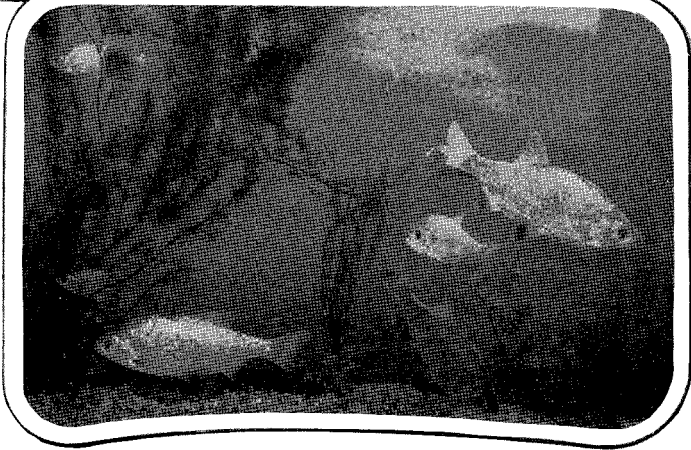
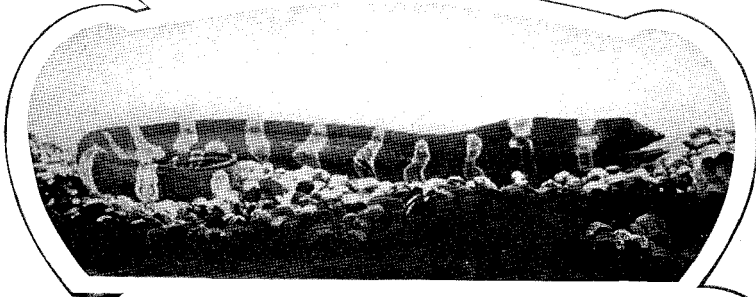
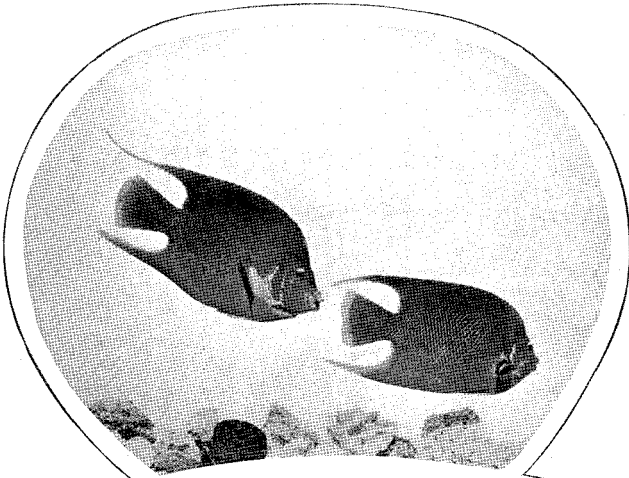


The donations to the Central Park Menagerie during the year were as follows :

- Jan. 13.....1 opossum, donated by John H. Slingerland.
 " 22.....1 hawk, donated by C. W. Martin.
 " 23.....1 opossum, donated by Julius Gambelle.
 " 25.....1 owl, donor unknown.
 " 27.....2 golden eagles, donated by William Bartells.
- Feb. 13.....3 pigeons, donated by Hamburg S. S. Co.
 " 24.....2 parrots, donated by Augustus Classon.
- Mch. 1.....1 black snake, donated by J. T. Brauw.
 " 4.....1 parrot, donated by Mrs. W. T. Parsons.
 " 6.....1 alligator, donated by J. Ortman.
 " 9.....5 rabbits, donated by George W. Vogel.
 " 22.....2 alligators, donated by Peter Freess.
 " 22.....2 alligators, donated by Mrs. A. W. Emerson.
 " 28.....1 parrot, donated by A. R. Stevenson.
 " 28.....6 marmosets, donated by C. H. Catherwood.
- April 9.....1 marmoset, donated by E. A. Hilman.
 " 19.....2 rabbits, donated by F. C. Miller.
 " 30.....1 monkey, donated by Mrs. E. C. Hoit.
- May 9.....1 parrot, donated by S. G. Pettenger.
 " 10.....1 parrot, donated by Mrs. Ashman.
 " 12.....4 rabbits, donated by J. N. Golding.
 " 16.....1 dove, donated by Mrs. Walsh.
 " 24.....2 red foxes, donated by C. F. Morehouse.
- June 6.....1 monkey, donated by Miss Nellie Baumont.
 " 12.....1 parriel, donated by Mrs. Clark.
 " 12.....1 alligator, donated by A. McGrath.
 " 13.....5 prairie dogs, donated by Joseph Rice.
 " 13.....1 canary bird, donated by H. Strauss.
 " 17.....2 guinea pigs, donated by Mrs. Whiteman.
 " 18.....1 cardinal, donated by Antonia Bascida.
 " 23.....2 hawks, donor unknown.
 " 23.....2 alligators, donated by Mrs. J. S. Gray.
- July 5.....1 parrot, donated by Mrs. Eves.
 " 16.....2 hares, donated by W. A. Broman.
 " 17.....1 guinea pig, donated by Miss H. Reid.
 " 23.....1 red fox, donated by E. Banks.
 " 23.....1 guinea pig, donated by Mrs. J. Allen.
- Aug. 2.....3 hawks, donated by J. H. Trippe.
 " 9.....1 cockatoo, donated by Emmet Muller.
 " 12.....1 Java sparrow, donated by Mrs. P. Rand.
 " 16.....1 blackbird, donated by Joseph Cleary.
 " 25.....3 marmosets, donated by Mrs. Kloppenburg.
 " 26.....1 monkey, donated by Mrs. Kelly.



EXHIBITS IN THE NEW YORK AQUARIUM.

1. ANGEL FISH.

2. MORAY (*Channomuraena Vittata*.)

3. PEARL ROACH.

- Sept. 2.....1 monkey, donated by Dr. Oppenheimer.
 " 6.....1 rail bird, donated by Kiessel & Faehner.
 " 16.....1 white swan, donated by George C. Boldt.
 " 20.....1 gold finch, donated by W. Willan.
 " 22.....1 brown thrush, donated by E. W. Buseker.
 " 22.....1 cinnamon bear, donated by Joseph Sareix.
 " 24.....1 monkey, donated by L. E. Riddle.
 " 25.....1 water hen, donated by Miss E. Stradler.
 Oct. 2.....1 magpie, donated by Mrs. Grisler.
 " 7.....1 marmoset, donated by R. Acosta.
 " 14.....1 opossum, donated by John Raynor.
 " 20.....4 canary birds, donated by Mrs. E. M. Kearney.
 " 20.....1 alligator, donated by Ed. Furrien.
 " 28.....1 Dorset ram, donated by John A. McGillivray.
 " 31.....2 cardinals, donated by Mrs. C. H. Davis.
 " 31.....1 rail bird, donor unknown.
 Nov. 3.....2 prairie wolves, donated by Sidney Read.
 " 10.....2 alligators, donated by Louis Bermann.
 " 14.....1 monkey, donor unknown.
 " 14.....1 opossum, donated by Mrs. Blesh.
 " 29.....1 parrot, donated by Mrs. B. S. McAllister.
 " 29.....1 parrot, donated by Miss M. Ahlers.
 Dec. 4.....1 monkey, donated by Mrs. Gilbert.
 " 9.....1 guinea pig, donor unknown.
 " 9.....1 rabbit, donor unknown.
 " 10.....1 rabbit, donor unknown.
 " 19.....1 diver, donated by Edward McArdle.
 " 24.....1 monkey, donated by John M. Lewis.

The births in the Menagerie were as follows:

- Mch. 1.....1 Mexican deer.
 " 9.....1 camel.
 " 14.....2 aoudads.
 " 18.....1 buffalo.
 April 29.....1 zebu.
 " 1 to 29...26 lambs.
 May 8.....1 zebu.
 " 8.....1 axis deer.
 " 31.....2 aoudads.
 " 31.....1 nylghau.
 June 6.....1 nylghau.
 " 9.....1 fallow deer.
 " 11.....1 fallow deer.
 " 15.....2 nylghaus.
 " 22.....1 nylghau.

July 23. 1 red deer.
Aug. 18. 1 American elk.
Sept. 20. 1 American elk.

The following exchanges were made during the year:

Jan. 27.....1 American elk buck and 1 Dorset ram for 5 baboons and
1 monkey.
April 26.....1 American elk buck for 1 red deer buck.
July 2.....2 nyilghau bucks and 1 axis buck for 15 swans.
Nov. 21.....1 spotted hyena and 1 nyilghau fawn for 2 striped hyena
and 6 monkeys.

The following purchases were made during the year:

Jan. 16..... 1 golden eagle.
Feb. 18..... 5 golden eagles.
April 28..... 3 golden eagles.
May 26..... 50 prairie dogs.
Aug. 16..... 24 assorted pheasants.
Oct. 15..... 1 Dorset ram.
“ 17..... 1 golden eagle.
“ 28..... 15 Dorset ewes.
Nov. 1..... 2 golden eagles.

Sold at public auction:

June 27.....	4 Dorset ewes.
"	9 ram lambs.
"	6 American elks.
"	1 fallow buck.
"	7 fallow does.
"	2 zebus.
"	9 Brazilian sheep.
"	1,142 lbs. of wool.

STATEMENT OF BALANCES OF APPROPRIATIONS, DECEMBER 31, 1902.

TITLES OF APPROPRIATIONS.	AMOUNT OF APPROPRIATIONS.	PAYMENTS.	AMOUNT OF UNEXPENDED BALANCES.
Salaries of Commissioners, Secretary and Employees of the Board of Parks...	\$29,300 00	\$29,299 96	\$0 04

BOROUGHES OF MANHATTAN AND RICHMOND.

TITLES OF APPROPRIATIONS,	AMOUNT OF APPRO- PRIATIONS.	PAYMENTS.	AMOUNT OF UNEXPENDED BALANCES.
Administration.....	\$28,280 00	\$27,642 52	\$637 48
Labor, Maintenance and Supplies.	432,198 71	.....	.....
Supplies.....	.....	79,501 84	.....
Pay-rolls .....	.....	352,406 39	290 48
Zoological Department.....	30,660 00	.....	.....
Supplies.....	.....	14,844 62	.....
Pay-rolls .....	.....	15,729 40	85 98
Maintenance of Museums—			
American Museum of Natural History.	160,000 00	160,000 00	.....
Metropolitan Museum of Art.....	150,000 00	150,000 00	.....
Music.	26,200 00	26,150 00	50 00
Contingencies.....	2,500 00	2,356 00	144 00
Surveys, Maps and Plans.	2,000 00	2,000 00	.....
Aquarium	46,153 14	45,968 17	184 97
Ambulance Service, Central Park.	1,200 00	1,199 93	07
Care of Grant's Tomb	5,000 00	.....	5,000 00
Harlem River Driveway ..	18,500 00	18,488 72	11 28

RECEIPTS.

Rents, privileges, etc..... \$52,630 42

EXPENDITURES ON CONSTRUCTION ACCOUNTS, 1902.

Riverside Park and Drive, Completion of Construction—

Grading and construction, drainage and walks.....	\$1,466 41
Construction of viaduct over West Ninety-sixth street....	67,442 10
Improving between Ninety-sixth and One Hundred and Twenty-fourth streets, planting, etc., around General Grant's tomb, grading, etc., between One Hundred and Twentieth and One Hundred and Twenty-seventh streets, etc.....	14,490 44

Improvement Parks, Parkways and Drives—

Central Park, Improvement of—Paving, etc., Circle, Fifty-ninth street and Eighth avenue.....	\$890 23
Central Park, Improvement of—Paving and repaving with asphalt, walks.....	935 77
Widening roadway, One Hundred and Fifty-third street and Macomb's Dam road, etc.....	40 96
Improvement, etc., Cooper Union Park.....	179 22
Paving with asphalt easterly and westerly sidewalks, Manhattan Square.....	113 55
St. John's Park, Construction of—Hudson Park.....	13,989 09
Jefferson Park, Improvement of.....	13,119 85
East River Park, Improvement of extension.....	510 13
Constructing and improving small park north of One Hundred and Fifty-third street, etc.....	42 53
Laying asphalt walks, leveling play-grounds, etc., East River Park.....	57 67
Constructing new walks around Arsenal Building, repairing and constructing other walks in Central Park.....	57 22
Improving principal entrance Central Park, Fifty-ninth street and Fifth avenue.....	84 01
Eleventh Ward Park Fund—Hamilton Fish Park.....	67 43
New York Public Library Fund.....	244,211 66
Hester Street Park Fund—William H. Seward Park.....	38,276 93
Repairing with asphalt Eighty-sixth street, from Central Park, West, to Riverside Drive.....	41 12
Washington Park, in the Town of Stapleton, and the small park in Port Richmond, Borough of Richmond, Improvement of.....	35,022 19
Regulating the grounds and making drives and walks around the Casino, Central Park.....	165 00
Widening roadway of Fifty-ninth street, between Fifth and Eighth avenues, etc.....	39,056 21
Improvement of parks, parkways and drives, Boroughs of Manhattan and Richmond.....	94,217 44
Jefferson Park.....	1,491 57
DeWitt Clinton Park.....	2,450 71
Public Comfort Station, etc., North Meadow, Central Park.....	829 07
Public Comfort Station, etc., Morningside Park.....	6 61
Constructing improved toilet facilities in City parks, Borough of Manhattan.....	87 67
Cathedral Parkway, Improvement and completion of.....	4,067 23
Mulberry Bend Park, Construction of.....	1,754 50

NEW YORK CITY PUBLIC PARKS AND PARKWAYS.

BOROUGH OF MANHATTAN.

Improved Parks with Names.

NAME.	LOCATION.	AREA IN ACRES.
Abingdon Square.....	Eighth avenue and Hudson street.....	0.202
Battery Park.....	Foot of Broadway.....	21.199
Beach Street Park.....	Beach street and West Broadway.....	0.038
Bowling Green.....	Broadway and Whitehall street.....	0.517
Bryant Park.....	Sixth avenue and Forty-second street.....	4.775
Canal Street Park.....	Canal and West streets.....	0.318
Central Park.....	Fifth to Eighth avenues, Fifty-ninth to One Hundred and Tenth streets.....	843.019
Christopher Street Park..	Christopher and West Fourth streets.....	0.139
City Hall Park.....	Broadway and Chambers streets.....	8.239
Cooper Park.....	Third avenue and Seventh street.....	0.229
Corlears Hook Park.....	Corlears and South streets.....	8.300
Duane Street Park.....	Duane and Hudson streets.....	0.108
East River Park.....	Eighty-fourth to Eighty-ninth streets, East river.....	12.546
Empire Park, south.....	Broadway and Sixty-third street.....	0.344
Empire Park, north.....	Broadway and Sixty-sixth street.....	0.069
Grand Street Park.....	Grand street and East Broadway.....	0.630
Greeley Square.....	Sixth avenue and Thirty-second street.....	0.144
Hamilton Fish Park.....	Hous'on and Willett streets.....	3.673
Hancock Square.....	St. Nicholas avenue and One Hundred and Twenty-third street.....	0.072
Harlem Lane Park.....	Seventh avenue and One Hundred and Fifty-third street.....	1.270
Hudson Park.....	Hudson and Leroy streets.....	1.700
Jackson Square.....	Eighth avenue and Horatio street.....	0.227
Jeannette Park.....	Coenties slip and South street.....	0.728
Madison Square.....	Broadway and Twenty-third street.....	6.840
Manhattan Square.....	Central Park, West, Seventy-seventh to Eighty-first streets.....	17.582
Morningside Park.....	One Hundred and Tenth to One Hundred and Twenty-third streets, between Columbus and Amsterdam avenues.....	31.238

NAME.	LOCATION.	AREA IN ACRES.
Mount Morris Park.....	Mt. Morris to Madison avenues, One Hundred and Twentieth to One Hundred and Twenty-fourth streets.....	20.174
Mulberry Bend Park.....	Mulberry and Bayard streets.....	2.750
Paradise Park.....	Mission place and Worth street.....	0.114
Park Avenue Parks ...	Park avenue, Thirty-fourth to Fortieth streets, and Fifty-sixth to Ninety-sixth streets.....	8.118
Riverside Park.....	North river, Seventy-second to One Hundred and Twenty-ninth streets.....	140.037
Riverside Park Extension	N. Y. C. and H. R. R. R. to bulkhead line of Hudson river, Seventy-second to One Hundred and Twenty-ninth streets.....	48.215
Rutgers Park.....	Rutger's slip and South street.....	0.478
Ryan Park.....	Second avenue and Forty-second street.....	0.180
Sherman Square.....	Broadway and Seventieth street.....	0.001
Stuyvesant Park.....	Rutherford place and Sixteenth street.....	4.229
Tompkins Square.....	Avenue A. and Seventh street.....	10.508
Union Square.....	Broadway and Fourteenth street.....	3.483
Washington Square.....	Fifth avenue and Waverly place.....	8.115
William H. Seward Park.	Canal and Jefferson streets.....	3.315
Total		1,213.863

Unimproved Parks with Names.

Colonial Park.....	One Hundred Forty-fifth to One Hundred and Fifty-fifth streets, Bradhurst avenue to Edgecomb avenue.....	12.790
DeWitt Clinton Park...	Fifty-second to Fifty-fourth streets, North river.....	7.377
Fort Washington Park...	Fort Washington Point, Hudson river...	40.810
Thomas Jefferson Park.	One Hundred and Eleventh street, First avenue, One Hundred and Fourteenth street and Harlem river.....	15.529
High Bridge Park.....	One Hundred and Fifty-fifth street to Washington Bridge, west of Driveway.	64.343
St. Nicholas Park.....	One Hundred and Thirtieth to One Hundred and Forty-first streets, St. Nicholas to Tenth avenues.....	26.604
Total.....		167.453

Improved Unnamed Parks.

LOCATION.	AREA IN ACRES.
Triangle at Broadway and Seventy-third street.....	0.095
Triangle at Manhattan avenue and One Hundred and Fourteenth street..	0.018
Triangle at Seventh avenue and One Hundred and Seventeenth street...	0.074
Triangle at Sixth avenue and Thirty-fifty street.	0.042
Total	0.229

Unimproved Unnamed Parks.

Triangle at Broadway and One Hundred and Sixth street.....	0.072
Triangle at St. Nicholas avenue and One Hundred and Thirty-seventh } street..... }	0.038
Triangle at St. Nicholas avenue and One Hundred and Fiftieth street..	0.024
Addition to Riverside Park, One Hundred and Twenty-second street } to Claremont place, Riverside avenue to Claremont avenue..... }	2.064
Extension of High Bridge Park, One Hundred and Fifty-fifth to One } Hundred and Fifty-ninth streets, east of Speedway	2.511
West of Harlem River Driveway and North of Washington Bridge.....	22.817
Corner of Worth and Baxter streets.....	0.187
Total	27.713

Parks in Process of Condemnation.

NAME.	LOCATION.	AREA IN ACRES.
John Jay Park.....	Seventy-sixth to Seventy-eighth street, } East river..... }	3.04
.....	Thirty-fifth to Thirty-sixth street, First } to Second avenue..... }	2.947
	Total	5.951

PARKWAYS, STREETS, AVENUES, ETC.,

Under the Jurisdiction of the Department of Parks.

LOCATION.	LENGTH.	WIDTH.
Cathedral parkway (One Hundred and Tenth street, west of Seventh avenue)	4,061 feet.	100 to 126 feet.
Circle at Eighth avenue and Fifty-ninth street. ....	.....	.....
Eighty-sixth street, west of Central Park, West	3,435 feet.	100 feet.
Fifth avenue, Fifty-ninth to One Hundred and Tenth street	13,661 "	100 "
Harlem River Driveway.....	11,562 "	100 to 150 feet.
Morningside avenue, West.....	3,538 "	90 feet.
Ninety-sixth street, west of West End avenue.....	802 "	100 "
One Hundred and Tenth street, Fifth to Seventh avenues	2,045 "	70 "
One Hundred and Twenty-second street, west of Tenth avenue.....	1,450 "	80 "
One Hundred and Twenty-third street, west of Morningside Park	819 "	60 "
Plaza at Fifty-ninth street and Fifth avenue.....	.....	.....
Plaza at One Hundred and Tenth street and Fifth avenue .....	.....	.....
Plaza at One Hundred and Tenth street and Eighth avenue.....	.....	.....
Riverside Drive.....	17,000 feet.	90 to 168 feet.
Seventy-second street, west of Central Park, West...	3,025 "	100 feet.
Total	61,398 feet.	.....

BOROUGH OF RICHMOND.

NAME.	LOCATION.	AREA IN ACRES.
Washington square.....	<i>Improved Park, with Name.</i> Bay, Water and Canal streets, Stapleton ...	1.46
.....	<i>Improved Unnamed Park.</i> Broadway, Bennett street, Herberton avenue and Vreeland street, Port Richmond.....	1.28
	Total.....	2.74

RECAPITULATION OF PARK AREAS.

	ACRES.
Borough of Manhattan.....	1,415.209
Borough of Richmond.....	2.740
Borough of Brooklyn.....	1,026.875
Borough of Queens.....	550.843
Borough of The Bronx.....	3,866.590
Total.....	6,862.257

RECAPITULATION OF PARKWAYS, STREETS, AVENUES, ETC.

	LENGTH.
Borough of Manhattan.....	61,398 feet
Borough of Richmond.....	.....
Borough of Brooklyn.....	} 226,952 "
Borough of Queens.....	
Borough of The Bronx.....	33,211 "
Total.....	321,561 feet

LIST OF STATUARY, MONUMENTS, ETC., IN THE PUBLIC PARKS.

BOROUGH OF MANHATTAN.

Central Park—

Bolivar (equestrian).
 Schiller (bust).
 Beethoven (bust).
 Eagles, The (group).
 Daniel Webster (standing figure).
 Indian Hunter (group).
 Columbus (standing figure).
 Shakespeare (standing figure).
 Robert Burns (sitting figure).
 Walter Scott (sitting figure).
 Fitz Greene Halleck (sitting figure).
 Humboldt (bust).
 Thorwaldsen (standing figure).
 Commerce.
 Seventh Regiment Memorial (standing figure).
 Mazzini (bust).
 Morse (standing figure).
 The Pilgrim (standing figure).
 Still Hunt (group).
 Falconer (standing figure).
 Tigress.
 Moore (bust).
 Hamilton (standing figure).
 The Alexandrian Obelisk.
 Richard Morris Hunt (exedra).
 Shepard Fountain.
 General W. T. Sherman (equestrian).

Riverside Park—

Washington (near Eighty-ninth street).
 Soldiers and Sailors' Memorial Monument (Ninety-second street).
 Tomb of General U. S. Grant (One Hundred and Twenty-fourth street).

Madison Square Park—

Chester A. Arthur.
 Admiral Farragut.
 Roscoe Conkling.
 William H. Seward.

Washington Square Park—

Washington Arch.
 Garibaldi.
 Alexander L. Holly.

Bryant Park—

Dr. J. Marion Sims.
Washington Irving.

Union Square Park—

Lafayette.
Washington.
Lincoln.
D. Willis James Fountain.

City Hall Park—

Nathan Hale.

Morningside Park—

Washington-Lafayette.

Hancock Square—

General Winfield Scott Hancock.

Greeley Square—

Horace Greeley.

Cooper Park—

Peter Cooper.

Battery Park—

Ericsson.

Broadway and Thirty-fifth Street—

William Earl Dodge.

Printing House Square—

Franklin.

Broadway and Twenty-fifth Street—

Worth Monument.

Bowling Green Park—

Abraham DePeyster.

THE COMMISSIONER'S REPORT
OF THE WORK OF
THE DEPARTMENT OF PARKS
FOR THE
BOROUGH OF THE BRONX
FOR THE YEAR 1902.

Honorable SETH LOW,
Mayor of The City of New York:

DEAR SIR—In compliance with the provisions of the Charter, I send you herewith the report of work undertaken and accomplished in this Department during the year 1902.

I have the honor to remain,

Very respectfully yours,

JOHN E. EUSTIS,
Commissioner of Parks,
Borough of The Bronx.

HISTORY OF THE PARKS.

Twenty years ago there were no parks in the Borough of The Bronx as it is known to-day. There were a few squares containing, perhaps, a quarter or one-half acre of ground at the most, left for public places by the old towns. In 1883, after considerable agitation in the public press, an act of the Legislature was passed—chapter 253 of the Laws of 1883. The first section reads as follows:

“Section 1. The mayor of the city of New York is hereby “authorized and empowered to nominate, and subject to the “confirmation of the board of aldermen, appoint a commission “to consist of seven citizens whose duty it shall be to select “and locate such lands in the twenty-third and twenty-fourth “wards of the city of New York and in the vicinity thereof as “may, in their opinion, be proper and desirable to be preserved “and set apart for one or more public parks for said city; and “they shall report such selection and location to the legislature “at the earliest date practicable.”

This act was passed on the 19th of April, 1883, and prior to the first day of May, 1883, the Hon. Franklin Edson, then Mayor of the City of New York, appointed Hon. Luther R. Marsh, President, Louis Fitzgerald, Waldo Hutchins, Charles L. Tiffany, William W. Niles, George W. McLean and Thomas J. Cromby as Commissioners pursuant to said act of the Legislature. On the 1st day of May, 1883, their appointment was confirmed by the Board of Aldermen. The work of this Commission was at once entered upon with vigor, as can readily be seen from the fact that they made their report to the Legislature in 1884, which report covered the vast territory now known as St. Mary's Park, Claremont Park, Crotona Park, Bronx Park, Van Cortlandt Park, Pelham Bay Park, Bronx and Pelham parkway, Crotona parkway and Mosholu parkway, aggregating nearly 4,000 acres in all, and, taken together, comprising one of the finest systems of parks in the world.



ZBROWSKI MANSION, CLAREMONT PARK.

The people of the present day owe, indeed, a debt of gratitude to all said Commissioners, who worked indefatigably in accomplishing this vast amount of work within a space of one year. After their report was submitted, the local authorities proceeded under the law to take title to the lands embraced within their report, so that the parks above mentioned, to wit, Bronx Park, Crotona Park, Claremont Park, Pelham Bay Park, St. Mary's Park, Van Cortlandt Park, Crotona parkway, Mosholu parkway and Bronx and Pelham parkway were finally acquired and fee vested in the City of New York on the 12th of December, 1888.

Beginning with our most westerly park limit, we have the Spuyten Duyvil parkway, a parkway varying from 200 to 400 feet in width, beginning at the junction of Spuyten Duyvil creek and the Hudson river, which winds and turns over the hill and through the valleys until it intersects Van Cortlandt Park at Broadway. This parkway was acquired by the City in 1882, is 11,500 feet in length, and is intended to be the connecting link, in time, from the system of parkways in the Bronx to those in Manhattan, by a viaduct over Spuyten Duyvil creek to connect with a similar parkway leading along the westerly side of Manhattan Island, being an extension of Riverside drive and Boulevard Lafayette.

The construction of this parkway was virtually completed prior to the present year, but during the early spring the westerly end was graded and completed, and considerable planting has been done and cleaning up upon the sides during the present year. Resurfacing of the macadam road has been done for portions of the distance, and a new drain system has been constructed at the westerly terminus. There remains to be built a retaining-wall of about 150 feet at the very westerly end, after which this parkway will require no further construction work.

VAN CORTLANDT PARK (AREA, 1,132 ACRES).

This is the second largest park in the Borough of The Bronx, and, on account of its accessibility, is much further advanced

in its development and is more generally used than Pelham Bay Park, the largest park in the borough.

This park is bounded on the north by the city line, on the west by Broadway for a distance of nearly a mile and a half, on the south and east by Jerome avenue, Mount Vernon road, the new Reservoir, Gun Hill road and Van Cortlandt avenue. The New York and Putnam Railroad runs through it, and the Union Railway road, on Jerome avenue, also bisects a large section of this park.

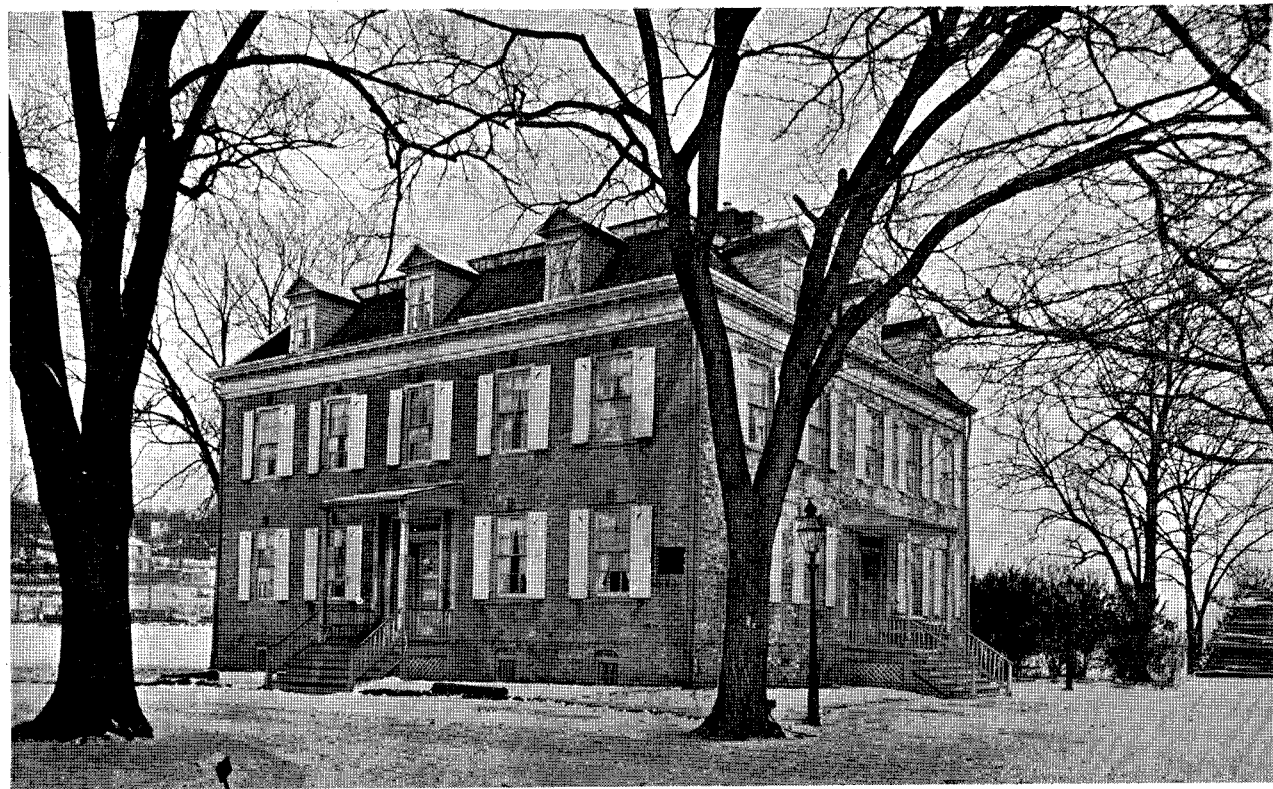
It may not be out of place to say that this particular section of the city played a very prominent part in the War of the Revolution. The Manorial residence of the Van Cortlandts, a substantial old mansion, was erected, as shown by the numerals engraved on its front, in the year 1748. It was, for a brief space, occupied by General Washington during the War of the Revolution, and in 1783 he revisited the place with his staff, occupying the dwelling for a few days immediately preceding the evacuation of New York by the English.

The Old Mill, which was destroyed a few years ago by lightning, at the foot of the lake directly east of the mansion, made flour during the Revolution for both friends and foes at different times, as it changed owners in the varying fortunes of the war.

The Saw-mill, which still stands, also did service for both parties in cutting up the logs used for building bridges, roads and tents for the contestants.

This extensive tract was disputable ground during the Revolutionary War. In accordance with an order of Congress, dated May 25, 1775, a post was established at Kingsbridge, and some of this tract of land was used for the purpose of keeping open communication between New York and the country. Here the outposts of both armies had frequent encounters, and the records of more than one fierce struggle are found in the relics unearthed in the various changes being made in the development of the land in this vicinity.

When Washington decided, in July, 1781, to join Lafayette



VAN CORTLANDT MANSION.

at Yorktown, he lighted his camp fires on the summit of Vault Hill. The vault, which gives its name to this eminence, from which an excellent view is afforded of the surrounding country, showing glimpses of the Hudson river and the Palisades in the distance, was the burial place of the Van Cortlandt family, and along its slopes and down through the valley of the Mosholu many a bloody skirmish took place between the outposts of the two armies.

This tract contains two features that are, indeed, prominent in the parks of the Greater New York. First is the Parade Ground, which was developed for the use of the National Guard of the State of New York, and is the finest parade ground in this State, comprising 150 acres of land in one plateau on a fine plain; and the other is Van Cortlandt Lake, which comprises about 75 acres, and is used during the skating season by more people than any other spot of its size within the city boundary. Often as many as from ten to fifteen thousand skaters a day glide across its surface.

This park has been given considerable attention during the last year. The Parade Ground has been opened to the polo teams of Squadron A of the National Guard, the guardsmen themselves laying out three polo fields and providing the necessary sideboards and posts, the Park Department taking care of the grounds for the polo players. The result of this innovation was that, on the occasion of two matches given by the Squadron with outside teams, from five to ten thousand spectators were present.

Polo playing among National Guardsmen seems to be a feature that is very necessary, as nothing compares with this for teaching not only good horsemanship, but accuracy of judgment and eye, and it is conceded by all who visited these grounds during the past year that there is no other spot so accessible from the centre of New York City, as the Parade Ground, for this very attractive game, and it is expected that during the coming year the regular contests that have been held far distant from New York during the past, will, probably

some of them, be held within the City of New York upon these grounds.

The Colonial Mansion, in front of the Parade Ground, has been turned over, by an act of the Legislature, to the Colonial Dames, and is used by them as a museum in which are housed many revolutionary relics which it is well worth a person's time to visit this park to see.

Lying to the east, west and south of this mansion, the ground is laid out in tennis courts, cricket fields and baseball diamonds, all of which were largely used during the past year and kept in condition for the players, and no one who wished to play any of those games was deprived of the opportunity for lack of space.

The large marsh, containing about 5 acres, lying in front of the mansion between that and the road leading to Broadway, has undergone a great change. A moat 10 feet in width, bounded by a wall 6 feet deep and 6 feet wide, has been constructed for the purpose of developing the Colonial Garden, which had been for many years a subject of talk upon the records of the Department. An appropriation of \$15,000 had been obtained during the past Administration for the development of this garden, but the only work accomplished was the filling in of a portion of this swamp. The wall has been nearly completed, and, at the present time, quite a large portion of the plaza surrounded by this wall has been brought up to grade with top soil, so that during the coming spring the same will be planted and surrounded by gravel walks and flowering shrubs.

The next work of improvement in this park has been the improvement of the golf links, which extend from the southerly end to the northerly end of the park; the first six holes being upon the high ground lying directly south of the lake, and the remaining twelve holes on the stretch from the lake on the east side almost to the northerly boundary of the park.

Many of the boulders were removed during the early spring, the stone walls taken away, and dead trees and unnecessary shrubs removed, and the people playing have stated that the

links are second to none in the country. They have been occupied on holidays, Sundays and Saturdays on an average by 1,000 players a day.

The borders of all the existing roads leading through this park had never received any attention whatever. In the early spring these borders were cleaned up, all dead trees removed and useless ones cut down. All the stone walls were taken away, and the banks graded and given a neat and tidy appearance. In addition to this work a new road was constructed along the line of the golf links from Gun Hill road to the northern boundary of the park—a distance of 5,950 feet—all the way through the forest, and opened up not only a beautiful drive through forest trees, but gave throughout its whole length a fine view of the golf players while engaged in their play. In doing this work it was necessary to remove a large stone wall lying between the road and the golf links and also a large quantity of immense boulders that had been deposited along the line of the road from cleaning up the golf links when they were first laid out. These boulders and rocks were all taken and used in the construction of the wall around the Colonial Garden.

There was also an additional road of about 2,100 feet built from the road along the golf links easterly to Jerome avenue, opening up one of the finest parts of the forests in this park. This connects with a previous road called Woodland path, constructed several years ago. A new road 25 feet wide, 1,800 feet in length, was constructed from Two Hundred and Thirty-seventh street to Jerome avenue, giving the people of Woodlawn a short cut to the Jerome avenue cars.

A new pipe line of 700 feet—some of it two feet in diameter—has been laid in and along the golf links. Over 1,000 cubic yards of rock wall have been laid in the building of the Colonial Garden walls.

A new road has been surveyed from Mosholu avenue in two branches north to connect with Van Cortlandt avenue, already built and macadamized by the City of Yonkers, down to the

park line. This road has been prepared for opening. About one-half of it has been cleared of timber during the latter part of the current year, for the purpose of furnishing the poor people of the neighborhood with wood to burn when they were unable to get coal, the trees having been taken down by the park employees, cut up and carried away by others, thus saving the City the expense of burning and cleaning the ground after the trees were felled.

About 25 acres of forest land have been cleared of brush, boulders and dead trees and opened up into a fine piece of forest.

New sheds have been built at the hotel opposite the golf links, during the current year, for the use of the people driving there for skating or playing golf.

All of the work above mentioned that has been done in this park has been done without the expense of a dollar of bond money, but all from the Maintenance Fund of the Park Department.

A statue of General Porter was unveiled in this park late in the autumn, and preparation for receiving the same—fitting up grounds in the rear of the mansion—was also carried forward by the Department; and, in addition to this statue, a fine section of a window from the old Rhinelander Sugar House, which was used as a prison during the Revolutionary War, and donated by Mr. Rhinelander to the Colonial Dames, has been erected in the park ground near the Colonial Mansion, and taken care of by the Department.

Going east from Van Cortlandt Park one enters into Mosholu parkway, which leads directly to Bronx Park.

This parkway is 6,035 feet in length and 600 feet wide, containing an area of 80 acres. A narrow driveway had been constructed through this parkway, but no other improvements had been done until the present year. During the present year little has been done excepting cleaning up. Several hundred old, dead and dying trees have been removed; all the old boulders lying upon the surface of this parkway have been



BRONX RIVER BELOW BRIDGE.

taken away and used for other work. About 400 feet of new walks with rubble foundations have been built. All of the slopes along the driveway have been cleaned up and sodded; rustic railings placed along all cuts.

Surveys, maps and plans have been prepared during the year for the final development of this parkway, at considerable expense, so that, at the beginning of the year, the Department is in a position to begin the operation of the development of this parkway and the entrance therefrom into Bronx Park immediately in front of the Botanical Museum Building.

It is highly important that this work should now be taken up, as the Grand concourse, which also intersects this parkway, is another grand parkway leading directly south to McComb's Dam Park upon the Harlem river.

BRONX PARK (AREA, 661 ACRES).

Bronx Park derives its name from Jonas Bronck, who came to America about 1639 with his friend Johann Petersen Kuyter, a man of means and education, and a native of Ditmarsen, that portion of the little Duchy of Holstein lying between the mouth of the Elbe and Eider rivers.

On his arrival in New Amsterdam, he purchased of the Indians some five hundred acres of land, situated upon the mainland beyond the Harlem river, where he established the bouwery that bore his name, and which after his death was known as "Bronck's Land." Later it received the appellation it still bears as that important division of New York City known as the Borough of The Bronx. It was the pioneer settlement of the colony beyond the Harlem in Westchester County, and was called by its owner "Emaus." It covered what is now known as Morrisania.

It is on record that Pieter Andriessen and one Laurens Duytts were hired by Jonas Bronck to clear portions of the tract of land which he had purchased, and the agreement between them in 1639 is still extant. One hundred and twenty-one florins were to be paid for their board on the ship, and

the two were to have the privilege of planting tobacco and maize on Bronck's land on condition that they should break up a certain portion of the wild land every year, as payment for their use of it, and then surrender it to the owner for the planting of grain.

Of the personality of Jonas Bronck comparatively little is known, but he must have been a man of means and considerable education, as is attested by the inventory of his effects. He died in or about 1643 and his property passed into other hands. If not a Dane by birth, he must at least have been one by adoption, as it is recorded that he served the King of Denmark as Commander in the East Indies.

The inventory of his effects was made on May 6, 1643, and is a most interesting document, relating to the property holdings of the earlier Dutch Colonists. It is a list of the goods and effects found at the house of Fenntije Jeuriaens, widow of Jonas Bronck, and the entire property is enumerated. We read of one stone house, covered with tiles, one barn, one tobacco house, a few panes of window glass, and among the household articles are 2 beds and 6 pairs of sheets, 31 pewter dishes, one silver cup, 7 silver spoons, 1 silver saltcellar, 1 silver little bowl, 4 tankards with silver chains, iron pots, 2 mirrors, 4 little alabaster dishes, carpenter tools, a goodly quantity of clothes, such as a black satin suit, old quilted satin doublet, blue damask woolen shirt, two hats, one black cloth mantle, one old mantle of colored cloth, 6 old shirts and other items of a like nature.

His library was mainly of a religious character, and contained among other books a Bible (folio), another in German (quarto), Luther's Psalms and Catechism, several doctrinal treatises and histories, a Danish child's book, a Danish chronicle, a Danish law book and calendar, some books on sea-travel and navigation, 18 old printed books and 17 manuscripts of which the titles are not given, which, with 11 pictures, big and little, form the sum total of a library that is the first one recorded in the State of New York, and which must be considered a fair sample of the literature that a well-to-do and edu-



SCENE IN HEMLOCK FOREST.



PATH IN HEMLOCK FOREST.

cated pioneer from the low countries would be presumed to bring with him into the wilderness of Manhattan.

One gold signet ring and one Japanese cutlass were also the property of Jonas Bronck. His live stock was plentiful, and all are listed, from the cows, calves, mares, stallions and oxen, to the hogs, of which there were "numbers unknown running in the woods." We read also of 6 skepels of wheat, 66 skepels of rye and 3 of winter barley "sowed in the bowery in the cleared land." This inventory is dated May 6, 1643. His widow later married Arent van Corlaer, Commissioner at Rensselaerwyck, the man who first established the friendship with the Indians and who founded Schenectady.

This park has also an early history which is interwoven with Colonial days, and has some of the finest scenery in the world. This park was formerly a part of the Lydig, Lorillard and Neale estates, and it would be difficult, even in the Adirondacks, to find a tract of land of such rare beauty and picturesque loveliness as some of the sections in this park.

The Bronx river runs directly through this park from north to south, varying in width from 50 to 400 feet, containing several falls and cascades. The banks on either side, in places, rise perpendicularly, and gigantic trees, centuries old, crown these summits. (Among these is a grand old tree that towers to a height of over 150 feet, a veritable monarch of the forest, standing apart and known to the present and several past generations as "Delancey's Pine.") It obtained its name from the Delancey family who owned the land which was formerly the Lydig estate, along the southern portion of Bronx Park.

It also contains, in that section used now as a zoological park, an immense boulder, an object of peculiar value and attraction, a stone weighing probably 100 tons, and so balanced upon the rock where it was lodged by some glacier thousands of years ago, that a person by ordinary effort can set it rocking to and fro. Such an attraction cannot probably be duplicated in any other place in the world.

Within the Lorillard estate section the Bronx river courses

through a narrow rock-bound gorge, the walls of which tower in some places to nearly 100 feet; and contains the Hemlock Forest, known as one of the finest forests of its kind in existence.

We shall have to describe this park in three sections as, in accordance with the provisions of a statute of this State, the northerly section has been set apart as a Botanical Garden under the jurisdiction of the New York Botanical Society; and the southerly end is used as a Zoological Park by the New York Zoological Society; so that the part that remains as a park proper comprises about 150 acres in the centre.

We will first take up the section that is left under the sole jurisdiction of the Park Department.

The Lorillard Mansion is noted as being the home of the Lorillards, where they first laid the foundation of their immense fortune. During the Revolution it was the one place in the Colonies where snuff was manufactured, and the old snuff mill occupied by them at that time, and for many years subsequent thereto, is still standing upon the banks of the river and is occupied by the Department of Parks for its workshops in connection with work along the parks in The Bronx. During the year that is now past, the large valley lying to the east of this section has been flooded and developed into a lake comprising about seven acres of ground; and in this construction it was necessary to place a dam on the bank of the river to bring the water over the high ground from the Bronx river into the valley to the east.

A new road has been constructed with Telford macadam 25 feet in width, 1,720 lineal feet in length, from Pelham avenue opposite the entrance to the Zoological Park, adjoining the Bronx river, extending northerly, and intersecting with a similar road built in the botanical part of the Bronx Park, making a beautiful woodland drive from Pelham avenue, at the Bronx river, directly north to the Botanical Museum building and gardens.

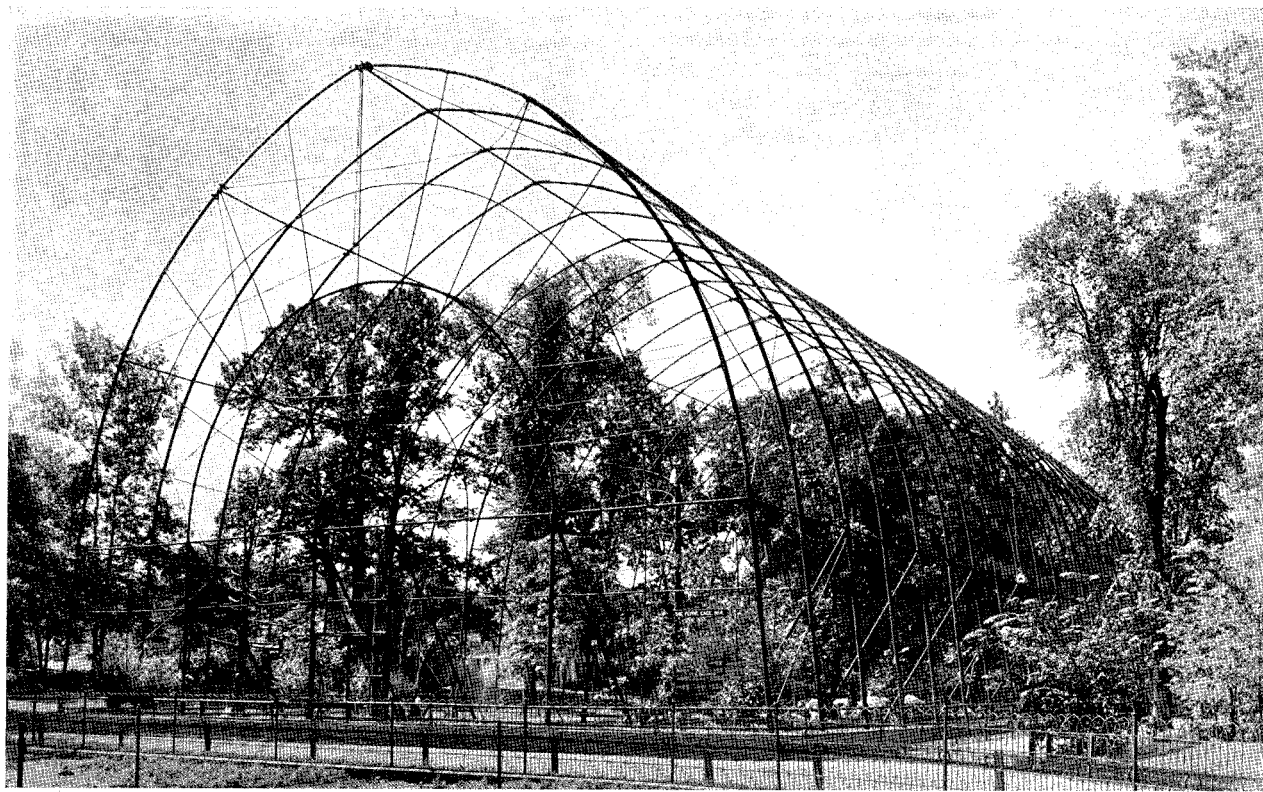
4,400 lineal feet of paths 10 feet wide on rubble foundations and surfaced with trap rock have been constructed; also 800



LORILLARD MANSION.



NEW LAKE, BRONX PARK.



THE GREAT FLYING CAGE.

lineal feet of new dirt road 25 feet in width has been constructed from the workshops north along the banks of the Bronx river to the dam.

Large and extensive repairs have been made to the workshops, including the addition of stables for a dozen horses, used by the Department.

The large mansion, as well as the stables in connection therewith, were turned over to the Police Department by the previous administration, and have been used by them as one of their stations, but it is the intention of the Department during the coming year to reclaim these buildings for park purposes, and notice has already been given to the Police Commissioner to vacate the same.

THE NEW YORK ZOOLOGICAL PARK.

In 1898 the New York Zoological Society and The City of New York began the practical work of creating a new institution devoted to zoology and the exhibition of living forms of life. It was intended that the New York Zoological Park should, in the extent of its collections and the manner in which they were installed, do ample justice to the demands of the metropolis of the American continent. Incidentally, it was expected that the natural development of the new institution would eventually place it in the front rank of the zoological gardens and parks of the world.

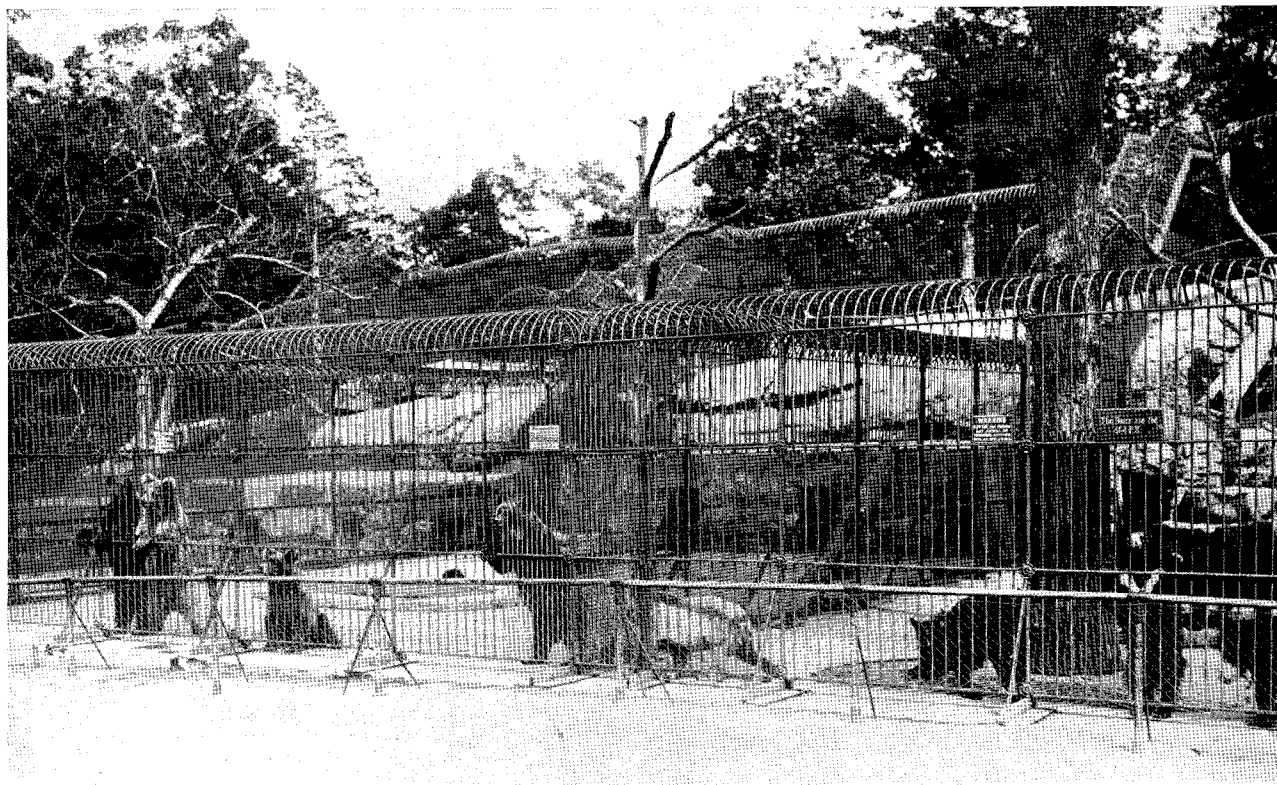
Active improvement work began in August, 1898, and on November 9, 1899, the Zoological Park was formally opened to the public. On January 1, 1903, the work of development was about half completed. Four years ago South Bronx Park was a wild and inhospitable wilderness, lacking every element of comfort to the visitor, and, to a great extent, unprotected. The forest had been completely neglected for fourteen years, every basin was a pestilential bog, and the only walks were foot-paths winding between the clumps of briar-bushes and tall weeds.

To-day the Zoological Park is almost completely fenced and

protected from destructive influences. It contains $4\frac{1}{2}$ miles of macadam walks, 5,850 feet of macadam roadway, 19,000 feet of sewers and drains, and no open sewer streams. It has six clean and wholesome ponds where that number of stagnant bogs formerly were. It contains 300 park settees, a spacious shelter pavilion, a comfortable restaurant, a service building, many public comfort rooms, 4 entrance pavilions and supplies of drinking water. It contains a reptile house, primates' house, lion house and aquatic birds' house that are as liberal in design and rich in execution as even the people of New York can properly demand. Moreover, it is only fair to the Zoological Society and The City of New York, to state the additional fact that, all things considered, these buildings are the best and the finest of their respective kinds.

In addition to the above heated buildings, there are many open-air installations for animals, some of them of an imposing character. For example, the bear dens represent the latest development in the care of bears, and form, with their 30 inhabitants, one of the most attractive, instructive, and also amusing features in the park. The bears are grouped together in nine large open yards against the side of a granite cliff. The space allotted to them is abundant for exercise, both in running and climbing, and they have an unlimited allowance of sunlight and water in which to bathe. The animals are healthy, good tempered and positively happy. The polar bear den, against the north end of Rocking Stone Hill, is the finest of the series and speaks for itself in the illustration shown herewith. The only trouble in connection with it lies in the fact that its inmates wrestle with each other in their swimming pool for so many hours daily, that the hair of each bear is kept seriously thinned out by the other's claws.

A general view of the bear dens from the hillside toward the reptile house reveals an imposing array of grizzly, brown, gray and jet black animals, varying in size from the huge Kadiak bear from Alaska, in den No. 2, to the diminutive jet black specimen from northern Japan, in den No. 5. The species



BEAR DENS.



KADIAK BEAR.

shown represent the following localities: 2 polar bears, from Nova Zembla; 3 Japanese black bears, from Japan; 2 Hima-layan black bears, from Japan; 2 hairy-eared bears, from Mon-golia, central Asia; 2 brown bears, from central Russia; 2 brown bears, from Asia Minor; 2 Kadiak bears, from Alaska; 2 grizzly bears, from Alaska; 1 silver-tip grizzly, from Colo-rado; 1 cinnamon bear, from Colorado; 3 sloth bears, from India, and American black bears from seven widely separated localities in North America. Other species of bears are con-stantly being sought for and will eventually be obtained.

THE WILD SHEEP, GOATS AND IBEX.

A collection which is quite new to the public is that contain-ing the wild sheep, goats and ibex, to be found on Mountain Sheep Hill. From a point opposite the south end of the bear dens there extends southward to the corner of the buffalo range a high, rocky ridge 500 feet long and 30 feet high. Two years ago it was an unattractive mass of boulders, old stone walls and rubbish, overgrown with weeds and briars. With great labor and at no little expense, the entire ridge has been con-verted into an imposing landscape feature, the natural granite rock having been utilized to the utmost, both in securing the finest landscape effect, and providing acceptable and thoroughly natural homes for the animals.

The ridge has been divided by wire fences into seven sepa-rate enclosures or yards, each provided with a warm and dry shelter cave hidden from view in the rocky hillside. There is in each enclosure sufficient green turf to form an appropriate setting for the rocks.

Already the collection of animals on Mountain Sheep Hill contains several rare and very interesting species. The rarest is the male Siberian ibex, from the Altai Mountains, central Asia, now nearly three years old, and so strong and vigorous that it requires an extra fence, of iron piping set in heavy iron posts, to confine him. The burrhel, or Blue Mountain sheep, of southern Asia, is the most beautiful species shown. The

three Punjab wild sheep, from the Himalayas north of India, are yet immature. The shaggy-haired and picturesque Himalayan tahr has developed finely since his arrival at the park, and attracts much attention. All of these species are of great rarity in captivity, and seldom seen in zoological gardens.

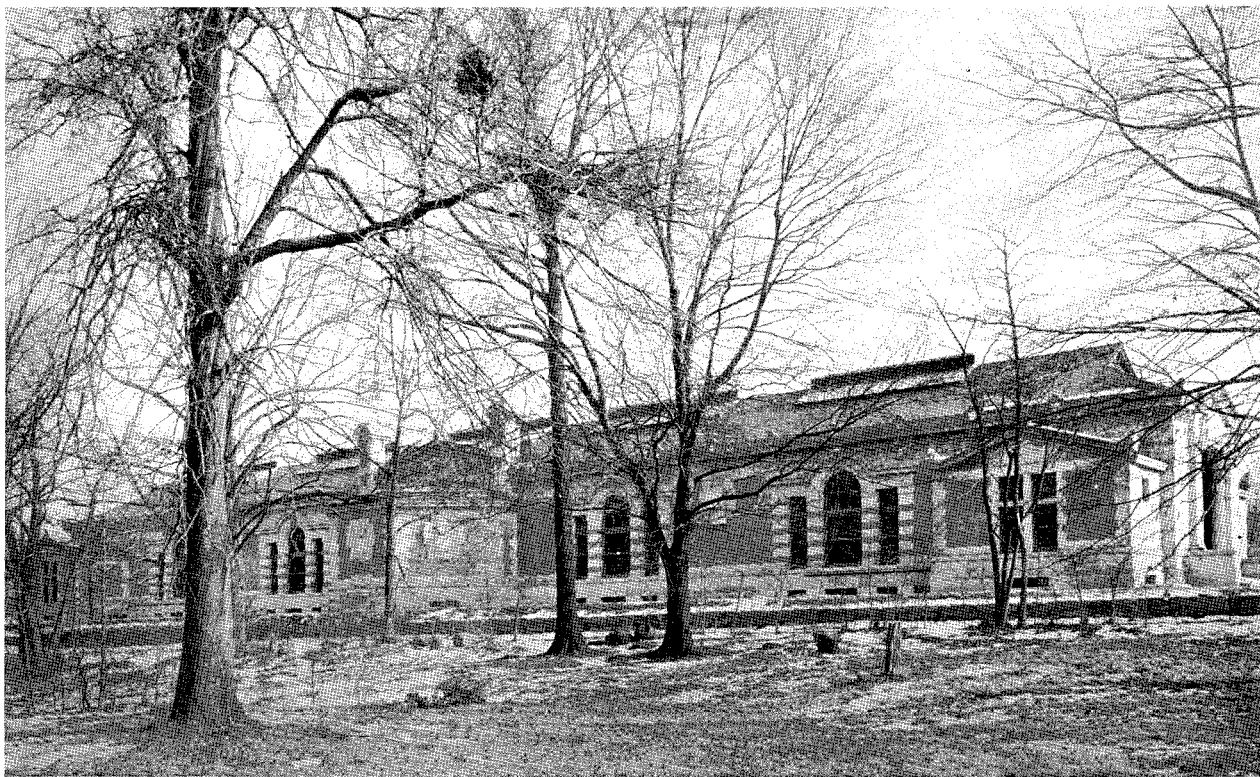
This collection also contains specimens of the chamois, mouflon, Spanish ibex and aoudad, and the health of the animals as a whole is very satisfactory. The only difficulty experienced with them thus far is due to their excess of vigor and inclination to fight.

THE LION HOUSE.

Every zoological society which creates a zoological garden puts forth its best effort in the planning and building of its lion house. Quite naturally, every one concerned is anxious that the home of the king of beasts, and his near relatives, should be in keeping with the dignity of his position in the animal world. Aside from this, however, it is desirable that the large carnivorous animals should have the greatest possible amount of space in which to live, in order that they may not seem to be prisoners, in durance vile. However people may differ on all other subjects, all agree that there is small pleasure in beholding a fine, large animal imprisoned in narrow, mean quarters, not half large enough to render him reasonably satisfied with life.

In addition to considerations for the animals themselves, the public requires, for its own comfort and convenience, a spacious and well-lighted hall, and the health of the animals and safety of the keepers require that the service arrangements should be of the best. Spacious outside cages are now regarded as an absolute necessity to any modern house for the large carnivora.

The lion houses of Europe afford a very interesting series of illustrations of the manner in which different minds have striven to attain the same end. No two of them are exactly alike, and the majority of them serve their purposes excellently. For all practical purposes, several of them come quite near to perfection; but, thus far, the shadow of the iron bar is over them all.



WEST FRONT OF LION HOUSE.

The lion house in the New York Zoological Park represents the greatest effort of the New York Zoological Society thus far, and constitutes what will undoubtedly stand, for many years at least, as its finest building. It contains many features which are entirely original, and no effort has been spared to render it of the highest possible value to the public. It is situated in a commanding position on the southeast corner of the level plateau known as Baird Court. Thanks to its position on this five-foot terrace, its western elevation does not convey an impression of a very low building, as would be the case if it stood upon a wide tract of level ground. From whatever distance it is seen, the western side—which is in full view from the Birds' Valley and the motor road which runs along the western side of Baird Court—conveys the impression of a highly artistic structure built of the finest materials. The wealth of sculptured stone and terra cotta, presenting realistic carvings of large feline animals, is calculated to impress the observer very strongly. This impression will reach its climax in the two life-size sentinel lions, carved in stone, which sit in repose on each side of each entrance to the building.

GROUND PLAN.

The essential features of the lion house consist of a main hall, 192 feet long and 28 feet wide; a series of cages 21 feet deep, along its eastern side, and a series of exterior cages, also extending the entire length of the eastern wall, and varying in depth from 24 feet to 42 feet 6 inches. Over all, the structure is 240 feet long, and its extreme width at the centre is 110 feet. The style of architecture is uniform with that of the other large buildings of the park, and similar building materials have also been used. The brickwork seems lighter in color than the walls of the primates' house and reptile house, because of the fact that the bricks have been laid in yellow mortar instead of dark red. This building is much more richly ornamented with animal sculptures and cut stone than any of the other buildings. The roof of the main hall is quite high, and the ceiling of a very light

yellow pine harmonizes very perfectly with the color of the masonry. The long western hall of the building is pierced by spacious windows, opening upon the line of trees which shade the building on the west. In the centre, the western wall is broken by a large alcove, semi-hexagonal in shape, the side-walls of which are unbroken by windows. This alcove is to be used for the exhibition of collections of drawings and paintings of carnivorous animals—and other animals, if the society so elects. It is provided with a spacious skylight, and it will admirably serve its very unique purpose. Primarily, it is intended to exhibit in this alcove instructive pictures of carnivorous animals which, by reason of their rarity, are seldom found in zoological gardens.

Along the western wall of the building a raised platform has been constructed, two steps high, with oak settees against the wall. This platform is intended to enable a large number of visitors to overlook the heads of those who throng the floor and otherwise might entirely cut off their view of the animals in the cages.

THE INTERIOR CAGES.

The interior cages are twelve in number. Six of them are extra large, 18 by 22 feet. These are intended for the finest lions and tigers, and for families of cubs. Six smaller cages, the dimensions of which are 12 by 22 feet, will accommodate the leopards, pumas and cheetahs. The floors of the cages are raised three feet above the visitors' floor, and have been constructed of strips of maple set on edge. Each cage is provided with two sleeping dens, which can, when necessary, be cut off entirely from the other portions of the enclosure. The top of the sleeping dens has been finished as a sort of balcony, running back to the outer wall of the building, to which access is gained by stumps of trees so cut as to form what stage carpenters call "practicable steps." The floor of each balcony is six feet high, and animals moving about upon it present a very fine spectacle, fully visible to every visitor on the floor.

The cage fronts represent a great innovation in the confining



REPTILE HOUSE.

of dangerous animals. Instead of the heavy iron bars hitherto in universal use for the confinement of large carnivorous animals, and which not only cut off much of the view of the animal, but continually suggest the prison idea, the fronts of these cages have been fitted with wire netting, specially made by the Page Woven Wire Fence Company, of Adrian, Michigan, for this building. The mesh is rectangular and very nearly square, measuring 3 by 4 inches. The horizontal wires are those which are relied upon to resist the attacks of the animals. These are of hard steel, size No. 5, and each wire has a tensile strength of about 4,500 pounds. Each end of each wire is wrapped around a heavy frame of round wrought iron, twisted tightly upon itself and the end soldered down.

The horizontal wires are held perfectly in place, and equidistant, by perpendicular tie-wires, four inches apart, wrapped around the horizontals at each point of intersection, and firmly soldered. The panels, made by the Page Company, have been set into heavy frames of angle iron and securely bolted. The whole of this ironwork has been painted dull olive green, to match the tiling in the interior of the cages, and the netting comes as near to being invisible as anything ever can, which is strong enough to confine lions and tigers of the largest size. The mesh interferes less with the view of the animals than anything that has yet been devised. As to its strength, and the possible ability of the animals to break through it, there is good reason to believe that, if the attachments of the angle irons held fast, an elephant could not break through it.

The interior walls of each cage have been covered with glass tiling of the dull jungle green color, specially made for this purpose, which is carried up a height of 8 feet. As a background for the display of feline animals it is an unqualified success, and from a sanitary point of view it is equally perfect. The walls above this have been painted with oil and stippled an amber-gray color. The ceiling of each cage is about half skylight, and the animals have an abundance of light for exhibition purposes, and quite as much as is good for them.

THE EXTERIOR CAGES.

The series of exterior cages has been planned somewhat differently from the interior cages. It consists of three enormously large cages—two semicircular and one square—and six smaller cages. Each of the large cages represents two of the large interior dens, and will be used by the occupants of these dens alternately. They have been planned, however, with a view to subdividing them later, if it should be found desirable. The large semicircular cages at the north and south ends of the series are 38 feet wide and 42 feet 6 inches deep. The large square central cage measures 36 by 38 feet, and the smaller cages are each 12 feet 6 inches wide and 24 feet deep. The fronts of all these are of wire netting, the same as appears in the interior of the building. During the coming spring, and prior to their occupancy by the animals, all the exterior cages will be provided with rockwork, stumps and trees, as far as may be desirable to promote the comfort and satisfactory display of the animals. Following the custom of most European gardens, all these exterior cages have been roofed over, chiefly for the purpose of making them acceptable to the animals, even in rainy weather. They face the southeast, and, therefore, receive the greatest possible amount of sunshine.

CAGE SERVICE.

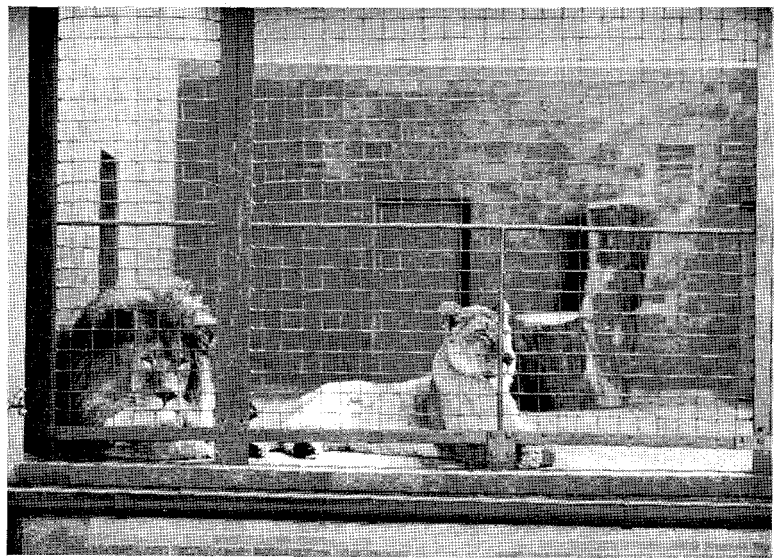
Perfect cage service demands the following conditions:

First—Direct communication for the animals between the interior and exterior cages.

Second—The accessibility to keepers of all cages, from the rear—not the front.

Third—Means by which animals may be introduced to, or removed from, their cages, elsewhere than in the spaces provided for visitors.

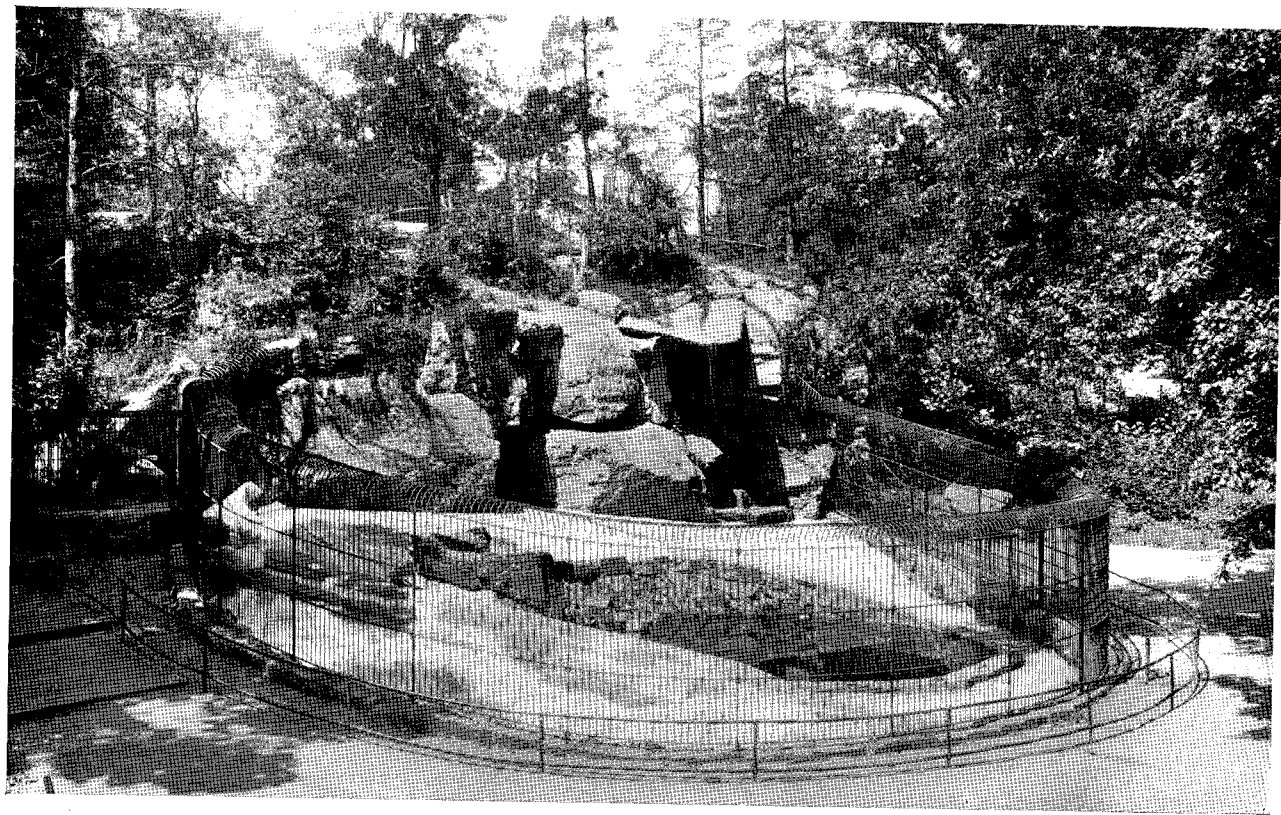
The filling of the above requirements demands what is really a central cage service—a feature which hitherto we have found only in one lion house. In the London Gardens the cage service



"HANNIBAL" AND "CLEOPATRA."



SPOTTED LEMUR.



POLAR BEARS' DEN.

of the lion house is indeed central; but the exterior and interior cages are entirely separated from each other by the keeper's passage. In order for an animal to go from one of its dens to the other, the keepers must connect those two dens by means of a bridge resting upon a car—a matter which involves considerable time and careful management. In the planning of the Zoological Park lion house, central service has been secured, and direct communication between inside and outside dens has also been obtained, by means of a keepers' passage underneath the sleeping dens and an elevator shaft between each pair of cages. The elevator shaft opens on each side into a sleeping den, the front door of which opens into the interior cage and the rear door into the outside cage. To introduce an animal it is transferred from its traveling cage into a transfer cage, which rests upon the platform of a car, and which can be raised or lowered by means of hand-power applied to very simple machinery attached to the car. This car runs on a track laid in the keepers' passage, through the entire length of the building. The car stops under the elevator opening, which communicates with the cage to be reached. The cage is elevated until its floor is on the same level as the sleeping dens, when the opening of two doors immediately liberates the animal in its appointed place. In the same manner, animals intended for exhibition in the studio will be taken from their cages, transferred and brought back again. By means of this arrangement the keepers can gain access, at any time, to any sleeping den, and they can also shut an animal into its sleeping den and gain safe access to the main floor of its cage. All the doors of the sleeping dens, and the partitions, are of sheet steel, running on trolleys, and opening and shutting by means of chains and pulleys.

THE STUDIO.

From the inception of the planning of the lion house, it has been the intention of the Zoological Society to provide within this building a feature specially designed to facilitate the work of artists, sculptors and students doing serious work in the

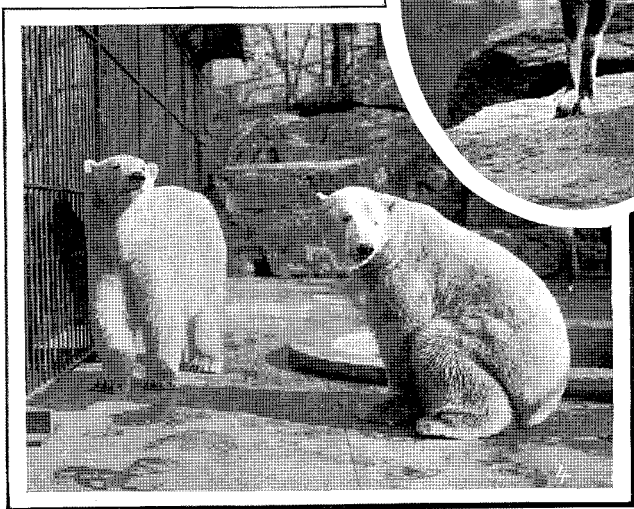
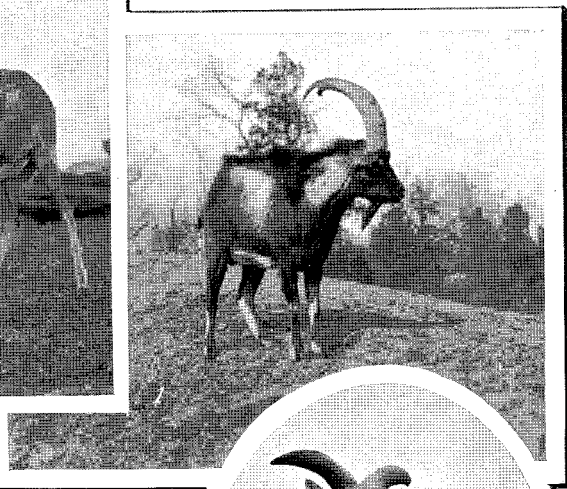
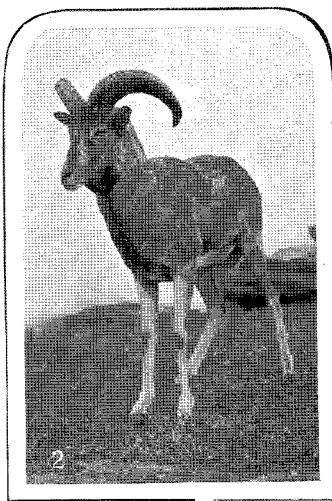
drawing, painting and modeling of animals from life. To this end a spacious and well-lighted room has been provided at the north end of the building, wherein at least twenty artists can be accommodated while working on living models "far from the madding crowd." Against the eastern side of this room has been constructed a cage 16 feet wide and 20 feet deep. The back of this cage, its north end, and practically the entire roof, are of plate glass, properly protected by iron bars. Through a trap-door in the floor of this cage, the transfer car will deliver an animal directly into it from the keepers' passage. The cage front is necessarily of wire netting. The main floor of the room will be constructed in a series of platforms, to accommodate the easels of those for whom this feature is intended.

As may readily be inferred, the object of this feature is to encourage and promote the work of serious-minded animal painters and sculptors—both amateur and professional. The society hopes that it will be the means of bringing into existence a considerable number of animal paintings and groups of statuary, which, without it, might never be produced. On stated days certain animals will be exhibited in the studio cage, provided the number of persons desiring to work from it justifies the labor of making the transfer.

THE ANIMALS OF THE LION HOUSE.

The procuring of a collection of lions, tigers, leopards and other large felines suitable to display in a lion house costing \$150,000, is no child's play. Manifestly, it will not answer to exhibit third-class animals in a first-class building, and the erection of any particularly fine structure for wild animals inevitably sets a pace for the animal men of the Zoological Park, that is decidedly warm. The specimens exhibited must, in size and quality, be equal to the best found elsewhere, they must be abundant in number, and they must also be kept in good health.

In more senses than one Carl Hagenbeck—the king of animal dealers—is the friend of zoological garden directors. But for his far-reaching enterprise, backed by genuine enthusiasm in his



1. SPANISH IBEX. 2. PUNJAB WILD SHEEP. 3. BLUE MOUNTAIN SHEEP. 4. POLAR BEARS.

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work, the task of stocking zoological garden installations would be far more serious than it now is.

When it became necessary for the Executive Committee to take up the question of providing a collection for the lion house, it was decided that the founders and patrons of the society should be invited to contribute sums of money with which to purchase animals to take their places in the collection as individual gifts. A list of the animals desired, and their probable cost, was prepared and sent out, with a suggestion that any one desiring to contribute to the collection should choose his gift and provide for the purchase. This happy thought met with prompt and generous response, and, as a result, every animal in the lion house collection is the special gift of some individual member or friend of the society.

Believing it unwise to attempt to purchase this important collection by correspondence, the Director of the Park was instructed to visit all the principal dealers in zoological collections of Europe, personally inspect all feline animals offered for sale, and make such purchases as circumstances seemed to require. He visited the gardens and dealers located at Liverpool, Manchester, London, Rotterdam, Amsterdam, Hanover, Achen, Hamburg, Berlin, Frankfort, Cologne, Dusseldorf and Antwerp, with the following results:

In London the society's representatives purchased one clouded leopard and two snow leopards; in Antwerp, one Senegal lioness; in Hamburg, five lions, two tigers, two black leopards, one African leopard and one jaguar.

In Berlin the only cheetah in Europe was purchased of the Berlin Zoological Gardens, whose director kindly consented to sell it as a favor to the New York Zoological Society, and for no other reason.

In addition to these purchases several other specimens were, at various times, obtained from other sources. At the opening of the lion house the collection, as a whole, stands as follows: A magnificent pair of Barbary lions, equal to the finest to be found in captivity anywhere, which are the gift of Mr. Nelson

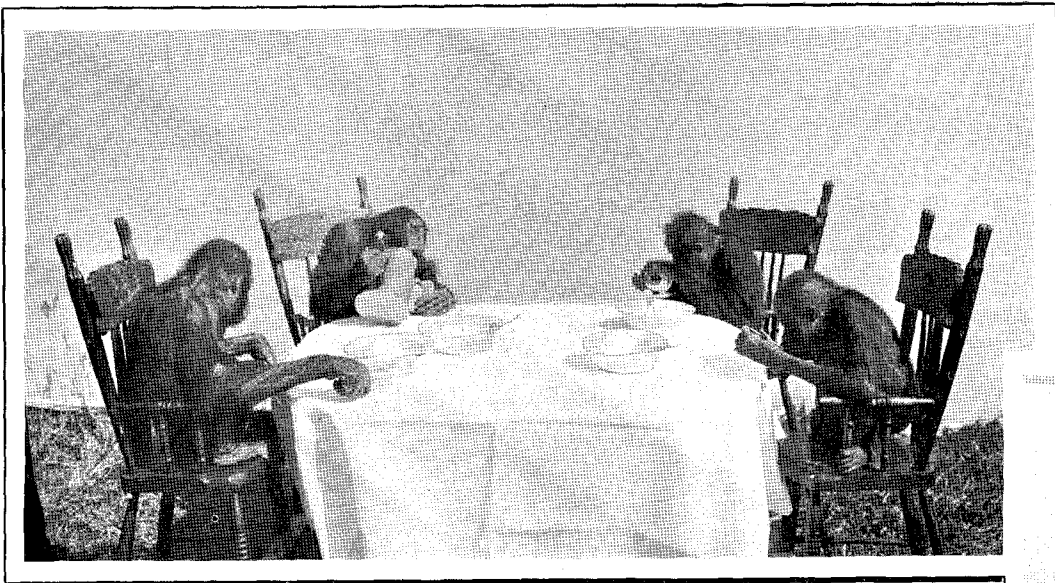
Robinson. The male of this pair, named "Sultan," is four years old, and is as handsome a lion as ever trod a cage floor. He is as good-tempered as he is handsome, and his mate, a beautiful Abyssinian lioness named "Bedouin Maid," is a model fit to represent her sex in any studio. On December 1 "Bedouin Maid" gave birth to five cubs in her traveling cage, temporarily quartered in the large room of the elk barn, pending the completion of the lion house. These two animals were sold to Mr. Robinson on the express condition that all cubs from this pair which might in the future be subject to sale by the Zoological Society should first be offered to Mr. Hagenbeck. This is the best possible evidence of Mr. Hagenbeck's estimate of the qualities of these animals. The mother is not only handsome, but is what breeders call a "good mother," and able to rear her cubs without assistance.

Another very fine Barbary lion, with a particularly luxuriant mane, is the gift of Mr. Andrew Carnegie. This specimen, which is named "Hanibal," is eight years old, and is a fine model. It was said at Mr. Hagenbeck's establishment that he had developed the habit of posing in the centre of his cage for admiration. "Hanibal's" mate is "Cleopatra," and comes as the gift of Mr. O. H. Payne.

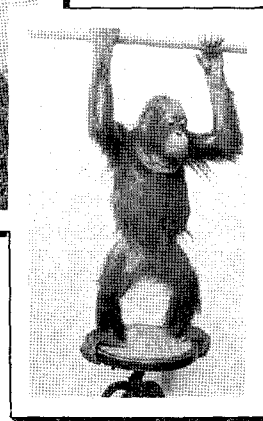
A lusty young Nubian lion, "Dongola," between two and three years old, was purchased at the request of Mr. Cleveland H. Dodge, and stands as his gift. This animal admirably represents the short-maned type of lion, and renders the collection of lions quite complete.

The sixth lion is a beautiful female, about a year old, imported from Senegal, West Africa, and presented by Mr. Philip Schuyler. This animal is named "Sandibel."

The best pair of tigers found for sale in Europe come as the gift of Mr. Charles T. Barney. They are from northern India, and, being only two and a half years old, have not yet attained their full size. They are very handsome animals, and, when fully adult, will be exceptionally large. These two specimens are named, respectively, "Rajah" and "Ranee."



ORANG-UTANS.





INTERIOR OF REPTILE HOUSE.

A pair of Siberian tigers have been ordered as a gift of Mr. O. H. Payne; but, owing to the great difficulty of procuring this very rare variety, specimens have not yet been secured. The Siberian tiger is of the largest, most costly and most sought for variety, and the number in captivity is small. Knowing the difficulty of procuring Siberian tigers, an order for this pair was placed over one year ago.

A very strong and vicious tiger cub, one year old, is the gift of Master Henry Fairfield Osborn, Jr. It came from Singapore, but from the length and abundance of its hair, it seems quite probable that it originally came from much farther north. It is quite possible that this specimen came down to Singapore from some portion of China, and if this proves to be the case, this specimen will be particularly interesting.

In the interior of Paraguay Mr. William Mill Butler, of Philadelphia, Secretary of the Paraguay Development Company, brought about the capture—about one year ago—of an animal that is undoubtedly the largest and finest jaguar in captivity. With infinite pains, Mr. Butler received this animal in Asuncion, and brought it with him to Liverpool, where it was boarded in Cross's Wild Animal Establishment for three months, and finally shipped to New York. This animal was presented to the society by Mr. Butler, and, until quite recently, it has been kept in temporary quarters. The name of this fine specimen is "Lopez."

A beautiful and fully adult specimen of the cheetah, or hunting leopard—for some reason quite rare in captivity—is the gift of Mr. Jacob H. Schiff. The procuring of this specimen required a special effort, as no representatives of this species were found in the hands of any of the dealers in live animals, and this example was secured through the good will of Director Heck, of the Berlin Zoological Gardens.

The two snow leopards—rarest of all the large feline animals—which were engaged in London, to be shipped from Calcutta, have not yet arrived, but are supposed to be somewhere between Calcutta and New York. These specimens are

the gift of Mrs. Emma B. Auchincloss, and, if they reach New York alive, will constitute the third and fourth specimens now to be seen in captivity. The other two are at London and Berlin, respectively.

Mr. William D. Sloane presented a pair of jet black leopards, from Malay Peninsula, which are not quite so cross as black leopards usually are. A Manchurian leopard, imported by way of Shanghai, and representing the most northern form of the leopard of India, is the gift of Mr. Philip Schuyler. Mr. Frederick L. Eldredge presented a male African leopard, which will, on arrival, if possible, be introduced as a cage-mate for the female Indian leopard presented by Captain Thomas Golding.

REPORT ON WORK DONE IN 1902.

The increase of public interest in the Zoological Park has been manifested in a variety of ways. The first was by a great increase in the number of visitors. Another took the form of numberless inquiries regarding certain collections which people expected to see. Ever since the beginning of 1900 visitors have continually been asking the park officers and attendants: "Where are the lions and tigers?" "Where are the elephants?" and "Where are the small birds?"

To meet these reasonable and just demands, the erection of a spacious and well-appointed lion house was begun in 1900, and in January, 1902, the society applied to the Board of Estimate for an additional bond issue of \$500,000. This sum was needed for expenditure in the erection of several large buildings for animals, many small installations, a spacious boat house and public comfort building, and for additional walks, fences and other permanent improvements of many kinds.

The completion in the near future of a branch of the rapid transit system to the West Farms entrance of the Zoological Park demanded vigorous efforts to complete the outfit of buildings for animals, and also of accommodation for visitors, by the time the new means of access would pour a trebly increased

number of annual visitors into the park. The immediate development of the fine pleasure grounds east of the Bronx river, and the adequate fencing and protection of that area, seemed quite imperative.

On May 19, 1902, the Board of Estimate and the Municipal Council granted a bond issue of \$250,000 for expenditure in 1902, in accordance with the special program submitted by the Zoological Society with its application. In accordance with plans duly approved by the Park Department of the Borough of The Bronx, work on the new improvements began immediately, and has been prosecuted with the utmost vigor during the succeeding months. The principal features of this year's work will be mentioned in the order of their importance.

THE ANTELOPE HOUSE.

On June 26, 1902, a contract was made by the Park Department with Thomas Dwyer, in the sum of \$54,000, for the erection of a very large and finely-appointed building for tropical hoofed animals, such as giraffes, African antelopes of every description, zebras and wild horses and wild cattle of the equatorial zone. Pending the erection of the elephant house, near Baird Court, this building must also provide temporary quarters for the elephants, rhinoceroses and hippopotami.

The antelope house is an elliptical building, 142 feet long by 18 feet wide, and is being constructed of buff brick, gray limestone and terra cotta, in the same general style as the other large buildings of the park. Around its interior walls it will provide a series of 24 stalls for animals, four of which are very large (19 by 24 feet), and the remainder are of various smaller sizes. From the exterior of the building will radiate a series of open-air yards, adequately shaded by trees and properly macadamized.

Work on this building began on August 1, and is being pushed so successfully that its completion and occupancy by May 1 are practically assured. This structure is located at the southern end of the park, on a beautiful tree-covered knoll, midway between the two southern entrances. Its completion will

undoubtedly attract all visitors to a portion of the grounds now visited by but few persons, and add to the scientific establishment a feature of great interest and value.

THE OSTRICH HOUSE.

On June 26 bids were opened for the construction of a small building to accommodate a collection of ostriches, rheas, cassowaries and emus, to be situated near the burrowing rodents' cages. Unfortunately, the lowest bid (\$37,200) was so far in excess of the architect's estimate (\$27,000), that it was necessary to reject all bids and withdraw the contract. The plans will be revised to effect a very substantial reduction in cost, and the contract will be readvertised.

COMPLETION OF THE BEAR DENS.

The growth and importance of the collection of bears rendered it imperatively necessary to complete the series of dens originally planned, by the erection of four new dens. A contract for the ironwork was made on June 26, 1902, with W. H. Wright & Son, for \$5,327, and all the excavating and masonry-work have been done by our own workmen, under the direct supervision of the officers of the Zoological Park. The completion of these new dens will make it possible to assort the bears on a scientific basis, and exhibit them with much greater benefit to the public, than is now possible.

ADDITIONAL WALKS.

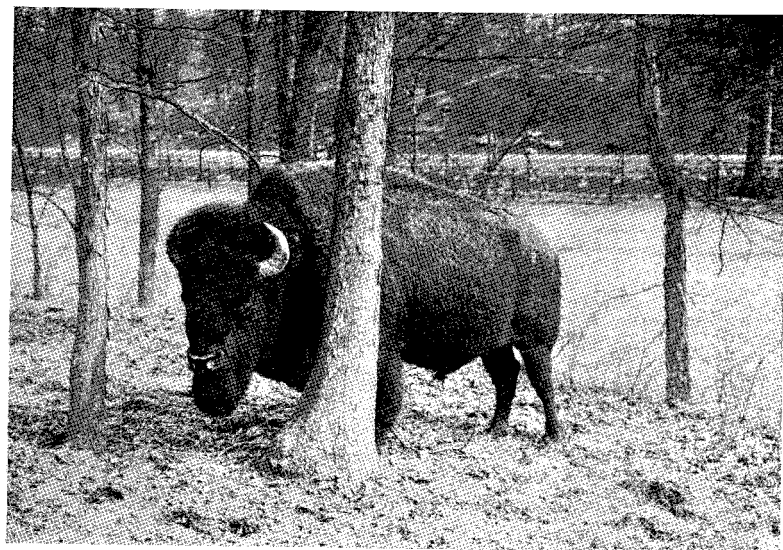
Beaver Valley Walk.—The construction last year of the trunk sewer from Baird Court to West Farms made it possible to construct this year the much-needed walk from the buffalo entrance direct to the polar bears' den, the beaver pond and the southeast corner of Baird Court. For two years this direct thoroughfare has been greatly needed, and its construction has been a source of great satisfaction to visitors. Its total length is 2,725 linear feet, and it winds in graceful curves and on easy grades through the most beautiful portion of the forest area



BEAVER VALLEY ROAD.



HERD OF BUFFALOES.



BUFFALO "CLEVELAND."

west of the Boston Road. In summer its cool shade makes of it a very popular promenade.

In order to make the outdoor cages of the primates' house available to visitors, and provide a suitable terminus for Beaver Valley Walk, the whole eastern half of that building was surrounded with its permanent pavement of telford macadam.

Mountain Sheep Walk.—The Completion of Mountain Sheep Hill called for a twelve-foot walk along the western side of the range of enclosures, which has been constructed. Its length is 490 feet.

Riverside Walk.—The large number of visitors who enjoy the beautiful forest and water view on the eastern side of Bronx Lake will be pleased to find next spring a first-class, well-placed walk of telford macadam 12 feet wide, extending from West Farms to Bronxdale, following quite closely the lines of the favorite footpath along the waterside. This important improvement is 4,195 feet in length.

DRAINAGE.

Buffalo Range.—Immediately upon the completion of the trunk sewer already referred to, steps were taken to drain the lower Buffalo Range, along the Boston Road. This work has been done very thoroughly, and for the first time that pasture is in proper condition for use. The completion of the sewer in Kingsbridge road, in the summer of 1902, has made it possible to drain the upper Buffalo Range also. By the close of the present year, the pestilential pool of stagnant water in the southern portion of the main range, which from the first has been fenced off to keep the buffalo herd from drinking from it, will be drained off and converted into dry ground. Every basin and valley in the main range is also being drained, and provided with a catch basin, to eliminate all stagnant water.

The total amount of sewerage and tiling done in the Buffalo Range, as a whole, is 2,600 feet, of which 800 feet is provided with 6-inch pipe.

Deer Ranges.—In order to eliminate all possibility of stagnant water in the Red Deer and Caribou Ranges, the basins of both these inclosures have been piped into the Birds' Valley sewer, and the lowest spots have been filled with earth and stone refuse.

There is now not one spot in any range for hoofed animals where water can collect and become stagnant.

EASTERN BOUNDARY FENCE.

In order to protect the eastern side of the park from the depredations of timber thieves, a strong wire fence, with a double overhang of barbed wire, is now being erected along the entire course of the eastern boundary. This work will be completed by the end of the year, and when it is completed, that portion of the park will be protected for the first time since it came into the possession of the City.

WEST FARMS ROAD.

Inasmuch as it will soon become necessary to divert heavy traffic from the West Farms entrance to a street or boulevard which must be constructed along our eastern boundary, it was decided to construct a good roadway and sidewalk over that portion of the West Farms road which is within the limits of the Zoological Park. Accordingly, a contract for the work was let for the sum of \$4,000. Work on this much needed improvement is now in progress.

ITALIAN FOUNTAIN IN BAIRD COURT.

Early in the year, a beautiful and very valuable Italian fountain, 200 years old, but extremely well preserved, was offered for sale at Como, Italy. This colossal work of art was purchased by Mr. William Rockefeller, at a cost of \$25,000, presented to the Zoological Society, and is now being erected at the expense of the donor, on Baird Court, about 100 feet north of the Primates' House. Owing to the necessity of additional

work on the lower basin of the fountain, it will not be fully completed before the spring of 1903. For this reason, a full description of this splendid new feature is now deferred.

MISCELLANEOUS WORK.

During the present year, electricity for lighting purposes has been brought into the park and supplied to the Service Building, Reptile House and Small Mammal House. It is also to be supplied to the buildings on Baird Court and the Bird House, as soon as an arrangement can be reached regarding the necessary conduits. It is quite probable that a portion of the cost of the conduits will have to become a charge upon the Ground Improvement Fund, as it is the intention of the Society that the conduits shall constitute a permanent improvement, planned on an adequate scale.

IMPROVEMENTS IN PROGRESS.

Funds are available for the construction of the large Bird House for perching birds, and the Boat House and Public Comfort Building at the West Farms entrance, all as called for in the Society's program. The plans for the Bird House are nearly completed and will be submitted to the Park Department early in January. The plans for the Boat House will follow soon after the Bird House has been disposed of, by the letting of a contract for its construction. Besides the above, a number of minor improvements are to be undertaken.

NEEDS OF THE IMMEDIATE FUTURE.

It must be remembered that to-day the Zoological Park is only *half finished*, and the amount of construction work yet to be done is very great. There are scores of valuable animals on hand, in temporary quarters, for which adequate provision should be made in 1903, in a Small Mammals' House. The need for this building is very urgent, and the Director of the Park is constantly harrassed by the necessity of making provi-

sions, literally from month to month, for animals that, by reason of their scientific and intrinsic value, deserve good permanent quarters.

The Zoological Society stands ready to provide a fine collection of ostriches, emus, rheas and cassowaries as soon as a suitable building for such birds can be provided. With two shelter houses for deer, costing not to exceed \$20,000, the Society will provide about twenty additional specimens of rare foreign deer, which, with the eighteen specimens already on hand, will constitute a collection worthy of New York City.

In addition to the above, there remains a great amount of work in the finishing of Baird Court and the Concourse in a suitable manner, and in erecting a carriage entrance on Pelham avenue. The terminal third of the Motor road requires to be constructed and equipped with public automobiles, to carry visitors through the park. In addition to all the above, there are a great number of other items of work, which, while of less importance than those mentioned, are equally necessary to the final completion of the great amount of work involved in the development of this park.

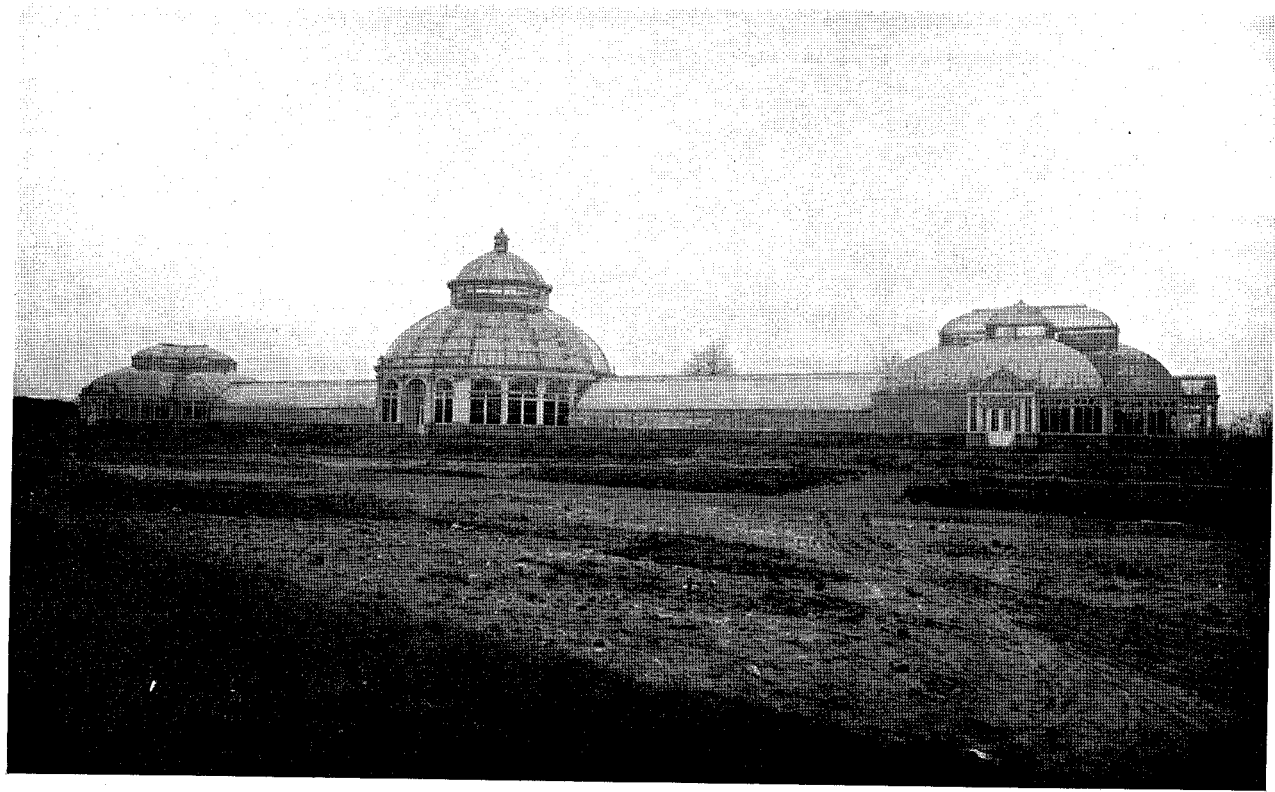
ATTENDANCE.

The attendance of visitors during the year 1902 was 723,816, an increase over the corresponding period last year of 202,468, or about 38 2-5 per cent.

ANIMALS.

On September 1 the animal collections of the park showed a total of 2,813 specimens, an increase since January 1 of 67 per cent. The various classes of vertebrates were represented as follows:

Mammals	141	species.....	612	specimens.
Birds	175	"	1,005	"
Reptiles	131	"	1,196	"
	<hr/>		<hr/>	
	447	"	2,813	"
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CONSERVATORIES, NEW YORK BOTANICAL GARDENS.

THE NEW YORK BOTANICAL GARDEN.

The New York Botanical Garden was incorporated by act of the Legislature of the State of New York in 1891, and the original act amended in 1894, and again in 1896. This legislation provided for the appropriation of 250 acres of Bronx Park, by the Commissioners of Public Parks in the City of New York, for the purpose of the corporation formed by the act, "for the purpose of establishing and maintaining a Botanical Garden and Museum and Arboretum therein for the collection and culture of plants, flowers, shrubs and trees, the advancement of botanical science and knowledge, and the prosecution of original researches therein and in kindred subjects, for affording instruction in the same, for the prosecution and exhibition of ornamental and decorative horticulture and gardening, and for the entertainment, recreation and instruction of the people." The legislation further provided that the Commissioners of Parks, upon the corporation meeting the conditions of the act, which included the raising by subscription of a sum not less than \$250,000, construct and equip within the grounds "according to plans approved by them and said Board of Managers, a suitable fireproof building for such botanical museum and herbarium, with lecture rooms and laboratories for instruction, together with other suitable buildings for the care and culture of other tender plants, indigenous or exotic." The conditions of the Act of Incorporation were complied with by the Board of Managers elected by the corporation, in June, 1895, and in the summer of that year the Commissioners of Parks appropriated 250 acres of land in Bronx Park as authorized, and this allotment was duly accepted by the managers of the Garden.

A detailed survey of the land thus set apart was made for the Board of Managers in the fall of 1895, and has formed the basis for all subsequent work in developing the Garden. Upon the completion of this survey, plans for buildings, roads, paths, grading, drainage, water supply and buildings, were at once taken up, and were continued through 1896, and part of

1897, being finally approved by the Commissioners of Parks, and by the Board of Managers in the summer of 1897. In September of that year the Board of Estimate and Apportionment made the first appropriation of \$500,000 for the construction of buildings; and ground was broken for the Museum Building on December 31, 1897, the building as it now stands, with the exception of some minor architectural additions recently made, having been completed and occupied in the spring of 1900; the power house, designed to supply both the Museum and the Public Conservatories with heat and electricity, and the subway connecting it with the Museum Building being completed at the same time.

Ground was broken for the Public Conservatories on January 3, 1900, and about two-thirds of the present glass houses were completed and put into operation in June, 1901. By means of an appropriation of \$200,000, made by the City late in 1900, the present range of Public Conservatories was completed early in 1902. In addition to these large buildings, a range of small propagating greenhouses, a stable and a public comfort station have been constructed.

The building of roads and paths was commenced in July, 1897, and has since been continuously prosecuted, so that at the present time more than one-half of the driveways planned for the Garden have been finished, while about one-half of those remaining to be built are under construction. About one-fourth of the system of paths planned has been completed, and about as much more is now being built, and should be finished during 1903.

The necessary grading operations have proceeded along with the construction of buildings, driveways and paths, together with the drainage, sewerage and water supply. The heaviest part of this work will have been accomplished during the next year.

The first planting was done in the fall of 1895, by the establishment of a temporary nursery, and this part of the work has been continued each spring and fall, as rapidly as grading oper-



PALM HOUSE.

ations and the building of paths and driveways would permit.

NATURAL FEATURES OF THE TRACT.

The land of the Garden is most diversified in character, and the area affords natural scenery unsurpassed in beauty in the vicinity of New York. The western part, bordering the Harlem Division of the New York Central and Hudson River Railroad, was mainly open fields which had been under cultivation up to the time that Bronx Park was established, a small portion of this being practically level, while most of it was of low hills with long slopes. This western part was selected as sites for the larger buildings and for most of the systematic plantations.

The Bronx river traverses the Garden from north to south, averaging about 50 feet in width; at the northern end of the Garden it runs through low meadows, with considerable marshy grounds, most of which are at present being reclaimed, flowing south into a tract of moist woodland to the old "Blue Ridge"; thence south through the famous hemlock forest to the old dam at the Lorillard mansion; from this dam to the southern boundary of the Garden the river descends rapidly through a picturesque ravine to the old Lorillard "snuff mill," below which it opens out into a quiet and broader stream.

The hemlock forest comprises about 40 acres on the west side of the river, the forest growth being mainly of the hemlock spruce, mixed with hardwood trees, such as beeches, oaks, hickories, birches and maples, and is of particular interest as being the most southern extensive group of hemlock trees along the Atlantic seaboard. Many of the trees in this forest are of large size, and the undergrowth is composed of interesting shrubs and small trees, the American dogwood being especially abundant. Many herbaceous plants of great beauty and interest at their flowering time are found in this forest. The natural rock ledges within this grove are of great beauty, many of them very bold, and carpeted with interesting vegetation.

The land of the Garden east of the Bronx river is almost

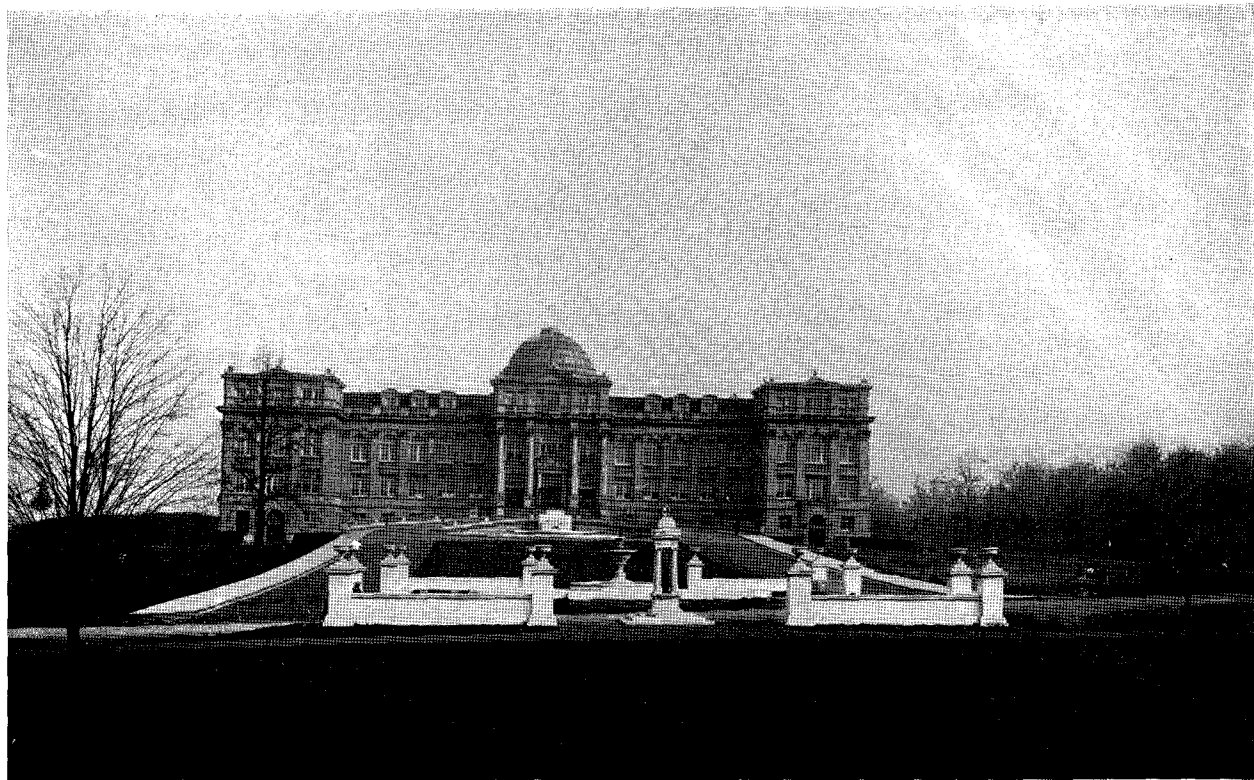
altogether hardy in character, and for the most part well planted by nature with hardwood trees, forming a natural arboretum; this area is being gradually developed into a scientific arboretum by the planting of species of trees not native to the tract, and the gradual elimination of unsightly trees of species represented in quantity.

When the ground was first assigned to the Garden, a careful examination of the native flora was recorded and it was found to contain not less than 860 kinds of plants, exclusive of the funguses and lichens, the study of which has since gone forward and these were found to number over 1,000 more. It is safe to say that no area of equal size in the temperate zone ever developed into a botanical garden has as many species of plants as these, in its natural state.

ACCESS TO THE GARDEN.

The Garden is conveniently reached, not alone by the city streets, parkways and boulevards, but by the Manhattan Railway, which has recently built a handsome terminal station at the southwestern corner of the grounds, together with an elegant approach and viaduct from that station into the grounds, connecting with paths and driveways leading to all parts of the Garden; also by the Harlem Division of the New York Central and Hudson River Railroad, which has a fine and commodious station called "Bronx Park" on the western side of the Garden, within a few minutes' walk of the larger buildings and of the other principal features; also by trolley car lines on Webster avenue, one block west of the New York Central line, and on the White Plains road, a few hundred feet east of the Garden; the trolley line on Jerome avenue is about half a mile west of Webster avenue.

The Botanical Museum.—The Museum Building stands on a slight elevation, seven hundred feet east of the Bronx Park railway station of the Harlem Division, New York Central and Hudson River Railroad. The architectural treatment is frank and dignified. The style is Italian Renaissance, with details



BOTANICAL MUSEUM BUILDING.

of scholarly character ; its front has a length of 308 feet, and its height to the top of the dome is 110 feet. The construction is fireproof throughout. The steel framework has been carefully designed to withstand all strains that will properly be put upon it. The central portico is of Indiana limestone, with columns and cornices of Corinthian order, and the curtain walls have pilasters of the same order.

The elevators and ventilating apparatus are operated by electricity provided by a dynamo in the power-house, where there is space for additional dynamo equipment for furnishing light, in case this should prove the most desirable method of obtaining it. There is a fine water pressure throughout the building, notwithstanding its height, provided by the proximity of the Williamsbridge reservoir, and a 36-inch main therefrom, which runs through the valley in front of the edifice.

The main Museum halls are open to visitors from 9 o'clock in the morning to 4.30 in the afternoon, three months in winter, and 5 o'clock the balance of the year, on every day of the week. Access to the third floor may be obtained by permission. Students properly prepared to prosecute investigations are afforded room and guidance in the laboratories, library and herbarium, but it is not designed to offer courses of elementary or secondary instruction, already well provided for in the schools and colleges, other than through a system of public lectures.

The basement contains a large lecture theatre, under the west wing, arranged so as to seat about 700 persons. Two courses of lectures on botany are maintained here each year, and each lecture is amply illustrated by means of the stereopticon, specimens and living plants from the conservatories of the Garden. Just east of the lecture theatre are two spacious halls. The hall adjoining the theatre is reserved for temporary exhibits, such as flower shows and fruit shows. The other hall is devoted to the Paleobotanical collection. This collection contains not less than 8,000 specimens, and illustrates the succession of plant life on the earth, from the most remote era at which plants are known to have existed, to the present time.

The first floor of the building is devoted to the Museum of Economic Botany, and the collections are now disposed of as follows:

The hall of the main building east of the centre is occupied by drugs and drug plants. Twenty-four cases arranged in six blocks are devoted to the drug collection.

The woods and wood products occupy the hall of the east wing. They are disposed in twenty cases which stand in seven blocks.

The hall west of the centre has been divided between two distinct collections. Fibers occupy twelve cases in three blocks on the south side of the hall; nine cases are devoted to crude fibers and their products, two to wood-paper and straw-paper, and one to cork.

Opposite the fibers, on the north side of the hall, stand an equal number of cases arranged in blocks corresponding to those on the south side. These are devoted to foods and food plants. For the present the foods are mainly divided into three groups, dry seeds and fruits, fleshy seeds and fruits, and herbs or such parts of herbs or woody plants, other than seeds and fruits, as are used for foods.

The west hall is devoted to miscellaneous collections. One case contains the turpentine and rosin exhibit. Three cases are devoted to gums and resins; two to fodder grasses and fodder plants; one to unrefined and refined sugars; one to tobacco; two to volatile oils; one to fixed oils; one to starches, and one to chocolate; tea, ginger and ginger ale and vegetable juices occupy one case; another case contains barley, malt, beer and ale; another, unfermented grape juice and wines; one case is given over to cinnamon, both the true and the false; one to a large collection of spices; one to licorice roots and various forms of refined licorice, and one case to miscellaneous objects, including a series of those vegetable products used in making soaps and insect powders.

The second floor of the building contains the general Botanical Museum or Systematic Museum. Three more or less inde-

pendent collections are now installed and make up the public systematic collections.

The third floor has the library as its central feature, consisting of a large reading-room immediately under the dome, and a stack room just behind. The stacks are of metal, arranged to carry books of quarto and octavo size or smaller, above, and of folio size below. These are supplemented by a series of folio cases in the centre of the room, the tops of which serve as tables. There is floor space sufficient for a considerable increase in the number of cases, and the floor itself has been constructed strong enough to permit the construction of another series of cases on top of those now in position, thus affording the possibility of doubling the book-carrying capacity of the room. The reading-room walls are also furnished with book shelves. The number of volumes now in the collection is about 13,000, of which less than one-half are the botanical library of Columbia University, deposited with the Garden under an agreement, while the remainder are the property of the Garden. West of the library are laboratories for plant embryology, plant morphology, plant physiology, plant chemistry and photography, together with a physiological dark room. East of the library are the laboratories for taxonomy. The furniture of all these laboratories consists of tables, cases and chairs; the instrumental equipment is being continuously increased.

The Conservatories.—The public Conservatories are situated about 400 feet east of the terminal station of the Manhattan Railway at Bronx Park, and about 1,000 feet south of the Bronx Park Station, Harlem Division, New York Central Railway. The range is composed of fifteen houses grouped as a quadrangle, open to the southwest, the total floor area being nearly one acre. The length of the quadrangle is about 512 feet, and the height of the central dome over 80 feet. The construction throughout is in accordance with the most modern principles, and the structures form the most elegant glass houses in the world.

The collections are arranged botanically in so far as tempera-

ture conditions will permit, eleven of the houses being devoted to tropical plants and four to those of warm temperate regions.

The total number of species contained in these public Conservatories is over 6,000, represented by not less than 20,000 plants. The labels indicate both the scientific and popular name, the botanical family, and the native habitat of the species. These collections are open to the public daily from 10 o'clock in the morning until 4.30 or 5 in the afternoon.

In addition to these public Conservatories, there is a system of propagating and experimental greenhouses on the east side of the Garden, remote from the Museum and Conservatories, in juxtaposition to the nurseries, in which are grown a very large number of additional species preparatory to placing them on public view in the main range, and for purposes of investigation.

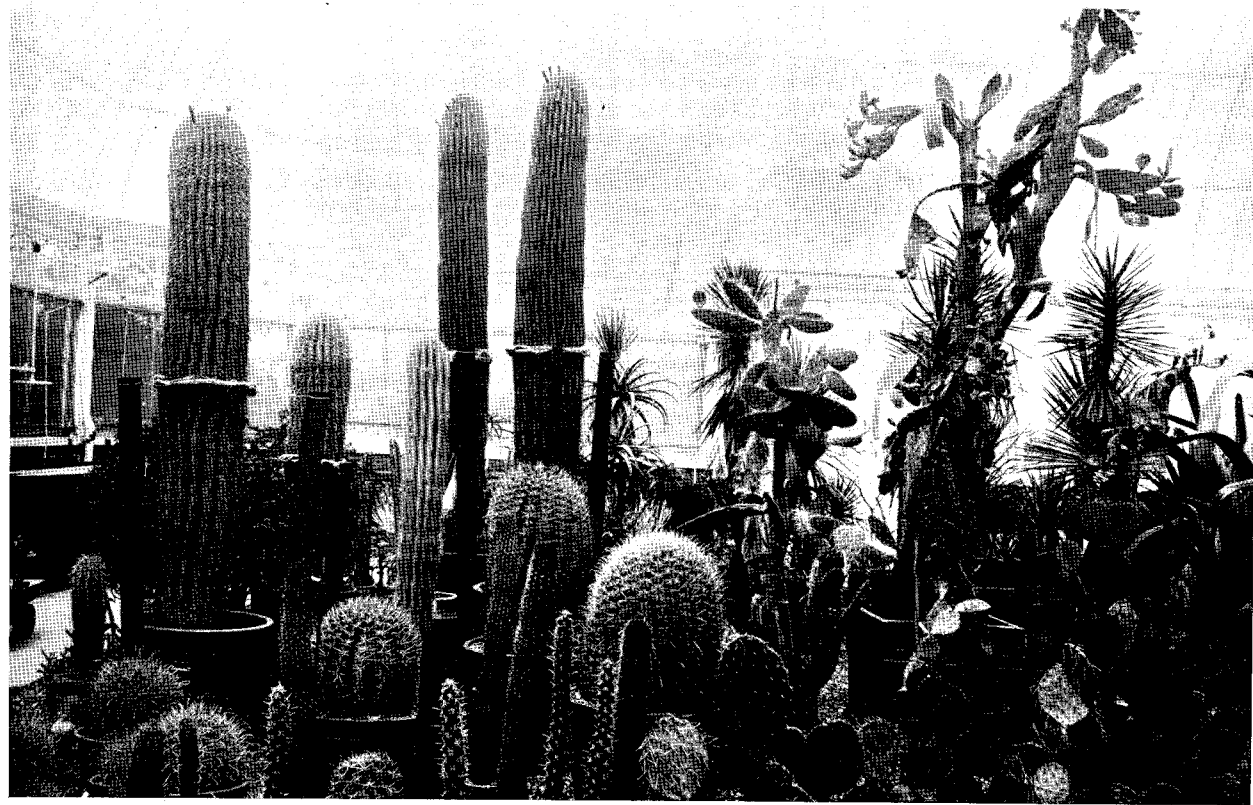
Out of Door Collections.—The hardy plants under cultivation, except those used for purely decorating and landscape purposes, are grouped as follows:

a. *Herbaceous Grounds.*—This plantation is located in a natural glade, about eight acres in extent, located about 1,000 feet south of the Museum Building, and 600 feet southeast of the Conservatories. It is reached from either building by suitable paths and driveways, partly completed and partly under construction. Here are grown species illustrating all but very few of the natural families of plants containing hardy herbaceous types, each natural family being given one or more plots of various sizes, dependent upon the number of species which can be successfully cultivated. The natural features of the area present a wide diversity of soil and exposure. The number of species at present installed in the herbaceous grounds is about 2,700.

b. *Fruticetum.*—The shrub collection is arranged in a similar manner to the herbaceous grounds, on a plain of about fifteen acres, northeast of the Museum Building, the species being planted in family groups. Some six hundred species of types



HERBACEOUS GROUNDS.



CACTUS HOUSE.

have been brought together up to the present time. This area is just now under active construction through the building of driveways and paths, and cannot be put into permanent condition until a year from now, but the collections meanwhile serve a very useful purpose.

c. *Arboretum*.—The deciduous Arboretum is spread over an area three-quarters of a mile long, and of varying width, on the east side of the Bronx river. The Pinetum, or collection of Conifers trees, is situated around the public Conservatories, and between them and the Museum Building and herbaceous grounds there are being cultivated about one hundred and thirty acres available for systematic tree planting; this has gone forward each spring and fall as rapidly as grading operations will permit. The number of species of trees brought together now aggregate about 300.

In addition to these main features, others of minor character are either begun or planned, and will be worked out from time to time, as occasion permits.

EDUCATION AND RESEARCH.

The collections of the New York Botanical Garden are brought together for the purpose of educating the people in everything appertaining to plants and their products, and their grouping and labeling are arranged primarily with that end in view. The grounds and buildings are open to the public daily, without charge at any time, and all information asked for is freely given. The driveways and paths are being constructed so as to lead conveniently and safely from one feature to another, with due regard to landscape effects and the preservation of natural scenery.

Special facilities are afforded teachers and scholars of the public schools, attendants being furnished to teachers bringing their classes to the Garden, for purposes of guidance and explanation, and some material for class use in the schools can be furnished from time to time. This work can be greatly ex-

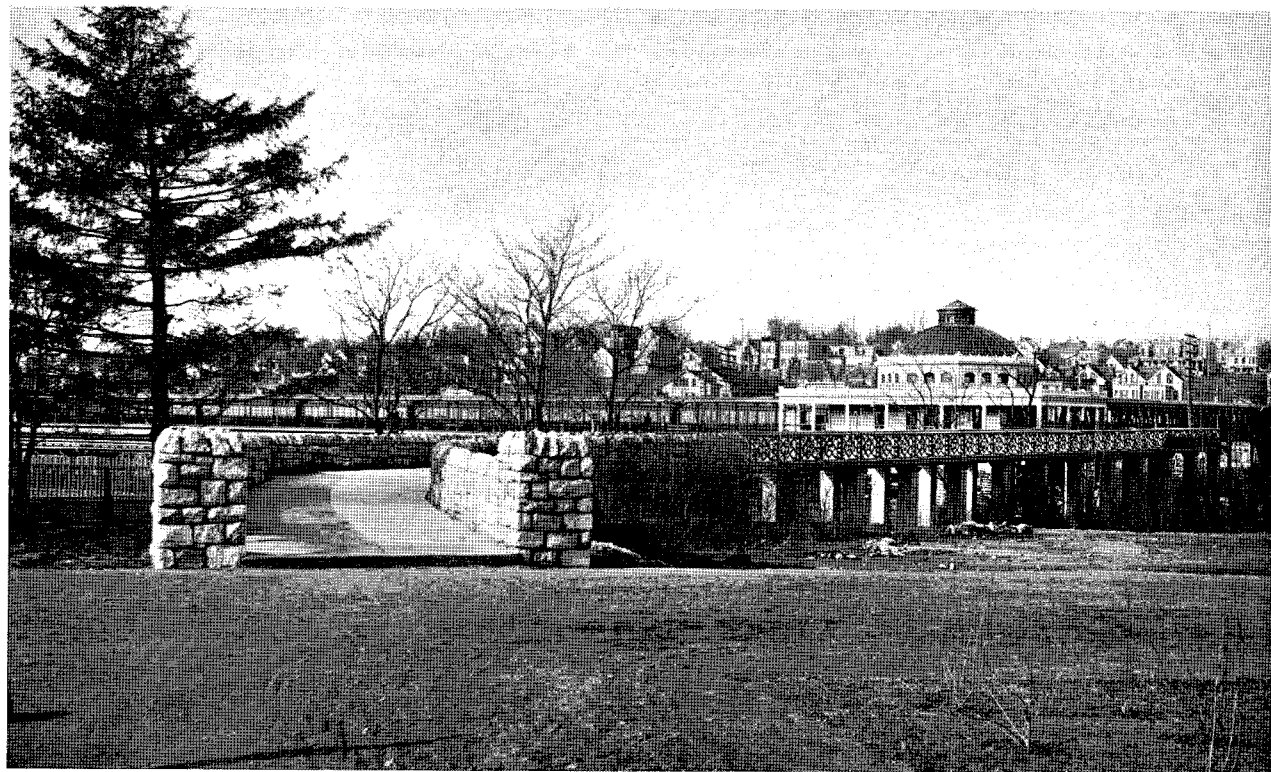
tended and emphasized as rapidly as construction of roads, paths and plantations proceed.

The Garden is also prepared to give special facilities for study and investigation, to teachers or other persons who are qualified by previous study to investigate the more profound problems of plant life, and thus add to the sum total of human knowledge; and many such have already taken advantage of these opportunities, being provided with tables in the laboratories of the Museum Building, and unrestricted access to the Library, herbarium, and other scientific collections. At present there are 43 such advanced students registered at the Garden, coming from 30 different colleges, universities and agricultural experiment stations.

WORK OF THE PAST YEAR.

The number of kinds of plants now under cultivation in all the plantations and in the conservatories increased about 1,300 during the year, there being now about 10,600 different kinds of living plants available for examination and instruction. It may be said in this connection that this is about one-half as many kinds as have ever been brought together at one time in any similar institution in the temperate zone, and that this has been accomplished within about six years.

The driveway and path approaches to the Museum Building and to the Public Conservatories which have been under construction for about two years have been essentially completed, and the greater part of the grading in the vicinity of these large buildings has been accomplished. The building of the range of Public Conservatories was completed early in the year by the finishing and opening of the five additional houses begun in the spring of 1901. The driveway extending from a point south of the Museum Building through the woods to the southern boundary of the Garden reservation was completed, and a large amount of work was accomplished on the driveway now being built from the lakes north of the Museum Building to the northern end of the Garden, and from there



APPROACH TO MANHATTAN RAILROAD STATION, BRONX PARK.

south along the east side of the Bronx river, together with accompanying drainage and grading. It is planned to complete this driveway and a large portion of the path system in the northern part of the Garden during the coming season. In addition to these works, several thousand feet of paths have been graded and their telford foundations laid up.

A handsome viaduct and approach to the new terminal Bronx Park station of the Manhattan Railway Company was completed and opened for use in December.

Publications containing results of discoveries and of other studies, by members of the staff of the Garden, and by its students, reports of progress in the work, and of lectures delivered to the public, comprise more than one thousand pages of printed matter and have been much sought for by other institutions and by students in all parts of the world.

Exploration and the collecting of plants and specimens have gone forward in Arizona, Sonora, western Texas, New Mexico, Porto Rico, Florida, Jamaica and Bolivia. The collections in the Museum Building have been increased by about 67,000 specimens, and the Library by 1,962 bound volumes.

A large amount of additional furniture for the Museum Building is now being supplied, which will enable the Garden to display nearly twice as many specimens as hitherto, and provide increased facilities for instruction and investigation.

BRONX AND PELHAM PARKWAY.

(Length, 11,661 ft.; width, 400 ft.; area, 95 acres.)

The title to this Parkway was vested in the city in 1888. Very little has been done, up to the present time, in the way of permanent improvements to this connecting link between the Bronx and Pelham Bay Park. A macadamized road 60 feet wide had been built previous to the present year, about two-thirds of the distance; the remaining portion across the Salt Meadows at the east end was under process of being graded, and a bridge was under contract over the New Haven Railroad

tracks. During the present year the grading to the westerly side of the abutment for the bridge over the railroad track has been completed. The plans for the construction of this bridge did not prove sufficient to hold the immense strain of the filling behind the westerly abutment, which shifted about 2 feet on the railroad property; and this resulted in the necessity of having this abutment taken down and rebuilt, for which work a contract was let during the year, and the work is now well under way.

The planting of trees upon this part of the road had never been done, and during the year we secured a fine lot of American elms, and the same have been planted on both sides of the driveway, from Bronx Park, east, as far as the road had been completed. The fill on the easterly end of the Parkway, in connection with the bridge, has been under progress at various times during the year, and is nearly up to grade, and can be finished within a short time after the ironwork for the bridge is received. A large portion of the westerly end of this Parkway, to the south driveway, has been filled to grade during the present year under an old contract with John B. McDonald, who is using a portion of this Parkway as a railway track for transferring the material from the Reservoir in the old Jerome Park race-track ground.

PELHAM BAY PARK.

(Area, 1,756 acres.)

This great park of over 1,700 acres, with its coastal indentations, including its picturesque bays and inlets, its open water front on the Sound, the bays and wooded margin of Hunter's Island, with an aggregate shore line of over nine miles, embraces territory which is unsurpassed for purposes of public recreation by any park in the world.

A section of this park, having an expanse of over 400 acres, stretches out in the form of a peninsula into the Sound, presenting a picture of great beauty and diversity. Along the shore line of this park are large tracts of woodland, abounding



PELHAM BAY ROAD (PELHAM BAY PARK.)



ENTRANCE TO NEW ROAD (PELHAM BAY PARK.)



BRIDGE, PELHAM BAY PARK.

in stately trees centuries old, forming natural groves, which were formerly the homes and spacious grounds of some of our wealthy residents.

This section of the city and park has also great Colonial interests. City Island, which is reached by traversing a large part of this park, was at one time, in its early history, laid out to take the place of what New York City is at the present day. This section was purchased from the Indians in 1639, named Freedland, signifying "Free Land" or the "Land of Peace." Its settlement began the following year and consisted principally of people from the New England Colonies, who moved here to avoid the Puritanical persecutions of that section. Among those noted for having sought refuge in this section at that time was Mrs. Annie Hutchison, from whom Hutchison river was named. Tradition states that her dwelling and plantation were located upon this river, upon what is now known as Prospect Hill, and that her execution took place at the Split Rock on that road.

Thomas Pell, in the year 1654, became one of the first permanent settlers. His purchase from the Indians included all of the present park lands, and the tree is still standing on a portion of this park under which it is recorded that Lord Pell signed the first treaty of peace with the Indians in 1654, after their endeavor to drive the settlers from their homes. This tree stands in front of what is now known as the Bartow Mansion in this park, and has been broken in two by severe storms, but the lower half of the tree is still in a good state of preservation.

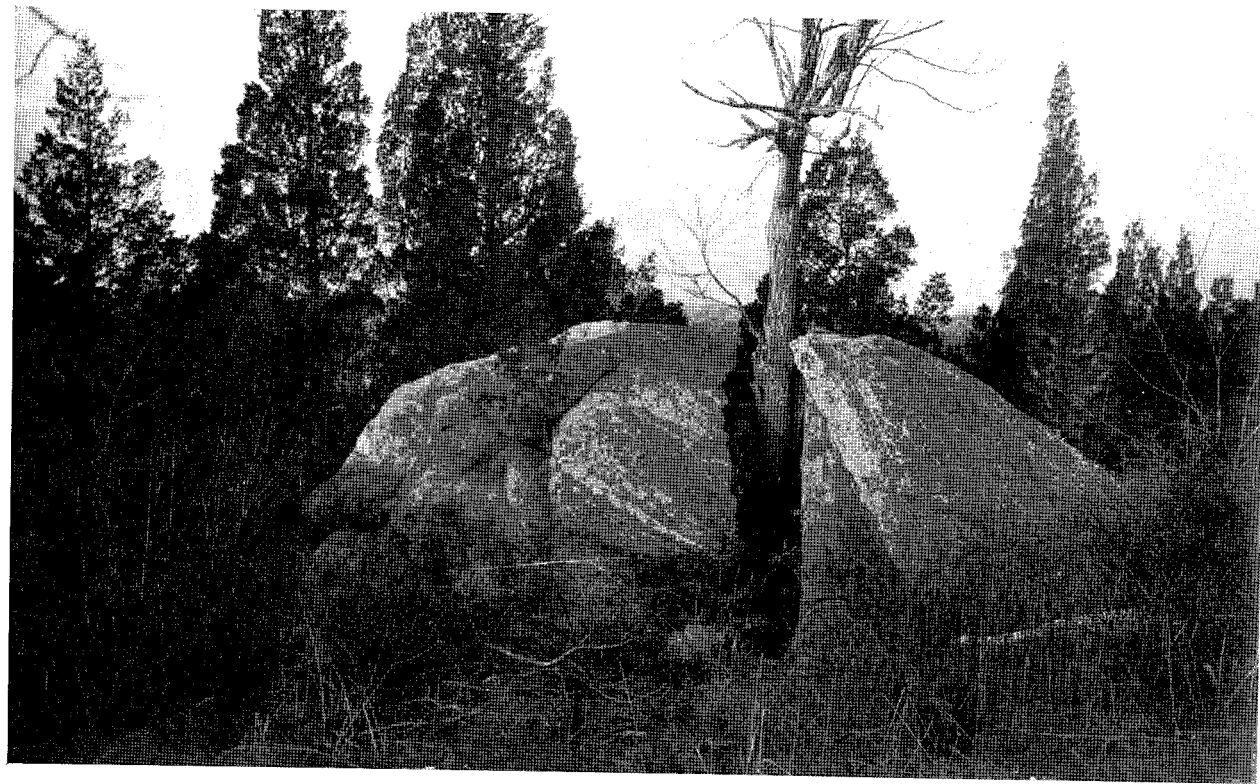
Coming down to the time of the Revolutionary period we find that a great many of the exciting scenes of that conflict in and about New York were enacted in this section. Glover's Rock has been marked by the Colonial Dames with a fine tablet, as designating the place where Colonel Glover held the British forces in check with a small force of men for a sufficient time to enable General Washington to retreat with the main body of his army. The following inscription, which appears upon

the tablet, is of interest to all lovers of history: "Glover's Rock. In memory of the 550 patriots who, led by Colonel John Glover, held General Howe's army in check at the battle of Pell's Point, October 18, 1776, thus aiding Washington in his retreat to White Plains. Fame is the perfume of heroic deeds. Erected by Bronx Chapter, of Mount Vernon, N. Y., Daughters of the American Revolution, October 18, 1901."

One main drive had been laid out and fully developed through this park and used by the public, which had been called the Shore drive, leading directly along the shore from Westchester to New Rochelle. Further than this, the park remained in the same state as when acquired by the City in 1888. During the present year several hundred old trees and stumps that had been damaged by the telephone and lighting corporations for the maintaining of their wires were removed. The sides of these roads were underbrushed for several hundred feet on each side of the road, and all old stones and stumps were removed and the same put in a clean condition. A new road was constructed from the Shore road, on the north of Pelham Bridge, around the Bay, to the City Island road at Glover's Rock, a distance of about 4,230 feet, 25 feet wide. This road was very much used, being preferred to the macadamized road on account of the ease to the horses' feet. Another road 20 feet in width was made from Waterbury's lane to the East Chester Bridge, a distance of 4,870 feet. A portion of the road from Waterbury's lane to the intersection of the Shore drive has been graded so that it can be used. The section across the salt meadows is not yet finished. Two old houses used as dwellings, in the section of the park before crossing the bridge, were removed during the spring, and the old material taken therefrom was used in the construction of forty-two bathhouses at the southerly end of the park and opened to the public entirely free of expense. These bathhouses became an exceedingly popular feature and were used often by as many as 700 bathers in a day. It is the intention of the Department to build others during the coming season,



GLOVER'S ROCK.



SPLIT ROCK.

in order to supply the great demand for this very beneficial exercise.

A path for pedestrians was constructed from the Shore road, near Bartow Station, to the City Island Bridge, a distance of 6,485 feet, for the purpose of taking the foot passengers off of the main drive, which is congested, especially on Sundays and holidays. Previous to the construction of this path all of the traffic was confined to the roadway, and it was often dangerous for women and children, who thronged this section in the hot weather. Now they have a path 12 feet wide built for a part of the way through the salt meadows, with a foundation of large stone boulders. About 50 acres of land previously untouched has been cleared of brush, brambles and stone, and brought into a good state of use for park purposes. Plans have been prepared for a new bridge over the East Chester Bay. A great deal of time was spent by the engineers of this Department in preparing plans and specifications, and several hearings were had before the Board of Estimate and Apportionment, which finally resulted in obtaining an issue of bonds of \$350,000 for the construction of this bridge. During the time the plans were being considered by the Municipal Art Commission, and before they were finally approved, an opinion of the Corporation Counsel was received, to the effect that the building of this bridge was properly the duty of the Bridge Commissioner, and it should be transmitted to him. This Department then turned over to the Bridge Commissioner not only the building of the new bridge, but the further care and maintenance of the old bridge, which had been previously maintained at the expense of this Department. During the past year the same had been replanked and the iron-work for the draw had been repaired at considerable expense. About 50 acres of the old meadows in this park have been plowed during the fall, in order to clear away the foul weeds and brush that have gradually crept into them until same are neither fit for grass nor for park purposes, the intention being to reclaim many of these fields into good, productive meadows.

The golf links upon this park have also been maintained during the year and used by a goodly number of people.

CROTONA PARKWAY.

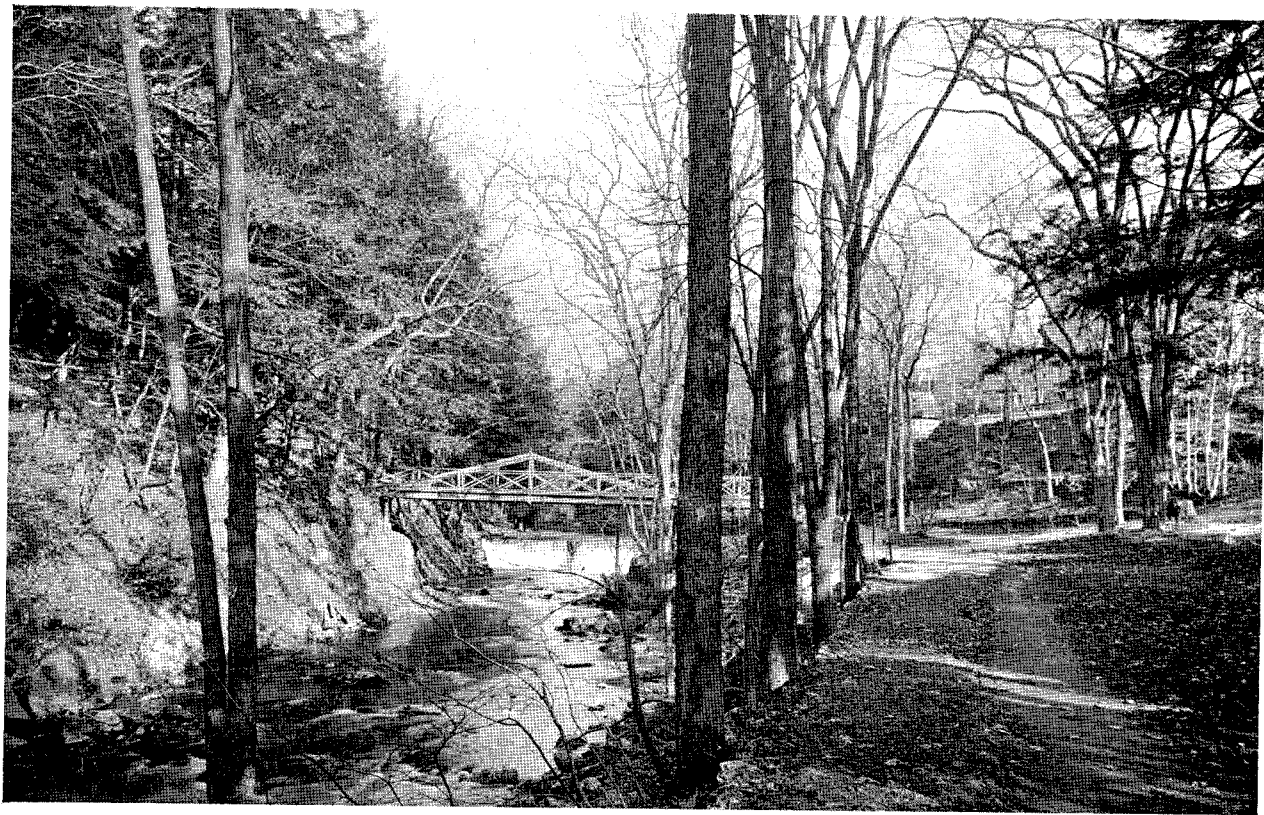
This parkway was acquired as the connecting link between Bronx Park and Crotona Park, in 1888, and is a strip of land 100 feet wide, lying to the east of the Southern Boulevard, running from Crotona Park north to Bronx Park, and then continuing along the westerly line of Bronx Park. Plans and specifications have been prepared during the past year for the development of this parkway, and an appropriation of \$80,000 of bonds has been secured from the Board of Estimate and Apportionment, and the contract advertised and let, and at the close of the year the contractor had the work well in hand. It is expected that during the coming season this contract will be completed and this connecting link between these two parks will be finished.

CROTONA PARK.

(Area, 155 acres.)

This park had received, previous to the present year, but little attention in regard to improvements. The small section around the Municipal Building had been graded and improved to a slight extent, and a path leading from the Municipal Building to the Indian Pond had been built. The old stone walls that were there when the same was in farm land still remained; the swamps along the westerly side had never been drained. During the present year the whole westerly side of this park, extending about one-half mile, has been thoroughly drained. All the stone walls in this section have been removed and the dead and useless trees taken out.

Eleven hundred lineal feet of a 20-foot roadway has been constructed across the park, between Wendover avenue and Crotona avenue. Eight hundred feet of this was laid with telford macadam pavement. Over 2,000 feet of stone pipe



BRONX RIVER AND BRIDGE.



BRONX RIVER, ABOVE FALLS.

drains were laid in the draining of the westerly section. Twenty-three hundred and forty lineal feet of paths, 10 feet wide, on a rubble foundation and covered with bluestone screenings, have been built in this park during the year. Three hundred American elm shade trees were planted along the streets fronting upon this park. Several hundred flowering shrubs have been planted at the intersection of the new drives and paths. About 8 acres of a swamp lying on the easterly side of this park at the southerly end has been filled in, so that during the coming year it will be used for athletic fields. A new grand stand was built in that part of the park used for ball games.

All of the new construction work in this park has been done with the regular force of the Department and out of the Maintenance Fund.

CLAREMONT PARK.

(Area, 38 acres; acquired in 1888.)

This park lies on very high natural ground, with an elevation of 100 feet in places, and gives an extended view of the surrounding territory on all sides. It is a fully developed park, every part being used by the public, containing many tennis courts and ball diamonds, all of which are kept in order for the public.

During the past year a large number of dead and dying trees have been removed, and, owing to the impossibility to get coal, many of the old apple trees upon this place were removed and used for wood.

Thirteen hundred lineal feet of new telford macadam roadway, 16 feet wide, has been built during the year; 920 lineal feet of new walks on rubble foundations have been constructed.

The grading of 5 acres on the northwest corner of the park has been completed, stone walls removed, and this portion newly seeded.

This was formerly known as the Zbrowski Farm, and the mansion lying in this park is used as the park offices of this Department.

ST. MARY'S PARK.

(Area, 29 acres; acquired in 1888.)

This park was formerly a portion of the estate of Gouverneur Morris, who took a very prominent part in the Convention which framed the Constitution of the United States, and who was also a delegate to the Convention which gave the present Constitution to our own State. He subsequently occupied the positions of United States Senator and Minister to France. His remains lie buried in the cemetery known as St. Ann's Church, within a few feet of this park.

A large portion of this park is also of very high elevation and commands a fine view of the East river and Sound, and the Harlem and Hudson rivers. During the year the paths of this park have been resurfaced with cinders. Several acres on the easterly side have been graded and planted, a large number of dead and dying trees removed, and sixty new shade trees were planted.

CEDAR PARK.

(Area, 17 acres; acquired in June, 1885.)

This park is on the high ridge between Walton and Mott avenues. During the year the westerly slope, which had never received any attention and was rapidly filling up Walton avenue, has been graded and seeded, and a new walk built from the Walton avenue side, up through to the top of the park. Over 10,000 cubic yards of earth have been removed in this work, besides a great deal of rock and boulders. The material removed was partly used in filling up a large borrow pit that had been taken out of this park by contractors in the past, so that the same could be seeded and brought into park use. The balance was used for filling in Macomb's Dam Park.

Six hundred and forty lineal feet of telford walk, 10 feet wide, was constructed, and a two-story comfort pavilion erected for men and women; also provision made for a tool-house for park employees.

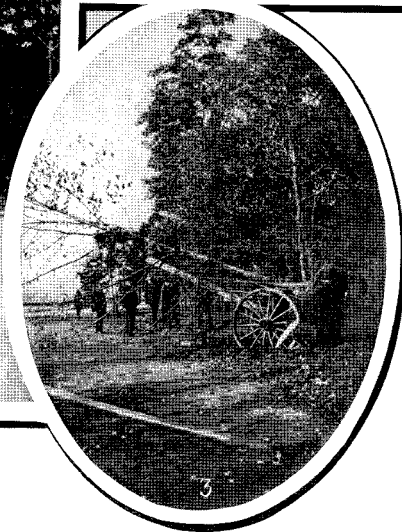
In the draining of this park, in connection with the new



CEDAR PARK (BEFORE IMPROVEMENT)



CEDAR PARK (AFTER IMPROVEMENT.)



REMOVAL OF TREES.

work, upward of 300 feet of 12-inch pipe has been laid, most of which was to replace old drain pipes that were found lying under ground, with their joints not even connected, and absolutely useless.

The name of this park was changed at the close of the year, by the Board of Aldermen, from Cedar Park to Franz Sigel Park, by which name it will hereafter be known.

MACOMB'S DAM PARK.

(Area, 27 acres; acquired in 1899.)

This park borders the Harlem river and Cromwell's creek, and is divided into several sections by the streets.

Previous to the present year very little had been done to this park; a large part of it was a salt marsh. The section lying along the river, to the north of the railroad and north of Jerome avenue, has been cleaned up, old Conrad's Hotel removed, and a walk built along the ridge from the river. About 10 acres of this park lying directly east of Jerome avenue has been filled to grade and covered with top soil, seeded and planted.

The old peanut stands at the intersection of One Hundred and Sixty-first street and Jerome avenue have been removed and a modern cottage pavilion constructed, in connection with which there are a waiting-room and two modern comfort stations for men and women, sufficient to accommodate the needs of the public for some time.

The water front around this park, from One Hundred and Sixty-first street to the northerly extremity of the park, has been dyked for the purpose of retaining the filling and completing the park clear to the water's edge. This was done under contract, from a bond appropriation, and cost about \$21,000.

In the planting of this section around the pavilion seven large maple trees have been planted, 10 inches in diameter, which were brought from Van Cortlandt Park. American elms were also planted along the intersecting roads adjacent to this park.

The material for filling in the sunken land has been received from contractors, without expense to the City. A telford walk 700 feet long and 15 feet wide has been constructed under the approach to the Central Bridge and is ready for asphaltting the surface in the coming spring.

All of the work done in this park during the past year, with the exception of the dyke upon the water front, has been done from the maintenance account of this Department.

ECHO PARK.

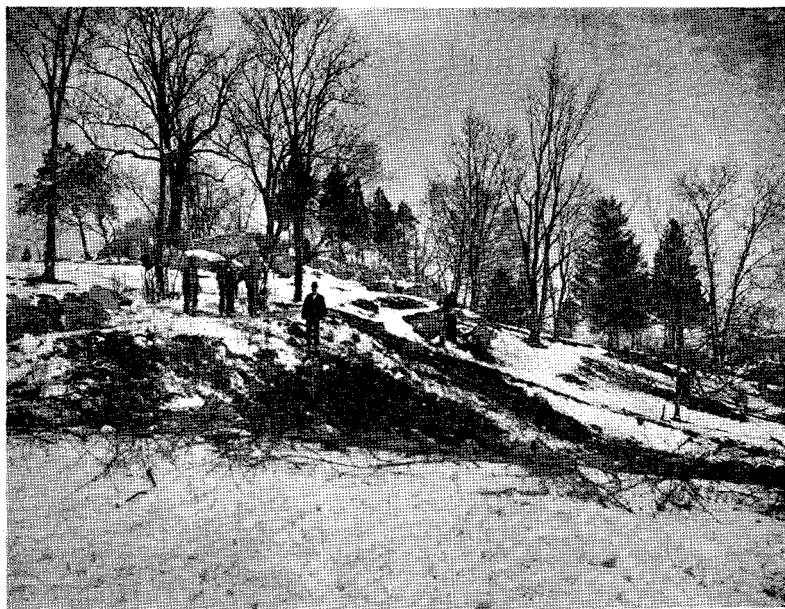
(Area, 3 acres.)

This park was turned over to the Park Department in February, 1902, previously having been under the jurisdiction of the Department of Highways and used as a dumping ground.

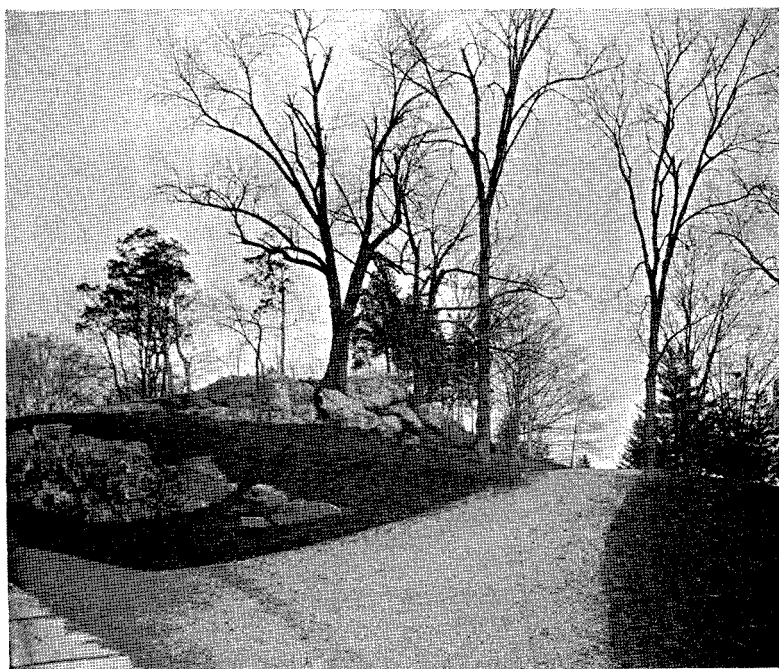
This is one of the finest little parks in the Borough of The Bronx. It has beautiful rock features, and takes its name from the fact that, in the valley between two of these high rocks, an echo is easily produced.

During the year the rubbish was removed, dead and worthless trees cut out, and all of that portion not occupied by rock was graded and seeded.

1,250 lineal feet of walks were laid out and built on rubble foundation and 30 shade trees planted. Surveys were made and plans prepared for application to the authorities to acquire an addition to the westerly side of this park, in order to preserve the rock features. This will require the taking of the bed of Ryer avenue, between One Hundred and Seventy-seventh and One Hundred and Seventy-ninth streets for park purposes, and acquiring eight lots between One Hundred and Seventy-eighth and One Hundred and Seventy-ninth streets to add to the park, through which a new drive will be laid out for the use of the public. The Local Board has approved of this application, and the matter is now before the Board of Estimate and Apportionment.



ECHO PARK (BEFORE IMPROVEMENT.)



ECHO PARK (AFTER IMPROVEMENT.)