPECIES	COMMON NAME.
1	‡Berberis Thunbergii	Barberry
2	§*Cornus Stolonifera (alba)	Dogwood
3	‡Deutzia Fortunei	Deutzia
4	§Deutzia Gracilis	Deutzia
5	†Forsythia Suspensa	Golden Bell
6	§Spiræa Anthony Waterer	Meadowsweet
7	‡Viburnum Opulus	High Bush Cranberry
8	‡Symphoricarpos Racemosus	Snowberry
9	‡Berberis Vulgaris	Barberry
10	†Ligistrum Ibota	Privet
11	†Exochorda Grandiflora	Pearl Bush
12	*Salix Vitellena	Golden Bark Willow
13	§Spiræa Van Houttei	Meadowsweet

*Denotes brilliant bark

‡Denotes fine berries

†Denotes beautiful foliage

§Denotes beautiful flowers.

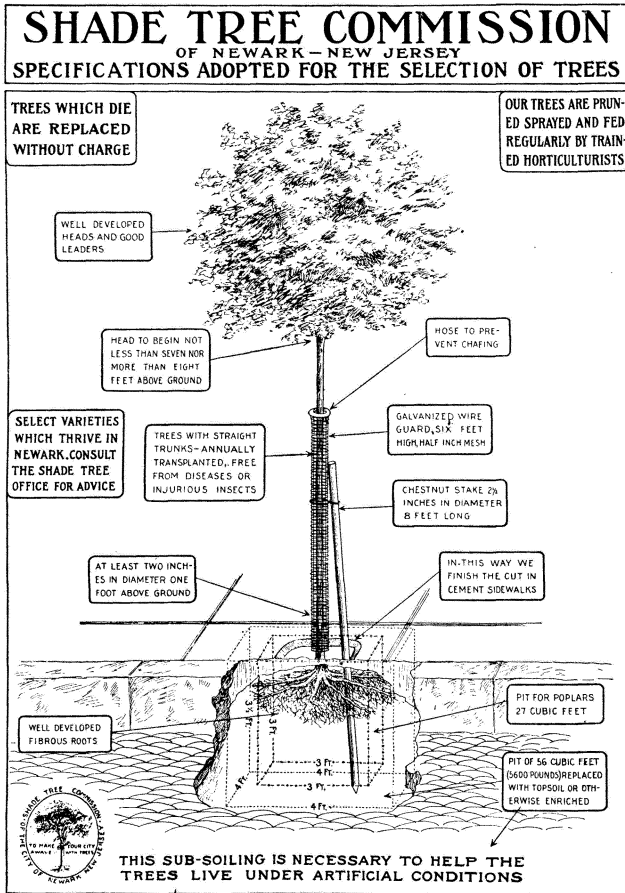
STREET WORK.

New
Plantings.

During the year 1906 we planted two thousand four hundred and twenty-seven trees. This is our best total for one year's planting. The table and map on another page show respectively the number and varieties of these trees and the streets on which they were placed. The table also shows that five thousand and sixty-eight trees have been set out from the beginning. The trees this year were of better quality and the assessments for the same were lower than in previous plantings. The minimum and maximum assessments for 1905 were \$2.38 and \$6.50; and for 1906 \$2.14 and \$3.69; while in the Fall planting of 1906 which will be assessed in 1907, the minimum was \$1.65 and the maximum \$3.16. Several factors contributed to this. First, some choice trees were obtained at five-eighths of the market price—this although our specifications were more rigid than before and though most of the trees were selected and tagged by our own men in the nurseries. Then there was less cement and flagging to be cut than in previous years. Another contributing circumstance was the readier consent of property owners where previously we encountered molestation and delay due to misapprehensions.

Lower
Prices.

Specifications.



In all these plantings the specifications on above cut were rigidly followed.

But when the young tree is planted our work is only begun. These five thousand trees are systematically inspected and, where need is, they are watered, pruned, mulched and sprayed. The mileage of streets covered by our planting

Systematic Care.

Guaranty.

makes a total of 40.7. Since trees line both sides of the street and treatment can only be given to one side at a time, we cover nearly 81 ½ miles of street trees in these routine labors. By virtue of our guaranty this care is a paramount duty. Then there has been the work of protecting and repairing. What with the thoughtless small boy, the runaway horse, the ruthless driver, the occasional ruffian; what with the layers of gas, sewer, water and electric wire mains, the repairers of paving and trolley tracks who smother the young tree with dirt and stones, and the builders who bruise and bend it with lumber and bricks, it requires vigilance to prevent disaster to these young growths. When the stake or wire guard has been damaged we have replaced these. If the tree itself has been injured we have doctored it, or, if injured past remedy, we have replaced it.

Old Trees.

Equally urgent is the necessity for attention to the older street trees. These have suffered from neglect and maltreatment. For instance, great harm comes to street trees from thoughtless owners of property. Their treatment is often fatal where an insect attack is only injurious. And the greatest insect enemy of our shade trees—the borer that feeds beneath the bark and in the wood tissues—does not take possession until low vitality has been induced, often through man's maltreatment. A most thoughtless practice of owners is to hem in the trunk of a splendid tree with cement or flagging, thus excluding air and water from the roots. Owners who would pay large sums rather than lose their trees, nevertheless offend in this respect. An opening should always be left about the base of a tree so that water and air may have free and unimpeded access to the roots. No set size can be given for this opening, but the minimum is set by ordinance at four square feet outside the trunk. On narrow sidewalks this end can be attained with little encroachment on the walking surface by leaving a long

Air and
Water For
Roots.

narrow opening or with no encroachment by the use of iron gratings.

Another evil, equally dangerous to the life of the tree and equally within the control of the individual who should have most interest in it, is the nibbling of horses. A few square feet of wire mesh properly placed will protect the tree absolutely from this. A pernicious practice of some thoughtless drivers is that of tying horses to trees. A tree-loving Chinaman, proprietor of a laundry on ——— Avenue, warns off trespassers of this kind by displaying the sign pictured below. The sign is attached to a guard set around the tree and reads as follows:

Wire
Protectors.



Sam's orthography is a trifle askew, but that he means to protect that tree is clear enough. A like zeal all around is a consummation devoutly to be wished.

While such evils as poor soil, insufficient breathing space and damage by horses are within easy and inexpensive control, and can be best met by individual property owners, the insect enemies can be better dealt with by organization. The Shade Tree Commission is equipped with apparatus and insecticides and with knowledge when and how to use them in combatting all forms of destructive insect life. The past year a vigorous and persistent effort was made to exterminate the insects, and destroy their eggs and cocoons. The cottony maple scale, oyster-shell bark louse and pernicious scale were attacked with sprays of kerosene emulsion and whale-oil soap. The Tussock moth cocoons and egg-masses were destroyed in enormous numbers with creosote solution before the first brood and between the first and second broods. The caterpillars were fought by arsenate of lead. We hope that we will never again have the caterpillar pests in such numbers. In our campaign against these, the boys

Spray Early.

Insect Ex-
termination.

and girls were impressed into service. The newspapers made known our desire to enlist the co-operation of the children. And the sign pictured below was displayed in Military Park.



Children's
Help.

In response to the call, the boys and girls brought 232 quarts of eggs, cocoons and caterpillars, which were then cremated. The youngsters had fun in gathering these; they felt well paid at ten cents a quart, and the city surely had no cause to complain of the bargain.

Send us a
Card.

In addition to the territory systematically sprayed, over 900 personal requests by phone or card or in person were received, and were promptly responded to. This work is con-

sidered a primary duty and word sent to the office will receive cordial response. This subject of insect enemies is treated more in detail in the appendix to this report.

See Appendix.

About three hundred and twenty trees of our planting had to be replaced during the year. This makes a loss of eight per cent, which is large. If this loss were occasioned by purely natural causes, it would be discouraging. But at least one-fourth, perhaps one-third, may be traced directly to paving operations, gas, runaways, boys and violent storms. Every effort will be made to reduce this percentage.

Percentage of Loss.

Many streets were pruned. A systematic plan of pruning the trees throughout the entire city by sections was inaugurated. The section bounded by Second Avenue, Clifton Avenue, Bloomfield Avenue, and Passaic Street was thus trimmed; also the section bounded by Second Avenue, Washington Avenue, Mt. Prospect Avenue, and Montclair Avenue. We began to trim the section bounded by Clinton Avenue, Broad Street and Miller Street. Before Pennsylvania Avenue was finished a strike broke out. Subsequently the weather became unsuitable but the street trees of this triangle will be thoroughly trimmed.

Pruning.

A determined effort has been under way to have the unsightly stumps and dead or dying trees and portions of trees removed by property owners. These decaying stumps often are the breeding places of the most destructive tree enemies, and a speedy removal is most desirable for the preservation of neighboring trees. This is equally true of the dead or dying limbs on an otherwise healthy tree. Besides, such trees and limbs constitute a danger to human life and limb and menace adjacent property. No tree or limb is removed, however, until after careful inspection by competent men of our force. Some 300 of these unsightly, insect-breeding, and dangerous trees have been removed during the year, as well as a great number of dead or dying limbs.

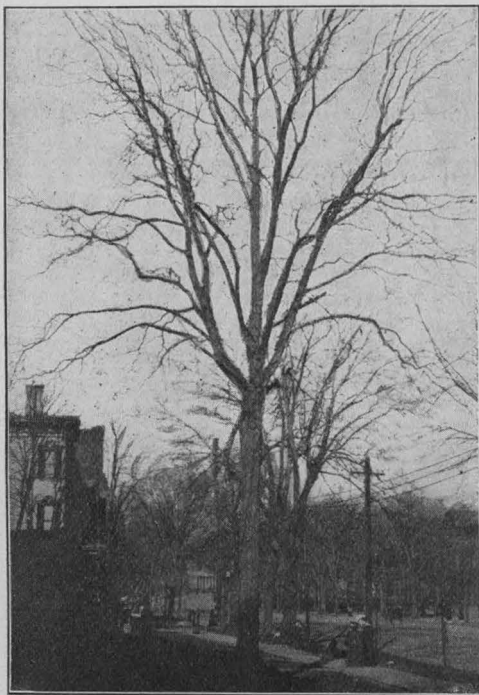
Dead Stumps.

300 Removed.

Approximately as many applications for permits to remove were denied because on inspection the trees proved to be neither dead nor dangerous.

An Ordinance. On December 14th, His Honor the Mayor approved the ordinance passed by the Commission entitled "An Ordinance Relating to the Protection, Regulation and Control of Shade Trees and City Parks in the City of Newark, New Jersey." The ordinance, thus approved, became of immediate effect. It was a long step forward in the protection of trees. It more clearly than heretofore declares it to be a violation of law, punishable by fine or imprisonment or both, to injure a street or park tree or do that which would occasion such injury—such as hitching horses to, or standing them within reaching distance of, said trees; etc., etc., etc. Also it is required to leave an open area not less than four square feet about the base of trees so that water and air may have free access to the roots. It forbids the attaching of wires, ropes and signs to trees. There are other prohibitions and requirements, among them this: that no person shall remove a tree without the written permit of the Shade Tree Commission. In every tree in a public street the public has an interest. No street tree should be condemned to destruction without competent investigation. This ordinance, it is hoped, will enable the Commission to have a conference with the owner before the growth of years is ruthlessly cut down. The Commission represents the interest of the people in the tree but is not unmindful of the rights of the property owner. Its function is to help him also, and generally the matter is adjusted without friction.

ARBOR DAY.



Shag Bark Hickory.

Arbor Day was again made the occasion of issuing a leaflet emphasizing the beauty and utility of trees. This time the shag bark hickory, planted at 95 Clinton Avenue in honor of Andrew Jackson during his campaign for the Presidency in 1828, was pictured on the leaflet distributed in great

"Old
Hickory."

numbers to the children attending public and private schools. This tree was one of the many planted throughout the country at that time to arouse enthusiasm for "Old Hickory" as the candidate was called. The tree is in prime condition and much handsomer than the half tone shows.

Arbor Day was also celebrated by the planting of trees in front of school houses. Over fifty trees were set out in front of schools and other city buildings.

Schools.

STREET PLANTINGS BY THE SHADE TREE COMMISSION IN 1906.

IN THE SPRING.

Street.	No. of Trees.	Street.	No. of Trees.
Avon Ave.	74	Miller St.	41
Brunswick St.	81	Milford Ave.	53
Bergen St.	124	Pennsylvania Ave.	30
Fairmount Ave.	43	Sherman Ave.	50
Highland Ave.	25	Sixteenth Ave.	122
Littleton Ave.	35	Sussex Ave.	5
Mt. Prospect Ave.	139	South Orange Ave.	277
Montclair Ave.	84		

Spring Total—1,268.

IN THE FALL.

Street.	No. of Trees.	Street.	No. of Trees.
Ann St.	29	Littleton Ave.	60
Bergen St.	53	Madison Ave.	49
Belmont Ave.	68	Mulberry St.	9
Darcy St.	28	Mt. Prospect Ave.	18
Fairmount Ave.	56	Myrtle Ave.	11
Fifteenth Ave.	16	Nichols St.	16
First St.	49	Seventh St.	46
Frederick St.	60	S. Seventh St.	29
Fulton St.	19	S. Ninth St.	89
Garside St.	61	S. Twelfth St.	35
Grafton Ave.	50	Springfield Ave.	66
Hamburg Pl.	20	Thirteenth Ave.	29
Heller Parkway	44	Thomas St.	27
Hillside Ave.	29	Tichenor St.	77
Lafayette St.	18		

Fall Total—1,161.

Total for Year—2,429.

TREES WERE PRUNED ON THE FOLLOWING NAMED STREETS.

Broad St. (South)	Irving St.	Taylor St.
Clifton Ave.	Kearny St.	Washington Pl.
Clinton Ave.	Lincoln Ave.	Woodside Ave.
Elizabeth Ave.	Mt. Prospect Ave.	1st Ave.
Elwood Ave.	Pennsylvania Ave.	2nd Ave.
Garside St.	Ridge St.	3rd Ave.
Gillette Pl.	Sherman Ave.	3rd St.
Hawthorne Ave.	Sussex Ave.	4th Ave.

ON THE FOLLOWING STREETS THE EGG MASSES
OF THE TUSSOCK MOTH WERE DESTROYED
WITH CREOSOTE.

Bleecker St.	Halsey St.	Pennington St.
Boston St.	High St.	Quitman St.
Broad St. (South)	Howard St.	Richmond St.
Burnet St.	Kearny St.	Spruce St.
Clinton Ave.	Milford Ave.	Stirling St.
Elm St.	Montgomery St.	Taylor St.
Fifth Ave.	Murray St.	Walnut St.
Fourteenth Ave.	Oraton St.	Washington St.
Fulton St.	Orchard St.	Wickliffe St.
Garside St.	Pacific St.	Wilsey St.

TREES WERE SPRAYED ON THE FOLLOWING
NAMED STREETS.

Adams St.	Halsey St.	Rector St.
Alpine St.	Hamburgh Place.	Rose St.
Alyea St.	Hayes St.	Roseville Ave.
Ann St.	High St.	Saybrook Place.
Arlington St.	Highland Ave.	School St.
Astor St.	Hill St.	Sherman Ave.
Atlantic St.	Houston St.	Somerset St.
Avon Ave.	Howard St.	South St.
Baldwin St.	Hunterdon St.	So. Orange Ave.
Barbara St.	Jackson St.	Spruce St.
Barclay St.	Jefferson St.	State St.
Beach St.	Jolin St.	Stirling St.
Beaver St.	Johnson Ave.	Story St.
Berlin St.	Kearny St.	Summer Ave.
Boyden St.	Komorn St.	Summer Place.
Broad St. (North)	Kossuth St.	Sussex Ave.
Bruen St.	Lafayette St.	Sylvan Ave.
Brunswick St.	Liberty St.	Taylor St.
Burnet St.	Lillie St.	Tichenor St.
Broad St. (South)	Lumb's Alley.	Thomas St.
Cabinet St.	Maine St.	Union St.
Camp St.	McWhorter St.	Verona Ave.
Carteret St.	Milford Ave.	Wall St.
Central Ave.	Miller St.	Wallace St.
Center St.	Monmouth St.	Walnut St.
Chadwick Ave.	Montclair Ave.	Warwick St.
Charlton St.	Mt. Prospect Ave.	Washington Ave.
Chester Ave.	Mulberry St.	Washington St.
Chestnut St.	Murray St.	Webster St.
Clark St.	Nesbit St.	W. Kinney St.
Clifton Ave.	N. J. R. R. Ave.	Wickliffe St.
Clinton Ave.	Newton St.	Wilsey St.
Congress St.	Niagara St.	3rd Street.
Clinton St.	New York Ave.	3rd Ave.
Cottage St.	Oliver St.	4th St.
Court St.	Oraton St.	5th St.
Darcy St.	Orchard St.	6th Ave.
Delavan Ave.	Oriental St.	6th St. (South)
East Kinney St.	Osborne Terrace.	6th St. (North)
Elizabeth Ave.	Pacific St.	7th Ave.
Elizabeth St.	Park Place.	7th St. (North)
Elm St.	Park St.	7th St. (South)
Fairmount Ave.	Parker St.	8th Ave.
Fairview Ave.	Passaic St.	9th Ave.
Garden St.	Paterson St.	9th St. (South)
Garrison St.	Pennington St.	10th St. (South)
Garside St.	Pennsylvania Ave.	11th St. (South)
Gotthart St.	Peshine Ave.	12th St. (South)
Gouverneur St.	Plane St.	13th St. (South)
Green St.	Prospect St.	14th St. (South)
Halleck St.	Quitman St.	15th St. (South)

FINANCIAL REPORT.

RECEIPTS.

Balance on hand January 1, 1906.....	\$616.73
By Tax Ordinance Appropriation 1906.....	18,500.00
By Appropriation from Contingent Fund.....	3,000.00
By Special Appropriations from Conting't Fund.	2,194.89
By Shade Tree Assessments.....	2,027.15
By Interest thereon.....	106.06
By Shade Tree Assessments.....	3,462.32
By Receipts from Sundry Services.....	57.04
	<hr/>
	\$29,964.19

DISBURSEMENTS.

Pay Roll—Planting.....	\$3,428.92
“ “ —Street Spraying.....	1,908.84
“ “ —Street Maintenance.....	1,981.80
“ “ —Parks	6,237.38
“ “ —Office	2,179.80
	<hr/>
	\$15,736.74
Trees	3,271.65
Manure	184.81
Fertilizers	178.41
Stakes	265.80
Wire	528.66
Hardware and Tools.....	781.61
Tools repaired, sharpened, etc.....	71.68
Rubber Collars for Trees.....	69.84
Insecticides	551.35
Gas for Spraying Machine.....	143.07
Plants	702.82
Sods	93.00
Hose	29.25
Water Rent.....	10.00
Wagon Repairs.....	27.30
Hire of Horse.....	481.50
Repairs to Fountains.....	40.85
Repairs to Arlington Ave. Steps.....	7.40
Restoring Memorial Stone, Military Park.....	50.00
Contractor in re Flag Pole Military Park.....	475.00
Base for Flag Pole, Military Park.....	147.00
Music at dedication Flag Pole, Military Park...	16.00
Printing for dedication Flag Pole, Military Park	3.56

Park Settees.....	\$931.30
Cement	16.54
Sand	39.35
Stone	91.80
Lumber	251.85
Paint	77.16
Bags	11.00
Expressage and Freight.....	22.44
Storage Rent.....	112.50
Postage	93.42
Stationery and Printed Matter.....	316.43
Typewriter—Desk—Appurtenances	132.66
Telegrams and 'Phones.....	10.75
Extra help.....	16.73
Auto for inspections.....	15.00
Railroad and Street Car Fares.....	188.02
Professional Services of Experts.....	112.03
Advertising	419.10
Reserve Fund for Spring Planting.....	3,238.81
	<hr/>
	\$29,964.19

Of this amount \$15,448.21 was expended for the planting, protection and care of trees on streets, and \$11,277.17 for the maintenance, care and improvement of Public Grounds, Parks, etc., from January 1, 1906, to December 31, 1906.

To this report of the year's work we have added a three-fold argument for the planting of trees in a city, an account of the insect enemies encountered during the year, a record of the exercises at Military Park on Memorial and Thanksgiving days, the statutes under which the Commission is acting, and the ordinance passed by the Commission.

Respectfully submitted,

CHARLES GRANT TITSWORTH,
JAMES A. BERRY,
JAMES S. HIGBIE.

Carl Bannwart,

Secretary.

Commissioners.

APPENDIX

A THREE-FOLD ARGUMENT FOR TREES.

In this day of æsthetic awakening, much is BEAUTY being done to bring about the "City Beautiful." The important cities are all in the procession. Park and Art Commissions, Architects' and Artists' Societies vie with each other in efforts to achieve civic development. It is encouraging to the planter of trees to note that all such organizations declare trees to be indispensable elements in the construction of the city beautiful.

Trees Indispensable.

Trees supply a two-fold beauty. Beauty of form and beauty of color. Graceful in outline and decked in Nature's green, they have a double attraction. Whether singly, or in mass, there is nothing in a city's streets so charming as bright green trees.

The French hold the "Grand Prix" as the creators of the most beautiful city—Paris. It is declared that the trees of Paris with their stately, growing columns, their overarching, living, moving, rustling canopies of green are more potent elements of the city's beauty than the Grecian pillars of the Madeleine, or the marble facades of the "Hotel de Ville." But we have a conspicuous example of civic art in our own country, viz; Washington, the Nation's capitol. Here again, trees are a prominent feature. Their background of green enhances the beauty of every statue, and frames every great building. The lines of well-planted, well-kept trees wind co-extensive with the boulevards and by their variety and beauty elicit the admiration of all beholders.

Paris.

Washington.

Civic patriotism and the desire to excel are already at work bringing about in Newark the city beautiful. These sentiments have been finding expression, for instance, in

Newark.

Always
Beautiful.

splendid municipal and business edifices. All right-minded men recognize the importance of beautiful public and private buildings. Yet all will agree, we think, that the touch of nature too is needed and is even more important. Indeed, it is the universal judgment that the attractiveness of a city depends largely on the trees planted along its streets. Whether one regards the graceful outlines of the leafless trunks and limbs, the tiny bud hastening its preparation for Spring, the feathery foliage as Spring bursts out anew, the glory of Summer, or the splendor of autumnal colors when every leaf becomes a flower, the tree stands forth a miracle of beauty and of power. If one healthy tree is a source of pleasure to the observant, long rows of well-kept trees with their graceful arches and nodding plumes, their grateful shade and flecks of sunshine, command attention from the most careless. They add more, we believe, to the beauty of a street than elaborate architecture—giving a loveliness and grace otherwise unattainable. Thus the street of the poor man may rival that of the rich.

Trees, because of their beauty, perpetually yield pure pleasure to the people; and this more and more as the people awake to them. Whatever thus adds to the stock of human joys has a real usefulness. That an American city should not be outdone by foreign cities in availing itself of this source of contentment seems beyond question. As President Eliot puts it: "The final aim of government by the people for the people is to increase the satisfaction and the joys of life to the highest possible degree for the greatest number of persons—to increase, that is, the number, variety and intensity of those sensations and emotions which give innocent and frequently recurring pleasure." And that is precisely the kind of pleasure given by trees, a pleasure, "innocent and frequently recurring." To pass even one noble tree every day in going from the home to the workshop makes an appreciable addition to the satisfactions of the citizen.

The catalogue of the tree's utilities may
 HEALTH easily be enlarged. Mr. W. A. Murrill, in
 Bulletin 205 issued by Cornell University,
 contends that "trees add to the healthfulness of a city by
 cooling and purifying the air. Besides cutting off the
 direct and reflected rays of the sun, foliage, by evaporating
 large quantities of water from its surface, exercises a
 marked effect on the temperature; and the reduction of the
 temperature in this way is greatest on dry, hot days when
 such reduction is most needed. Leaves also absorb impure
 and hurtful gases and manufacture the oxygen needed by
 us humans for respiration. Circulation of the air, due to
 unequal temperature, is likewise promoted by trees properly
 pruned and arranged; while the air of basements and cellars
 is rendered less humid by the removal of surplus water
 from the surrounding soil through the medium of roots and
 foliage."

This appraisal of the tree as a sanitary factor is confirmed
 by the resolution of the New York County Medical Society,
 quoted by C. Mulford Robinson in "The Improvement of
 Cities and Towns." The resolution follows:—"Resolved,
 That one of the most effective means for mitigating the
 intense heat of the Summer months and diminishing the
 death rate among children is the cultivation of an adequate
 number of trees in the streets." The sanitary value of the
 tree is illustrated further by the fact that the bill which was
 presented to the Legislature in 1899, to give the care of the
 street trees of New York City to the Park Commission, was
 drawn by a physician, a member of the State Board of
 Health, and was introduced as a purely sanitary measure.

The air we breathe contains oxygen, carbonic acid gas,
 and ozone. The supply of oxygen is demonstrably gener-
 ated by the plant life of the globe. The carbonic acid gas,
 hurtful to animal and helpful to vegetable life, is absorbed
 by the plants, and the proper atmospheric balance thus
 maintained. The large percentage of ozone in forest air.

Trees Dimin-
 ish Death
 Rate.

Trees
 Vitalize the
 Air.

and the scarcity of it in the treeless streets where crowded dwellings abound, demonstrates that this tonic and recuperative element of the air is due to the presence of trees and the lack of it to their absence. The air in the vicinity of trees contains less bacteria and dust-particles than does the air outside of tree influence, which again demonstrates that the presence of trees decreases the total of atmospheric impurities. It is pertinent to note here that a local varnish manufacturer depends upon his row of well-kept trees to screen much of the dust from the air before it enters his windows to injure his product.

Trees and
Life
Outdoors.

Streets well planted with trees invite out of door life by day and night, and the out-door life thus induced in no small degree thwarts the grim spectre of tuberculosis, now so serious a menace to every individual in our cities.

Trees
Appreciate
Property.

Trees are among the first things which impress a stranger in forming judgment as to whether a city is, or is not, a good place to live in. One need not be a lover of nature to appreciate the realty value of the refreshing shade of a row of street trees when the sun is blazing. What relief, what rest to weary eyes is the verdure of trees after the glaring pavements and shining windows of a bare street;—and how desirable then becomes a residence on the verdure covered street. These are evident truths, and that realty values appreciate in consequence is equally apparent.

Courts
Affirm This.

The courts recognize trees as an asset to the property on, or in front of which they stand. This real estate value of trees has been confirmed by numerous court decisions. In many cases the courts have decided that the destruction of a street shade tree detracted from the value of the abutter's property to the amount of \$50, \$300, \$400. In cases where several trees fronting the same property have been destroyed

by illuminating gas, the courts have awarded \$150 to \$200 per tree to the abutter.

Prof. T. J. Burrill, of the University of Illinois, cites the following instance of the money value of trees:—"Two lots on the same street were offered for sale. These lots were essentially similar in all respects save that in one case there were four trees, about twenty-five years old. Two of these trees were in the street and two on the lot inside of the street. In the case of the other lot, the only trees (two of them) were on the street, and these were less than half the age of the others. The prices asked for the lots were respectively \$2,500 and \$1,500. A man wishing to build compared the two lots and decided in favor of the \$2,500 one, the lot namely with the four trees—\$1,000 for four trees, or we might say for two trees. This lot had sixty-six feet frontage and contained about one-fourth of an acre. On such an acreage the net profit for twenty-five annual crops of corn might perhaps have been \$25. And each crop would have received more care than did the four trees during the whole of the twenty-five years. \$1,000 to \$25—the contrast is instructive! Yet there are to-day persons of intelligence who, in looking forward to results, will prefer to trust the corn."

\$1,000 For
Four Trees.

It is a small task to plant a tree. The subsequent attention is not large. The trees once started help themselves as scarcely anything else of moment to us ever does. They grow while we sleep. They drink the sunshine and compound their own food out of the refuse gases of the air and the watery solution of the soil. Out of these inert, inattractive, barely recognized substances, by a miracle of transformation there comes forth that thing of life and beauty—which is also a thing of tangible money value—a tree.

Small
Expense.

In view of the foregoing, it is respectfully submitted that an enlightened interest in the promotion of the beauty, the

Three Good
Reasons for
Trees.

health, the realty values of our city, commends to civic patriotism the maintenance, protection and increase of the trees of Newark. Appreciating this, the Shade Tree Commission has aimed to prosecute its calling with zeal and judgment during the year that is passed.

INSECT ENEMIES.

Much as has been said in the previous pages of our work in re the planting, care and maintenance of trees, and systematic care and improvement of parks, it must be borne in mind that from late May to early Autumn our energies are for the greater part centered on the insect campaign. While the City of Newark is extremely fortunate in not having yet been visited by the destructive Gypsy and Brown Tail moths, it has nevertheless several pests capable of alarming depredations. These require constant watchfulness to keep them in check.

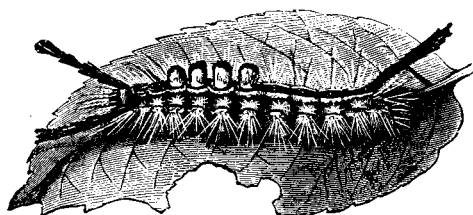
The worst enemy to the city's trees is the

TUSSOCK MOTH.

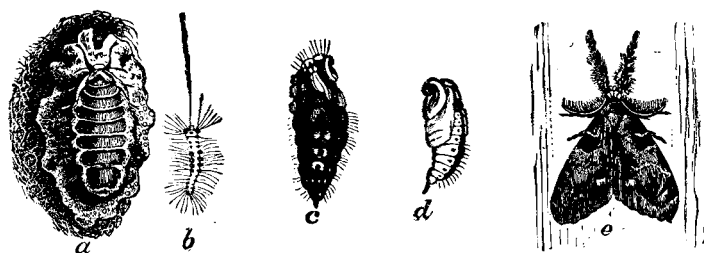
This insect is distinctly a shade tree pest and directs its ravages against an unlimited variety of trees and shrubs. It is partial to the Linden and Horse-chestnut. In this city it is found on every tree except the Ailanthus, Gingko and Sycamore.

The Tussock moth caterpillars are easily recognized by the very pretty red, yellow and black markings. The eggs hatch in the Spring and the caterpillars ascend to the leaves and feed until full grown. They crawl to the lower limbs and form cocoons, which are very conspicuous, even to the untrained eye. In a short time the moth emerges from this cocoon and deposits eggs, which soon hatch and once again the caterpillars ascend the tree and feed upon the leaves.

The first brood is the most destructive, as the second brood is very small in this locality. The accompanying plate shows the various stages in the life cycle.



Caterpillar of the Tussock moth.



The White-marked Tussock Moth: *a*, the wingless female ovipositing on the empty cocoon; *b*, young caterpillar suspended by a silken cord; *c*, pupa of the female; *d*, pupa of the male; *e*, male adult or moth. After Riley. These illustrations are published by courtesy of the State Department of Entomology.

The treatment for the destruction of this pest is both preventive and remedial. The first consists of going over infested territory in mid-summer, immediately after the eggs are deposited, and wetting these eggs with creosote, to which is added enough coal tar to color it black.

The second method is that of spraying with a stomach poison, while the caterpillars are feeding. This is very effective when the poison is applied in time. The first spraying under this method is with arsenate of lead and Bordeaux, the Bordeaux being added as a fungicide. The following was the

FORMULA.

Arsenate of lead	12 lbs.
Bordeaux Mixture	8 "
Water	100 gals.

This solution is deposited on the under side of the leaf in a very fine spray. The accompanying half-tone shows a spraying gang at work.



It is impossible with our present comparatively meagre equipment to systematically spray every tree in the city; yet the Shade Tree Commission holds itself in readiness as far as possible to spray any tree, or trees, on any streets if so requested. It is too often the case, however, that these

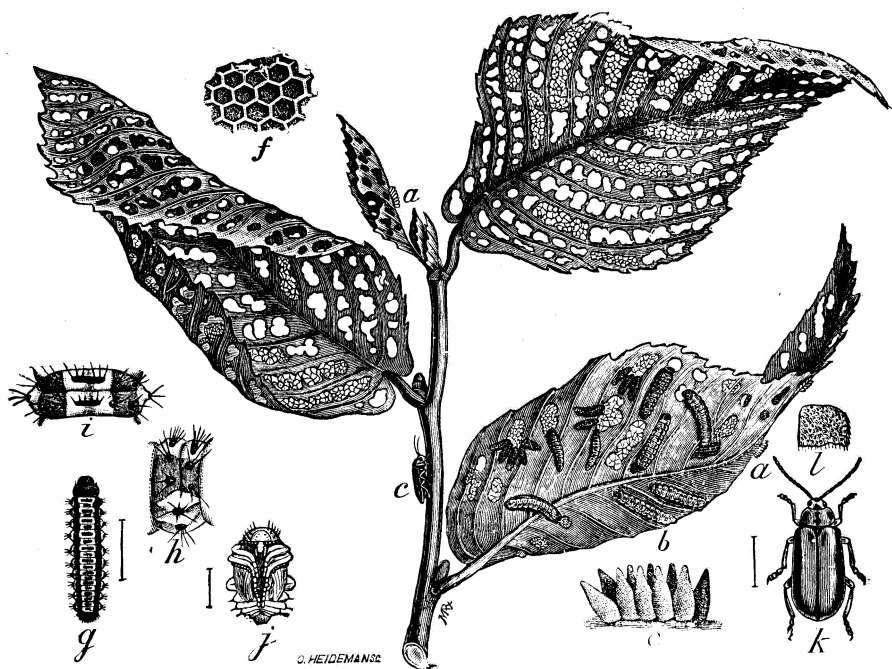
requests are made after the tree is nearly defoliated. If we were promptly notified at the *first* appearance of the caterpillar, these private calls could be attended to more effectively.

Second only to the Tussock moth in its ravages upon the city trees is the

ELM LEAF BEETLE.

This pest was imported from Europe about half a century ago, and is now widespread throughout the country. It confines its attacks solely to the elm. It is present in such great numbers that it frequently causes the death of large trees by its persistent attack, year after year, upon the foliage. The beetle winters in the adult stage seeking shelter in any protected spot. In the Spring they crawl to the leaves and, after feeding awhile, deposit eggs on the under side of the leaf. The young soon hatch and begin feeding on the under side of the leaves. North of here only the first brood is destructive, but in this latitude the second and third broods are also destructive, their ravages extending until early frost terminates their activity. The treatment is for the greater part remedial: Early in the Spring the trees are sprayed with a strong solution of arsenate of lead to kill as many of the adult beetles as is possible before they deposit their eggs. Immediately after the young emerge from the egg it is necessary to spray again, using a weaker solution of arsenate of lead, since the larvae are more susceptible to the poison than are the adults. Intermittent sprayings are necessary throughout the Summer and early fall to control such numbers as may have escaped the first treatments.

The accompanying cut shows the various stages in the life cycle of this beetle.



The elm-leaf beetle: *a, a*, egg patches on leaves; *b*, larvæ feeding; *c*, adult; all natural size; the holes eaten through the leaves are by the adults, the scraped surfaces are by the larvæ; *e*, egg mass; *f*, surface of an egg; *g*, larva; *h*, *i*, larval details; *j*, pupa; *k*, beetle; *l*, surface of elytra; *e* to *l* enlarged. From Div. Ent., U. S. Dept Agl.

Several other pests, whose food is the foliage of trees such as the web worm, tent caterpillar, etc., appear only in isolated cases and easily succumb to the above treatment. But turning from these insects which feed upon the tissues and juices of the leaves, there are those which confine their attack to the bark or wood of the tree. Foremost among these are the

BORERS.

We have to combat several varieties of these. But the method of attack and the treatment are practically identical for all varieties. They are found chiefly on the silver and

sugar maple, but occasionally also they attack the elm, and a few other trees. The eggs are deposited upon the bark and the young soon hatch and crawl to a convenient place and commence to bore into the wood, working first upon the smaller branches and then descending to more spacious quarters as they increase in appetite and size. They are voracious in their feeding habits, and a *single borer often causes the death of a young tree*. Their work can easily be seen in large trees as it takes the form of a gnarly exuberance, sometimes of a depression, on the surface of the bark. The treatment of this pest is very difficult, the only method in use at present is to go over the trees at regular periods and exterminate all that can be found. This is accomplished by killing the larvae with a sharp pointed wire, or by injecting bisulphide of carbon into the cavity where the grub is feeding and closing the passage with putty. Both of these methods are efficient, but are necessarily very tedious.

It is a deplorable fact that the English sparrow has driven out all the songsters that would otherwise abound in the trees of our city streets and parks. In rural districts the song-birds keep the borers in check, so that their ravages are scarcely noticed.

Another insect enemy is the scale. Of this, there are several varieties and New Jersey is their stronghold. Unchecked, they work havoc to the trees. The cottony maple scale was found in small numbers during the past year, and an application of whale oil soap—1 lb. soap to 5 gals. water—was found to be very effective. The oyster shell scale was more prevalent than for a few years past, and was found on elm trees, quite a radical departure from its fixed habitat. Since this class of pests are sucking insects, it is necessary to apply a contact poison, and many trees were systematically sprayed with kerosene emulsion and whale oil soap, and these treatments were in every case effective. Isolated cases of San Jose, Tulip and Scurfy scale have been found, and very successfully combatted. During the past

year we have tried several new scalicides, recently put on the market, but up to the present time we have found none that can in our judgment take the place of kerosene emulsion and whale oil soap, either in efficiency or cost of production.

TWO HISTORIC EVENTS.

The
Portsmouth
Guns.

Two events, certain to have historic interest in the years to come, transpired at Military Park. It seems fitting these should be chronicled here with some detail. The first occurred on Memorial Day and was the formal acceptance of the custody of the two guns from the U. S. S. Portsmouth which had been committed to the care of the city by the National Government; with this event was associated the rededicating of the restored stone which on July 4th, 1826, the anniversary of the Nation's birth, had been set by our fathers to commemorate American Independence. We compile the following from the press reports of the ceremonies:

Veterans
Present.

"The guns rested on their carriages on either side of the apex, and were enshrouded in the Stars and Stripes. In the center the recently restored memorial stone, commemorating American Independence, was guarded by a rail draped with the national colors. The United Spanish War Veterans lined up on the south end of the park, the Marcus L. Ward and Phil Kearny posts, G. A. R., along Park Place, and Lincoln post, No. 11, along Broad St.

"Mayor Henry M. Doremus, accompanied by members of the Common Council and by the Shade Tree Commissioners, took his stand beside the memorial stone, with President Titsworth of the Commission at his left, the remainder of the delegation surrounding them. George H. Ashback and William F. Van Houten, representing the Portsmouth veterans, to whom were assigned the honor of unveiling the cannon, took their places each beside a gun. The Mayor then accepted the cannons in the following speech:—

"Fellow citizens—It seems fitting that these two eight-inch guns which have been loaned to the city by the United

States Government should be accepted on the day set aside to commemorate the veterans of our wars.

“These two guns are themselves veterans of the Civil War and took active part before that war and since in some of our engagements abroad, and it is appropriate that they should rest here, where once the Liberty pole threw its shadow o’er the common, and here they will remain to remind us how our liberty was won and to tell future generations how we have kept alive the spirit which makes independence permanent.”

Mayor
Doremus’
Speech.

“It may not be amiss to remind you in passing that it was on this spot, July 4, 1826, that the city fathers gathered and laid a memorial stone commemorating the Fiftieth Anniversary of American Independence.

“We have with us to-day two men who loaded and fired these guns in the year 1856—George H. Ashback and William F. Van Houten—whom I have named as an honorary committee to take part in these exercises.

“And now I desire to officially transfer the care and custody of these two guns to the Shade Tree Commission of the City of Newark, and I ask you, Mr. President, to see that they are always kept in that honorable condition their past service to our country commands.”

“The guns were accepted on behalf of the Commission by its President in a brief address. He also referred to the ceremonies of July 4, 1826, when ‘a procession composed of the representatives of the many trades in the then flourishing little town of eight thousand and seventeen inhabitants made its way here while thirteen oxen bore on a lumbering cart the memorial stone in grateful commemoration of the fiftieth anniversary of independence. Ruthless feet have effaced the inscription and the meaning of the stone has been forgotten. Today we have recut the inscription that the gratitude of the men of 1826 may speak forth with our gratitude for the blessings of Liberty and Home.’

“At the Mayor’s direction the guns were then unveiled by Veterans Ashback and Van Houten and with the removing of the flags the ceremonies ended. In honor of the fact the veterans named had served these guns on the old Portsmouth, the Mayor presented to them as gifts the flags with which the guns had been enshrouded.”

New Liberty
Pole.

The other of the two events at Military Park above referred to was the dedication of the new steel lattice-work flag-pole, 112 feet in height, reared on the spot where formerly stood the old Liberty-pole and where recruits were received during the Civil War. This dedication and the flag-raising in connection therewith occurred on Thanksgiving Day. A report of the ceremonies, copied from the Newark Daily Advertiser of the next day, follows:—

Impressive
Scene.

“More than 5,000 persons attended the flag-raising in Military Park yesterday, nearly 2,000 of whom were boys and girls from the public schools, who had been selected by Emil Hofman to sing national hymns during the exercises. It was a second saengerfest when the childish voices, in unison with those of the older folk, made the air ring with patriotic songs. It was said that the affair was one of the most impressive ever seen in that historic park, which has been the scene of many patriotic gatherings.

“There was no hitch in any part of the program, and everything was carried out to the letter. At the conclusion of the exercises Mayor Henry M. Doremus, at whose suggestion the pole was erected, complimented the Shade Tree Commissioners for the excellent manner in which they had carried out his wishes.

“Among those present, besides Mayor Doremus, were Charles G. Titworth, president of the Shade Tree Commission; James A. Berry and James S. Higbie, the other two commissioners, and Carl Bannwart, Secretary; Richard C. Jenkinson, Police Commissioner Henry K. Gardner, Aldermen Edward E. McClintock and Alfred N. Dalrymple, Dr. A. B. Poland, Superintendent of Public Schools; William F. Greathead, clerk of the Board of Works, and Captain C. Albert Gasser, Secretary to Mayor Doremus. Camp Mitchell United Spanish War Veterans attended in full uniform, also a representation of the Ladies’ Auxiliary of the U. S. W. V.

"A bugle call 'assembly' by Andrew Shawger, of Camp Mitchell, U. S. W. V., opened the exercises. Then the hymn, 'My Country, 'Tis of Thee', was sung by school children, under the direction of Mr. Hofman. The Rev. Dr. D. R. Frazer, of the First Presbyterian Church, offered prayer, and Mrs. C. Albert Gasser, President of the Ladies' Auxiliary of Camp Mitchell, presented a beautiful new flag 15 feet by 25 feet. Mrs. Gasser said:

"Mr. Titsworth, on behalf of the Ladies' Auxiliary of Camp Mitchell, United Spanish War Veterans, I have the honor of tendering to your honorable board, an American flag, to be flown from the new flag-staff which you have had erected in this park at the suggestion of His Honor Mayor Henry M. Doremus. I am also pleased to say that our organization will esteem it an honor to replace the flag with a new one when the usefulness of this has ceased.'

"The President of the Commission responded in a few words, thanking the ladies for their patriotic gift. He said that through this gift we are able to place above this spot, consecrated by our forefathers to a monument to liberty, the proud symbol of our country—the emblem of liberty and law and love.

"In erecting this pole we have done all that science can suggest to have one that shall endure. Our prayer is that the time may never come when foreign foe or traitorous countryman shall haul down the flag which flies therefrom. Here let it float, if God pleases, day by day, until time shall end, staunchly waving its assurance of freedom and protection to all the people of this great city.'

"Color Guard Louis Busch and William Busch, then began to raise the flag to the top of the pole, while the assemblage sang 'The Star-Spangled Banner,' accompanied by Krimke's brass band, and as the last strains of the national song died away, the color guard stood 'at rest'—the flag high in air floated from the top of the pole.

"Then Mayor Doremus called for three cheers for Old Glory and the response was grand. The exercises closed with a bugle call, 'To the colors,' by Andrew Shawger."

School Children's Chorus.

Presentation of Flag.

Acceptance.

Old Glory In Air.

List of streets planted by the SHADE TREE COMMISSION, showing time of planting,
variety of trees and number of each variety planted.

STREET.	Elms.	Norway Maples.	Sugar Maples.	Oaks.	Lindens.	Gingkos.	Oriental Planes.	Poplars.	White Ash.	Fall 1904.	Spring 1905.	Fall 1905.	Spring 1906.	Fall 1906.
Avon Avenue	74						15	14					74	29
Ann			20									20		
Atlantic			10									10		
Baldwin			96								96			
Belleville Avenue	1	33		32	2									68
Belmont Avenue			124					53					124	53
Bergen												105		
Broad, North	105													
Broad, South	95									95				
Brunswick			81										81	
Camp	7			1								8		
Central Avenue		338								245	93			
Centre	7											7		
Charlton	3										3			
Chestnut			23									23		
Clinton Avenue	177									53	124			
Cottage		20										20		
Court				15	16						31			
Darcy							15	13						28
Eighth		99										99		
Elizabeth Avenue	82									68	14			56
Fairmount Avenue	99												43	16
Fifteenth Avenue							16							49
First								49						60
Frederick								60						19
Fulton								19						61
Garside		49						12						50
Grafton				50										20
Hamburg Place								20						44
Heller Parkway				44										
High	51			9							60			
Highland Avenue							25						25	
Hill	14									4	10			
Hillside Avenue	28	1												29
Jefferson		80										80		
Kinney, East						43					43			

SHADE TREE COMMISSION.

Kinney, West			37								37		
Lafayette		5					18				5		18
Lincoln Park	23								4	19			
Littleton Avenue	95											35	60
Lombardy							12				12		
Madison Avenue	49											53	49
Millford Avenue	53											41	
Miller			41									84	
Montclair Avenue				42		42						159	18
Mt. Prospect Avenue		18		159				9					9
Mulberry													11
Myrtle Avenue		11											
N. J. R. R. Avenue	5									5			
Nichols		16											16
Ninth, South		89											89
Osborne Terrace			34								34		
Park Place	30									30			
Park, East	27					21				48			
Pennington			17								17		
Pennsylvania Avenue	30											30	
Rector		16										16	
Roseville	73	24		71								168	
Second Avenue		35										35	
Seventh Avenue						46							46
Seventh		27						2					29
Sherman Avenue			50									50	
Sixteenth Avenue						122						122	
South	25									25			
South Orange Avenue	150			127									277
Springfield Avenue						60							66
Spruce					19					19			
Summer Avenue		190								190			
Sussex Avenue				5								5	
Thomas						27							
Thirteenth Avenue							21						27
Tichenor			13					8					20
Twelfth, South	35							77				13	77
Tyler		4	19									23	35
Van Buren									55			55	
Van Ness Place			4									4	
Walnut	26				23			147		196			
Washington Avenue		110					50				160		
Washington	102			1							103		
Webster		30										30	
Wright			65										65
Military Park, Arbor Day, '04			85							85			
Total	1,466	1,115	711	556	60	91	418	513	55	750	1,073	821	1,268

THE STATUTES.

P. L. 1893, p. 496.

1. BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey*, That in all the municipalities of this state there may be appointed, in the manner hereinafter provided, a commission of three freeholders, who shall serve without compensation, and who shall have the exclusive and absolute control and power to plant, set out, maintain, protect and care for shade trees in any of the public highways of their respective municipalities, the cost thereof to be borne and paid for in the manner hereinafter directed.

2. *And be it enacted*, That it shall be optional with the governing body of any municipality whether this act shall have effect in, and such commissioners shall be appointed in, such municipality; and whenever any such governing body shall by resolution, approve of this act, and direct that such commissioners shall be appointed, then, from that time, this act and all its provisions shall be in force, and apply to such municipality; and such commissioners shall be appointed for terms of three, four and five years, respectively; and on the expiration of any term, the new appointment shall be for five years, and any vacancy shall be filled for the unexpired term only; and in cities the said appointments shall be made by the mayor thereof, and in townships by the chairman of the township committee, and in villages and boroughs by the chairman or president of the board of trustees, or other governing body.

3. *And be it enacted*, That whenever said commissioners shall propose to make any such improvements as setting out or planting any shade trees, or changing the same in any highway, they shall give notice of such contemplated improvement (specify the streets or portions thereof where such trees are intended to be planted) in one or more of

the newspapers of their said municipality, if there be any newspaper published in said place, for at least two weeks prior to any meeting in which they shall decide to make such improvement.

4. *And be it enacted*, That the cost of planting and transplanting any trees in any highway, and boxes or guards for the protection thereof, when necessary, shall be borne by the real estate in front of which such trees are planted or set out, and the cost thereof as to each tract of real estate shall be certified by said commissioners to the person having charge of the collection of taxes for said municipality; and upon the filing of said certificate, the amount of the cost of such improvement shall be and become a lien upon said lands in front of which said trees were planted or set out, and the said collecting officer shall place the assessment so made against any property in the annual tax bills rendered to owner or owners of such property, and the same shall be collectible in the same manner as the other taxes against said property are collected.

5. *And be it enacted*, That the cost and expense of caring for said trees, after being planted or set out, and the expense of publishing said notices, shall be borne and paid by a general tax to be raised by said municipality; said tax shall not exceed the sum of one-tenth of one mill on the dollar annually on all the taxable property of said municipality, and the needed amount shall be each year certified by said commissioners to the assessor and assessors of the said municipality, and be assessed and raised as other taxes.

6. *And be it enacted*, That this act shall take effect immediately.

Approved March 28, 1893.

NOTE:—By the Act of 1902, p. 703, approved April 10, 1902, the provision of law fixing this annual appropriation was repealed, and the Common Council is directed to provide for the expenses of all the departments of the city.

P. L. 1905, p. 212 No. 2.

A SUPPLEMENT to an act entitled "An Act to provide for the planting and care of shade trees on the highways of the municipalities of this State," approved March twenty-eight, one thousand eight hundred and ninety-three.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. In any municipality which now has or hereafter shall take advantage of the act to which this is a supplement the commission appointed under the provisions thereof shall have exclusive control over the public parks, belonging to or under the control of such municipality, or any department in the government thereof, with full power and authority to improve, repair, manage, maintain and control the same.

2. The said commission shall have full power and authority and is hereby empowered to pass, enact, alter, amend and repeal ordinances for the protection, regulation and control of such parks, and the trees, flowers, shrubs, statuary therein, and also for the protection, regulation and control of all shade trees planted or growing upon the highways of any such municipality, and to prescribe fines and penalties for the violation thereof and fix the amount of the same; the method now in use for the passing, enacting, amending and publishing ordinances in said municipality shall be the method used to pass, enact, alter, amend, repeal and publish the ordinances herein mentioned.

3. All moneys collected from fines or penalties for the violation of any ordinances of any such commission, and all moneys collected for assessments made upon the property for the cost of planting and transplanting any trees, and the boxes or guards for the protection thereof in any such city, shall be forthwith paid over to the proper municipal authorities and shall be placed to the credit of the said commission and subject to be drawn upon by the said commission in the manner provided by law for the payments of moneys in any such municipality.

4. All acts and parts of acts inconsistent with this act are hereby repealed.

5. This act shall take effect immediately.

Approved April 7th, 1905.

P. L. 1906, p. 522.

AN ACT in relation to the control of public parks belonging to or under the control of any municipality of this State or any department in the government thereof.

BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

1. In any municipality which now has or hereafter shall take advantage of an act entitled "An Act to provide for the planting and care of shade trees on the highways of the municipalities of this State, approved March twenty-eighth, one thousand eight hundred and ninety-three," the commission appointed under the provisions of said act shall have exclusive control of the public parks belonging to or under the control of such municipality or any department in the government thereof, with full power and authority to improve, repair, manage, maintain and control the same.

2. The said commission shall have full power and authority and is hereby empowered to pass, enact, alter, amend and repeal ordinances for the protection, regulation and control of such parks and the trees, flowers, shrubs, statuary and other improvements therein, and to prescribe fines and penalties for the violation thereof and to fix the amount of the same. The method now or hereafter in use for the passing, enacting, altering, amending, repealing and publishing ordinances in said municipality shall be the method used to pass, enact, alter, amend, repeal and publish the ordinances herein mentioned, and said ordinances shall be enforced in the manner provided at the time of said en-

forcement law for the enforcement of the ordinances of the commission authorized by the aforesaid act and any amendments or supplements thereof.

3. This act shall take effect immediately.

P. L. 1906, p. 333.

A SUPPLEMENT to an act entitled "An Act to provide for the planting and care of shade trees on the highways of the municipalities of this State, approved March twenty-eighth, one thousand eight hundred and ninety-three."

I. BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

2. The said commission may prescribe penalties for the violation of any of their ordinances, and the courts which now or hereafter shall have jurisdiction over actions for the violation of ordinances of the municipality in which said commission has been or shall be appointed shall have jurisdiction in actions for the violation of such ordinances as the said commission shall enact; and said ordinances shall be enforced by like proceedings and processes, and the practice for the enforcement of said ordinances shall be the same as that provided by law for the enforcement of the ordinances of the municipality in which such commission exists.

2. The officers authorized by law to serve and execute processes in the courts, as aforesaid, shall be the officers to serve and execute any process issued out of any court under this act.

3. A copy of an ordinance or ordinances of said commission, certified to under the hand of the clerk, secretary or president of the said commission, shall be taken in any court of this state as full and legal proof of the existence of such ordinance.

THE ORDINANCE.

AN ORDINANCE relating to the protection, regulation and control of Shade Trees and City Parks in the City of Newark, New Jersey.

BE IT ORDAINED by the Shade Tree Commission of the City of Newark, New Jersey, as follows:

1. No person shall, without the written permit of the Shade Tree Commission, cut, break, climb, injure or remove any living tree in a public highway, or any tree or plant in a city park; or injure, misuse or remove any device placed to protect such tree or plant, or any structure or device, in or around a city park and pertaining thereto; or have possession of any such structure or thing, or any part thereof.
2. No person shall enter upon any portion of lawn or ground within a city park when notified by a sign placed in such park, or by a guardian of such park, or by a police officer, not to enter upon such lawn or ground.
3. No person shall leave any paper or other waste material in a city park, except in the receptacles which may be provided therein for such material.
4. No person above the age of fourteen years shall, except at such places and under such regulations as may be designated by the Shade Tree Commission, play at any game in a city park.
5. No person shall, without the written permit of the Shade Tree Commission, place any booth, stand or other structure, or station any wagon or other vehicle, in a city park.
6. No person shall offer any article for sale, display any advertising device, or distribute any circulars or cards in a city park.
7. No person shall fasten a horse or other animal to a tree in a public highway of the said city, or in a city park therein, nor cause a horse or other animal, to stand so that said horse or animal can injure such a tree.

8. No person shall utter any profane, threatening or abusive language or loud outcry, or do any obscene or indecent act, commit any nuisance, solicit any subscription or contribution, or play any game of chance in a city park, or bring into a city park any instrument of gambling or of any similar use.

9. No person shall, without the written permit of the Shade Tree Commission, attach or keep attached to a tree in a public highway or city park, or to the guard or stake intended for the protection of such a tree, a rope, wire, sign or any device.

10. No person shall, without the written permit of the Shade Tree Commission, place, or hereafter maintain, upon the ground in a public highway or city park, stone, cement or other substance which shall impede the free entrance of water and air to the roots of any tree in such highway or park without leaving an open space of ground outside the trunk of said tree in area not less than four square feet.

11. In the erection or repair of a building or structure, the owner thereof shall place such guards around all nearby trees on the public highway as shall effectually prevent injury to them.

12. Every person or corporation having any wire charged with electricity running through a public highway or park shall securely fasten such wire so that it shall not come into contact with any tree therein.

13. No person or corporation shall prevent, delay or interfere with the Shade Tree Commission or its employees in the planting, pruning, spraying or removing of a tree in a public highway or city park, or in the removal of stone, cement or other substance about the trunk of a tree.

14. Every violation by the same person of any provision of this ordinance which occurs again, or continues, or any day or days succeeding the first violation thereof, shall constitute an additional violation for each of such succeeding days.

15. Any person violating any of the provisions of this ordinance, shall, upon conviction thereof, forfeit and pay a penalty of not more than fifty dollars, at the discretion of the court in which the conviction is had; and may be, in the discretion of the court, committed to the county jail or penitentiary for a period of not exceeding three months.

16. This ordinance shall take effect immediately.

CHARLES GRANT TITSWORTH,	}	<i>Shade Tree Commissioners.</i>
JAMES A. BERRY,		
JAMES S. HIGBIE.		

Carl Bannwart, Secretary.

Approved December 14, 1906.

HENRY M. DOREMUS, *Mayor.*