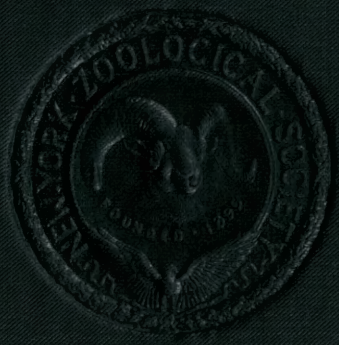
NEW YORK ZOOLOGICAL SOCIETY
FOUNDED 1895

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NINETEENTH ANNUAL REPORT

OF THE

NEW YORK ZOOLOGICAL SOCIETY

CHARTERED IN 1895

OBJECTS OF THE SOCIETY

A PUBLIC ZOOLOGICAL PARK
THE PRESERVATION OF OUR NATIVE ANIMALS
THE PROMOTION OF ZOOLOGY

1914

UNIVERSITY OF ILLINOIS

NEW YORK
OFFICE OF THE SOCIETY, 11 WALL STREET
JANUARY, 1915

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Baldwin, Albert H.,
Baldwin, Frederick H.,
Baldwin, Jared G., Jr.,
Ballard, Sumner,
*Bangs, Dr. L. Bolton,
Banks, Theodore H.,
Barbey, Henry G.,
Barclay, Mrs. Reginald,
Barlow, Peter Townsend,
Barnard, J. Augustus,
Barnes, Miss Charlotte A.,
Barnes, Edward W.,
Barnes, James,
Barnes, Mrs. John S.,
Barney, A. L.,
Barney, Ashbel H.,
Barney, Mrs. J. Stewart,
Barnum, William M.,
Barron, George D.,
Barrow, Miss D. B.,
Bartlett, Philip G.,
*Barton, Willis E.,
Batterson, James G.,
*Baumann, Gustav,
Baxter, George S., Jr.,
Bayard, Louis P.,
Baylies, Edmund L.,
*Baylies, Mrs. Natalie E.,
Baylis, William,
Bayne, Mrs. L. P.,
Beadleston, Alfred N.,
*Beal, William R.,
Beall, Jeremiah,
Beekman, Dr. Fenwick.
Beekman, Gerard,
Beers, Mrs. E. LeGrand,
Behr, Robert,
Bell, Louis V.,
Bell, Park E.,
Beller, A.,
Bement, Edward,
Beller, William F.,
Benedict, Lemuel C.,
Benkard, Harry H.,
Benkard, Mrs. Harry H.,
Benjamin, George Powell,
Benson, R. Lawrence,
Benson, Miss Mary,
Benson, Robert,
Benton, Andrew A.,
Berens, Dr. T. Passmore,
Bernard, Pierre Arnold,
Berolzheimer, E.,
Bernheim, George B.,
Bernheimer, Charles L.,
*Bernheimer, Simon E.,
Bertron, S. R.,
Bigelow, William S.,
Bier, Mrs. Sylvan,
Bijur, Abraham,
*Billings, Frederick,
Billings, C. K. G.,
*Bingham, Kenneth F.,
Birch, Stephen,
Birchall, W. H.,
Bird, George,
Bishop, Miss Mary Cunningham,
Bissell, Clinton T.,
Blagden, George,
Blagden, Mrs. George,
Blagden, Mrs. Julia G.,
Blair, D. C.,
Blair, J. Insley,
Blair, Mrs. Ledyard,
*Blakeslee, T. J.,
Bliss, Ernest C.,
Bliss, William H.,
Blodget, Alden S.,
Bloodgood, Robert F.,
Bloomingdale, Mrs. Joseph B.,
Bloss, James O.,
Boese, Quincy Ward,
*Boettger, H. W.,
*Bogert, Edward C.,
Boissevain, G. L.,
Bolton, Miss Ella F.,
Bolton, William H.,
Bond, Alfred H.,
Bond, Jr., Henry R.,
Bond, Stephen N.,
Bonner, G. T.,
Booth, Mrs. Augusta,
Booth, Enos S.,
Borgstede, John G.,

*Deceased.

Bopp, John,
Borland, J. Nelson,
*Borland, Mrs. John,
Borland, William G.,
*Bostwick, Albert C.,
Boulton, William B.,
Bowdoin, Miss Edith G.,
*Bowdoin, Mrs. Temple,
Bowen, Clarence Winthrop,
Bowen, James,
Bowers, John M.,
Bowne, Francis Draper,
*Brackett, George C.,
Bradbury, Harry B.,
Bradley, Allan B. A.,
Brady, James Buchanan,
*Brady, Mrs. J. R.,
Brady, Nicholas F.,
Brand, Oscar J.,
Bransom, Paul,
Brede, John,
Bremer, August F.,
Brewster, Mrs. Benjamin,
*Brewster, Mrs. Charles O.,
Brewster, George S.,
Bridges, Robert,
Briggs, James E.,
*Brinckerhoff, Elbert A.,
Brinckerhoff, Alex. G.,
Bristol, Prof. Charles L.,
Bristol, John I. D.,
Bristow, William B.,
Brodmerkel, Jr., Charles,
Brokaw, Clifford V.,
Brokaw, Mrs. Clifford V.,
Bronson, Dr. Edward Bennet,
Bronson, Mayhew W.,
Bronson, Mrs. Melvin A.,
Brooks, Miss Bertha G.,
Brooks, Dr. Harlow,
Brower, George V.,
*Brown, Hon. Addison,
Brown, Charles F.,
Brown, Dickson Q.,
Brown, Edwin H.,
Brown, Col. Franklin Q.,
Brown, J. Adams,
Brown, John Barker,
Brown, Richard E.,
Brown, Stephen P.,
Brown, Mrs. Thomas E.,
Brown, Vernon Carleton,
Brown, Waldron P.,
Browning, William H.,
Browning, J. A.,
Broughton, Mrs. U. H.,
Brundige, Miss Elisabeth B.,
Brunnow, Rudolph E.,
Bryan, Geo. J.,
*Bryant, Dr. Joseph D.,
Bryce, Mrs. William,
*Buchanan, William,
Buckner, Thomas A.,
Budd, Henry A.,
Buechner, C. Fred,
Bulkley, Edwin M.,
Bulkley, Mrs. Edwin M.,
Bulkley, L. Duncan,
Bull, J. Edgar,
*Bull, William L.,
Bull, Mrs. Wm. Lamman,
Burden, James A., Jr.,
Burden, Jr., Mrs. James A.,
Burden, Mrs. W. A. M.,
Burgess, Edward G.,
Burleigh, Mrs. George W.,
*Burnham, Mrs. Douglas W.,
Bush, John S.,
Busk, Fred T.,
Butler, Arthur W.,
Butler, Charles D.,
Butler, Charles Stewart,
Butler, Mrs. Nicholas Murray,
Butler, Mrs. P. H.,
Butler, Miss Virginia,
Cabot, F. H.,
Caesar, Henry A.,
Cahen, Julius P.,
*Calef, Amos H.,
Calkins, Prof. Gary N.,
Callender, Miss Mary R.,
Callender, Walter R.,
Calman, Henry L.,
Calman, Albert,
Cammann, Edward C.,
Cammann, Henry Lorillard,
Cammann, Herman H.,
Campbell, Donald,
Campbell, J. W. C.,
Canfield, George Folger,
Cannon, James G.,
Canrobert, A. H.,
Carey, Frederick F.,
Carey, Henry T.,
Carhart, A. Sibley,
Carnegie, Mrs. Andrew,
Carpender, William,
Carpenter, C. L.,
Carr, Mrs. Walter L.,
Cartier, P. C.,
Case, Henry P.,
Cass, Charles Anderson,
Cassard, William J.,
*Caswell, John H.,

*Deceased.

Cathcart, Miss Jennie R.,
Cerero, R. L.,
Chabot, Theodore J.,
Chalmers, Arthur A.,
Chamberlin, William B.,
Chambers, Frank R.,
Chambers, Hilary R.,
Champollion, Andre,
Chanler, Robert W.,
Chapin, Miss Maria Bowen,
Chapman, Arthur,
Chapman, Henry Otis,
Chapman, John Jay,
Chauncey, Elihu,
Chaves, Jose Edward,
Cheney, George L.,
Chesebrough, Robert A.,
Chichester, Charles Darwin,
Child, Mrs. Lewis P.,
Childs, Eversley,
Childs, Starling W.,
Childs, William H.,
Chisolm, Mrs. B. Ogden,
Chisholm, Mrs. Hugh J., Sr.,
Choate, Joseph K.,
Christiancy, George A. C.,
Christie, Robert L.,
Chubb, Percy,
Church, Charles T.,
Church, Jr., E. D.,
Church, George H.,
Church, F. S.,
Church, Louis P.,
*Church, Theodore W.,
Claflin, John,
Clancy, John Evarts,
Clapp, A. P.,
Clark, Chas. Hopkins,
Clark, Charles Martin,
Clark, D. Crawford,
Clark, Miss E. Mabel,
Clark, Herbert L.,
Clark, J. Francis Aloysius,
*Clark, J. Mitchell,
Clark, Mrs. John C.,
Clark, Jr., Louis C.,
Clark, Miss Marian Averell,
Clark, W. A.,
Clark, Walter G.,
Clark, William N.,
Clarke, E. A. S.,
Clarke, Thomas Shields,
Clausen, George C.,
Clemens, Dr. James B.,
Clews, Mrs. James B.,
Cleveland, Miss Mabel H.,
Clyde, William P.,
Cochran, G. D.,
Cochrane, A. W. S.,
Cochrane, F. D.,
Cockcroft, Miss E. V.,
Cockran, Hon. W. Bourke,
Cockran, Mrs. W. Bourke,
Coddington, Mrs. Jefferson,
*Codman, Mrs. Ogden,
Coffin, Francis A.,
Coffin, William Edward,
Colbron, Paul Townsend,
Colburn, Albert E.,
Colby, Howard A.,
Cole, Edward F.,
Cole, Mrs. Rufus,
Collier, Mrs. R. J.,
Collins, Clarence Lyman,
Collins, Miss Gertrude,
Collins, Dr. Stacy Budd,
Colt, Harris D.,
Colt, Richard C.,
Comstock, Mrs. H. G.,
Condon, Thomas Gerald,
Conheim, Hermann,
Content, Harry,
Conkling, Paul B.,
Converse, Miss Mary E.,
Conrad, Miss Alicia D.,
Conway, Mrs. Maud Allis,
Conyngham, John N.,
Cook, Charles S.,
Coombe, T. Gorton,
Cooper, H. S. Fenimore,
Cooper, Theodore,
Corbett, Mrs. Henry L.,
Corbin, Austin,
Corlies, Howard,
Corning, C. R.,
Cory, Daniel W.,
Coster, Edward Livingston,
Cowdin, Winthrop,
*Cowles, David S.,
*Cox, Charles F.,
*Cox, Jennings S.,
*Cram, Mrs. Kathrine G.,
Crampton, Prof. Henry E.,
Crandall, Lee S.,
*Crane, Jonathan H.,
Crane, Mrs. Jonathan H.,
Cravath, Mrs. Paul D.,
Crawford, William,
Crayen, Dr. Gustav A.,
Crimmins, Thomas,
Crocker, Robert S.,
Crocker, William T.,
*Cromwell, Frederic,
Cromwell, James W.,

*Deceased.

Cromwell, Lincoln,
Crosby, Maunsell S.,
Crosby, Nicholas E.,
Cross, Mrs. C. Vanderbilt,
Cross, George D.,
Cross, W. Redmond,
Crossley, G. Reginald,
*Cruickshank, James,
Cunningham, W. deL.,
Curie, Charles,
Curiel, H.,
Cushing, Harry A.,
Cushman, Mrs. James S.,
Cutter, Ralph L.,
*Cutting, W. Bayard,
Cutting, Mrs. W. Bayard,
Cuyler, Mrs. C. C.,
Cuyler, Miss Eleanor deG.,
Daab, Martin,
Dadmun, Geo. E.,
Dailey, Granville F.,
Dallett, Miss Francis A.,
Dallett, Frederic A.,
Daly, Mrs. Marcus,
*Damon, William E.,
Dana, Charles A.,
Dana, Paul,
Davenport, Dr. Charles B.,
Davenport, Mrs. Ira,
Davidge, William H.,
Davies, Frederick M.,
Davies, J. Clarence,
Davies, Julien Tappan,
Davis, Daniel A.,
Davis, David T.,
Davis, Gherardi,
Davis, Howland,
Davis, Joseph P.,
Davis, Morgan,
Davis, W. J.,
Davison, Charles Stewart,
Davison, Miss Ella H.,
Davison, George Howard,
Davison, Mrs. Henry P.,
Day, Arthur M.,
Day, Mrs. Henry Mills,
Dean, Dr. Bashford,
DeCoppet, Henry,
deForest, Miss Caroline,
deForest, Lockwood,
DeForest, Robert W.,
Degener, J. F.,
DeGoicouria, A. V.,
deGraffenried, Baroness R.,
DeKlyn, B. F.,
Delefield, Edward C.,
Delafield, Frederick P.,
Delafield, Lewis L.,
Delafield, Miss Julia Livingston,
Delano, Warren,
DeLanoy, William C.,
deLaugier-Villars, Countess,
Demorest, Mrs. Wm. Curtis,
Deming, L. C.,
Depew, Mrs. Chauncey M.,
DePuy, Henry F.,
deRham, Mrs. H. Casimir,
Dery, D. George,
Despard, Walter D.,
Devereux, Walter B.,
*DeVinne, Theodore Low,
*DeWitt, George G.,
Dexter, Stanley W.,
*Dey, Anthony,
Deyo, Robert E.,
Dick, Mrs. Evans R.,
Dickerson, E. N.,
Diehl, Jr., George H.,
Diehl, George H.,
Dienst, A. P.,
Diestel, Wm.,
Dike, Oscar D.,
Dillon, W. B.,
Dimock, George E.,
Dinsmore, Mrs. W. B.,
Dixon, Theodore P.,
Dodd, Miss Gertrude,
Dodge, Miss Elizabeth W.,
Dodge, Francis P.,
Dodge, Miss Grace H.,
Dommerich, Otto L.,
*Dommerich, L. F.,
Donald, Miss Anna E.,
Donaldson, Robert M.,
Doremus, F. S.,
Douglas, James,
Douglas, William H.,
Douglass, Alfred,
Dow, Charles M.,
Dowd, Joseph,
Dowd, Mrs. Joseph,
Downey, John I.,
Dowling, Edward D.,
Dows, David,
Dows, Mrs. David, Jr.,
Dows, Tracy,
*Drakenfield, B. Ferdinand,
Draper, Dr. William K.,
Drayton, J. Coleman,
Draz, Francis,
Drexel, Mrs. John R.,
Droescher, S. R.,
Drummond, I. Wyman,
Duane, Richard Bache,

*Deceased.

DuBois, Dr. Eugene F.,
DuBois, Dr. Matthew B.,
Duel, Dr. Arthur B.,
Duer, Mrs. John Beverley,
Dulles, Jr., William,
Duncan, Mrs. John P.,
Duncan, Stuart,
Duncan, Mrs. Stuart,
*Duncan, W. Butler,
Dundas, Ralph Wurts,
Dunham, Dr. Carroll,
Dunham, Mrs. G. H.,
Dunn, Gano,
Duryea, Mrs. H. B.,
Dutcher, William,
DuVal, Mrs. Horace C.,
Dwight, John E.,
Eames, John C.,
Eastman, Miss Anne K.,
Easton, Charles Philip,
Eaton, Mrs. Frederick H.,
Ebermann, Mrs. Ernest,
Eckstein, George,
Eckart, Edmund,
Edgar, D.,
Edgar, Herman L. R.,
Edgar, Mrs. J. Clifton,
Edgell, George S.,
Edmonds, John W.,
Edwards, Wm. Seymour,
Eger, Theodor G.,
Edwards, Case,
Egerton, M.,
Eggeling, Otto,
Ehret, Louis J.,
Eidlitz, Robert James,
Eilers, Carl,
Elbers, Mrs. Fritz,
Eldridge, Frederick L.,
Eldridge, William T.,
Ellis, William D.,
Ellsworth, J. M.,
Ellsworth, Lincoln,
Elting, Dr. Arthur W.,
Emanuel, Jr., J. H.,
Embury, Mrs. James W.,
Emerson, Mrs. F. W.,
Emmet, Miss Lydia F.,
Emmet, Robert Temple,
Endicott, Robert,
*Eno, John Chester,
Erbsloh, R.,
Erlanger, Milton S.,
Erdmann, Martin,
Esberg, Henry,
Ettlinger, Louis,
Erdmann, William,
Eustis, John E.,
Estabrook, Arthur F.,
Evans, Richard,
Evarts, A. W.,
Evarts, Miss Mary,
Evarts, Sherman,
Eveland, Frank,
Everett, A. L.,
Fabbri, Alessandro,
Fabbri, Ernesto G.,
Fabbri, Mrs. Ernesto G.,
Faber, Eberhard,
*Fahenstock, Harris C.,
Fahnestock, Dr. Ernest,
Fahnestock, Mrs. Ernest,
Fahnestock, William,
Fairbanks, Henry P.,
Fairchild, Benjamin L.,
Fairchild, Mrs. C. S.,
Falls, Mrs. DeWitt Clinton,
*Falk, Gustav,
Fargo, James C.,
Farley, Colvin,
Farnham, Paulding,
Farrell, James C.,
Farrelly, T. Charles,
Farrell, E. J.,
Farrington, Harvey,
Fay, Francis B.,
Fellows, Wm. Gordon.
Fennell, George W.,
Ferguson, Rev. Henry,
Ferguson, William C.,
Ferris, Herbert W.,
Feuss, Capt. Andrew W.,
Feustman, Leon P.,
Field, Mrs. Augustus B.,
Field, Mrs. William H.,
Field, William B. Osgood,
Fielding, George T.,
Finch, Edward B.,
Fincke, Mrs. Reginald,
Fincke, Rev. William M.,
Fischer, William H.,
Fisher, L. G.,
Fisk, Daniel M.,
Flagler, Henry Harkness,
Flannery, Mrs. Joseph A.,
Fleitmann, Frederick T.,
Fleming, Henry S.,
Flint, Jr., Austin,
Flower, Frederick S.,
Floyd-Jones, Edward H.,
Fohr, Franz,
Foot, James D.,
Foran, George J.,
Ford, Miss Lesta,

*Deceased.

Fordyce, John A.,
Foster, Edward W.,
Foster, Giraud,
Foster, Macomb G.,
Foster, Scott,
Fowler, Mrs. Anderson,
Fowler, Charles, Jr.,
Fowler, Harold,
Fowler, Thomas Powell,
Fox, Hugh F.,
*Fraley, John U.,
Fox, Louis V.,
Frank, Louis,
Fraser, Alex J.,
Fraser, Alex V.,
Fraser, Mrs. George C.,
*Fraser, Mrs. George S.,
Fraser, Miss J. K.,
Fraser, William C.,
Freeman, Miss Gertrude A.,
Frees, John F.
French, Daniel C.,
French, Mrs. John,
*Fried, Samson,
Fries, Dr. Harold H.,
Frissell, A. S.,
Frost, Aaron V.,
Frothingham, John W.,
Fuld, Felix,
*Fulda, Dr. Clemens,
Fuller, Charles D.,
Fuller, Mrs. Eugene,
Funke, Edmund A.,
Furniss, Miss Clementina,
Gaillard, Mrs. Wm. O.,
Gallatin, Albert,
Gallatin, Mrs. Albert,
Gallatin, Goelet,
Gallatin, Mrs. Goelet,
Gallaway, Merrill W.,
Garrett, John W.,
Garrison, Mrs. J. H.,
Gass, Frank,
Gaunt, James,
Gautier, Dudley G.,
Gay, Joseph E.,
Geddes, Donald G.,
Geer, Mrs. Walter,
Gelbach, Dr. R. William,
Gerrish, John Brown,
Gerry, Peter G.,
Gerstle, Edward G.,
Gianini, Charles A.,
Gilbert, Clinton,
Gillespie, Robert McM.,
Gilsey, Henry,
Glazier, Henry S.,
Glyn, W. E.,
Goadby, W. H.,
*Goddard, Frederic N.,
Goddard, Mrs. F. Norton,
Goddard, Morrill,
Godfrey, Mrs. E. D.,
Goldman, Albert,
Goldmann, Julius,
Goldmann, Nathan,
Goldschmidt, S. A.,
Goodhue, Charles E.,
Goodhue, Mrs. S. C.,
Goodwin, George B.,
Goodwin, Mrs. J. J.,
Gotthelf, Charles,
Gotthelf, Herman,
Gotthold, Frederic,
Gould, Charles A.,
Gould, Dr. Frederic S.,
Gould, Charles W.,
Gould, Edwin,
Graham, Mrs. George S.,
Graham, Mrs. Robert D.,
*Grant, R. S.,
Graf, William,
Graves, Jr., Henry,
Graves, George Coe,
Graves, J. P.,
Gray, Henry G.,
Greeff, Ernest F.,
Greenough, John,
Greenough, Mrs. John,
*Greenwood, Isaac J.,
Greenwood, Joseph R.,
Greenwood, J. Wm.,
Greer, Charles,
Gregory, Dr. William K.,
Griffin, Mrs. William P.,
Griffith, Miss Margarette E.,
Griffith, Miss Susan D.,
Grinnell, E. Morgan,
Griscom, Jr., Clement A.,
Griswold, Chester,
Griswold, George,
Gross, Frank,
Guggenheim, Simon,
Guggenheimer, Miss Elvira,
Guinzburg, A. M.,
Guiteras, Dr. Ramon,
Gulliver, Mrs. W. C.,
Gurnee, Walter S.,
Hackett, James K.,
Haffen, John M.,
Hage, John D.,
Haight, Charles S.,
Haines, Charles D.,
Hallock, Charles P.,

*Deceased.

Hall, A. C.,
Hall Arthur H.,
Hall, Frank L.,
Hall, Thomas C.,
Halls, Jr., William,
Halsey, Herbert Drake,
*Halstead, Miss L. P.,
Hamann, Wm. A.,
Hamersley, Miss C. L.,
Hamersley, Louis Gordon,
Hamilton, Miss Adelaide,
Hamilton, Miss Elizabeth Stewart,
Hamilton, Mrs. William Pierson,
*Hammond, James B.,
Hammond, Mrs. John Henry,
Hammond, Ogden H.,
Hance, John A.,
Hansmann, Carl A.,
Harbeck, Charles T.,
Hard, Anson W.,
*Hard, Mrs. Anson W.,
Harmon, Mrs. Clifford,
Harper, Harry,
Harper, Lathrop,
Harriman, Mrs. Herbert M.,
Harriman, Mrs. J. Arden,
Harriman, Mrs. J. Borden,
Hartshorne, J. M.,
Harvey, Eli,
Hasslacher, Jacob,
Hastings, Mrs. Thomas,
Havemeyer, Jr., H. O.,
Havemeyer, J. C.,
Haven, George G.,
Haven, J. Woodward,
Havens, Albert G.,
Hawe, Matthew,
Hawk, Mrs. William Samuel,
*Hayes, Mrs. R. Tomers,
Haynes, William DeForest,
Hecker, Dr. Anton J.,
Heckscher, Mrs. August,
Hedges, Job E.,
*Heiman, Abraham,
Heiman, E.,
Heintz, John C.,
*Heitemeyer, Clemens,
Hencken, Hancke,
Henderson, John B.,
*Hendricks, Francis,
Hengstler, Louis,
Henning, Emil F.,
Hepburn, A. Barton,
Hepburn, Mrs. A. Barton,
Hermann, Bernard F.,
Hermann, Mrs. Ferdinand,
*Hermann, Ferdinand,
Herrick, Herold,
*Herrman, Mrs. Esther,
Herter, Mrs. Albert,
Herter, Mrs. Christian A.,
Hess, Selmar,
*Hewitt, Mrs. Abram S.,
Hewitt, Herbert H.,
Hexamer, A. P.,
Hicks, John M. W.,
Hill, E. B.,
Hicks, E. Pierpont,
Hill, Frank B.,
Hill, Robert C.,
Hills, Dr. Alfred K.,
Hinchman, Walter,
Hirsch, Charles S.,
Hirschland, Franz H.,
Hochschild, Berthold,
Hoe, Mrs. Robert,
Hoffman, Charles Frederick,
Hoffman, Miss M. U.,
Hoffman, Mrs. William M. V.,
Hogg, James A.,
Holbrook, Mrs. Edward,
Holbrook, Mrs. F. S.,
*Holden, Edwin R.,
*Hollister, Wm. H.,
Holt, Henry,
Holter, Mrs. E. O.,
Holzmaister, Louis V.,
Hooley, Edwin S.,
Hooker, Dr. Ransom S.,
Homes, Henry F.,
Hopkins, Russell,
Hoppin, Miss Frances,
Hoppin, Hamilton L.,
Hoppin, Jr., William W.,
Hornaday, Mrs. J. C.,
Hoskier, H. C.,
Hotchkin, W. B.,
Howe, Wirt,
Howell, T. A.,
*Howland, Henry E.,
Howland, Mrs. Henry E.,
Hoyt, Colgate,
*Hoyt, Goold,
Hoyt, Mrs. Henry R.,
Hoyt, Mrs. Jesse,
Hoyt, John S.,
Hoyt, Miss Virginia Scott,
Hoyt, Walter S.,
Hubbard, Walter C.,
Humphreys, Mrs. Edward Walsh,
Hunn, Arthur B.,
Hunt, Mrs. Leigh,
Huntington, Mrs. Archer M.,
Huntington, Mrs. Robert P.,

*Deceased.

*Huntington, Rev. W. R.,
Huntman, Rev. Gerard H.,
Hupfel, J. Christian G.,
*Hurlbut, Frank M.,
Hussey, William H.,
Husted, Miss M. Katharine,
Husted, Jr., Seymour L.,
Hutchins, Augustus Schell,
Hutchinson, Cary T.,
*Hutter, Karl,
Huyler, C. D.,
Huyler, F. D.,
Hyde, Mrs. A. Fillmore,
Hyde, Augustus L.,
Hyde, B. T. Babbitt,
Hyde, Dr. Frederick E.,
Hyde, Mrs. William H.,
Hyde, W. Truslow,
Ijams, J. T.,
Inches, George B.,
Irons, Henry C.,
Irvin, Mrs. Richard,
Iselin, C. O'Donnell,
Iselin, C. Oliver,
Iselin, Miss Georgine,
Iselin, John H.,
Iselin, Miss Louise M.,
Iselin, William E.,
Iselin, Mrs. William E.,
Iselin, William O'Donnell,
Isham, Charles B.,
Isham, Samuel,
Isham, William B.,
Jackson, Dr. George Thomas,
*Jackson, R. G.,
Jackson, R. Halsey,
*Jackson, Samuel Macauley,
Jacob, Lawrence,
Jacobi, Dr. A.,
Jacobs, Samuel K.,
Jacobus, John S.,
Jacquelin, Herbert T. B.,
James, Henry, Jr.,
James, Dr. Robert C.,
James, Mrs. Walter B.,
Jarvis, Mrs. S. M.,
*Janeway, Dr. Edward G.,
Jenkins, A. W.,
Jenkins, Mrs. Helen H.,
Jenkins, Michael,
Jenkins, William B.,
Jennings, Frederick B.,
Jennings, Philander R.,
Jennings, Sidney J.,
Jennings, Walter,
Jesup, Richard M.,
Johnes, William Foulke,
Johnson, F. Coit,
Johnson, Guy B.,
Johnston, J. Herbert,
Johnston, William J.,
*Joline, Adrian Hoffman,
Jones, Mrs. A. Mason,
Jones, Miss Beatrix,
Jones, Mrs. Cadwalader,
Jones, Charles H.,
Jones, H. Bolton,
Jones, Dwight A.,
Jones, Dr. Israel C.,
Jones, Lewis Q.,
Jones, Townsend,
Judson, H. I.,
Kahn, Felix E.,
Kahn, Louis,
Kahn, Dr. Robert J.,
Kane, Mrs. DeLancey,
Kane, Miss Louisa Langdon,
Kast, Dr. Ludwig,
Kaupe, Wilhelm,
Kautz-Eulenberg, Miss P. R.,
Kean, Hamilton Fish,
Kean, Mrs. Hamilton Fish,
Keech, Frank B.,
Keeler, Mrs. C. B.,
Keeling, Mrs. Wheldon,
Keen, Frank H.,
Keil, Francis,
Keil, Henry F.,
Kellogg, Mrs. Charles,
*Kelly, Eugene,
Kelly, Horace R.,
Kennedy, Edward G.,
Kennedy, Mrs. John Stewart,
Kent, Edwin C.,
Kephart, Rev. William H.,
Keppel, David,
*Keppel, Frederick,
Kernan, Mrs. Walter N.,
Keuffel, W. G.,
Keyes, Mrs. Charles W.,
Keyser, Mrs. Samuel,
Kidder, James Hathaway,
Kimball, Alfred R.,
King, Augustus F.,
King, Miss Ethel,
King, James Gore,
King, Mrs. J. Howard,
King, Mrs. Leroy,
Kingsland, Mrs. William M.,
Kinney, Morris,
Kinney, Warren,
Kinney, Mrs. Warren,
*Kinnicutt, Dr. Francis P.,
Kip, W. Ruloff,

*Deceased.

Kitching, Frank W.,
Kittredge, Samuel Dana,
Kitz, Joseph,
Klaw, Marc,
*Klee, Benjamin,
Knapp, Arnold,
Knapp, Jr., Mrs. Harry K.,
Knapp, Mrs. Joseph Palmer,
Knight, Charles R.,
Knoedler, Roland F.,
Koehler, H. C.,
Kohlman, Charles,
Kohlsaat, Miss Edith M.,
Kolb, Gustave F.,
Kolb, Jr., George C.,
Kolb, Frederick,
Koles, Dr. Henry M.,
Konig, George T. H.,
Kraus, Sam,
Krech, Mrs. Alvin W.,
Kremer, William N.,
Kremer, Mrs. Wm. N.,
Krunscheid, C. D.,
Kuempel, Max,
Kunhardt, Henry R.,
Kurzman, Charles C.,
Kuser, John Dryden,
Kuser, John L.,
Kuttroff, Adolf,
Kuttroff, Frederick,
Lacombe, Hon. E. Henry,
Lagai, Dr. George,
Laimbeer, Jr., John,
Laing, Edgar H.,
Lambert, Dr. Alexander,
Lambert, Dr. A. V. S.,
Lambert, Dr. Samuel W.,
Lamont, Mrs. Thomas Wm.,
Landauer, I. N.,
Landon, Mrs. E. H.,
Landon, Francis G.,
Lane, Edward V. Z.,
Lane, James Warren,
Lane, Wolcott G.,
Langmann, Dr. Gustav,
Lange, Miss Carmen,
*Langeloth, J.,
Lanier, Mrs. James F. D.,
Lapham, Mrs. John J.,
Latting, Charles P.,
Lauder, Jr., George,
Lauterbach, Mrs.,
Lawrence, John Burling,
Lawrence, John L.,
Lawrence, Newbold T.,
Lawrence, R. Warren,
Lawrence, Townsend,
*Lawrence, Walter Bowen,
Lawrence, W. V.,
Lea, Charles M.,
Learned, Walter,
Ledlie, George,
Ledoux, Dr. Albert R.,
Ledyard, Edgar M.,
Ledyard, Mrs. Lewis C.,
Lee, Prof. Frederic S.,
Lee, Mrs. Frederic S.,
Lee, George C.,
*Lee, J. Bowers,
Lee, William H. L.,
Lefferts, Marshall C.,
Leggett, Warren F.,
Lehmaier, James M.,
Lehman, Meyer H.,
Leland, Wilfred C.,
LeRoy, Edward A.,
Lesher, A. L.,
Letkemann, H. V.,
Levy, Emanuel,
Lewis, Mrs. August,
Lewis, Frederic Elliott,
Lewis, Percy Pyne,
Lewis, Dr. William J.,
Lewisohn, Adolph,
Lieb, Jr., J. W.,
Lienhart, R. H.,
Lincoln, Lowell,
Litchfield, E. Hubert,
Litchfield, Edward H.,
Litchtenstein, Paul,
Livingston, William S.,
Lobenstine, William C.,
Lockwood, Ernest M.,
Loewi, Hugo V.,
Logan, Frank J.,
Loomis, Guy,
Loop, Chas L.,
Lord, Mrs. George DeForest,
Lounsbery, Mrs. Richard P.,
Low, Ethelbert Ide,
Lowe, William,
Lowell, Miss Carlotta Russell,
Lowell, James B.,
Lowndes, The Rev. Arthur, D.D.,
Lucas, Dr. Frederic A.,
Luchsinger, Jacques,
Luce, Mrs. Harry J.,
*Ludeke, A.,
Ludington, C. H.,
Ludlum, C. A.,
Ludlow, Rear-Admiral Nicoll,
Luke, David L.,
Lummis, Miss Eliza O'B.,
Lueder, A.,

*Deceased.

Lusk, Prof. Graham,
Luttgen, Walther,
Lyman, Frank,
Lyon, Emory S.,
McAlpin, Mrs. Charles W.,
McAlpin, Jr., Mrs. D. Hunter,
McAlpin, George L.,
McBurney, Charles I.,
McBurney, Henry,
McCagg, Louis B.,
McCall, Richard,
McClintock, Gilbert S.,
McCoon, Miss Edith,
McCrea, W. S.
McCreery, Robert S.,
McCulloh, J. S.,
McCutcheon, James,
McGuire, Joseph H.,
McKeever, J., Lawrence,
McKim, John A.,
McKim, Leroy,
McLane, Thomas S.,
McLean, James,
McLean, Marshall,
McMurtry, G.,
Macfarlane, Wallace,
Mack, Arthur C.,
Macy, George H.,
Magee, John,
Mager, F. Robert,
Main, Frank H.,
Male, Francis S.,
Mali, Pierre,
Mali, Mrs. Pierre,
Manecke, Dr. Philip,
Manice, Mrs. William,
Mann, William d'Alton,
Mapes, Jr., Daniel,
Mapes, Ernest S.,
Marbury, Miss Elizabeth,
Marcus, George E.,
Markham, Walter,
Marks, Miss Lucy B.,
Markoe, Harry,
Markoe, Dr. J. W.,
Marsh, C. P.,
Marshall, A. W. W.,
*Marshall, Charles H.,
Marston, Edwin S.,
Martin, Jr., Bradley,
Martin, Howard T.,
Martin, John S.,
Martin, Robert W.,
*Martin, William R. H.,
Martinez Miguel R.,
Mason, Charles N.,
Masten, Arthur H.,
Masters, Miss,
Mather, Samuel,
Mathews, Thomas,
Matthew, Dr. W. D.,
Mayer, Jesse,
*Mayer, John,
Mayer, Mrs. Joseph B.,
Mayer, Marcus,
Maynard, Duff G.,
Maynard, Mrs. Walter E.,
Meeker, Henry E.,
Meem, James C.,
Mehl, Henry,
Meinhard, Morton H.,
Meloy, Andrew D.,
Menn, Howard,
Merritt, Henry C.,
Meyer, Dr. George W.,
Meyer, Miss Heloise
Meyrowitz, Emil B.,
*Milbank, Albert J.,
Milburn, John G.,
Miller, Mrs. Cyrus C.,
Miller, Mrs. Charles E.,
*Miller, Roswell,
Millet, Mrs. F. D.,
Milliken, S. M.,
Mills, Abraham G.,
Mills, Andrew,
Mills, Frederic C.,
Milmine, C. E.,
Mole, A. B.,
Montant, Alphonse,
Montgomery, Carleton,
Montgomery, Richard M.,
Moore, Casimir deR.,
Moore, Jr., Charles Arthur,
Moore, Miss Faith,
Moore, Miss K. T.
Moore, Mrs. Russell Wellman,
Moorhead, Horace R.,
Morawetz, Victor,
Morgan, Miss Anne T.,
Morgan, Miss C. L.,
Morgan, Mrs. Edith P.,
Morgan, Edwin D.,
Morgan, Mrs. J. B.,
Morgan, Mrs. J. Pierpont,
Morgan, Junius S.,
Morgan, Mrs. Junius S.,
Morgan, Prof. Thomas H.,
Morgan, Wm. Fellowes,
Morgan, Jr., William Forbes,
Morris, Dave H.,
Morris, Gouverneur,
Morris, John Jacob,
Mortimer, Richard,

*Deceased.

Morton, A. L.,
Morton, Mrs. Henry Samuel,
Mosle, A. Henry,
Motley, Jas. M.,
Mott, Henry C.,
*Mott, John Bowne,
Mott, Mrs. Valentine,
Mowbray, H. Siddons,
Mueller, Charles F.,
Muhlfeld, Frank J.,
Munroe, Henry W.,
Munsey, Frank A.,
Murgatroyd, John,
Muurling, T. J. R.,
Myers, William S.,
Naegell, Robert,
Neilson, Dr. Howard S.,
Neilson, Wallace Platt,
Neilson, D.D., Rev. William H.,
Nelson, James W.,
Nesmith, James,
*Neumer, Ferdinand,
Neumoegen, M. L.,
Neumoegen, Mrs. M. L.,
Neustadt, Mrs. S.,
Newman, Hugo,
Nichols, Acosta,
Nichols, John W. T.,
Nickerson, Hoffman,
Niles, Miss Florilla,
Niles, Robert L.,
*Noble, Alfred,
Nolker, Robert E.,
Norrie, Miss Mary,
Norman, Mrs. Bradford,
North, George B.,
Norton, Charles D.,
Norton, George F.,
Obermayer, Charles J.,
O'Connell, Dr. J. H.,
Ochs, Adolph S.,
Oettinger, Dr. P. J.,
Offerman, John,
Ogden, Charles W.,
Ohmeis, John
Ohmeis, P. M.,
Olcott, Dudley,
Olcott, 2nd, Dudley,
Olin, Mrs. Stephen H.,
Olney, Elam Ward,
Olyphant, Robert,
Olyphant, Robert M.,
Onativia, John Victor,
Openhym, George J.,
*Opdycke, Leonard E.,
Oppenheimer, Dr. Henry S.,
Ordway, Samuel H.,
Osborn, Mrs. Henry Fairfield,
Osburn, Dr. Raymond C.,
Outerbridge, Mrs. Adolph J.,
Outerbridge, Dr. Paul,
*Owen, Henry E.,
Packard, Mrs. E. Winslow,
Paddock, Mrs. Charles H.,
Page, William H.,
Painter, Dr. H. McM.,
*Palmer, S. S.,
Palmer, Dr. T. S.,
Parish, Wainwright,
Parker, A. W.,
Parker, Edward Ludlow,
Parker, Junius,
Parker, Winthrop,
Parpart, William E.,
Parsons, Edwin,
*Parsons, Mrs. Edwin,
Parsons, Miss Gertrude,
Parsons, H. DeB.,
Parsons, John E.,
Parsons, Miss Mary,
Parsons, William Barclay,
Parsons, William H.,
Partridge, Edward L.,
Paton, David,
Patterson, Henry Stuart,
Patterson, T. H. Hoge,
Paul, John J.,
Payne, Mrs. Henry W.,
Peabody, Stephen,
Pearson, F. S.,
Pearson, Mrs. Frederick,
Peaslee, Miss F. Randolph,
Peck, Charles E.,
Peck, Leicester O.,
Pegram, Edward S.,
Pell, Stephen H. P.,
Pendleton, Francis Key,
Penfold, Edmund,
*Penfold, William Hall,
Penrose, Dr. Charles B.,
Percival, L. A. D.,
Perkins, George E.,
Perkins, Robert P.,
Perry, John P. H.,
Perry, William A.,
Perry, Winthrop H.,
Peter, Emil,
Peters, Mrs. Charles G.,
Peters, Samuel T.,
Peters, William Richmond,
Pfeiffer, Curt G.,
Pfeiffer, George,
Phelps, Mrs. Charles,
Phelps, Mrs. Ansel,

*Deceased.

Phelps, Dr. Governeur M.,
Phillips, William W.,
Piatti, Dr. Virgil C.,
Pickhardt, Carl,
Piel, Gottfried,
Piel, Michael,
Pierrepont, Miss Anna Jay,
Pierrepont, R. Stuyvesant,
Pierson, Gen. J. Fred,
Pike, R. W.,
Pillot, P. Stuyvesant,
Pinchot, Gifford,
Platt, Charles H.,
Platt, Frank H.,
Platt, Henry B.,
Platten, J. W.,
Plaut, Albert,
Plympton, Gilbert M.,
Polk, Dr. William M.,
Pollock, George E.,
Pomroy, Mrs. H. K.,
Poor, Henry V.,
Pope, Frederick W.,
Pope, G. D.
Porter, Alexander J.,
Porter, Horace,
Porter, Louis H.,
Porter, William L.,
Post, Abram S.,
Post, Mrs. Charles Alfred,
Post, Edward C.,
Post, Jr., George B.,
Potter, Miss Blanche,
Potter, Edward Clarkson,
Potter, Frederick,
Potter, Orlando B.,
Potter, R. Burnside,
Potter, Mrs. R. Burnside,
Potts, Jesse W.,
Potts, William Brevoort,
Pratt, Albert H.,
Pratt, George D.,
Pratt, H. L.,
Pratt, John T.,
Pratt, Mrs. John T.,
Prentice, John Hill,
Prentiss, Miss Henrietta,
Prentiss, Geo. H.,
Press, T. Channon,
Preston, Veryl,
Priddy, Lawrence,
Prime, Miss Cornelia,
Prince, Edward S.,
Prince, Prof. J. Dyneley,
Proctor, William,
Proctor, Thomas R.,
Proctor, Wm. Ross.
Pryer, Charles,
Pulitzer, Mrs. Joseph,
Pulsifer, Mrs. N. T.,
Putnam, J. Bishop,
Putnam, H. St. Clair,
Putnam, William A.,
Pyle, D. H. McAlpin,
*Pyle, James Tolman,
Pyne, Mrs. M. Taylor,
Pyne, 2nd, Percy R.,
Quincy, Charles F.,
Quintard, Dr. Edward,
*Radford, Harry V.,
Randall, Frank E.,
Randolph, Edmund D.,
Randolph, William W.,
Ranft, Richard,
Ranger, Stanley,
Rascovar, James,
Rasmus, W.,
Rasmus, W. T.,
Rathborne, Richard C.,
Rauch, William,
Read, William A.,
Redmond, Miss E.,
Redmond, Mrs. Henry S.,
Reid, John,
Reid, Ogden Mills,
Reid, Mrs. Ogden Mills,
Reimer, Otto Eugene,
Reincke, E. A.,
Reinhardt, George N.,
Remsen, Charles,
Reynolds, E. B.,
Rhett, Miss Florence,
Rhinelander, Charles E.,
Rhinelander, Philip,
Rhoades, Mrs. J. Harsen,
Rice, Miss Mildred G.,
Rice, Mrs. William B.,
Richard, Miss Elvine,
Richard, Edwin A.,
Richards, Eben,
Richards, E. O.,
Richardson, Mrs. C. Tiffany,
Ridder, Herman,
Riggs, Geo. C.,
*Riker, Samuel,
*Ripley, H. Dillon,
Ripley, Julien A.,
Rippe, Mrs. E. J.,
Rives, George L.,
Robbins, Chandler,
Robbins, Mrs. Helen C.,
Roberts, G. Theodore,
Roberts, Miss M. M.,
*Robertson, Mrs. Fanny P.,

*Deceased.

Robertson, Albert,
Robertson, Julius,
Robertson, R. H.,
Robinson, Mrs. Douglas,
Robinson, Edward,
Robinson, Eli K.,
Robinson, G. H.,
Robinson, Miss Pauline,
Robison, William,
Roche, Mrs. Burke,
Rockwood, William H.,
Roe, Frank O.,
Roe, Irving L.,
Roelker, Alfred,
Rogers, E. L.,
Rogers, Mrs. Francis,
Rogers, Hubert E.,
Rogers, James H.,
Rogers, Mrs. William Beverley,
Rokenbaugh, Henry S.,
Rolle, Augustus J.,
Rombough, John B.,
Roosevelt, Mrs. James,
Roosevelt, Mrs. J. W.,
Roosevelt, Mrs. Hilborne L.,
Roosevelt, James A.,
Roosevelt, W. Emlen,
Root, Elihu,
Rose, Mrs. A. Sumner,
Rossiter, Arthur W.,
Roth, Frederick G. R.,
Roth, J. E.,
Rothwell, James E.,
Rowell, Mrs. George P.,
Rowland, Thomas,
Ruhe, Louis,
Runyon, Carman R.,
Runyon, E. W.,
Ruppert, Jacob,
Ruppert, Mrs. Jacob,
Ruperti, Justus,
Russell, Archibald D.,
Russell, Dr. John F.,
Ryan, J. D.,
Ryan, John Barry,
Ryle, Arthur,
Ryle, Graham,
Sachs, Arthur,
Sackett, Miss Gertrude T.,
Sage, John H.,
Saks, Isadore,
Sampson, Alden,
Sampson, Charles E.,
Sands, Miss Anne A.,
Sands, Benjamin Aymar,
Sands, Mrs. Benjamin Aymar,
Satterlee, Mrs. H. L.,
Satterwhite, Preston P.,
Sanger, Mrs. Ralph,
Sauter, Frederick,
Sauter, Jr., Fred,
Schaff, Hermann,
Schaefer, Andreas F.,
Schaefer, Edward C.,
Schaefer, Henry,
Schanck, George E.,
Schaue, C. F.,
Schauffler, Dr. A. F.,
Schauffler, Mrs. A. F.,
Schefer, Carl,
Schenck, Henry deB.,
Schieffelin, Mrs. H. M.,
Schieffelin, William Jay,
Schirmer, Rudolph E.,
Schmelzel, Miss Jane E.,
Schmelzel, James H.,
Schmidt, Adolph T.,
*Schmidt, F. Leopold,
Schmidt, William H.,
Schnabel, R. A.,
*Schniewind, F.,
Scholle, A. H.,
Schrag, Charles A.,
*Schreyvogel, Charles,
Schuyler, Miss Louisa Lee,
Schwarcz, Max M.,
Schwarz, Henry F.,
Schwarzler, Albert J.,
Scofield, Miss Marion,
Scott, Donald,
Scott, Hon. Francis M.,
*Scott, Frank H.,
Scott, William,
Scoville, Mrs. John H.,
Scoville, Robert,
Scribner, Arthur H.,
Scribner, Mrs. Charles,
Scrymser, James A.,
Seaman, Dr. Louis L.,
Sedgwick, Robert,
See, A. B.,
Seifert, Karl F. J.,
*Seligman, Alfred L.,
Seligman, George W.,
Seligman, Jefferson,
Senff, Mrs. Charles H.,
Seton, Alfred
Sexton, Lawrence E.,
Seybel, Daniel E.,
Shapiro, D.,
*Shardlow, Mrs. Joseph,
Sheets, Dr. E. A.,
Sheffield, James R.,
Sheffield, Mrs. James R.,

*Deceased.

Sheldon, Mrs. Charles,
Sheldon, Edward W.,
Sheldon, George R.,
Sheldon, William C.,
*Shepard, Augustus D.,
Shepard, Mrs. Elliott F.,
Shipman, Richard D.,
Shoemaker, Henry W.,
Shillaber, Wm.
Shonts, T. P.
Shurtleff, Roswell Morse,
Sibley, Mrs. H. W.,
Siedenburg, Jr., Reinhard,
Siegel, Jacob,
Silleck, Jr., Henry G.,
Silleck, Jr., Mrs. Henry G.,
Silliman, Harper,
Simon, Theodor A.,
Simpson, J. F.,
Simpson, John W.,
Sinclair, Mrs. John,
Singer, Arthur J.,
Skeel, Dr. Frank D.,
Skidmore, William L.,
Slade, Francis Louis,
Slaughter, R. B.,
Slocum, J. J.,
Smidt, Mrs. G. L.,
Smidt, Thos.
Smiley, Daniel,
Smillie, Charles F.,
Smillie, James C.,
Smillie, Ralph,
Smith, Dr. A. Alexander,
Smith, Augustine J.,
Smith, Mrs. Charles S.,
Smith, Elias D.,
Smith, Erskine M.,
Smith, F. M.,
Smith, Mrs. F. Hopkinson,
*Smith, Nathaniel S.,
Smith, Pierre J.,
Smith, Robert K.,
Smith, Roland W.,
Smith, Dr. Samuel,
*Smith, William Alexander,
Smithers, Charles,
Smithers, F. S.,
Snow, E. G.,
Soltmann, E. G.,
Sorchan, Mrs. Victor,
Spalding, Keith,
Sparrow, Mrs. Edward W.,
Spear, Jr., James,
Spedden, Frederic O.,
Spencer, Alexander H.,
*Spencer, Edwards,
*Spencer, Lorillard,
Sperry, William M.,
Speyer, Mrs. James,
Spitzner, George W.,
Spofford, Mrs. J. L.,
Sprague, Mrs. Frank J.,
Sprigg, Judge Carroll,
Spring, Miss Anna Riker,
Spurr, E. W.,
Squibb, Dr. Edward H.,
Squire, Eben H. P.
Stafford, William Frederick,
Stafford, Mrs. William Frederick,
Standish, Myles,
Stanton, John R.,
Staples, Mrs. John J.,
Starr, Louis Morris,
Stearns, Louis,
Stebbins, James H.,
Steele, Mrs. Charles,
Stein, Mrs Alexis W.,
Steinbeck, Edward,
Steinbrugge, Jr., Edw. J.,
Steinmetz, John A.,
Stephens, Olin J.,
Stephens, Roderick,
Stevens, Alexander H.,
Stevens, Frederic W.,
Stevens, Richard
Stevens, Mrs. Richard,
Stevens, Theodosius F.,
Stewart, James,
Stewart, Mrs. Percy Hamilton,
Stewart, William R.,
Stillman, Mrs. C. C.
Stillman, James A.,
Stimson, Mrs. Frederic,
Stimson, Dr. Daniel M.,
Stockard, Dr. Charles R.,
Stockmann, Miss Marie F. C.,
Stoeckel, Carl,
*Stokes, H. B.,
Stokes, James,
Stone, Miss Annie,
Stone, Miss Ellen J.,
Stout, Joseph S.,
Stow, George G.,
Straight, Willard,
Strange, A. B.,
Straus, H. Grant,
Straus, Percy S.,
Strauss, Frederick,
Strauss, Charles,
Streat, James,
Street, W. A.,
Strong, Jr., Benjamin,
Strong, Richard A.,

*Deceased.

Strong, Theron G.,
Stroock, Joseph
Stroock, Louis S.,
Sturges, Henry C.,
Suckley, Mrs. R. B.,
Suffern, Robert Adams,
Sullivan, Mrs. James,
Sutro, Lionel,
Swan, James A.,
Swenson, S. A.,
Taber, Miss Mary,
Taft, Henry W.,
Taft, William Howard,
Tag, Albert,
Tailer, Edward N.,
Talcott, James,
Talmage, Mrs. E. T. H.,
Tatham, Charles,
*Tatum, A. H.,
Taylor, Mrs. Henry Osborn,
Taylor, Henry R.,
Taylor, James B.,
Taylor, Lloyd,
Taylor, Moses,
Taylor, Robert C.,
Tenney, C. H.,
Terry, Jr., Mrs. John T.,
*Terry John T.,
Thacher, Archibald G.,
Thacher, Mrs. George W.,
Thacher, Thomas,
Thaw, J. C.,
Thayer, Harry Bates,
Thomas, Dr. Allen M.,
Thomas, Jr., Seth E.,
Thomas, Mrs. Washington,
Thompson, Mrs. J. Todhunter,
Thorley, Charles,
Thorne, Mrs. Edwin,
Thorne, Jonathan,
Thorne, Mrs. Jonathan,
*Thorne, Newberry, D.,
Thorne, Mrs. Samuel,
Thorne, Mrs. W. V. S.
Thorne, W. V. S.,
*Thorp, W. Edwin,
Tiffany, Louis C.,
Tilley, George D.,
Tilton, Joseph W.,
Timken, J. Henry,
Timmermann, Henry G.,
Timpson, James,
Tod, J. Kennedy,
Todd, H. H.,
Todd, Walter B.,
Toler, Mrs. Virginia W.,
Tomby, Borgfeldt,
Tonneli, Mrs. John N.,
*Tousey, William,
Townsend, Miss Amy C.,
Townsend, Mrs. E. M.,
Townsend, Edwin S.,
Townsend, Howard,
Townsend, Isaac,
*Townshend, John,
Tows, Coe Downing,
Trimble, Mrs. Richard,
Trowbridge, Frederick K.,
Tuckerman, Alfred,
Tuckerman, Paul,
Turnbull, Arthur,
Turnbull, Mrs. Ramsay,
Turnure, George E.,
Tuska, Benjamin,
*Tuttle, Dr. G. M.,
Tweddell, William H.,
Tweed, Mrs. Charles H.,
Twining, E. S.,
Uhl, Oswald W.,
Underwood, William Lyman,
Upmann, Carl,
Valentine, Mrs. Patrick A.,
Valentine, Dr. William A.,
Van Beuren, Jr., Frederick T.,
Van Beuren, M. M.,
*Van Cortlandt, Augustus,
Vandergrift, S. H.,
Vanderpoel, Ambrose E.,
Vanderpoel, Mrs. John A.,
Vanderlip, Frank A.,
Van der Smissen, Dr. G. J.,
Van Dyke, R. B.,
Van Emburgh, D. B.,
Van Gerbig, Barend,
Van Ingen, Mrs. Edward,
Van Ingen, Mrs. E. H.,
Van Norden, Ottomar H.,
Van Nostrand, B. T.,
Van Sinderen, Howard,
Van Winkle, Edgar B.,
Varian, Wilbur L.,
Varcoe, Harold,
Vesper, Karl H.,
Vietor, Adolph,
Vietor, Thomas F.,
Vincent, Frank,
Vogel, Herman,
von Bernuth, Jr., Fritz,
von Dreele, Wm. H.,
von Gontard, Mrs. Alexander,
von Lengerke, Justus,
von Zedlitz, Mrs. Anna M.,
Waddington, George,
Wagstaff, Mrs. Alfred,

*Deceased.

Wagstaff, C. DuBois,
*Wainwright, J. Howard,
Walburn, Joseph,
Walcott, Frederic C.,
Waldon, S. D.,
Wales, Edward H.,
Walker, Bryant,
Walker, Dr. John B.,
Waller, Jr., Robert,
Waller, Mrs. Robert,
Walsh, Samuel A.,
Walter, Edgar,
Walter, Martin,
Walty, A. R.,
Wanninger, Charles,
Warburg, Paul M.,
Ward, Artemas,
Ward, Mrs. George Cabot,
*Ward, Henry C.,
Wardner, Henry Steele,
Wardwell, Allen,
Warner, W. E.,
Warren, Mrs. J. Hobart,
Warren, Lloyd,
Washburn, Thomas E.,
Washburn, Wm. Ives,
Waterbury, John I.,
Waterbury, Miss,
Watson, Charles F.,
*Watson, Rev. J. Henry,
*Weatherbee, Edwin H.,
Weatherbee, Mrs. Edwin H.,
Webb, F. Egerton,
Webb, Mrs. William Seward,
*Weber, Dr. Leonard,
Weeks, James,
Weil, Richard,
Weir, Mrs. C. Gouverneur,
Weitling, William W.,
Wells Oliver J.,
Weigle, Charles H.,
*Wendell, Mrs. Jacob,
Werner, C. H.,
Wessell, Arthur L.,
Wessel, J. Henry,
Westover, M. F.,
Wetmore, Edmund,
Wheeler, Everett P.,
Wheeler, Walter S.,
Wheelock, Mrs. G. G.,
White, A. M.,
White, Harold T.,
White, Horace,
White, Leonard D.,
Whitehouse, J. Henry,
Whitehouse, William F.,
Whiting, Dr. Charles A.,
Whiting, Miss Gertrude,
Whitman, Clarence,
Whitman, Jr., William,
Whitridge, F. W.,
Wickersham, George W.,
Wigglesworth, Henry,
Wilkins, F. H.,
Willcox, Wm. G.,
*Willets, John T.,
Williams, Arthur,
Williams, David,
Williams, Alex. S.,
*Williams, Mrs. G. G.,
Williams, George L.,
Williams, Jr., Richard H.,
Williams, Mrs. Percy H.,
Williams, Waldron,
Williams, William,
Williamson, Mrs. Butler,
Wills, Charles T.,
Wilson, Prof. Edmund B.,
Wilson, George T.,
Wingate, Geo. W.,
Winter, Julius,
Winterroth, Maj. E. J.,
Winthrop, Jr., Egerton L.,
*Winthrop, Robert Dudley,
Wisner, Charles,
Witherbee, Frank S.,
Witthaus, Dr. Rudolph A.,
Wittmann, Joseph,
Wolf, Arthur D.,
Wolff, Emil,
Wood, Arnold,
Wood, Gilbert Congdon,
Wood, J. Walter,
Wood, William Congdon,
*Woodhouse, J. S.,
Woodhouse Company, J. S.,
Woodruff, Albert C.,
Woodward, Robert B.,
*Woodward, Sr., Mrs. William,
Work, Bertram G.,
Worcester, Wilfred J.,
Worrall, P. B.,
Wright, Hal,
Wright, J. Dunbar,
Wright, John Howard,
Wunderlich, H.,
Wyckoff, Dr. Peter Brown,
Wyckoff, Mrs Peter B.,
Yorkwitz, Albert,
Young, A. Murray,
Young, George W.,
Zabriskie, Andrew C.,
Zabriskie, Miss Ethel,

*Deceased.

ZINSSER, AUGUST,
ZINSSER, MRS. AUGUST,
ZINSSER, JR., AUGUST,
ZOLLER, CHARLES,

Corresponding Members

GILFEDDER, T. P.,
JOHNSTON, SIR HARRY H.,
LESOUEF, W. H. DUDLEY,
MILLWARD, RUSSELL HASTINGS,
STURTEVANT, LIEUT. C. G.,
TYRWHITT, DRAKE G.,

Summary of Membership

Benefactors	7
Founders in Perpetuity	14
Founders	20
Associate Founders	8
Patrons	35
Life Members	285
Annual Members	1,746
Honorary and Corresponding Members	15
	2,130

Qualifications for Regular Membership

Annual Members	$ 10	Associate Founders	$ 2,500
Life Members	200	Founders	5,000
Patrons	1,000	Founders in Perpetuity	10,000
		Benefactors	$25,000

Form of Bequest

I do hereby give and bequeath to the "NEW YORK ZOOLOGICAL SOCIETY," *of the City of New York,*.....

.....

.....

ABYSSINIAN LION, MENELIK

REPORT OF

THE EXECUTIVE COMMITTEE

TO THE BOARD OF MANAGERS.

THE Executive Committee respectfully submits the following report to the Board of Managers for the year 1914:

It is again the sad duty of your committee to report the loss through death, of a friend who has stood by the Society from the beginning. Mr. John L. Cadwalader, one of the Founders of the Society and of the New York Zoological Park, Vice-President, and an original member of the Board of Managers, died on Wednesday, March 11, 1914. Resolutions expressing the esteem in which it holds the memory of Mr. Cadwalader, were passed by the members of your committee, and will appear at the end of this report.

MEMBERSHIP.

The efforts of your committee to secure new members since the start of the European war have been rather barren of results, although the net result for the entire year, is slightly better than for 1913. A total of 214 new members has been secured, 200 Annual Members and 14 Life Members. Resignations and deaths, however, reduce the net result to a gain of 104 members as compared with a net gain of 84 for 1913.

It is the intention of your committee to maintain a steady campaign for new members during the winter, as an increase in the membership means an increase in the efficiency and extent of the work of the Society. Members can render great assistance in this direction by suggesting the names of persons to whom invitations to join in the work of the Society can be sent. Experience has shown that the most valuable recruits are those secured through the co-operation of existing members.

The membership as of January 1, 1915, is as follows:

	January 1, 1914	January 1, 1915
Benefactors	6	7
Founders in Perpetuity	16	14
Founders	20	20
Associate Founders	8	8
Patrons	36	35
Life Members	278	285
Annual Members	1,648	1,746
Honorary and Corresponding Members	14	15
	2,026	2,130

Members are entitled to free admission to the Zoological Park on pay days (Mondays and Thursdays), when the collections can be seen to the best advantage, to the privileges of the Administration Building, which is reserved for members, and especially for ladies and children, and also to the *Annual Reports;* the bi-monthly *Bulletin;* copies of *Zoologica,* and complimentary tickets of admission, for all lectures, receptions and special exhibitions. Such tickets are available for distribution among friends.

ATTENDANCE, PARK AND AQUARIUM.

The attendance at the Park and Aquarium has been as follows:

	Park	Aquarium
1914	2,020,433	2,029,707
1913	1,943,683	2,205,729
Increase, Park	76,750	
Decrease, Aquarium		176,022

In spite of the disturbance and changes caused by the European war, the attendance at the Park has not only been maintained, but shows a most gratifying increase of 76,750.

The attendance at the Aquarium shows a decrease of 176,022 due to the slack business conditions in the lower part of the city and the falling off of transatlantic travel.

The total annual cost to the City for the maintenance of these two institutions for the year 1914 is 5.8 cents per visitor.

COLLECTIONS AT THE PARK.

In January and February, the Primate collection was visited by the first serious epidemic in the history of the Zoological Park. The orang-utans and chimpanzees were attacked simultaneously by a remarkably rapid form of tuberculosis, and in a few weeks all of them died. The largest and finest chimpanzee survived only ten days after he first showed signs of illness. Fortunately the epidemic did not seriously affect the baboons, monkeys and lemurs.

The victims of this epidemic have been thoroughly examined by the Prosector's Department, and the results are conclusive that these animals were attacked by a human type of tuberculosis, conveyed by spectators.

This building has been completely overhauled, with a view to the elimination of all harboring places for vermin, and the improvement of the ventilation. The ape cages have been effectually sterilized by Dr. Blair and repainted, to render them safe for further occupancy.

New Animals.—Several notable accessions have been received at the Park. The most valuable are the following: a gorilla, an adult male orang-utan, a male chimpanzee, a great ant eater, 3 sea lions, 2 Siberian ibexes, 2 Abyssinian ground hornbills, 4 emus, a black-footed penguin, a large anaconda, a gelada baboon, a blotched giraffe, 3 East African zebras, an East African bush pig, 4 ground hornbills, a Manchurian eared pheasant, a peacock. During September the collection of equines was increased to seven by the purchase of a young kiang or Tibetan wild ass, born in July, 1913, in the Zoological Gardens of London.

Death of Animals.—Aside from the losses occasioned by the epidemic of tuberculosis, reported above, the losses from death have been only the usual number. The most important were a very young giraffe, an eland, a mountain sheep, 3 large apes, and a fine female zebra, newly arrived from Africa, that broke its neck in a panic caused by an electric storm. At the close of the year the animal collections generally are in excellent health, the only serious exception being the partial paralysis in the legs and arms of the gorilla, and a bad case of rheumatism in one of the forelegs of the pygmy African elephant.

A census of the animals in the Park, taken January 1, 1915, shows the following results:

	January 1, 1915	
	Species	Specimens
Mammals	204	586
Birds	811	2,753
Reptiles	164	1,014
	1,179	4,353

Gunda.—During the months of May, June and July, Gunda, the large male Indian Elephant now on exhibition at the Park, having arrived at full maturity, showed serious signs of musth, a periodic attack occurring in all adult male elephants during the breeding season. During this period Gunda became vicious and dangerous to human life. The Director was therefore compelled, with the full approval of your committee, to confine him closely by leg chains. This aroused a perfect storm of abusive letters and newspaper articles from sentimentalists of every character. Some of these attacks verged on the hysterical, and others were from irresponsible cranks, but all showed a supreme contempt for facts. Your committee was thereupon compelled to tell the truth in a circular to its members, which was given out to the press, and to give the exact conditions in very plain language. Since this statement the excitement seems to have abated. As soon as the musth was over Gunda was released, but the Society must be prepared next spring, and annually thereafter, to see Gunda suffer from recurrences of these attacks, and during them it will be necessary to confine him closely until it is over. The only alternative is to put this splendid specimen to death.

COLLECTIONS AT THE AQUARIUM

The collections at the Aquarium continue in good condition, and all exhibition space is fully occupied, with a considerable supply of specimens in reserve. During June four of the porpoises died within a few days of each other, three being lost by tubercular pneumonia, and one from a diseased spine, injured at the time of capture. The fifth and only remaining specimen is apparently in the best of condition after more than a year's captivity. An illustrated paper on the behavior of these animals in captivity has been published by the Society. Your committee is endeavoring to secure several additional specimens.

Collections of fresh water fishes have been received from the Lower Mississippi River and from the Detroit Museum,

numbering nearly three hundred specimens, putting the entire fresh-water exhibit in good shape. A great many fresh-water fishes were also obtained through the courtesy of the Department of Parks of the City of New York.

Small but excellent collections were received each month from Bermuda, which relieved the Society from making the usual early summer collecting trip. An interesting collection of tropical fishes, containing 509 specimens and representing 69 species, has been received from Key West, Florida, and 63 specimens of tropical fishes have been presented to the Society by the Department of Agriculture of Bermuda.

The hatchery exhibit has been conducted, as usual, with the co-operation of the U. S. Bureau of Fisheries, which supplies fish eggs from its various hatcheries throughout the country.

A great amount of painting and white-washing has been done at the Aquarium, as well as carpenter work, including the enclosing of the porpoise pool. The refrigerating plant has also been thoroughly overhauled, and extensive repairs have been made to the boilers.

A census of the exhibits taken January 1, 1915, shows the following results:

	January 1, 1915	
	Species	Specimens
Fishes	146	2,876
Reptiles	24	130
Amphibians	9	109
Invertebrates	18	2,051
Mammals	2	3
	199	5,169

FINANCES.

The accounts of the Society are in good condition and close the year with credit balances, as follows:

Endowment Fund Income Acct.	$ 5,895.21	
Income Account	15,978.88	$21,874.09
Animal Fund	10,414.12	
Cadwalader Animal Fund	500.00	10,914.12

Library Fund	146.57
National Collection of Heads and Horns	280.27
Wild Life Protection Fund	517.45
Stokes' Bird Fund	134.69
Improvement and Repair Account	1,269.19
Endowment Fund (uninvested)	264.05
	$35,400.43

Carnegie Pension Fund (uninvested)		$748.14
Pension Fund Income Account:		
Farmers Loan and Trust Co.	$3,639.95	
Corn Exchange Bank	540.32	
		$4,180.27

The accounts of the Society and of the Zoological Park and Aquarium for the year 1914, are at present being audited by Messrs. Marwick, Mitchell, Peat & Co., whose printed report will be hereto attached immediately following the report of the Treasurer. This audit also includes the Privilege Departments.

To facilitate the yearly report of the auditors, the Auditing Committee has authorized a quarterly audit to be made of the books of the Society, instead of once a year, as heretofore; the cost to be the same, and the present system of checking the accounts to remain unchanged.

Income Account.—The general income of the Society, including that from the Endowment Fund, was barely sufficient to meet the current expenses of the Society during the year. It is important that the income for this account should be materially increased by an increase in the membership and in the Endowment Fund. During the year 1915 strong efforts will be made by your committee in both these directions.

During the year this account has suffered from the loss of the Sustaining Memberships, which have proved of very substantial assistance to the Society during the last five years. These subscriptions have expired, and only 19 of the subscribers have renewed for a further period. This account has been further depleted by the necessity of paying in the Society's share of the Pension Fund contribution for 1914, amounting to $1,795.12.

The balance to the credit of this fund on December 31, 1914, amounted to $15,978.88.

The funds for the Library, Wild Life Protection and the Collection of Heads and Horns, are dependent upon appropriations made from the Income Account, and special subscriptions. The Income Account, however, can only afford the money necessary for current expenses, and your committee must rely on special subscriptions to make any notable advances from these special funds.

Park Improvement and Repair Fund.—During the year the question of repairs to the installations at the Park became a matter of great importance. The appropriation for this purpose provided by the City is insufficient to meet the demand. It was therefore decided by your committee to devote the gate receipts, from January 1, 1914, which have heretofore been applied to the increase of the collections, to the making of necessary renewals, the most important of which were the repairs to the Primate House. The sum of $10,507 became available for this purpose during the year. A schedule of repairs was prepared and approved by your committee, and the work has been completed.

Extensive repairs were made to the Buffalo Barn, Lion House, Reptile House, Primate House, Bear Dens, Flying Cage, Walks, and to the heating apparatus. The installations are now in very good shape to meet winter conditions. It will be necessary, however, to keep up this work for several years to prevent serious deterioration. This method of dealing with the matter also afforded immediate relief to the regular Maintenance Fund, which has been greatly overburdened by the increased cost of supplies.

A similar schedule of repairs to buildings has been prepared by your committee for the coming year and the gate receipts will be used for this purpose.

The balance to the credit of this fund on December 31, 1914, amounted to $1,269.19.

Animal Fund.—The withdrawal of the gate receipts from the money available for the purchase of animals, and the heavy expenditures for new exhibits, resulted in greatly depleting the Animal Fund. The Park. however, is well stocked, and with economy this fund will probably supply our current needs, unless an opportunity arises for the purchase of some especially desirable and expensive animals. The European war has resulted in an almost complete cessation of the supply of wild

PORTION OF THE MUSK-OX HERD

animals, which come chiefly through Germany, so that every opportunity to secure valuable exhibits must be availed of.

The balance to the credit of this fund on December 31, 1914, amounted to $10,414.12.

Endowment Fund.—The only additions to the Endowment Fund during the year have been a subscription of $1,000 from Mr. Mortimer L. Schiff; subscriptions aggregating $1,100 received through the efforts of the Ladies' Auxiliary, the details of which appear in the Report of the Treasurer; and the fees received from new Life Members, $2,800, bringing the total up to $323,962.

Two bequests have been left to the Society, one by the late Mrs. Morris K. Jesup, a Life Member, in the amount of $25,000, and one by the late Jacob Langeloth, an Annual Member, in the amount of $1,000. When the above bequests have been paid in the Endowment Fund will total $349,962.

During the year the cash balance in this fund has been invested as follows:

$1,000, Morris and Essex R. R. Co., 3½% bond.
$5,000, Illinois Central & Chicago, St. Louis & New Orleans joint 5% bonds.
$1,000, N. Y., Lackawanna & Western Terminal Improvement, 4% bond.

Leaving a small uninvested cash balance on December 31, 1914, of $264.05.

The net interest from this fund is on a basis of about 4.55%.

Endowment Fund Income Account.—As stated in previous reports, this account was created merely to distinguish income from the Endowment Fund from the income from dues and other sources, and this fund is available at all times for transfer to the General Income Account, and for use in the work of the Society.

During the year one transfer to the General Income Account has been made, which amounted to $14,070. The balance on December 31, 1914, amounted to $5,895.21.

Cadwalader Animal Fund.—Under the will of the late John L. Cadwalader, a bequest of $20,000 has been left to the Society, to be held as a special fund, the income of which shall be used for the purchase of animals for the Park. The bequest has been paid

in and credited to a new account known as the "Cadwalader Animal Fund," and has been invested in securities yielding net income at the rate of 5 per cent per annum.

The balance of income to the credit of this fund on December 31, 1914, amounted to $500.

Caroline Phelps Stokes' Bird Fund.—This fund consists of the income from the fund of $5,000 invested in bonds of the Illinois Central Railway Company, bequeathed to the Society by Miss Caroline Phelps Stokes, deceased, and is devoted to the protection of bird life throughout the country. The expenditures for this fund during the year amounted to $332, and were made in the interest of the protection of birds in Virginia, and for the purchase of copies of Dr. Hornaday's lectures, delivered before Yale University Forestry School, now in text-book form, and entitled "Wild Life Conservation in Theory and Practice," for distribution among colleges, universities and forestry schools throughout the country, with a view to the promotion of the use of that work as a text book.

The balance of income to the credit of this fund on December 31, 1914, amounted to $134.69.

MAINTENANCE.

Park.—The sum of $200,000 provided by the City for the maintenance of the Zoological Park for the year 1914 proved sufficient, and the year closed without a deficit. A similar amount has been appropriated for the year 1915. It will prove difficult to live within this amount, however, by reason of certain necessary increases in salaries and the return of Mr. C. William Beebe, Curator of Birds, to the pay rolls of the Society, as well as the continued increase in the cost of supplies. Mr. Beebe's salary for the last five years has been borne by Col. Anthony R. Kuser in connection with his work on the Pheasant Monograph.

It is practically out of the question to secure an increase in this fund from the City for several years, so it will be necessary to be even more economical than usual in order not to have a deficit at the close of the year.

Aquarium.—The amount of $47,000 provided by the City for the maintenance of the Aquarium for the year 1914 proved barely sufficient to close the year without a deficit. During the summer this fund was in excess of its monthly average to the

extent of $1,500, and during the last three months of the year it was necessary to practice the strictest economy. This shortage of funds was occasioned by an unusual amount of cleaning, painting and repair work, by extensive repairs to the boilers, and also by the unusual expense of feeding the porpoises, the cost of this item alone amounting to about $850 to date.

A similar amount has been granted for the year 1915, which will probably prove sufficient in the absence of special repairs.

CARNEGIE PENSION FUND.

During the early part of March, the Chairman of your committee placed before Mr. Andrew Carnegie, the need of the Society for a Pension Fund for the employees of the Zoological Park and the Aquarium. The small salaries paid in these two institutions render a pension fund imperatively necessary, and there is no expectation that such a fund could ever be supplied by the City. There are one hundred and thirty-nine persons employed at the Park, and thirty-two at the Aquarium.

As the result of this application Mr. Carnegie generously offered to provide the sum of $100,000 necessary to start the proposed fund. A special pension fund was thereupon planned and examined by an actuary. A Pension Board was appointed as follows:

George C. Clark, Chairman; Lewis R. Morris, H. Casimir deRham, William B. Osgood Field, Percy R. Pyne, Treasurer, representing the Board of Managers; H. R. Mitchell, Raymond L. Ditmars and Hermann W. Merkel, representing the employees at the Zoological Park; and Raymond C. Osburn, representing the employees at the Aquarium.

The plan provides on a fairly liberal scale for pensions for the employees of the Society at both the Park and the Aquarium, and is based on a contribution of 2 per cent of their salaries from employees; and a contribution of $8,000 per annum from the Society, including the income from the Pension Fund of $100,000 provided by Mr. Carnegie, which has been invested in securities providing annual net income at the rate of 4.35, or $4,350 approximately, leaving a balance of $3,650 to be annually provided by the Society. This will render an increase in the income of the Endowment Fund during 1915 an absolute necessity. With this end in view, an effort will be made by your committee to increase the total endowment of the Society from $349,962 to $500,000.

The plan went into effect on August 1, and is working satisfactorily under the supervision of the Pension Board. To date the Society has contributed, including the income from the Pension Fund, $3,333.33 and the employees, $1,044.54.

To receive the income from the Carnegie Pension Fund, and the contributions from the Society and its employees, your committee has authorized the opening of a new account to be known as the Pension Fund Income Account. The balance to the credit of this account on December 31, 1914, amounted to $4,180.27.

There is also a small uninvested balance to the credit of the Carnegie Pension Fund, amounting to $748.14.

GROUND IMPROVEMENT FUND.

On account of the policy of retrenchment adopted by the present city government it has been impossible to obtain favorable action on the application for $52,000 of Corporate Stock for ground improvement work at the Park, pending before the Board of Estimate and Apportionment during the spring. Your committee, therefore, made a new application for $15,000 additional for the erection of an Animal Hospital and $10,000 for Emergency Ground Improvement work at the Park. During July this application was approved, although greatly reduced in amount, as follows:

Construction of a Hospital Building to be located in the Service Yard	$15,000
NOTE: With the balance at present on hand a total of $22,518.32 will be available for this purpose.	
Steel fence, 180th St., East of Bronx River	1,125
Six new drinking fountains	600
New paint and oil storage building	300
Poultry and Breeding houses	1,400
	$18,425

At the start of the European war, a general order was issued by the Comptroller directing the heads of all departments to withhold new work, which affected the above appropriation. Your committee, however, has been successful in obtaining the release of the money appropriated for the erection of the Animal Hospital. The balance of the appropriation is held up indefinitely.

The small balance of $4,165.34, reported January 1, 1914, as being available for Miscellaneous Ground Improvement Work at the Park, has been completely exhausted.

CONSTRUCTION.

Animal Hospital.—The balance of $7,518.32 available for the erection of an Animal Hospital, proved insufficient for that purpose, and your committee therefore made an application, as above stated, to the City Authorities for an additional appropriation of $15,000, which has been granted. With the money at present on hand a total of $22,518.32 is available for this purpose. Failure of the various City Departments to act has resulted in considerable delay, but the site has been located, and the plans have been completed, and with the specifications are being printed. Bids will be advertised for early in 1915.

The epidemic among the anthropoid apes and the difficulty of providing the gorilla with suitable quarters, has emphasized the absolute necessity of a Quarantine and Hospital Building.

Ape House.—The next building to be erected at the Park will be a house for the anthropoid apes, so planned that the space reserved for the animals and that devoted to visitors will be absolutely independent, and each have a separate system of ventilation and heating.

Elephant House Roof.—The repairs to the roof of the Elephant House have been completed with apparently satisfactory results.

Shelter Pavilion, East Side.—The Shelter Pavilion on the east side of the Bronx River has been completed and opened to the public.

EXPEDITIONS.

Gorilla Expedition.—The Society's expedition to West Africa for living gorillas, in charge of Mr. R. L. Garner of Philadelphia, returned to New York on August 21, with one female gorilla in good condition. This rare animal (known as "Dinah") is at present on exhibition at the Park. A smaller and less valuable specimen, obtained at the same time, died in January, 1914, before leaving Africa. The plan formulated to take time to domesticate gorillas in Africa, proved successful in this case. This specimen on arrival, instead of being morose, sullen and contrary in appetite, was very cheerful, lively and affectionate, and exercised vigorously.

Every effort is being made by your committee to preserve this specimen in good health, and an outside cage has been constructed to give her open air treatment. In spite of this, however, her health has visibly declined, but your committee hopes that it may only be a temporary condition which will pass off. A full account of this animal will appear in the Director's report.

Crandall Expedition.—During the spring your committee authorized an expedition to South America to secure a collection of birds. The expedition started from New York on March 21, in charge of Mr. Lee S. Crandall, Assistant Curator of Birds at the Zoological Park. Six weeks were spent in the field, the total result being more than three hundred living specimens, including mammals, birds, reptiles, batrachians, fishes and insects, a great majority of which had not previously been exhibited here.

Tour of Veterinarians.—Dr. W. Reid Blair, Veterinarian at the Zoological Park, has made an official tour of European Veterinary Hospitals and Laboratories, under the auspices of the American Veterinary Medical Association, leaving New York on June 13, and returning August 22, and during August attended the International Veterinary Congress in London. His report will appear at length in this volume.

Mowbray Expedition.—An expedition to Louisiana to collect large fresh-water fishes in the Mississippi River was authorized on April 2, under Mr. L. L. Mowbray, for many years in charge of the Aquarium at Bermuda, and lately in charge of the Aquarium at Boston. One hundred and twelve specimens of fresh-water fishes were obtained, consisting of ten species, and forty-three turtles, consisting of four species. Mr. Mowbray has been placed permanently on the Aquarium staff.

WILD LIFE PROTECTION.

Early in April the violent opposition to the federal migratory bird law, that for three months had been manifested in Kansas City, Missouri, developed in the United States Senate, and created a situation that required prompt and vigorous treatment. The movement set forward by Senator James A. Reed, was calculated to destroy our most valuable bird law by withholding an appropriation for its enforcement, in order that the law might be utterly discredited. The Director of the Park was forced to join the officers of other bird protecting organizations

in arousing the press and people of the country at large to support the demand for a fund of $50,000, with which to enforce the law. After about five weeks of very strenuous efforts and a prolonged fight in the Senate, the measure came to a vote on April 14. The result was a three-fourths majority for an appropriation of $50,000, but the debate showed conclusively that the validity and constitutionality of the law will be fought at every point by the enemies of birds, and a fierce fight will be made to defeat the proposed treaty with Canada. This means that the Society must continue its efforts to arouse the public in behalf of that treaty, and secure the ratification by the usual two-thirds vote.

The campaign for the protection of the birds of the world from the millinery trade, which was being vigorously prosecuted in England, Germany, France and Holland, has been completely halted by the European war. In England the Hobhouse bill, similar in character to our migratory bird bill, was actually on the point of being passed by the House of Commons when war was declared, and only urgency measures were considered in Parliament.

A successful effort was made in California by the game dealers and market gunners to destroy the Flint-Carey law prohibiting the sale of game. A great contest arose over this issue, and was conducted vigorously throughout the entire year. The matter came up for popular vote on a referendum on November 3, and the law was destroyed by a majority of 8,153. This defeat was partly due to a public exposition of the duck shooting proclivities of the President of the California State Game and Fish Commission, Mr. F. M. Newbert, and on the whole it is a great step backwards for California.

In the months of January and February, 1914, Director Hornaday delivered at Yale University a course of lectures before the Forestry School, on "Wild Life Conservation in Theory and Practice." In November these lectures were published in text-book form by the Yale University Press, and in the interest of wild life protection, your committee has authorized the purchase of two hundred copies, and their distribution among the universities, colleges and forestry schools in the United States with the recommendation that they be used as text books.

NATIONAL COLLECTION OF HEADS AND HORNS.

On account of heavy expenditures in other directions, the expenditures made during the year on these collections were unusually small and unimportant.

GALLERY OF OIL PAINTINGS.

In accordance with the program laid down in 1912, your committee ordered three more oil paintings of especially important animals. Mr. Carl Rungius executed for the Society a large exhibition painting of a "Mule Deer in the Montana Bad-Lands," and a life-size portrait of "Dinah," our gorilla. Mr. Charles R. Knight painted for the Society a picture of a "Jaguar at Home."

At present seven paintings by Mr. Rungius and two by Mr. Knight, including those for the year 1913, viz.—the "Prong-Horned Antelope" and the "Snow Leopard," are on exhibition at the Park in the Administration Building. An "Angel Fish," also by Mr. Knight, is on exhibition at the Aquarium.

Mr. Watson B. Dickerman has been elected a member of the Art Committee to take the place of Mr. Emerson McMillin, who resigned.

One additional subscriber to the fund for this gallery of paintings has been received, viz.—Mr. Joseph A. McAleenan, a Life Member of the Society.

The subscribers to this fund are as follows:

Subscriptions of $250 a year for five years:

Frank K. Sturgis, Lispenard Stewart,
Percy R. Pyne, Mortimer L. Schiff,
Joseph A. McAleenan.

Conditional subscriptions of $250 a year:

Cleveland H. Dodge, Edward S. Harkness,
C. Ledyard Blair, Watson B. Dickerman.

It is the intention of your committee to complete a full series of important American mammals at the earliest feasible date. The approaching extermination of many of the most interesting forms will make such a gallery of paintings of American wild life of unique and increasing value.

FORESTRY DEPARTMENT.

The usual amount of general maintenance work, such as cleaning of walks and lawns, collection and disposal of garbage and refuse, care of forests and planting, pruning of trees and the extermination of pests, and a great deal of painting, has been carried on as in previous years.

Comparatively little has been done by this department in ground improvement work on account of lack of funds for this purpose. The most important items, however, are, the paving around the new Yak Shelter, setting of water troughs and the final details in connection with this installation; repairs to the concrete sidewalk of the Concourse; repairs to the paving in the Service Yard and to the wagon scale; grading around new Pavilion east of the river, and planting around new Public Service Building.

The amount of repair work to buildings and walks accomplished during the year has been far greater than in any other year since the establishment of the Park. This has already been reported upon in the Improvement and Repair Fund.

PROSECTOR'S DEPARTMENT.

During the year the soft parts of deceased animals have been turned over to the Prosector's Department for analysis. Specimens are preserved and are of great scientific value, and your committee feels indebted to Dr. George S. Huntington and his assistants, Dr. H. von W. Schulte and Dr. Hans Zinsser, as well as to Dr. H. L. Amoss of the Rockefeller Institute, for their assistance during the year.

PHEASANT MONOGRAPH.

Mr. C. William Beebe, Curator of Birds, returned to the employ of the Society on January 1, 1915, after a leave of absence of five years. The work on the pheasant monograph is now practically complete with the exception of proof reading and book-making, and the final touches, which could have been completed immediately if it were not for the war. As it is, preparations have been made to complete the monograph and publish possibly one volume this year, and the balance next year. The letter press and the illustrations have been completed. The monograph can be completed whenever conditions justify its publication.

LABORATORY, CURATOR OF BIRDS.

To facilitate the work of Mr. C. William Beebe, Curator of Birds at the Zoological Park, in connection with his scientific research, your committee has authorized the erection of a laboratory for his use by the extension of the winter house of the Eagle and Vulture Aviary to the northward.

Mr. Beebe returned to his duties as Curator of Birds on January 1, 1915.

WALRUS PROTECTION.

At the Annual Meeting of the Society in 1914, a committee, with Mr. Hoffman Nickerson as Chairman, was appointed to take steps for the preservation of the Walrus, now threatened with extermination by reason of indiscriminate killing in the Behring Sea and in the adjacent regions of the Arctic Ocean. Mr. Nickerson visited St. Petersburg and established relations with the Russian authorities which promise to lead to co-operative action with Russia on the part of our federal government, if the latter continues to take an intelligent interest in the preservation of Alaskan animals, and not abandon the power to make game laws to the local authorities.

The efforts will be continued during the coming year, but will probably have to await the outcome of the war before definite results in connection with an international treaty can be effected.

BRONX PARKWAY COMMISSION.

The Bronx Parkway Commission has made notable advances in the acquisition of lands through private purchase, and in the cleaning of the Bronx River and the removal of nuisances. Charges emanating from dissatisfied property owners who desired to force the Commission into condemnation, were brought, but were dismissed by the Governor on the ground of frivolity.

Nearly one-half of the land has been acquired by the Commission at private sale, and the balance has been appraised, and to a large extent its purchase is under negotiation. In view of the fact that the Parkway is fifteen miles long, and involves 1,271 parcels consisting of 1,200 acres, the acquisition of nearly one-half of the land within fifteen months represents an enormous volume of work.

PLANTS, TURF AND FIELD CLUB.

Through the courtesy of the officers of the Turf and Field Club a number of rare and costly palms and other plants have been placed on deposit with the Society at the Zoological Park as a loan.

RECEPTIONS.

Reception at Aquarium.—The first of a series of annual receptions to members was held at the Aquarium on Monday evening, May 4. An attendance of about six hundred was noted, including thirteen members of the Board of Managers. Ladies from the Ladies' Auxiliary acted as a Reception Committee. Motion pictures were shown of the porpoise expedition, and of elephant seals on Guadalupe Island. Music and refreshments were furnished. Hereafter this reception will be held on the first Monday in May.

Ladies' Day at the Park.—The Ladies' Auxiliary held a reception at the Park on Thursday, May 14. Band music was furnished and refreshments were served.

Members' Day at the Park.—On Thursday, May 21, a reception, with music and refreshments, was tendered to members in the Administration Building. Arrangements were also made to serve tea to members in this building on Thursday afternoons, May 29, June 4 and 11, but the attendance on the latter days was too small to justify their continuance. Hereafter this reception will be held on the first Thursday in June.

MEMORANDUM OF MEETINGS 1915.

Annual Meeting of Society:

January 12, 1915, 8:30 P. M.
Hotel Waldorf-Astoria.

Meetings, Board of Managers:

Annual Meeting.	Annual Dinner.
January 19, 1915, 3 P. M.	February 9, 1915, 8 P. M.
Down Town Association.	Courtesy of Ogden Mills, Esq.

Park Meeting.
June 3, 1915, 2 P. M.
Preceded by Luncheon.

Meetings, Executive Committee:

January 7, 1915
February 4, 1915
March 11, 1915
April 8, 1915
May 13, 1915
November 11, 1915
June 17, 1915
October 14, 1915
December 9, 1915

Members' Reception at Aquarium.

May 3, 1915, 8:30 P. M.

Members' Day at Zoological Park.
June 3, 1915, 3 P. M.

Ladies' Day at Zoological Park.
May 13, 1915, 3 P. M.

BOARD OF MANAGERS.

At the Twentieth Annual Meeting of the Society, held on January 13, 1914, at the Hotel Waldorf-Astoria, the following Managers were elected:

Class of 1917.

Henry Fairfield Osborn,
William C. Church,
Lispenard Stewart,
H. Casimir deRham,
Charles F. Dieterich,
James J. Hill,
George F. Baker,
Grant B. Schley,
Wm. Pierson Hamilton,
Robert S. Brewster,
Edward S. Harkness,
William B. Osgood Field.

Owing to the death of Mr. John L. Cadwalader, there was a vacancy in the Vice-Presidency, and at the spring meeting of the Board of Managers, Mr. Madison Grant was unanimously elected Vice-President to fill this vacancy.

The Fifth Annual Dinner of the Board of Managers was given by Mr. Cleveland H. Dodge on Tuesday, February 10, 1914, at the University Club. Short addresses were made by Mr. Madison Grant and Mr. Dodge. Mr. Raymond L. Ditmars, Curator of Reptiles at the Zoological Park, gave four reels of extremely interesting motion pictures, showing the life of insects and snakes at the Park.

The Sixth Annual Dinner will be given through the courtesy of Mr. Ogden Mills on Tuesday, February 9, 1915.

The spring meeting of the Board of Managers was held in the Administration Building in the Zoological Park on Thursday, May 21, 1914. General reports were received from the Executive Committee, the Treasurer and the Directors of the Park and the Aquarium. It was decided to hold this meeting hereafter on the first Thursday of June at 2 o'clock P. M., and that it be preceded by luncheon at the Park.

At a meeting of your committee held on October 1, 1914, Mr. Henry M. Tilford was elected a member of the Board of Managers, Class of 1915, to fill the vacancy caused by the death of the late John L. Cadwalader.

ACKNOWLEDGMENTS.

The relations with all departments and officials of the City's government, and especially with the Park Department, have continued to be most cordial, and your committee is greatly indebted to these officials, as well as the members of the Board of Estimate and Apportionment, for their support and co-operation during the past year.

The Directors of the Park and the Aquarium, and their respective staffs, have been most zealous and energetic in the performance of their duties, and the Society enters upon this new year with the assurance of an ever-increasing sphere of activity and usefulness.

Respectfully submitted,

MADISON GRANT, *Chairman.*

PERCY R. PYNE,
SAMUEL THORNE,
WILLIAM WHITE NILES,
WM. PIERSON HAMILTON,
FRANK K. STURGIS,
LISPENARD STEWART,
WATSON B. DICKERMAN,
HENRY FAIRFIELD OSBORN,
Ex-Officio.

Extract from the Minutes

of the

Executive Committee of the Board of Managers

of the New York Zoological Society

April 2, 1914

on the occasion of the

Death of John L. Cadwalader

The Executive Committee of the Board of Managers of the New York Zoological Society desire to express the esteem in which they hold the memory of their late colleague

John Lambert Cadwalader

one of the Founders of the Society and of the New York Zoological Park.

With his close friend, Philip Schuyler, Mr. Cadwalader stood by the Society in the early days of its formation between 1895-1898, when it had neither plans, friends, nor influence. He was one of the original Board and faithfully gave all the meetings of the Executive Committee between 1895 and 1902 his unrivaled counsel and advice, and the prestige of his great reputation at the bar. He carefully examined all the successive legal steps by which secure foundations were established for the future administration of the Society and the Park.

As in all other causes for the public welfare in our City and Country he gave freely of his valuable time and most generously of his fortune. He loved the Park as it developed and was a frequent and delighted visitor. In our meetings we shall always miss his serious, genial and often humorous presence as well as the delightful hospitality of his home.

This tribute and memorial would be incomplete without a record of his formal service to the Society; an original member of the Board of Managers, elected May 7, 1895; a member of the Executive Committee from May 21, 1895, until January 21, 1902; Vice-President from January 21, 1902, until his death; a member of the Board of Managers until his death; elected Associate Founder during 1897; Founder, December 14, 1900; Founder in Perpetuity, December 6, 1910.

During his life he contributed nearly $12,000 to the development of the Park, and on his decease he gave further evidence of his interest in the bequest of $20,000, so that his name will be permanently enrolled as one of the Benefactors of the Society. May his example as a citizen and patriot inspire many men of the rising generation to render similar service to the City, the State and the Country.

Resolutions

for the

Promotion of Wild Life Protection

At the Annual meeting of the New York Zoological Society held on January 12, 1915, the following Resolutions were offered, and unanimously adopted:

CONVERSION OF NATIONAL FOREST RESERVES INTO GAME REFUGES.

WHEREAS, It appears that the killing for sport, and for food, of game birds and mammals in the National Forest Reserves is destroying the wild life much faster than it is breeding, and over wide areas the final disappearance of many species is impending; now therefore be it

Resolved, That the New York Zoological Society recommends that the Federal Government take immediate steps to convert any or all of the forest reserves of the United States into game refuges, for such period and to such extent as is necessary to assure the continued existence of threatened species, and the continuance of the game supply of the surrounding districts.

INTERNATIONAL TREATY FOR PROTECTION OF BIRDS.

Resolved, That the New York Zoological Society respectfully urges upon the attention of the Government of the Dominion of Canada, the pressing importance, as well to Canada as to the United States, of concluding at the earliest moment practicable, an international treaty for the protection of all migratory birds, under regulations similar to those now in force in the United States through the Federal Migratory Bird Law.

PROTECTION OF THE WALRUS.

Resolved, That the report of the committee on Marine Mammals be accepted with thanks, and that the committee be continued with full power for another year; and be it further

Resolved, That the Society continue its efforts to bring together the Russian and the United States Governments in a comprehensive program of conservation; and be it further

Resolved, That as soon as political conditions permit, an international congress of the nations whose territories march on the Polar Regions, be called to consider uniform measures for the protection of wild life within the Arctic circle in order that the food supply of native races be conserved, and that the unique and ancient forms of arctic mammals be preserved for all time.

HIMALAYAN TAHR

These agile goats are skilful climbers

REPORT OF THE

DIRECTOR OF THE ZOOLOGICAL PARK

TO THE BOARD OF MANAGERS.

THE year 1914 leaves us with a rather unusual number of causes for regret. The epidemic of quick and strange tuberculosis that struck our apes last January was the most exasperating item of ill-fortune that ever has visited our animal collections. The loss of the frail young blotched giraffe that we had so long awaited from East Africa was not very surprising, but none the less disappointing. The mysterious partial paralysis of the arms and legs of our gorilla is wholly undeserved, but from that the animal is now recovering.

On the other side of our annual accounting, we find the usual number of benefits for which to be grateful. First of all, the Board of Estimate lifted our maintenance fund out of a Slough of Despond, and enabled us to live through the year without hourly worry regarding our daily expenditures. The Society's difficult and costly adventure in West Africa for a live gorilla was a complete success, even despite the European war. The success of Mr. Grant's efforts in the creation of a pension fund for the Society's employees gave to our 170 men and women an assurance of care in old age, and in widowhood, such as they had remotely dreamed of but never had dared to hope for. By taking $10,000 from the Animal Fund, because there was no other source of supply, we were enabled to carry out a long list of repairs to buildings that long had been awaiting attention. Finally, the annual attendance of visitors at the Zoological Park handsomely passed the 2,000,000 mark.

ATTENDANCE.

If the turn-stile attendance of visitors of any public educational institution is not to be taken as a good index of its popularity, then where will an index be found? In its remoteness from New York City's center of population and of street-car service, the Zoological Park is heavily handicapped. For about four-fifths of this city's population, our grounds are reached

only by a very special effort, and a long ride before and after, often disagreeably crowded. Very few persons visit our grounds because they are near at hand.

But in spite of all handicaps of distance and transportation, our attendance has steadily increased from year to year, literally by leaps and bounds. For 1914 we were quite prepared to find that the war, the hard times and extensive lack of employment had prevented any increase in our list of visitors. Late in the year we were agreeably surprised to find our attendance figures not only were showing no decline, but a good increase was being recorded. The close of the year finds us well beyond our hoped-for 2,000,000 figure.

During the year one newspaper and two obscure magazines have contained lugubrious editorials and letters on the grave question: "Shall not all Zoological Gardens and Parks be abolished, in favor of Museums of Dead Animals?" Thus far we have made no answer to that momentous and epoch-making question. Today, however, we will make our answer, thus:

2,020,433!

The monthly schedule of attendance for 1913 and 1914 is as follows:

MONTHLY ATTENDANCE FOR THE YEAR 1914.

	1914	1913	1912
January	56,268	88,195	38,271
February	57,235	75,895	75,752
March	77,257	127,448	118,911
April	182,131	128,828	136,689
May	394,154	262,474	183,216
June	220,406	297,719	266,294
July	277,901	233,961	193,816
August	249,072	242,672	228,964
September	204,206	171,371	162,535
October	150,872	136,800	155,105
November	107,922	104,950	77,354
December	43,009	73,370	71,548
Total	2,020,433	1,943,683	1,708,455

1914 Increase over 1913 76,750
1914 Increase over 1912 311,978

THE POLICE AND THE PUBLIC.

The failure of the police department and the judges of the police courts of this city to sternly repress the throwing of rubbish in parks and in the streets continues to handicap our efforts for cleanliness and good order. On every Monday morning in fine weather between spring and winter, such of the parks of this city as we have been accustomed to see at frequent intervals always show wicked and disgusting ill-usage at the hands of the mobs who frequent them on Sundays. It seems to be a fact that about ten per cent of the people of this city are not fit to live in civilized communities.

It is difficult to understand the workings of the minds of persons who can blithely and cheerfully scatter rubbish on beautifully kept lawns that have been created for their benefit. It is not the part of good citizenship to keep silent in the presence of low-lived beasts who appreciate nothing, and love filth and disorder. The police department and the municipal judges of this city are very neglectful of their duty in failing to suppress these lawless tendencies, with iron hands. How much longer are the decent people of New York going to tamely submit to the reign of Dirt and Disorder, at the same moment that loud calls are being made for "more parks," and more "breathing spaces"—for more exhibits of vandalism?

During the summer season of 1914 it was again necessary for the Zoological Society to maintain, at the expense of its members, three private detectives for the purpose of keeping the disorderly portion of our visitors within bounds. But for their efforts, joined to those of our own special details of about twelve men every Sunday, the Park would have been uninhabitable by decent folk.

The Police Commissioner greatly aided us by doubling the police force on Saturdays and Sundays; and it was a great relief to be able to feel that in case of any serious emergency our men would have the assistance of half a dozen policemen instead of two only.

Throughout the year, no accidents occurred to visitors, and even with our great crowds of visitors there was no disorderly conduct of a violent character. Only one complaint against an employee reached the Director, and when the case was called for trial by the Director the complainant failed to appear.

AFRICAN RHINOCEROS, VICTORIA

THE CASE OF THE ELEPHANT, GUNDA.

Last spring a New York newspaper elected to start in its columns a sentimental war on the Director of the Zoological Park with Gunda, the troublesome Indian elephant, as the *casus belli*. By the use of cruelty stories and letters, hundreds of readers were finally wrought up to a state of excitement over the "tortures" of Gunda.

A similar state of mind, among sensitive people who know little about wild animals save through the newspapers, could have been developed by similar methods regarding *almost any animal in the Zoological Park!* More than this, it is reasonably certain that the same methods could produce a similar state of public indignation regarding the confinement, hard work, abuse by employers and other sorrows in general of any clerk, cook, motorman or milkman in New York. And yet, it is probable that there are in this city today 100,000 persons—men, women and children—who would be glad to exchange their present condition in life for a counterpart of the conditions that regulate the daily life of that storm-center elephant.

All the world knows what a fully equipped newspaper can do in creating sentiment when it applies itself to a given task with unflagging industry and abundant space. A few years ago the colored people of New York were very successfully wrought up to a state of excitement by a shrewdly developed newspaper sensation regarding Ota Benga, the African pygmy.

The troubles of a very small portion of the public regarding Gunda were due to ignorance of important facts in the case, to persistent misrepresentation by letter-writers to "the paper," and an absence of the ability to accept facts, or to reason regarding that animal. Inasmuch as we are very likely in the future to have further troubles with bad elephants, and the Zoological Society looks to the officers of the Zoological Park to render evenhanded justice both to the animals *and to the keepers*, I deem it desirable to state now that the Park Officers do not propose to be driven by ignorant public clamor, by insulting letters either signed or unsigned, or by threats of any sort, from doing what they regard as their plain duty in each case.

As some members of the Society already are aware, the Director of the Park has enjoyed a combination of opportunities for studying the minds and temperaments of elephants, both wild and captive, such as perhaps no other man in America ever

has experienced, and he does not propose to have his views deliberately thrust aside by persons outside the Zoological Society who never in their lives have taken the trouble to study the various sides of elephant character, and who never have been required to associate with bad elephants.

As a case in point, we recall a visit from a gentleman who last summer vehemently assured the Director that for years past he had been visiting all the zoological gardens of Europe and America, that he knew all the keepers, knew all the captive elephants in Europe, and that he knew of his own personal knowledge that no elephant ever had been chained as Gunda is, etc., etc. And yet, until we told him the fact he never once had heard or known that for the past twenty years old "Bolivar" was kept chained in his stall in the Philadelphia Zoological Gardens, by all four feet, and *no one ever made any fuss about it!*

In several of the unjust and insulting letters that were written to the *New York Times,* and printed therein (down to a date as late as Jan. 13), there was displayed much gross ignorance; and in several serious misrepresentations were made. For example, it was persistently stated that we had chained Gunda as a "punishment," and in "revenge" for his attacks on the keepers. All such statements were wickedly false, and most unjust to the keepers and the Director of the Park; but apparently to people who are in the habit of writing and publishing falsehoods and insults, those are "trifles, light as air." Gunda never was punished for any of his misdeeds! His chains were necessary to make it possible to keep him alive and in good health, *and to avoid killing him prematurely.* The "Park authorities" never have made any "promise" or "promises" whatsoever regarding Gunda.

Some persons affect to believe that Gunda would rather be killed than to live as we keep him; which merely reveals the depth of individual ignorance regarding wild animals to which some human minds can descend. In every other business in life, it is conceded that there is such a thing as expert knowledge, derived from education, observation and experience. Regarding wild animals, however, there are persons who seem to think that this condition does not exist. If a director of a "zoo" should attempt to tell an editor how to run his newspapers, the director would be regarded as a fit candidate for a lunacy commission; but some persons instantly can assume that they know all about wicked elephants, and are competent to give directions regarding their management.

It seems that in New York City there are a few human minds so dense as to be impenetrable by facts and reason. It is useless to try to inform such minds, on any subject, even that a deadly dangerous elephant *who is free,* and an unarmed man cannot occupy the same stall at the same time without a tragedy. Unless the elephant is partially restrained from killing the man. murder will be done. The mere fact that an elephant cannot be turned out of doors in winter—from four to six times each day —in order that his housework may be done, does not phase Gunda's letter-writing champions, in the least.

During last June, July and August, Gunda was exceedingly wicked and dangerous. His annual period of sexual excitement was very severe and long continued. When it ended, and he had quieted down, we were able to take off his rear leg-chain, and slip the ring of his (seven-foot) front chain over a long steel cable, which enabled him to travel at will between the front of his cage and the rear of his corral. Even with that liberty, however, he spent by far the greater portion of his time standing quietly in his stall indoors, munching hay and watching the crowds of visitors! Today he enjoys life much more than the *average* New Yorker; because all his wants are supplied, he has plenty of company, and no one troubles him.

Whenever Gunda begins seriously to suffer from any phase of his confinement, the Director of the Park will be the first person to recognize it, and to propose to the Executive Committee of the Zoological Society that he shall be destroyed.

There is one other point about the Gunda unpleasantness that continually comes into view. Of all the many persons who have attacked us most unjustly regarding the elephant, *not one person* (so far as I can recall) *ever has expressed the slightest sympathy for Gunda's keepers, or regret that Keeper Thuman spent four months in bed recovering from the two terrible wounds that nearly cost him his life!* The sympathy is all for the elephant, whose only grief is that he cannot get a chance to finish Thuman!

It is the legitimate business, and also the imperative duty, of the managers of every zoological park or garden worthy of the name to keep and to exhibit a certain number of dangerous animals. In the care of such animals, the directors of such institutions have duties to the animals, to the public, and to the keepers of dangerous animals, none of which may be ignored.

The safety of keepers is a subject which is of prime importance and in the New York Zoological Park it is and ever shall be so treated.

THE PENSION FUND.

The long-desired pension fund for the employees of the Zoological Park is an accomplished fact—thanks to the enterprising initiative of Chairman Madison Grant and the never-ending generosity and human-kindness of Mr. Andrew Carnegie. Instead of a long campaign for subscriptions, conducted at an unpropitious period for securing them, Mr. Carnegie's splendid gift of $100,000 brought the pension idea to a state of full bloom, actually in a moment.

It is only the men and women who have worked hard—and lived hard—on small salaries, out of which nothing worth while can be saved, who can understand fully what this pension system means to our force. Without the prospect of a pension as a safe shield against calamity, every head of a family without an imperishable income knows no such thing as freedom from worry regarding the consequences to his wife and his children of his disablement or death, and a total loss of income.

For at least ten years the Zoological Society has been paying pensions to certain superannuated employees, and widows of employees, and nothing has been said about it. The help had to be given; and the City could not give it. Although salaries in the Park always have been low, the Society has made that condition less hard by taking a practical interest in the welfare of its employees, at least as far as its means would allow. No person who is injured on duty, either through his own fault or no fault, ever is required to get well at his own expense. In several cases, the efforts and the expenses of the Society have saved the lives of employees.

The status of the pension system can be stated in a few words.

The Carnegie Pension Fund yields an annual income of $4,360.

The employees of the Park pay into the General Pension Fund two per cent of their salaries.

The Zoological Society makes to the General Pension Fund an annual subscription (from its Income Account) of about $3,500, or whatever sum proves to be necessary to pay pensions.

During the next ten years, the drafts on the Pension Fund will be light, and during that period a good surplus will be accumulated. Eventually the Pension Fund will imperatively need other subscriptions, to a total of about $100,000 more, to meet the heavy calls that future years inexorably will bring. The sooner this is provided by bequests and special subscriptions, the better. The general basis of the pension payments is from 20 to 40 per cent of the employee's salary, according to his term of service, and one-half that rate for a dependent widow. The details of the plan of foundation have been printed in full, in pamphlet form, and that publication is in the hands of all persons who are directly interested.

WILD LIFE PROTECTION.

The most important short campaign of the year 1914 was for the saving of the federal migratory bird law. Through a combination of hostile influences, chiefly outside Congress, a committee of the United States Senate was induced to strike from the Agricultural appropriation bill the entire sum ($50,000) that had been inserted by the House for the maintenance of the migratory bird law from July, 1914, to July, 1915. Even when a paltry $10,000 was restored, it meant that for twelve months the law would be, through non-enforcement, an object of public contempt.

The prospect of seeing the best bird law ever put into any statute book for twelve long months dragged through the mire through non-enforcement, was unendurable. Instantly with the news of the danger a campaign began, to induce the United States Senate to save the law. These efforts were successful; for the original appropriation of $50,000 was written back in the bill, and eventually enacted into law. In the course of the contest on the floor of the Senate, the Zoological Society's representative was roundly and at great length assailed by Senator Reed, of Missouri.

The very energetic campaign of Mr. Hoffman Nickerson for the saving of the Pacific walrus herds of Bering Sea led him to visit Petrograd, Russia, in an effort to make an impression upon the Russian Government. His mission failed through a very exasperating cause. The Russian officials were quite willing to receive Mr. Nickerson, and consider his cause in a friendly spirit, provided the diplomatic representatives of the United States in Russia would introduce him. This simple service our Chargé

d'Affaires flatly declined to render, without a positive order from the United States Government; and so, thanks to two kinds of red tape, Mr. Nickerson's effort was completely thwarted. There are times when an inactive friend is quite as deadly to a cause as an active foe. Mr. Nickerson's admirable efforts in behalf of the disappearing walrus, prosecuted in two great capitals, certainly deserved better treatment than they received.

HEADS AND HORNS COLLECTION.

The most important gifts of the year were a finely mounted head of an Abyssinian buffalo or "Nile" buffalo, presented by Mr. Irving K. Taylor, and a particularly fine horns and skull of a black mountain sheep (*Ovis stonei*), presented by Mr. Frank H. Callbreath, Telegraph Creek, British Columbia, and brought to the Park by Mr. Daniel J. Singer, of New York. The purchases made during the year embraced an extra large white-tailed deer head from Minnesota; and the estate of Bartlett Richards, of Wyoming, deposited a famous "freak" mule deer head of grand proportions.

A constant watch is maintained for heads and horns of a character so commanding that they will materially strengthen the collection; but "record" offerings have been few.

PAINTINGS OF ANIMALS.

The Society begins to need the picture galleries that now contain the heads and horns, for its collection of oil paintings. We now have seven paintings by Carl Rungius, three of which are of large size, and two by Charles R. Knight—certainly a good beginning for a gallery of animal paintings. We will welcome the time when the erection of a suitable building for the heads and horns will enable us to install that collection properly, and throw it open to all visitors, and at the same time release the picture galleries for their original purpose.

DEPARTMENT OF MAMMALS.

W. T. Hornaday, Curator; Raymond L. Ditmars, Assistant Curator.

The most noteworthy animal added to the collection of mammals during the year 1914 was the gorilla, obtained by Mr. Richard L. Garner in the Fernan Vaz district, French Congo Territory, West Africa, and brought to New York on August 21. The arrival of this vigorous specimen of the famous and much-sought

SPRINGBOK

but elusive anthropoid, marked an important event in the history of American zoological collections. Having been on exhibition nearly five months, our gorilla has established a record for its species in the New World. But two specimens had ever previously arrived in the United States. One, a mere infant that never was exhibited, lived but three days. The second specimen, which was exhibited in the Park in 1912, survived but ten days. The present specimen is exceptionally fine as compared with the young animals of the species that at long intervals have been brought out of Africa to die *en route* to Europe, or soon after arrival there.

On September 1, 1914, our gorilla weighed forty and one-half pounds. Her standing height was three and one-half feet and the extreme spread of her arms and hands between the tips of her middle fingers was four feet two and one-half inches. This animal's health remained excellent until November 15. It was then she showed symptoms of paralysis of arms and legs. Dr. Amoss of the Rockefeller Institute of Medical Research has made critical microscopic examinations, and we believe that the gorilla will outgrow these indications of locomotor ataxia. She

is given plenty of out-door air, and each day the keepers wheel her about the Park paths in a small carriage.

An outside room has been constructed for the gorilla, by entirely lining the large outside cage at the northeastern corner of the Primate House, with glass panels. She may go in and out when she likes. The new room is not heated, but during a portion of each day it is visited by sunlight. This playroom will be useful in exercising the other members of the collection of anthropoids.

The collection of mammals will be particularly affected by the war situation in Europe which has called a complete halt upon the collecting and shipping of wild animals from German sources of supply. There are on exhibition in the Park at the present time a number of old animals that should be replaced during the coming year. Deaths among the faithful veterans of public interest cannot be replaced without new arrangements, and zoological collections in America generally will greatly suffer from such conditions unless new lines of supply are promptly established. It will be necessary for us to draw heavily from the South American fauna during the next year, or possibly for several years to come, but the mammals of the American tropics will never suffice to fill the gaps caused by the loss of impressive Old World forms. It is to be hoped England will take immediate steps to supply the American market with African and oriental animals, great and small.

One serious accident in our force of keepers is to be recorded for the past year. On the morning of May 9, Keeper Bernard McEnroe was viciously attacked by a cow bison and violently thrown to the ground. Although severely injured, he was able to escape from the corral. Dr. Gilbert J. Van der Smissen, who attends all employees injured while on duty, discovered that one of Keeper McEnroe's lungs had been punctured by one of the bison's horns. Under skilful treatment, however, after sevseveral months' disability, the patient quite recovered, and finally he returned to work August 3.

In August we installed a collection of animals at the Yak House. The surrounding yards are now filled, and the animals find shelter in various rooms of this commodious building. The central yards are occupied by an impressive pair of black yaks, to which a vigorous calf was born on August 19, 1914. The southeasterly yards are occupied by a pair of elands, and an

eland calf was added to the colony, by birth, on December 22, 1914. One of the southwesterly yards is occupied by several species of kangaroos, and the northerly yards are well filled with ostriches, emus and cassowaries. During the warm months when this aggregation of odd and picturesque species wanders about the radiating enclosures the spectacle is quite impressive.

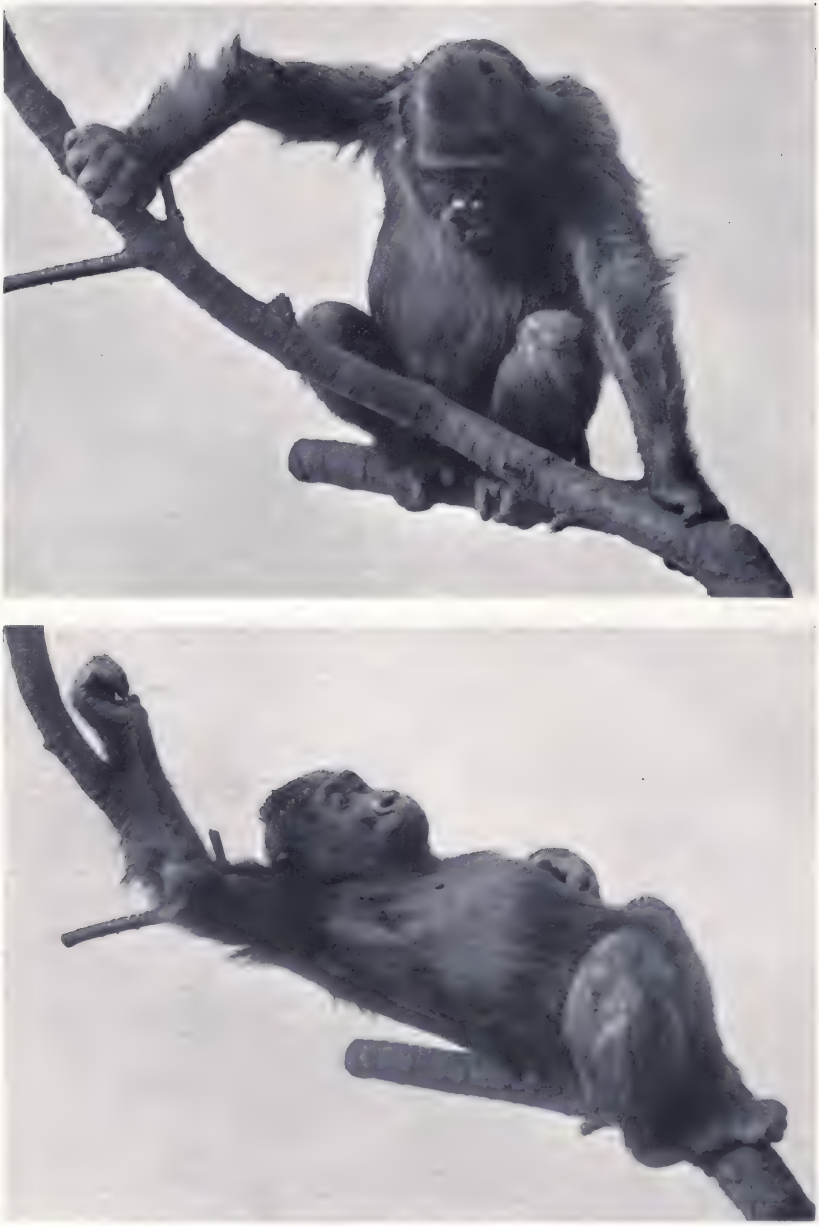
During the early summer we noted that the rheumatic condition of the pygmy elephant, Congo, was becoming much aggravated, and we attributed the elephant's distress partly to the hard cement floor of his stall. He has for years been more or less troubled with rheumatism. Congo was taken out of the Elephant House and placed in the southerly portion of the elk range, where there is a small pond. He was greatly pleased with the change, and spent much of his time in the pond. The soft ground and sun-warmed mud worked wonders with Congo, and in view of his improved condition at the time it became necessary to take him indoors, we decided to keep him off the cement floor during the winter. Congo is consequently not on exhibition, as the only place we could provide for him was a deeply bedded box stall, necessarily of large dimensions, in the Antelope Shelter Barn.

Following is a list of important gifts during 1914:

13 Sapajou Monkeys
5 Macaque Monkeys
2 Woolly Monkeys
1 Green Monkey
2 Squirrel Monkeys
2 Marmosets
1 Bennet's Galago
2 Gray Wolves
4 Coyotes
7 Foxes
2 Pack Rats
1 Woodchuck
1 Olive Agouti
7 Raccoons
1 Coati-mundi
1 Black Bear
5 Opossums
3 Lynx
2 Skunks
1 Canada Porcupine
7 Gray Squirrels
2 13-Lined Spermophiles
1 Hutia
4 Egyptian Jerboas
1 Long-Nosed Tenrec
1 Spiny Tenrec
1 Argentine Armadillo

Following is a list of the more important purchases during the past year:

1 Chimpanzee
1 Orang-Utan
2 Hoolock Gibbons
5 Baboons



GORILLA, DINAH

When at liberty, she plays with all the abandon of a child.

19 Lemurs
1 Abyssinian Lion
1 Himalayan Bear
1 Stellar Sea Lion
3 California Sea Lions
1 Camel
3 Grant Zebras
1 Kiang
1 Blotched Giraffe
1 Siberian Ibex
1 Fringe-Eared Beisa
1 Sable Antelope
2 Bonteboks
2 Rocky Mountain Goats
1 East African Wild Hog
2 Red Kangaroos
1 White-Cheeked Kangaroo
2 Rock Wallabies
3 Echidnas
1 Great Anteater

The most important deaths during the year were the following:

1 Blotched Giraffe (very young)
3 Orang-Utans
3 Chimpanzees
1 Gelada Baboon
1 Lioness (destroyed; old age)
1 Tashkent Wapiti (old age)
1 Grant Zebra (accident)
1 Big-Horn Sheep

The list of important births in 1914 is as follows:

3 Hog Deer
6 Axis Deer
3 Sika Deer
4 Red Deer
5 White-Tailed Deer
4 Fallow Deer
2 Malayan Sambar Deer
1 Eld Deer
4 American Elk
4 American Bison
1 Yak
2 Elands
1 Beatrix Antelope
2 Aoudads
1 Persian Ibex
4 Himalayan Tahrs
1 Mongolian Wild Horse
1 Hybrid Bear
2 American Beaver
3 Paradoxures

The following animals were sold during 1914: 2 Indian sambar deer; 8 fallow deer; 2 Virginia deer; 1 hog deer; 1 wild horse; 2 hamadryas baboons; 2 raccoons; 1 lion; 1 hybrid bear.

Mr. Lee S. Crandall, Assistant Curator of Birds, returned in August from a collecting trip in Central America with the following mammals: 1 pair raccoons, 1 pair coati-mundis; 1 pair red-bellied squirrels; 1 murine opossum and 1 gray spider monkey.

The complete census of the mammals at the close of 1914 is as follows:

COMPLETE CENSUS OF THE MAMMALS OF THE ZOOLOGICAL PARK.

January 1, 1915.

(*Osborn's Classification.*)

	Species	*Specimens.*
Marsupialia	8	11
Edentata	2	4
Carnivora	45	98
Pinnipedia	2	5
Rodentia	38	112
Primates	29	71
Artiodactyla (Even-toed Ungulates)	60	254
Perissodactyla (Odd-toed Ungulates)	15	25
Proboscidea	3	5
Hyracoidea	1	1
Total	203	586

REPORT OF THE VETERINARIAN OF THE ZOOLOGICAL PARK.

W. Reid Blair, D. V. S.

During the past year we had the misfortune to have two severe epidemics of infectious diseases among our collections—tuberculosis among the primates, and distemper among the carnivores. The tubercular infection was of a very virulent type, and within a few weeks our entire collection of great apes was lost.

Since this collection of apes had become famous on account of the health and longevity of its members, it may be of interest to record the fact that no similar collection has lived for so long a time in any other zoological garden. The following table shows the length of time we have exhibited those nine orangs and chimpanzees in the Zoological Park:

Orang, Mike	6 years	9 months
" Mimi	6 years	10 months
" Babe	5 years	9 months
" Louis	3 years	4 months
" Sammy	3 years	0 months
Chimpanzee, Baldy	5 years	6 months
" Dick	3 years	8 months
" Betty	2 years	9 months
" Susie	2 years	10 months

HARTEBEESTE

The average exhibition period for these nine specimens was about 4 years, 5 months.

For the first time in several years, distemper has been the cause of a considerable number of deaths among the small mammals, where the disease assumed the type of acute broncho-pneumonia. This disease is the most insidious with which we have to contend. In addition to the great susceptibility and high mortality, when distemper is contracted by the small mammals, there is always the greater danger of the infection spreading to our large carnivores, where it would be most difficult to control. On account of the large number of species susceptible to this disease, every small mammal which arrives at the Park is viewed with suspicion and quarantined for two or three weeks. Distemper is universally prevalent throughout the country, and is rarely absent for any length of time from the channels of

transportation. The problem of control is made all the more difficult by the fact that it is sometimes impossible to determine the medium through which the infection reaches our animals.

I have repeatedly demonstrated that a vaccine will cure many cases of distemper, but as the animals even after complete recovery are capable of spreading the infection to others, it would be unwise to attempt to treat these cases without complete quarantine hospital facilities, which are not available at present in the Zoological Park. I hope soon to have a vaccine which might be used for immunizing against distemper, and which could be innoculated into susceptible animals upon their arrival at the Park.

Many monkeys have been given to the Park which were in the middle or terminal stage of cage paralysis, when received. Occasionally these animals remain satisfactory subjects for exhibition for a time, or until the paralysis becomes sufficiently marked to attract the attention of the ordinary observer. Emaciation is, however, an accompaniment of the terminal stages of the disease in all except the very acute and actively progressive cases. All animals showing the terminal symptoms of cage paralysis are chloroformed at once, whether they have been received as gifts or have developed the disease in our cages.

Each year an increasing number of animals that have been on exhibition for a considerable number of years must be humanely destroyed on account of general debility resulting from old age. During the past year several elk, bison, antelope and deer have been destroyed, also the lioness Bedouin Maid. The male lion Sultan, which has been with us for about thirteen years, and now is about eighteen years old, is much emaciated, and can hardly survive longer than 1915.

We have had to combat the usual number of rare diseases the past year, and some of them are of considerable interest to the student of human medicine. The jaguar Lopez, which had been on exhibition in the Park for more than twelve years, developed an abscess in the submaxillary region, which assumed the form of a very acute septicaemia, and the animal was chloroformed. A very large orang which had been in vigorous health developed a mastoid abscess, as well as an abscess on the brain, producing a paralysis of one side of the body. This animal was chloroformed. A chimpanzee had appendicitis, with perforation and adhesions. A gibbon died a few days after reaching the Park, the autopsy revealing a chronic adhesive peritonitis and

adhesive pleurisy. A Malabar squirrel died from a rupture of the left ventricle.

A particularly fine eland died from anthrax. This animal, apparently in fine physical condition, was found dead upon the keeper's arrival in the morning. The suddenness of death in cases of anthrax often suggests acute poisoning or accidental death, but the post mortem and the microscopical examination of the blood demonstrated the presence of anthrax bacteria.

Broncho-pneumonia and lobar pneumonia are always the cause of a considerable number of deaths each year. Pneumonia is a common affection among the primates, even when not associated with tuberculosis.

We never have had so few cases of gastro-enteritis as during the past year. Among the hoofed stock, where this disease has been so troublesome in the past, few fatal cases have occurred, and the errors in diet which contributed so largely to this disease have been eliminated.

During the year 1914 the total number of deaths was as follows: Primates, 89; Carnivores, 79; Ungulates, 48; Marsupials, 19; Rodents, 74; and Edentates, 6. Total, 315.

DEPARTMENT OF BIRDS.

C. William Beebe, Curator; Lee S. Crandall, Assistant Curator; Samuel Stacey, Head Keeper.

The bird collections as a whole have never been in better health or condition than during the past year. Unfortunately, however, as Germany is the chief bird mart of the world, the suppression of the commerce of that country made itself felt at once, and there has been some falling off in both species and specimens. Up to the present, our cages and aviaries have been so well filled that this diminution is not noticeable by visitors, there being no cages empty because of this unexpected obstacle to the maintenance of the full enrollment of the collection. During the last two or three weeks of the year, a few birds, mainly canaries, were brought over by way of Holland, and it may be that more interesting shipments will follow.

During April and May, the Assistant Curator, accompanied by Mr. T. Donald Carter, went on a collecting trip to Costa Rica. More than 400 living specimens were secured, including mammals, birds, reptiles and batrachians, fishes and insects. Full

THE HOUSE FOR WILD EQUINES

View taken from the south end of the Marsh Garden.

reports of the expedition were published in Vol. XVII, No. 4, of the *Bulletin,* and in *Zoologica,* No. 18.

A fine pair of North African ostriches, reared on one of the Arizona farms, and a flock of six emus, were installed in the Yak House and adjacent corrals, and so far have thriven satisfactorily without the slightest artificial heat. We hope to be able to establish these birds as permanent inmates of their present roomy quarters.

Fourteen small individual cages which were erected at the sides of the passage from the Parrot Hall to the Glass Court have proved an unqualified success. We are thus enabled to exhibit many delicate or quarrelsome birds which otherwise we should not be able to keep. The specimens shown include many of the rarest in the collection.

The most interesting arrival during the year is a kagu, (*Rhinochetus jubatus*). This bird, which is a native of New Caledonia, one of the small French islands lying east of Australia, was purchased in Germany, and formed part of the last shipment to be received from that country. Although curiously nondescript in appearance, the kagu forms one of the sub-orders of the cranes, and is allied to the sun-bitterns, trumpeters and seriemas.

A fine flock of black-footed or jackass penguins (*Spheniscus demersus*), the first we have had in several years, was placed in the walrus enclosure, near the Reptile House. Shortly after their arrival several of the birds were attacked by fungus growths on the head, but under treatment soon recovered, and all now are in the best of health.

Previous to July, 1912, the Society never had exhibited a blue goose (*Chen caerulescens*). Since then, by a series of gifts, purchases and exchanges, a flock of eight of these rare birds has been gathered, and now forms one of the most striking features of the Wild Fowl Pond.

Other rarities added during the year include a Cape gannet (*Sula capensis*) ; ringed teal (*Nettion torquatum*), one of the handsomest of the duck family; Australian stone plovers (*Burhinus magnirostris*), and red spur-fowl (*Galliperdix spadicea*). The last-named are curious little bantam-like partridges, the male of which is armed with two or three spurs on each leg.

A family new to the collection, the *Meliphagidae,* is represented by a yellow-tufted honey-eater (*Lophoptilotis melanops*),

a handsome little bird, with a tuft of stiff, yellow feathers extending behind each ear.

Pheasant Monograph.—The work of the Curator in the preparation of this monograph is completed, save for several introductory chapters, part of the genus *Phasianus* and a general revision. The conditions which at present exist in Europe are delaying the completion of the colored plates. The photogravures are ready for binding. In spite, however, of the adverse conditions, it is planned to issue the first volume in the autumn of 1915, and the remainder as soon as possible.

Owing to the practical completion of his work on the monograph, Curator Beebe has terminated his leave of absence, and on January 1, 1915, returned to active duty in the Zoological Park. The zoological results of the pheasant expedition, aside from pheasants, are in course of preparation for a volume of *Zoologica*. During the year the Curator published in *Zoologica* five papers, two of which bear directly on the pheasant work.

These contributions were as follows:

Notes on the Ontogeny of the White Ibis.

Specialization of Tail Down in Ducks (with L. S. Crandall).

Effect of Postponed Moult in Certain Passerine Birds.

Preliminary Pheasant Studies.

Review of the Genus *Gennaeus*.

As indirect results of the Pheasant Expedition the following papers have appeared, and others are in course of publication:

A New Squirrel from Borneo—*Sciurus beebei.*
(Allen, Bull. Amer. Mus. Nat. His. XXX. p. 338).

A New Slug from the Himalaya Mountains—*Anademus beebei.*
(Cockerell, Bull. Amer. Mus. Nat. His. XXXII. p. 617).

Catalogue of the Pheasants, Jungle Fowl and Spur Fowl in the Indian Museum.
(Beebe, Records of the Indian Museum, Calcutta, V. p. 263).

A New Lizard from India—*Gehyra beebei.*

(Annandale, Records of the Indian Museum, Calcutta, IX. p. 306).

Mallophaga from Birds (mostly *Corvidæ* and *Phasianidæ*) of India.

(Kellogg & Paine, Records of the Indian Museum, Calcutta, X. p. 217).

CENSUS OF BIRDS LIVING IN THE ZOOLOGICAL PARK.

January 1, 1915.

Orders.		*Species.*	*Specimens.*
Rheiformes,	Rheas	2	2
Struthioniformes,	Ostriches	2	4
Casuariiformes,	Cassowaries	3	8
Tinamiformes,	Tinamous	4	21
Galliformes,	Quail and Pheasants	61	138
Turniciformes,	Hemipodes	1	1
Pteroclidiformes,	Sand Grouse	2	3
Columbiformes,	Pigeons and Doves	41	115
Ralliformes,	Coots and Gallinules	11	18
Sphenisciformes,	Penguins	1	5
Lariformes,	Gulls and Terns	16	38
Charadriiformes,	Plovers and Sandpipers	16	33
Gruiformes,	Cranes, Seriemas, etc.	16	29
Ardeiformes.	Ibises, Storks and Herons	24	50
Palamediiformes,	Screamers	2	4
Phoenicopteriformes,	Flamingoes	3	8
Anseriformes,	Swans, Geese and Ducks	64	630
Pelecaniformes,	Cormorants and Pelicans	10	28
Cathartidiformes,	New World Vultures	8	20
Accipitriformes,	Hawks and Eagles; Old World Vultures	28	51
Strigiformes,	Owls	15	34
Psittaciformes,	Parrots, Macaws and Cockatoos	65	153
Coraciiformes,	Kingfishers, Hornbills, etc.	7	11
Cuculiformes,	Touracos and Cuckoos	5	5
Scansoriformes,	Barbets and Toucans	6	8

Piciformes,	Woodpeckers	8	16
Passeriformes,	Thrushes, Sparrows and all other Perching Birds	390	1320
		811	2753

Summary: Orders, 27; Species, 811; Specimens, 2,753.

DEPARTMENT OF REPTILES.

Raymond L. Ditmars, Curator; Charles E. Snyder, Head Keeper.

With the widely extending influence of the war in Europe the foreign animal market has been almost destroyed. Our collection of reptiles has been greatly affected by these conditions. Many reptiles must be rated as very transient exhibits, particularly the extremely delicate poisonous snakes and the tropical lizards. There is now no way of replacing gaps in the collection caused by the deaths of Old World specimens. It will be necessary in the months to come to draw upon South America for reptiles, but the reptilian fauna of tropical America is not nearly so interesting as the Indian, Malayan, Australian and African forms. For the immediate future we can look only to England for our supplies.

Happily we have on exhibition in the Reptile House a good series of hardy Old World species. Among these are cobras, pythons, several species of turtles and tortoises, and a very fine series of crocodilians. The Curator of Reptiles is already in correspondence with collectors in Mexico, Central and South America, and it is possible that the failure of the Old World animal market may result in the exhibition at the Park of representatives of many species that never before have been shown alive.

Strange to say, no deaths of important reptiles occurred during the past year. There were many valuable and interesting accessions. The Curator of Reptiles made two collecting trips to the mountains of northern New York during the past year, and in the latter trip was accompanied by Keeper George Palmer as assistant. During these trips a fine series of reptiles and amphibians was obtained, and the year closes with the collection of local species very complete. As during the previous year, an automobile was constantly used in the collecting work,

and over six hundred miles of road were covered, enabling the collectors to quickly reach and investigate many ledges, swamps and other types of collecting grounds.

Particularly noteworthy among the exhibits in the Reptile House is the series of amphibians, which has steadily grown in size and importance under the sympathetic care of Keeper Deckert. All of the local amphibians were collected by members of the Reptile House staff, Keepers Deckert and Toomey being particularly diligent and successful. The amphibians now form an imposing series, and we herewith publish a full list of the collection:

The following is a list of Amphibians living in the Reptile House, New York Zoological Park, November 1, 1914*:

Class AMPHIBIA

Order URODELA (Salamanders)

Family (1) Proteidae.

1. *Proteus anguinus,* Blind Salamander.....Caves of Austria
2. *Necturus maculatus,* Mudpuppy.....Eastern U. S.

Family (2) Amphiumidae.

3. *Amphiuma means,* Congo Snake.....Southern U. S.
4. *Cryptobranchus allegheniensis,* Hellbender.....Central U. S.
5. *Megalobatrachus maximus,* Giant Salamander.....Japan and China

Family (3) Amblystomidae.

6. *Amblystoma tigrinum,* Tiger Salamander (land form).Eastern U. S.
7. *Amblystoma tigrinum,* Axolotl (aquatic form).....Mexico
8. *Amblystoma punctatum,* Spotted Salamander.....Eastern U. S.
9. *Amblystoma opacum,* Marbled Salamander.....Eastern U. S.
10. *Amblystoma jeffersonianum,* Jefferson Salamander.....Eastern U. S.

Family (4) Plethodontidae.

11. *Spelerpes ruber,* Red Salamander.....Eastern U. S.
12. *Spelerpes bilineatus,* Two-Lined Salamander.....Eastern U. S.
13. *Plethodon glutinosus,* Slimy Salamander.....Eastern U. S.
14. *Plethodon cinereus,* Gray Salamander.....Eastern U. S.
15. *Plethodon c. erythronotus,* Red-Backed Salamander..Eastern U. S.
16. *Hemidactylium scutatum,* Four-Toed Salamander.....Eastern U. S.

Family (5) Desmognathidae.

17. *Desmognathus fusca,* Dusky Salamander.....Europe

*Prepared by Richard Deckert.

Family (6) SALAMANDRIDAE.

18. *Salamandra maculosa,* Fire Salamander.....Europe
19. *Triton austriaca,* Austrian Newt.....Austria
20. *Triton vulgaris,* European (common) Newt.....Europe
21. *Triton waltli,* Spanish (ribbed) Newt.....Spain

Family (7) PLEURODELIDAE.

22. *Diemyctylus viridescens,* Common (American) Newt.Eastern U. S.
23. *Diemyctylus v. miniatus,* Red (mountain) Newt.....Eastern U. S.
24. *Diemyctylus torosus,* California Newt .....Pacific Coast
25. *Diemyctylus pyrrhogaster,* Fire-Bellied Newt .....Japan

Order SALIENTIA (Frogs)

Sub-order Aglossa (Tongueless Frogs)

Family (1) DACTYLETHRIDAE.

1. *Xenopus laevis,* Cape Clawed Frog .....Africa
2. *Xenopus mulleri,* Tentacled Clawed Frog.....Africa
3. *Xenopus calcaratus,* Pigmy Clawed Frog.....Africa

Family (2) DISCOGLOSSIDAE.

4. *Bombinator igneus,* Fire-Bellied Toad.....Europe

Family (3) PELOBATIDAE.

5. *Pelobates fuscus,* European Spadefoot Toad.....Europe
6. *Scaphiopus holbrookii,* Hermit Spadefoot Toad.....Eastern U. S.

Family (4) HYLIDAE.

7. *Hyla septentrionalis,* Giant Tree Toad.....Cuba and Bahamas
8. *Hyla versicolor,* Gray Tree Toad.....Eastern U. S.
9. *Hyla pickeringii,* Peeping Tree Toad.....Eastern U. S.
10. *Hyla gratiosa,* Florida Tree Toad .....Florida and Georgia
11. *Hyla cinerea,* Southern Tree Toad.....Southern U. S.
12. *Hyla aurea,* Golden Tree Toad.....Australia
13. *Hyla coerulea,* White's Tree Toad.....Australasia
14. *Hyla arborea,* European Tree Toad.....Europe, Asia, No. Africa
15. *Acris gryllus,* Cricket Frog.....Eastern U. S.

Family (5) BUFONIDAE.

16. *Pseudophryne australis,* Australian Toad.....Australia
17. *Bufo molitor,* Central American Toad.....Costa Rica
18. *Bufo marinus,* Giant Toad.....Tropical America
19. *Bufo vulgaris,* European (common) Toad.Europe, Asia, No. Africa
20. *Bufo viridis,* Green Toad.....Europe and Asia
21. *Bufo calamita,* Natterjack Toad.....Europe
22. *Bufo halophilus,* California Toad.....California
23. *Bufo americanus,* American Toad.....Eastern U. S.
24. *Bufo fowleri,* Fowler Toad.....Eastern U. S.

Family (6) CYSTIGNATHIDAE.

25. *Limnodynastes dorsalis,* Burrowing Frog.....Australia
26. *Heleioporus pictus,* Silver Frog.....Australia

Family (7) RANIDAE.

27. *Dendrobates tinctorius,* Harlequin Frog.....Costa Rica
28. *Rana catesbiana,* Bull Frog.....Eastern U. S.
29. *Rana clamitans,* Pond Frog.....Eastern U. S.
30. *Rana virescens,* Leopard Frog.....Eastern U. S.
31. *Rana palustris,* Pickerel Frog.....Eastern U. S.
32. *Rana sylvatica,* Wood Frog.....Eastern U. S.
33. *Rana ridibunda,* Giant Edible Frog.....Europe
34. *Rana chrysoprasina,* Costa Rican Frog.....Costa Rica
35. *Rana godmani,* Godman Frog.....Central America

Following is a list of the more important purchases during the year:

Three rough-eyed caimans, 2 Australian monitors, 2 Gila monsters, 1 royal python, 2 spectacled cobras, 1 South American rattlesnake, 2 South American boas, 1 anaconda, 2 West Indian tree boas, 6 long-nosed vipers, 6 African giant toads.

Among the most important gifts were the following:

South American gopher tortoise from the Roosevelt Expedition to South America; 2 Central American boas, 2 ground boas, 3 Russian green snakes, 1 South American bush snake, 1 South American giant toad, 1 blind salamander from the Adelsberg Cave of Austria.

Mr. Lee S. Crandall, Assistant Curator of Birds, returned in August from a collecting trip in Central America. Besides birds and mammals, Mr. Crandall brought with him a very important series of amphibians. Most of the species were new to our collections and in fact had never previously been exhibited alive in this country or Europe. The following is a list of Mr. Crandall's specimens:

One fer-de-lance, 1 tree snake, 31 marine toads, 8 tadpoles (unidentified—now developing), 9 red harlequin toads (*Dendrobates*), 1 green harlequin toad (*Dendrobates*), 4 brown frogs, 1 brown tree frog, 3 red millipedes, 1 white millipede, 1 *Anolis.*

A census of the collection follows:

CENSUS OF REPTILES AND AMPHIBIANS OF THE ZOOLOGICAL PARK.

January 1, 1915.

	Species.	*Specimens.*
Chelonia	36	233
Crocodilia	7	45
Lacertilia	22	201
Ophidia	40	210
Amphibia	59	325
Total	164	1,014

SUMMARY OF COLLECTIONS.

A census of the animals in the Zoological Park, taken January 1, 1915, is as follows:

	Species.	*Specimens.*
Mammals	204	586
Birds	811	2,753
Reptiles	105	689
Amphibians	59	325
Total	1,179	4,353

DEPARTMENT OF INSECTS.

Raymond L. Ditmars, Curator.

We were particularly fortunate to have started breeding experiments among the foreign insects during the past year, as the European war has quite eliminated any possibility of obtaining Old World specimens the coming spring. We have bred the curious walking-leaf and walking-stick insects, and carefully preserved their eggs for hatching in the spring and early summer. Our stock of foreign cocoons is in good shape, and the insect collection is gradually becoming a self-supporting exhibit. The sale of mounted butterflies and moths in glass-sealed tablets has fully covered the cost of our collecting trips for local specimens.

Among the curious insects and their allies exhibited the past year—some of the material lasting through the winter months—has been a very remarkable series of the leaf and stick insects from Europe and the Indo-Malayan regions, the rhinoceros beetle of Africa, the Egyptian scarab, the luminous beetle

of tropical America and the lesser hercules beetle, the last named represented in various stages of its life history. The life history of the silk-worm was fully displayed, as well as the larvæ of other of the large silk-spinning moths. The collection of singing insects, always of much popular interest, was very adequate during the summer.

Several rare tropical spiders were received and are now thriving. In fact, we have exhibited some specimens of these larger arachnids over a period of four years. They spin huge tubes of iridescent silk, and their cages are of particular interest. Among the more recent arrivals is a huge example of the South American bird-killing spider (*Mygale avicularia*), that has a spread of limbs of about five inches. Another is the horned-back spider of tropical Africa. It is a large and savage creature, with a curved protuberance upon the back. It fiercely leaps at an intruding object, uttering a distinct sound, which is quite unique among the silent legions of its allies.

GROUND IMPROVEMENT AND MAINTENANCE WORK OF THE DEPARTMENT OF FORESTRY AND CONSTRUCTION.

Hermann W. Merkel, Forester and Chief Constructor; E. H. Costain, Assistant Forester and Captain of the Watch.

In new ground improvement work, comparatively little was done during the year, on account of lack of funds for this purpose.

During the winter months of 1914, forty-eight of our new benches with concrete standards were manufactured, giving a seating capacity of two hundred and forty people, at an approximate cost of $300. These benches have been very successful, and requests for blue-prints and details have been received from a number of park departments. Their absolute permanency and indestructibility by park vandals strongly commends their use.

The paving around the new Yak Shelter, the setting of water troughs, and other finishing touches in connection with this installation, were carried out, at a cost of $400.

At the Concourse, 3,000 square feet of concrete sidewalk were relaid, at an expense of $150.

In connection with the work in the Service Yard, $350 were expended in new paving, and the building of a new foundation for the wagon-scale.

The grading around the new Pavilion, on the east side of Bronx Lake, and the connecting of the water supply and sewer systems, cost $100.

Along the east front of the new Public Service Building, the excavating of tree-holes and planting of large evergreen trees and shrubs cost $350.

REPAIRS TO BUILDINGS AND WALKS.

The amount of work of this character accomplished during this year has been far greater than in any other year since the establishment of the Zoological Park. Special efforts were made in several directions, and as a consequence a number of our installations are now in better condition than they have been for a long time.

Repairs of Walks.—On repairs of walks, $900 was expended. For this amount 78,000 square feet of tar-macadam were re-surfaced, including the north half of Baird Court, the north end of Bird Valley, and eastern portion of Grant Walk, and the Buffalo Walk. In addition to this the flight of steps leading east from the Antelope House, which was in a dangerous condition, was completely rebuilt.

Buffalo Barn.—The roof of this building which had been leaking since the fourth year after its construction, had been patched and repaired a number of times. It was found necessary to remove the entire roof covering, and rebuild it.

Reptile House.—At the Reptile House the entire south roof was removed. The roof boarding and purlins were repaired or replaced as necessary, a layer of two-ply tar paper placed over this, and new slats were then put in place with heavy copper nails, instead of iron nails, as previously used. All poor or broken slates, of which there were many, were removed and discarded, and new slate substituted, and the copper flashing at gutters, valleys and sky-lights, which was everywhere poor and scant, was replaced with new 16 oz. copper, running for a sufficient distance under the slate to make a tight job. For next year only the short east and west slopes remain to be replaced. Several water pipes that were corroded were replaced, and in the large python cage, a rolling steel curtain was installed. A number of cage interiors were decorated by Mr. E. A. Costain of this department.

WILD PARSNIP IN BLOOM

Many of the common wild species of plants have been used with great decorative effect around the Marsh Garden.

Primate House.—This building came in for the most extensive repairs of any. All of the cages with the exception of that of the lemurs, were very throughly overhauled and painted, and between the large cages new partitions of brick were built. The twenty-four small wall cages were removed from their positions, the wooden backs were taken out, new floors put in, the cages replaced on concrete blocks, and fastened against the walls.

In all except two instances the heating pipes which ran in a recess back of the cages were taken out, and replaced at the sides.

Of the large cages along the east side of this building all have been given a very thorough overhauling. The ventilating ducts which were sheathed in wood, and were good harboring places for vermin, were ripped out, and new openings for ventilation were made in the ceilings. The entire wooden sheathing of the cages was removed, the partitions filled in with brick, and covered with a lining of vulcanized fibre in large sheets, all of the joints being covered with strap iron. The marble base along the entire front was removed, and the wooden supports which had been badly decayed at the bottom, were sawed off and placed on sanitary concrete blocks. New iron work was supplied as needed, and the floors repaired. The cages then received three coats of paint.

The guard rails and nettings in front of the east cages, both inside and out, were removed and replaced by much higher netting of a better design, and covered with sheet metal from the rail down to the floor. This absolutely prevents visitors from feeding any of the apes or monkeys and from throwing matches into their cages.

The flooring in the entire attic of the building was torn out. Two openings for fresh air ducts were cut through the east foundation walls, and new ducts made and installed. An enclosure of wood and glass was built in the large outside ape cage for the use of the gorilla.

Lion House.—Here almost the entire water supply system had to be replaced with galvanized iron pipes, as the old pipes had corroded very badly. The old flooring was taken out of nine cages, and replaced with floors of two-inch oak, laid on a concrete foundation; all joints in the oak flooring being carefully filled with white lead, after which the completed floor was

treated with paraffin. Lead lined sheet iron gutters were put in front of all the cages. All the iron work, including that in connection with the sliding doors of the sleeping dens, was given a through overhauling and replaced where necessary, and a great deal of tiling was repaired or replaced.

The upper portion of the eastern outside wall of this building, which had been disintegrating very badly for a number of years, was relaid or replaced as was found necessary. Many of the terra-cotta blocks were entirely removed, and replaced in beds of mortar. This work was done by our own force, at about one-quarter the cost of the lowest estimates received from contractors.

In the heating system of this building, some changes were made, and new coils were installed under the floors of two of the large cages.

Bear Dens.—The concrete floors and the tanks of the old series of Bear Dens were badly cracked and in a leaky condition. In the most northerly den, the entire floor was torn out, and a new one, provided with expansion joints, was put down. The tanks in three of the dens were partly torn out, supplied with new water-proofing where needed, and relined with a five-inch layer of reinforced concrete, and a heavy rim was so constucted that the overflow water will go directly into the sewer.

Heating Repairs.—In the Antelope House, the wall coils in the four northeast stalls were put out of commission last winter by a break of the flow and return pipes to these coils. Owing to the fact that these pipes were imbedded under the concrete floors of one of the stalls, it was necessary to remove the concrete flooring before repairs could be made. The new pipes were placed on the partition walls, so that in the future they will be more accessible.

Breaks of this nature must be expected during the next few years in several of the older buildings, as in many cases, cheap steel pipe was used. Unfortunately it is impossible to tell where these breaks will occur.

Flying Cage.—Owing to the presence of the birds in this cage until late this fall, it was not possible to do much work toward the repairing and recovering of this structure except the manufacturing of the new netting, which was done in our own shop. As soon as the cage became available, a scaffolding was erected in such a manner that any section thereof can be taken

down and removed to another portion of the cage. Repairs are now under way, and with good weather during the winter and spring months, the re-occupation of the cage in the spring should be only slightly delayed.

Service Building.—In the Service Building a number of changes were made. The old ice-house was converted into a store-room for guide books and other Privilege Department publications. The cook-room was changed into an office and store-room, and the former store-room was made ready for use as an office for the Chief Clerk's Department. A former store-room in the southwest corner of this building was converted into a room for the Chief Forester's Office. The electric lighting system of this building was thoroughly overhauled and extended.

Aquatic Bird House.—The cage work in this building was overhauled, repairs made to the roof, and the entire interior was cleaned and painted.

Elephant House.—Under the supervision of the Architects and Consulting Engineer of the Society, the tile and gravel roofs of the Elephant House were overhauled, and rebuilt in part, by contract; but a great number of minor repairs inside of the building were made by our force. Portions of the upper walls of the cage of the male African elephant were lined with one-quarter inch sheet steel to prevent further damage to the walls.

Eagles' and Vultures' Winter House.—An extension was added to the winter house for eagles and vultures, to supply a laboratory for the Curator of Birds.

GENERAL MAINTENANCE AND REPAIRS.

The usual amount of general maintenance work, such as the cleaning of walks and lawns, the collection and disposal of garbage and refuse, was carried on the same as in previous years. During the winter months, hundreds of loads of fertilizers were deposited at a central point, and removed by the New York Botanical Garden and the Park Department, and one carload was shipped to the Bronx Parkway Commission for use in their nursery at Crestwood. The ever increasing amount of ashes, which had become a serious burden, was this year (for the first time) removed by the Street Cleaning Department, through the courtesy of the Deputy Commissioner, Mr. Carroll H. Dunphy.

The painters' force has been kept especially busy. I am very glad to report that more painting was done during the last twelve months than ever before, and this was accomplished without an increase in the force. Outside of the buildings already mentioned, the following installations were given a thorough painting and overhauling: Antelope House and yard fences, Small Deer House and yard fences, Zebra House fences, Elephant House fences, Ostrich House fences, Eagle and Vulture Aviary, entire Buffalo Range, all boundary fences, Beaver fence, and all of the Bear Dens, all of the guard wires, all of the gate houses, Service Building, Wolf and Fox Dens, Boat House, and many others of minor importance.

CARE OF FORESTS, AND PLANTING.

This work was carried on as in previous years, except that we were not able to do as much work in the pruning of forest trees as should have been done, on account of the many days of last winter when it was impossible to work on the trees. With this exception the forest continues in good condition, and the number of insect pests has been very small.

In policing the grounds on Sundays and holidays during the crowded season, we again had the help of three outside men, and with these, and all our own men that could be made available for Sunday and holiday work, it was possible to maintain reasonably good order. The number of pickpockets operating in the Park on crowded days is still great, and presents a serious problem.

Our Special Patrolman Van Benschoten took care of the east side, as usual. During the year he made forty-one arrests, obtaining a conviction in each case. The number of picnics in these woods is as great as ever; fifty-four permits for 6,500 people have been issued. Approximately 275,000 people visited that section of the Park during the year.

Fires continue to be a serious menace to all the wooded portion of the Park. There is no question but that a great many of them are deliberately set by hoodlums, who, in spite of all we can do, infest the Park east of the Boston Road. It is extremely difficult to detect anyone at this work, and it is probably needless to say that a warm reception awaits anyone who is discovered setting such fires.

At the Nursery we raised the usual amount of vegetables and live stock, though still badly handicapped by the absence of proper breeding houses for poultry.

An event during the year was a visit to the Park of the American Association of Park Superintendents during their Convention, on August 27, 1914. The members were entertained by the New York Zoological Society at Luncheon. The visitors, who came from all over the United States and Canada, expressed unbounded admiration for the Park and its installations, and tendered a vote of thanks to the New York Zoological Society, for its courtesy.

DEPARTMENT OF ADMINISTRATION.

H. R. Mitchell, Chief Clerk and Manager of Privileges; Wm. Mitchell. Cashier.

The year 1914 has been one of important changes and improvements in the Chief Clerk's office force and office accommodations. The erection of the new Privilege Building provided for the removal of the cook's store-rooms and kitchen, thereby releasing several valuable rooms. This led to many important changes that benefited nearly all of the officers in the Service Building. It also provided additional storage space for publications and stock.

For the first time in a number of years, the Budget allowance for the year was granted in a lump sum "For the Maintenance of the Zoological Park," thus permitting its expenditure under the various classifications as necessary without the formality and delay incident to transfers by the Board of Estimate, if granted at all. This plan has done much toward enabling us to get through the year on the allowance made us by the City without the necessity of calling on the Society to contribute toward the Maintenance of the Park. A portion of the addition of a little more than $8,000 made in our appropriation over last year, was used in making increases of $5 per month (from $55 to $60) in the pay of a number of laborers.

Much work was done in the Chief Clerk's office during the early months of the year in collecting data regarding the personnel of the force and other information concerning the application of the pension plans of other institutions to our organization. The Chief Clerk served on the Committee of three employees, with Mr. Ditmars and Mr. Merkel, which drafted the

pension plan, and the data gathered was utilized by the Executive Committee and the Actuary employed by the Society.

The new position of Stock Accountant, which was first provided for in the maintenance appropriation for 1914, was filled on the first of January by Mr. William Mitchell. Mr. Mitchell's acquaintance with the park organization and its methods was of great assistance in getting the system of Stock Accounting under way without great difficulty or delay.

Accounts and Audit.—The financial transactions with the various funds of the Society for the year 1914 as set forth by the books and vouchers kept in the Chief Clerk's office underwent the usual examination and audit by the Society's certified accountants. The Treasurer's statements prepared therefrom and the Auditor's certification covering same, appear elsewhere in full. In order to prevent any delay in the preparation and printing of the Annual Report through the time required for the audit of accounts, arrangements were made to have the books examined and checked quarterly. In this way it will be possible to have the various annual statements and a certificate ready for printing by the third week in January. The Privilege Accounts were checked at the same time, and in the same manner, and a balance sheet covering them was submitted to the Society's Audit Committee at the close of the year.

Several new accounts were opened during the year, among them the Carnegie Pension Fund, covering Mr. Carnegie's endowment for pension purposes; the Pension Fund Income Account, for handling of contributions of the Society and its employees, for pensions; and the Improvement and Repair Account, to which Park Gate Receipts are transferred and disbursed in Improvement and Repair work at the Park as authorized by the Executive Committee.

Privileges.—While the business of the Privilege Department has shown some falling off in volume during the last half of the past year, and there has been a shrinkage in net profits, the reduction is due to the unusual conditions that have affected all lines of business during that period.

Under ordinary conditions, a normal increase would have been made corresponding with the increase in attendance.

Privilege Building.—The difficulties in connection with the execution of the contract for the construction of this building have been referred to in previous reports. This case has fur-

nished one of the most exasperating examples of construction work under the "lowest-bid" city contract system that ever has been experienced in the development of the Zoological Park. After all efforts to have the work completed by the contractor had failed, the Commissioner of Parks was compelled to declare the contract cancelled for non-fulfillment, and estimates were obtained from several bidders for "completing and perfecting interior work, in accordance with specifications." An order has been placed accordingly, and the bills therefor are to be paid from balance due the contractor.

Rocking Stone Restaurant.—The improvements made in this establishment during the last year have been of benefit both in improving the service and increasing profits. While the volume of business fell considerably below that of last year, especially during the latter part of the season, the net profits were actually in excess of those of the previous season.

Soda Water.—There was a decrease of practically ten per cent in the receipts for 1914, from this source, and a similar reduction in the profits. As there seems to have been no decrease in the desire for soda water as a beverage, the reduction in the figures can only be charged to general economies on the part of the public.

New Soda Pavilion.—It is now about fourteen years since the erection of the temporary open pavilion in front of the Reptile House. This old fountain is no longer adequate to properly take care of the business that comes to it. A new structure, with new equipment, is imperatively demanded. The new building need occupy no more space than is utilized by the present structure, and it need be no more conspicuous; but it should correspond in permanency to other Park structures, and afford adequate room for taking proper care of the business resulting from an annual attendance of between two and three million visitors.

Souvenir Books, Cards and Pictures.—While the sales of souvenir books for 1914 were very well up to our expectations, based on other items, it is perfectly evident that new ideas and new pictures are needed in order to keep up the interest both of our employees and the public. While there is a good stock of the 50-cent series on hand, the 25-cent edition is practically exhausted. The latter, being the more popular book, must be renewed; and the new books must be placed on sale early next season.

The sale of souvenir postal cards showed a proportionately greater falling off during the last season than any other publication, which leads us to believe that they may be becoming less popular with the public as souvenirs. When the present supply is exhausted, new pictures and new and interesting subjects will be introduced into the series.

Our sales of photogravures have continued at a fairly satisfactory rate. These pictures handsomely represent our finest animals, and are appreciated by the public.

Guide Book and Map.—The Mountain Sheep edition of the guide book is, in many respects, superior to previous editions. Frequent comments made by visitors, and unsolicited expressions from purchasers, bear out the assertion. Sales continue to be large, although many visitors are seen entering the park carrying old issues.

In addition to the map-fan which has been sold during the summer months for several seasons, a guide map of the Park in folder form that can readily be carried in the pocket was placed on sale this season, at five cents. It simply serves as a quick and ready guide for visitors who do not care to bother with a guide book.

Boat House Restaurant.—The change in the organization at the Boat House Restaurant, made necessary by the transfer of the cook, to fill a vacancy created at the Rocking Stone Restaurant, was a serious handicap throughout the season. The result was that the kitchen force there was disorganized to some extent throughout much of the season, and it was impossible to make a satisfactory showing. The gross receipts fell behind those of 1913, and were not greatly in excess of those of 1912. The difficulty now seems to have been overcome, and it is confidently expected that hereafter the business will show a steady gain.

Boating.—It was found necessary to either make extensive repairs on some of our wooden boats, or dispose of them and replace them with steel boats. Because of the better service given by the latter, about twenty-five of the older wood boats were discarded and a car of Mullin steel boats ordered. On account of the trouble and expense of constant repairs to wooden boats, this method of gradually improving the equipment will be continued until the remaining wooden boats are entirely eliminated.

On the whole, the boating season was very satisfactory, and closed without an accident of any consequence. As considerable work is required on the electric launches and their batteries before next season, it was thought best to carry our boat foreman through the winter, and have him continue this work. The boating equipment should therefore be in very good condition before the spring of another season.

Attention is again called to the urgent necessity of a new concrete dock at the boat landing. The old wooden structure which has now served for a number of years is rapidly giving way and requires constant repairs. The stairs leading from the dock to the Boat House are in bad shape, and must be carefully gone over and strengthened before another season, to insure their not giving way when crowded. As the prospect of securing an appropriation from the City for constructing a new dock in the near future seems very gloomy, we urge that this improvement be made from the Boat Receipts in 1915, and that the work begin as soon as the season closes to permit of its being carried on without interfering with the boating business.

Gate Receipts.—For the first time in a number of years there was a considerably reduced income from admissions at the gates on pay days. As referred to elsewhere in this report, the gate receipts for 1914 were, by action of the Executive Committee, placed in a new fund to be utilized in making a number of imperative repairs to buildings that could not be taken care of from Maintenance funds.

Riding Animals.—The Riding Animal Privilege made an excellent showing for the year. While the gross receipts were not quite equal to those of last season, operating expenses were lower, resulting in an increase in the net profits.

Pavilion East of Bronx River.—Construction work on the new pavilion East of Bronx River was not completed until late in the season, too late to inaugurate any refreshment service, or install equipment for use in 1914. The opening of this pavilion, situated as it is on the crest of the knoll north of the open glade east of the Bronx River (opposite the Boat House) suggests the desirability of making some provision at this point for a small public playground for children.

During recent years the City has been doing much along this line in its various public parks, with beneficial results. The open space south of this pavilion is a natural playground, and at present there is no other part of the Zoological Park where

visitors are allowed on the grass. The maintenance of a playground here would involve only a moderate outlay for the equipment, and perhaps that could be supplied from the City's funds for parks and playgrounds. No additional expense need be incurred for maintenance, as the equipment and grounds could be looked after, and order preserved, by the employees in charge of the Pavilion.

DEPARTMENT OF CIVIL ENGINEERING.

George M. Beerbower, Civil Engineer.

During the first half of the year our engineer was hindered from the performance of other duties by the necessity of constant, skilled and dependable supervision over the construction of the Shelter Pavilion, which is only just now completed, on the east side of Bronx River. He designed and supervised the folding steel shutters for the protection against vandals of the workspace or refreshment-serving space in this building, wherein existing conditions required them to be of new and special design.

The greater part of the engineer's duties is made up of small matters in such great variety that a detailed list would not be suitable for this report. Much of the work under ground and under floors, such as water supply and drainage, which has been in use for many years, is beginning to require repairs and alterations, and much of the time of the engineer is taken in locating the pipes and fittings of which he has kept a record.

Among the more important new works are, the preliminary drawings for the Animal Hospital which were developed from sketches and data furnished by the Veterinarian and the Director and Pathologist. Owing to the great variety of wild animal patients for which this building is required to provide, it is necessarily quite a complicated institution, and calls for skill and experience of several kinds, engineering as well as medical.

In the floor plan of this building, the available space had to be considered, and its site was repeatedly shifted on the ground to secure the necessary access to all sides and to avoid endangering the lives of valuable trees in the vicinity. The floor levels were adjusted to reconcile the various conditions found in the undulations about the site, and the existing buildings in the vicinity.

PLANTING OF PURPLE IRIS AT THE MARSH GARDEN

A complete grading plan of the surrounding grounds was staked out on the ground, with final grades indicated, and this grading is now being done by our own force of men.

The great variety of carting of animals in cages, and the variety of supplies and waste materials to be handled called for a cart of special design. This was designed by our engineer, and his plans executed in our own shops.

Soundings were made and drawings and estimates were prepared for a new concrete boat landing at the Boat House. A massive door, to be operated from outside the building, was designed for the handling of a dangerous elephant. A wire screen was designed to separate the visitors from parrots on perches, and many other smaller improvements, alterations and repairs were planned.

The Laboratory for the Curator of Birds was designed by our engineer, and the drawings, specifications and contract were prepared in his office, bids received, a contract was let, and personal supervision of the work was given by our engineer. Special designs were prepared for the book cases and other cabinet work, and these designs have been executed in our own shops, in a very skillful and creditable manner.

The large colored map of the westerly portion of the park, made for exhibition purposes, has been gone over and brought up to date, ready for any occasion which may call for it.

A topographical survey of the easterly portion of the park, embodying the newly added areas, showing the wooded portions, the principal individual trees, exposed rock ledges, open glades and abutting streets and properties, has been made and plotted on the same large scale, (50 feet to an inch), as the map of the westerly portion, which makes a map 54 inches by 10½ feet. The whole will be colored so as to make the details conspicuous from a considerable distance, and, in combination with the finished map of the westerly portion, will make a striking exhibit of the natural beauties as well as the extensive improvements which have been made during the years which the Zoological Society has had these grounds in its charge.

DEPARTMENT OF PHOTOGRAPHY AND PUBLICATIONS.

Elwin R. Sanborn, Photographer.

Photography.—The most important subjects photographed during 1914 were the following: Orang-utan, great-billed rhea,

binturong, wombat, hunting dog, blotched giraffe, African ostrich, tahr, hartebeest, bush pig, Prjevalsky horses, Grant zebra, Abyssinian lion, black-footed penguin, vultures, emus, kangaroos, plantings around the Marsh Gardens and various other places. An excellent series of negatives was made of the gorilla including a valuable record of this very interesting animal in motion pictures. The new gallery in the south end of the winter house for pelicans made this possible. The great volume of light diffused through the fine ribbed glass permits rapid exposures; a valuable aid in working with an active animal. It was possible to allow the gorilla to move about and as she assumed a pose that was of interest, an instantaneous exposure was made. To correct movement with the motion picture camera, the taking speed, in light value, is 1/35 of a second. This time value was exceeded; an achievement, when it is considered that no artificial light was employed as a contributary aid in making a negative.

Bulletin.—Six numbers of the *Zoological Society Bulletin* were issued in 1914. The fact that we have only the Park and Aquarium to draw upon for material for this publication, constitutes a handicap upon it, but it never was designed to occupy a place as a wide-world magazine.

Annual Report.—The Annual Report was issued in its regular form.

Zoologica.—Seven numbers of *Zoologica* were issued and the eighth number is now in hand and will be published shortly. Two of these numbers were prepared for the Aquarium.

Under the direction of Dr. Townsend, a series of motion pictures illustrating the methods of deep sea dredging, were obtained on board the U. S. S. *Fish Hawk* while the vessel was stationed on Long Island Sound.

Appended is a statement of photographic work accomplished in 1914:

Lantern slides and transparencies	193
Enlargements	60
Prints for albums	850
" " Society publications	112
" " Miscellaneous publications	475
" sold, and used for special purposes	1,080
Total	2,770
Number of index albums, to date	54

FUTURE DEVELOPMENTS.

East of the Bronx River and Lake there now lies an area of more than 100 acres of valuable park lands, covered with virgin forest, and save for one small area near the river, quite untouched by improvements. The 66 acres of forest recently acquired are suffering for intelligent and skilful attention. Regardless of prospective road-building that immensely valuable forest must be taken care of. The 66 acres referred to lie outside the Zoological Park. The city must provide an improvement fund of at least $25,000 for east side work that is urgent. The construction of the elevated subway along the eastern boundary of the park lands leaves no option in this matter. Something must be done; and work should begin very soon.

Respectfully submitted,

WILLIAM T. HORNADAY,
Director.

REPORT OF THE
PENSION BOARD
OF THE
NEW YORK ZOOLOGICAL SOCIETY

THIS Board, consisting of nine members, is appointed by the New York Zoological Society through its Executive Committee for the purpose of carrying out the provisions of the Carnegie Pension Fund, and the regulations governing the administration and disbursements of the Pension Fund Income Account. Five of the members of the Board represent the Board of Managers, three the employees of the Zoological Park and one the employees of the Aquarium.

The Carnegie Pension Fund, the gift of Mr. Andrew Carnegie, consisting of $100,000, is invested by the Zoological Society, and the income, as well as contributions by the Zoological Society, and contributions from the employees, is used for the payment of pensions to such employees as are entitled thereto under the provisions of the regulations agreed upon between the Society and the employees.

The income from the Carnegie Fund, amounting to $4,360 annually, is supplemented by contributions from the Zoological Society to reach the sum of $8,000 per year. This is further increased by monthly subscriptions from the employees, the same being 2% of the salaries earned by such employees, and amounting to about $3,200 per annum at the present time.

A contributing employee becomes privileged to receive a pension after 15 years of continuous service if he has reached the age of 70, in which case the pension amounts to 30% of his salary, with an increase of 2% for each additional year of service up to the 20th year, with a minimum pension of $20 per month. After 20 years of continuous service at the age of 65, a 30% pension with a minimum of $25 per month is paid. After 25 years' service at the age of 65, 40% with a minimum of $30 is paid. After 30 years' service, 50% pension with a minimum of $35 per month may be paid.

Periods of service are counted only from the time an employee reaches the age of 21, except in the case of female employees, who are eligible for membership at 18 years of age, and entitled to pensions in every instance, five years younger than male employees.

An employee who is dismissed or resigns before becoming pensionable, has returned to him the total amount of his contributions with compound interest at the rate of 3½ per cent per annum.

There are further provisions for repayment of contributions in case of the death of an employee before reaching pensionable age. Also for pensioned employees' widows' pensions, and for a small declining insurance.

These provisions are as liberal as they can be made, especially because the years of service rendered to the Society before the establishment of the fund must be counted, though of course no contributions had been made by the employees. Considering the contributions from employees, and the amount of the income from the Carnegie Fund, and from the Zoological Society, the Fund is not yet on an entirely safe basis. Two sections of the original regulations, that regarding the "subscribing employee's widow's pension," and the "pension on account of death resulting from injury received in the line of duty," are for the present suspended through the lack of funds.

This of course is only a brief resumé of the Pension Plan, copies of which may be obtained by any member interested.

It is hoped that further bequests and contributions may be received from time to time, because it is not desirable that the present restrictions to the pension provisions should continue. Pending the receipt of further funds the plan was put in effect on August 1, 1914.

The Board organized on May 14, 1914, with Mr. George Crawford Clark as Chairman, Mr. Percy R. Pyne as Treasurer, and Mr. Hermann W. Merkel as Secretary. The members representing the Board of Managers are Messrs. George Crawford Clark, H. Casimir deRham, Lewis Rutherfurd Morris, William B. Osgood Field and Percy R. Pyne. The members representing the employees of the Zoological Park: H. R. Mitchell, Assistant to Treasurer in Charge of Pensions, Hermann W. Merkel, Raymond L. Ditmars; and representing the employees of the Aquarium: Raymond C. Osburn.

It was decided to hold a meeting every month, and special meetings when necessary.

As soon as the Board was ready to receive applications, and posted notices to that effect at the Zoological Park and the Aquarium, furnishing at the same time each employee with copies of

the Plan, great enthusiasm prevailed in favor of joining the Pension Fund, and so many applications were received that at the meeting of September 16, 1914, the first one in which applications could be considered, 133 employees of the Zoological Park, 29 employees of the N. Y. Aquarium, and two employees of the Zoological Society were admitted, after their applications had been certified by the Directors of the Zoological Park and the Aquarium as permanent employees, and after the applications had been passed upon by the Membership Committee. At following meetings, 5 more employees of the Zoological Park were admitted, bringing the total number of contributing members to 169. This represents for the Zoological Park 97-4/5%, and for the Aquarium 100%, of those eligible for admission to the Fund, and this alone is a clear indication that the employees of the Society fully appreciate the liberality of Mr. Andrew Carnegie and of the Society, in providing the Fund and establishing the Plan, and there can be no question that the Pension system does now, and will in the future, react favorably upon the service, tending as it does towards a feeling of greater permanence and security, and creating a spirit of loyalty.

There has been contributed to the Pension Fund Income Account since the establishment of the Fund, by the Zoological Society, $3,333.33; by the employees, $1,044.54, amounting to, with interest on the bank deposit, $4,392.12. This is available for the payment of pensions, and has been invested until such time as needed. The expenditures to December 31, 1914, are $211.85, leaving a balance of $4,180.27.

Respectfully submitted,

HERMANN W. MERKEL,
Secretary, Pension Board.

Approved:
GEORGE C. CLARK, *Chairman.*

THE INTERNATIONAL VETERINARY MEDICAL CONGRESS

THE International Veterinary Medical Congress held at London beginning August 3, to which I was designated an official delegate by the Executive Committee of the New York Zoological Society, was a great disappointment inasmuch as a *sine die* adjournment was taken after the first day's proceedings. The European war prevented representatives of practically all the Continental Governments from attending. Those delegates who reached London found telegrams awaiting them, ordering their immediate return to their own countries. Of the 1,450 official delegates to the Congress, only 300 appeared at the opening session, and these were principally representatives from North and South America. This failure of the Congress was a great disappointment, and a real loss to science, since many important contributions were to be presented by professional men of international reputation upon the subject of communicable diseases from animals to man.

However, it was my great privilege during June, July and August to visit many of the best laboratories, hospitals and clinics on the Continent, and to note the work on contagious and infectious diseases in animals being done by some of the great European investigators. My itinerary included the following:

Brussels.—The Experimental Station and laboratories of the Veterinary College.

Paris.—The famous Veterinary School at Alfort, with its pathological museum. The Pasteur Institute and laboratories.

Bern.—The Serum Institute, under the direction of Professor Kolle.

Milan.—The animal clinics and pathological research laboratories in connection with the Veterinary College.

Budapest.—The new pathological and bacteriological research laboratories of the Veterinary College, and the Serum Institute.

Vienna.—The Veterinary College and Hygienic Institute; animal clinics.

INDIAN RHINOCEROS

Dresden.—The Veterinary College laboratories and clinics. The finest municipal abattoirs and stock yards in the world are here.

Leipsic.—The tuberculosis research laboratories of the Veterinary Institute under the direction of Professor Eber, who is doubtless the greatest authority on tuberculosis on the Continent.

Berlin.—The famous Veterinary College laboratories. Here is the largest animal clinic in the world, where over 15,000 animals are treated annually. The German Serum Society. The Imperial Board of Health research laboratories, at Gross Lichterfelde.

Hanover.—The Anatomical Museum. The pathological and bacteriological laboratories in connection with the Veterinary College.

Utrecht.—The animal hospital, clinics, quarantine station, pathological and bacteriological museums in connection with the Veterinary College and University.

Rotterdam.—Government Serum Institute.

Some most valuable information gained was through the demonstrations by Professor Levadatti, of the Pasteur Institute, by means of motion pictures, of the diseases of the blood. Of particular interest to me were his studies and demonstrations of the life cycle of the blood parasite, *Filaria immitis,* a worm which we found produced a fatal disease among our California Sea-Lions some years ago; also his demonstrations of *trypanasomes* in the blood of various animals. Motion pictures were seen which showed the *Trypanasomes* free in the circulating blood, and also the effect on these parasites after the blood was treated with curative serums. Other films showed the development of intestinal flora in living animals.

At these laboratories I also had an opportunity of studying the work being done on malignant tumors and cancers of animals. Professor Boree, the specialist of the Institute in the investigation of cancer, exhibited numerous mice affected with cancer, and explained his investigations whereby he was able to demonstrate the fact that cancer in these animals was infectious and transmitted by contact, and not by heredity.

I found at these laboratories, as well as in other places on the Continent, that the motion picture apparatus was being extensively used for the purpose of accumulating permanent records, and also for demonstrating the technic of important

surgical operations. The camera plays a very important part in the research work of practically all the laboratories and clinics.

In Budapest, the experimental farm for the study of the infectious diseases of animals, under the direction of Professor Hutyra, is most complete, and there is a fine studio for recording the various pathological changes in the organs by means of photographing the specimens with Lumiere color plates.

Here also was seen an ideal animal hospital. Separate wards were arranged for surgical and medical cases. Wards for contagious skin affections with separate diet kitchen and baths; examination rooms, operating room, sterilizing rooms, and an isolated building for the treatment of contagious diseases such as distemper. I found here that in the research laboratory they had found tuberculosis in snakes. The first time it was recorded here was three years ago. It may be of interest to know that tuberculosis in snakes was noted by Dr. Harlow Brooks in the *Seventh Annual Report* of the New York Zoological Society, published in 1902.

The Veterinary Institute Laboratories at Leipsic are under the direction of the famous tuberculosis expert, Professor A. Eber. Professor Eber's work for a number of years has been on the relationship of the types of tubercle bacilli, and he has repeatedly shown that it is possible to so alter the human type of tubercle bacillus by systematic passage through animals that, with the means at present at our disposal, they cannot be distinguished from bacilli of the bovine type. His researches furnish abundant evidence that the two types of tubercle bacillus, the human and the bovine, are not types of sub-species with constant characters, but rather varieties of one and the same bacillus, with relatively variable characters. He recognizes that the bacilli cultivated directly from the human or bovine sources possess certain biological characteristics which permit of a distinction in the majority of cases between the human and bovine types.

In his experimental work in carrying the human type tubercle bacillus through guinea-pigs, calves and cattle, Professor Eber succeeded repeatedly in changing the morphological characters of the human bacillus to that of the bovine type. The series of pathological lesions seen in this laboratory were of much interest to me in connection with my study of tuberculosis in primates.

In addition to the institutions mentioned, I had the pleasure of visiting the Zoological Gardens of the following ten cities: Antwerp, Budapest, Vienna, Hamburg, Berlin, Hanover, Amsterdam, Rotterdam, London and Edinburgh. In many of the places visited, I found the gardens rich in zoological specimens, but nearly all over-crowded with buildings, and the corrals and yards much too small for the comfort of the animals, especially the hoofed animals.

There are two new zoological gardens in Europe: One a municipally owned garden located in Budapest; the other, the Scottish Zoological Park at Edinburgh. Both of these institutions are modelled to a great extent after Hagenbeck's, at Hamburg. The garden at Budapest is only three years old, but already is rich in zoological specimens. For instance, I found there a good collection of African antelopes; also a herd of five giraffes, all in excellent health, and five elephants. Here, also, I saw a pair of American bison which were bred in our Zoological Park, reaching this far away Zoological Garden through the Hagenbeck agency. One of the most interesting buildings in this Garden is the Elephant House which is patterned after a Turkish Mosque. So faithful is the reproduction that upon its completion it nearly led to serious diplomatic complications between Turkey and Hungary. The interior decorations and colored windows produce a lighting effect of a beautiful pale purplish hue.

The Polar Bear Dens and Sea-Lion Pool, as well as the Mountain Sheep Rocks, are modelled after the same structures at Hagenbeck's.

The Scottish Zoological Park, the property of the Zoological Society of Scotland, is located half a mile from the Edinburgh city boundary, and comprises about 74 acres. The Society obtained possession of the property in the spring of 1913, and immediately began the work of laying out the grounds. The whole Park lies above rock, which is never far from the surface, and there is an abundance of fine old timber. From the higher portions of the Park magnificent views are obtained of the surrounding country, and its aspect to the southwest secures the maximum of sunshine, with shelter from the cold winds. Altogether it is an ideal spot for the purpose of a zoological park, and no finer setting could be desired for the display of animal life.

Experiments are being carried on here to demonstrate to how great an extent exotic animals can adapt themselves to changed climatic conditions. Many ingenious and simple methods have been devised for confining the animals in artistic and more or less natural enclosures. In the arrangement of the collection more regard is paid to the natural features of the ground than to the relationship or zoological sequence of the groups exhibited.

The outdoor enclosure for a group of lions for instance, consists of a broad shelf of rock, banked and flanked by high overhanging cliffs, up which the lions can neither jump nor climb, and guarded along the front by a wide and deep ditch partially filled with water. The ditch is too wide for the animals to leap, and the outer side is smooth and overhanging, and is further guarded by a row of iron spikes, so that should the lions go down into the ditch, they are forced to go back to the rocky ledge, and cannot by any means find an exit on the outer side.

Another attractive exhibit in the Park is the Polar Bear Pool, which is blasted out of the solid rock somewhat in the shape of a horseshoe, having in its center a large mass of natural rock, which forms a kind of promontory, bounded on three sides by water, and on the fourth by a cliff. The dimensions of the pool are about 65 feet long by 50 feet wide. The rock which surrounds the pool on the outer side rises to about 8 feet above the water level, overhangs slightly and affords an excellent means of preventing the escape of the bears. Thus no iron work is needed and there is nothing to obstruct the view of the visitors.

The Monkey House is a small structure consisting of an inner brick-built sleeping place opening into large outdoor cages. The monkeys have free access to sleeping boxes, but the superintendent, Mr. Gillespie, told me that all the monkeys spent the whole of the past winter without any artificial heat whatever, and remained in excellent health. The collection is made up principally *of the hardier species,* there being none of the anthropoid apes exhibited here.

The Hagenbeck Garden at Stellingen is one of the most attractive of the zoological gardens of Europe. While many of the buildings are not artistic or expensive, still they serve every practical purpose, which is to shelter the animals during inclement weather. The Hagenbecks believe that a zoological garden or park entirely fails in its function unless the animals it contains are exhibited in a manner which allows them to live under conditons which not only permit but encourage them to display

their normal instincts and habits of daily life, and in a setting resembling as far as possible the environment in which they naturally would be found in a state of freedom.

Many experiments carried on in their Garden, which would be considered hazardous by many, have shown to how great an extent tropical animals can adapt themselves to changed climatic conditions. The large artificial rock work which constitutes the quarters of the baboons and common monkeys is truly a remarkable exhibit, with nearly a hundred of these animals scampering over the rocks. At the back of the rock work are interior quarters which the animals reach by passing through trap doors, and where they may retreat during stormy weather or at night.

The grand panorama view is of an enclosure containing a great variety of European and tropical cranes and water fowl on an artificial lake in the foreground, beyond which is a plain enclosing elands and other African antelopes; next a plateau with lions roaming over the rocks, and finally in the back-ground huge artificial rocks reaching high into the air, and with mountain sheep and goats running and jumping about.

In the Lion House during the date of my visit, there were five litters of young lion cubs, varying in ages from two weeks to two months. Two more litters were due to arrive within six days. During one afternoon I saw an exhibition performance of fourteen full grown lions in a large open air cage. On the same afternoon fourteen magnificent full grown tigers were put through their exhibition in the same cage. These exhibitions in addition to the great pleasure given to the visitors were doubtless of great benefit to the animals in giving them the exercise that they need to keep them in such fine physical condition.

Practically all the hoofed tropical animals are forced to stay out-of-doors all the time. They are very active and certainly look to be in the best of health. Among the many rare zoological specimens seen at the Hagenbeck Park were two full grown Alaskan moose in splendid condition; a pair of very large specimens of the two-horned African rhinoceros; a young one horned African rhinoceros, which Mr. Lorenz Hagenbeck believes to be a very rare species of the rhinoceros; a pair of sea elephants, weighing about 1200 pounds each; a South African sea-bear; several specimens of the dark grey water-buck (*Cobus ellipsiprymnus*); and a very large and intelligent walrus which gives daily

exhibitions in its pool. It plays, in turn, the harmonica, cornet and whistle, and finally ends its program with a bass solo.

There are numerous rare birds—among them three king penguins in full adult plumage.

The ostrich farm at Stellingen is one of the most interesting features of the Park. There are about 90 birds here, varying in age from three weeks to full grown birds. The shelter consists of a long wooden building, without artificial heat, where the birds are confined during the coldest of the winter weather. These buildings open into large paddocks where the birds spend practically all the day exercising in the open air.

The only gardens where I saw animals being forced to live in the open air, or in unheated buildings were at Hamburg, Budapest, and Edinburgh. The two latter Gardens are young, and their handling of animals cannot be looked upon as anything but experimental for these localities, and I believe it is yet too early to determine the claimed superior advantages of exhibiting animals in unheated buildings. I did not see any garden in Europe which handled its delicate animals any differently from what we do here. Moreover, if statistics were available, it would be found that the European gardens do not succeed in keeping their animals alive any longer than we do, nor do they give the animals nearly as much freedom. In central Europe, where the climate is dry and much milder than in New York City, the animals can stay out-of-doors longer without discomfort, but when the weather is stormy they seek shelter just as readily there as here. The animals have access to their outdoor cages at all times, but I doubt very much if any but the hardier species voluntarily spend all their time out-of-doors during the winter months. They lay great stress on the fact that they have acclimated many tropical animals, which no longer require heated buildings, such as golden baboons, rhesus, and Japanese red-faced monkeys; axis deer, elands, water-bucks, beatrix antelopes, Indian sambar and barasingha deer, African and Indian gazelles. We have also acclimated practically all these animals mentioned, as well as a considerable number of others.

Nowhere did I see any of the *great apes* or *monkeys* which we consider delicate species living out-of-doors.

I would not advise trying to keep any but the hardier species of monkeys, tropical antelopes or deer in unheated buildings during the winters such as we have in New York City. Without

heat it would take more than a week here to dry out a building after one or two days of the easterly storms, such as we frequently have during the fall and winter.

Respectfully submitted,

W. REID BLAIR,
Veterinarian.

SALT-WATER BREAM (*DIPLODUS HOLBROOKII*)

PIN-FISH (*LAGODON RHOMBOIDES*)

REPORT OF THE
DIRECTOR OF THE AQUARIUM
TO THE BOARD OF MANAGERS.

IN reporting upon the Aquarium for the past year, the Director feels justified in stating that its present condition is good, both as regards living exhibits, and service performed by employees. Although much of the equipment is obsolete in character, the fact remains that in no other aquarium is there so much animal life successfully carried considering the space available.

At no time during the twelve years of the Zoological Society's management of the Aquarium have the exhibits decreased to a noticeable degree either in number or variety. All exhibition tanks and pools are kept full of attractive specimens of good size, while the variety of forms is usually more than twice the number of tanks available. Most of our specimens live in tanks too small for their proper accommodation.

As has been frequently pointed out it is not possible to enlarge or greatly vary the exhibits in the present building. There is no space left for the increase of either specimens or equipment for handling them. Under present conditions the Aquarium is virtually at a standstill in this respect. Its water systems are adapted only for exhibits of the character now installed there, and in pleading limitations, these facts are kept in mind.

Nevertheless, more than two millions of visitors annually find much in the Aquarium that is pleasing, and but little to criticise. As a matter of fact there is no criticism of the exhibits, and seldom is there complaint about the irremediable defects of the building. There are few museums that maintain more friendly relations with the public.

COLLECTIONS.

The total number of specimens on December 31, 1914, was 5,169, the number of species 199. These are as follows: fishes 2,876—species 146; reptiles 130—species 24; amphibians 109—species 9; invertebrates 2,051—species 18; mammals 3—species 2.

In August the Aquarium received a manatee from Porto Rico as the gift of Hon. John A. Wilson, of San Juan, who also secured free transportation for it from the New York and Porto Rico Steamship Co. The manatee was unfortunately injured in capture and lived only three weeks, during which time it was apparently unable to feed. The specimen was presented to the American Museum of Natural History, New York, in Mr. Wilson's name.

In September Messrs. Travilla Brothers of Minneapolis, presented two yearling California sea lions, one of which died soon after its arrival. The other specimen is active and thriving and is most interesting to visitors.

Two handsome specimens of the tarpon captured at Belford, N. J., in lower New York Bay in August and September, were exhibited at the Aquarium for a couple of weeks. Like other specimens collected by commercial fishermen, they were subjected to careless handling and did not live long. These are the third and fourth tarpons taken in New York Bay during the past ten years and received alive at the Aquarium.

A four-hundred-pound leatherback turtle captured at Manasquan, N. J., was received in October. This species has never survived long in captivity. Although specimens are received every summer, none of them have ever learned to feed.

The Bureau of Agriculture of Bermuda sent sixty-three handsome tropical fishes in August. These fishes were intended for exhibition at the Toronto Exposition, which was abandoned on account of the war in Europe. They were presented through Mr. E. J. Wortley, Director of the Bureau of Agriculture.

Mr. Chester Lloyd of Brooklyn presented twenty very interesting goldfishes of nine different varieties.

Mr. Emil Gottsleben of Nassau, Bahamas, presented a fine hawksbill turtle, the second specimen which has been received through his kindness.

Dr. A. G. Mayer sent eleven young loggerhead turtles from the Dry Tortugas, Florida.

The U. S. Bureau of Fisheries presented fish eggs of several species for the Aquarium hatchery. The young were delivered when hatched to the New York Conservation Commission for stocking State waters.

In addition to the above the Society supplied sixteen hundred specimens. These represented ninety different species of

fishes, six of turtles, two of porpoises, a giant lobster thirty-eight inches in length, the longest on record, and numerous species of invertebrates.

In April Mr. L. L. Mowbray, of the Aquarium staff, went to Moon, Mississippi, to procure specimens of fishes, including the giant gars of the lower river region which reach lengths of eight or nine feet. Owing to the lateness of his arrival, the gars, being in spawning condition, could not be transported, but he procured 150 fishes of twelve species, some of which were new to the Aquarium collections. He also procured numerous turtles and frogs. Another attempt will probably be made to procure gars at a favorable season. These large fresh-water fishes are greatly desired for one of the large floor pools of the Aquarium, but the expense of transporting heavy fish tanks by rail is almost prohibitive.

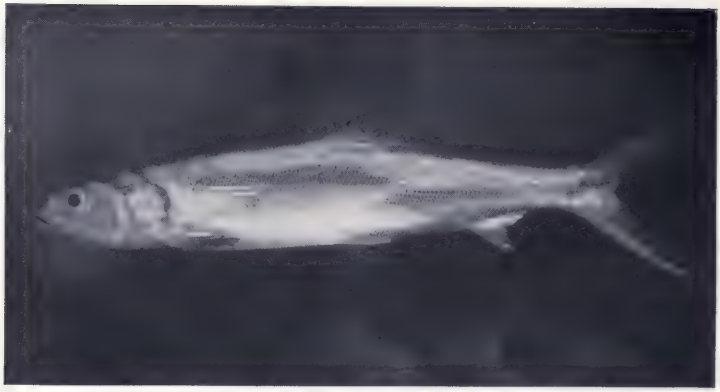
In July Mr. Mowbray went to Key West, returning with 500 tropical fishes of sixty-six different species. Several of these were also new to our exhibits. The cost of the trip to Florida, amounting to $384, was reduced to the extent of $175, on account of the sale of 150 specimens to the Detroit Aquarium.

One of the porpoises (*Tursiops truncatus*) brought to the Aquarium on November 15, 1913, is still living and in good condition after more than thirteen months of captivity. Four other porpoises received at the same time, lived in the building seven months, when they were lost in rapid succession from pneumonia.

The surviving animal is lively and playful, making its exciting porpoise leaps many times every day. It is, so far as known, the only porpoise in captivity, and is naturally the star attraction of the Aquarium. It feeds entirely on fish, the cheapest that can be bought in the markets, and consumes 25 pounds daily. The specimen is a male, eight feet in length, and weighs about 300 pounds.

A twenty-two page illustrated account of the Aquarium's porpoises was prepared by the Director and published by the Zoological Society in May, 1914, in *Zoologica*.

In November the Director returned to Hatteras, N. C., to obtain more porpoises, but owing to stormy weather, was forced to abandon the project temporarily. During the summer he made an attempt to capture porpoises at Stony Brook Harbor, Long Island, but was unsuccessful on account of the force of the



TEN-POUNDER (*ELOPS SAURUS*)

tides at that locality, which made it impossible to control the very heavy seine required to hold animals so active.

Another species of porpoise (*Delphinus delphis*) captured on the coast of New Jersey, was exhibited at the Aquarium in October.

This specimen, like all of the porpoises received from fishermen, was injured and lived only two days. A specimen of the small harbor porpoise (*Phocæna communis*), taken at Provincetown, Mass., in October did not reach the Aquarium alive.

Porpoises to endure captivity must be taken uninjured and kept in tanks of cool water from the moment of capture until placed in the pool at the Aquarium. Our experience has shown that this can be done without great difficulty or expense.

The porpoises lost in June were presented by the Zoological Society to the American Museum of Natural History, New York, the Academy of Natural Sciences, Philadelphia, the Museum of the Brooklyn Institute, the College of Physicians and Surgeons, New York, and the Oceanographic Museum, Monaco. The soft parts of most of the specimens were utilized by the College of Physicians and Surgeons. It is well that other institutions derive some profit from our misfortunes.

The porpoises lost from pneumonia, died from the malady that sooner or later carries off our seals and manatees, and results from attempts to keep out-of-door animals in a heated building in winter, without the advantages of a specially ventilated section which such animals require. All captive lung-breathing marine mammals exhibited indoors, should be separ-

ated from visitors by a plate glass partition, where a lower temperature and special ventilation would insure their safety. This is of course not possible in the present building.

The motion pictures of porpoises obtained by the Society's expedition to Hatteras, and exhibited at the Annual Meeting of the Society and at the Reception at the Aquarium, have been sold for a sum equal to the cost of securing them, a profitable arrangement for the Zoological Society.

Exchanges of specimens were made with the Aquariums in Detroit and Philadelphia, and with the New York Conservation Commission.

A full list of donations to the collections and to the library will be found under the heading *List of Gifts.*

REPAIRS AND IMPROVEMENTS.

Under this heading may be mentioned repairs to furnace walls, replacing of boiler tubes, repairs to refrigerating plant and to skylights, all at moderate cost; other repair items were mostly of minor importance.

An addition of pure sea water, brought in from Sandy Hook Lightship, was made to the reservoir, and some additional rockwork of a decorative character was placed in the tanks.

The exterior of the Aquarium is and always has been most unsightly. It could be somewhat improved by recoating with the ordinary brown stone preparation, but funds have not been available for the work.

AQUARIUM PUBLICATIONS.

The various publications relative to the work of the Aquarium which were sold during the year, yielded the sum of $679.06, which will be applied to the publication fund of the Aquarium.

These documents include the New York Aquarium Nature Series, mostly pamphlets; the Aquarium numbers of the *Zoological Society Bulletin;* post cards and poster stamps. The fund now has a balance of $1,744.73.

SCIENTIFIC INVESTIGATION.

The Aquarium has continued to supply investigators with material for work in various fields of biology and to provide laboratory room as far as the limited space of the present build-

ing permits. It is thus possible to aid in the furtherance of research far beyond anything that could be done directly by the staff of the Aquarium. With an adequate building there is no reason why the Aquarium should not become one of the centers for biological research dealing with aquatic life. Unfortunately we are at present so greatly hampered for space that it is impossible to accommodate much of this work within the walls of the institution.

Dr. G. A. MacCallum has continued his studies on the parasites and diseases of the fishes in the Aquarium. This work, carried on in connection with the Departments of Pathology and Bacteriology of the College of Physicians and Surgeons of Columbia University, has brought to light some very interesting cases of fish diseases. Some of these have been tested out by experiments and found to be due to pathogenic bacteria and to be directly infectious.

In regard to animal parasites, Dr. MacCallum has found that ninety per cent of the angel-fishes and butterfly-fishes succumbed to the attacks of parasitic trematode worms of the genus *Microcotyle*. These minute worms infest the gills and not only impede the access of water by the production of slime, but suck the blood of the fishes to such an extent that a fatal anæmia ensues. In the same way many of the salmonoid fishes are infested in the gill regions by species of trematodes of the family *Octocotylidæ*.

On the other hand internal parasites are found to be much less common than among wild fishes, the conditions in captivity apparently tending to reduce their number very greatly. The exception to this is found in the case of the striped bass (*Roccus lineatus*) in which a parasitic round, or nemotode, worm (*Echinorhynchus proteus*) is sometimes found in such numbers as to cover the whole of the intestinal mucosa causing intense inflammation and preventing the proper functioning of the intestine. However, this seems to be less fatal than the gill infections referred to above.

The protozoan parasites known as *Myxosporidia* are found to be much less common than in fishes from outside waters though occasionally the ulcers and tumor-like swellings produced by these parasites are found in the skin, in the muscles and in the internal organs. But few cases of death have been found traceable to this cause in the Aquarium. The fishes most fre-

quently affected were perches, flounders, alewives, smelts, hakes and pickerels.

Fishes that have died in captivity are frequently found on autopsy to have a greatly distended gall bladder sometimes with a general jaundiced condition due to the closure of the bile duct either by inflammation or occasionally by parasites.

A few cases of thyroid tumor have been found and fibrous tumors have also been noted. Several cases of disease of the jaws and other parts of the mouth, attended by the complete destruction of the soft tissues laying the bony structures bare, are obscure as to the cause and have not yet been thoroughly studied.

While such investigations made here and elsewhere may be considered as only in the preliminary stage, enough has been done to indicate that fishes suffer from many kinds of diseases and to show also that the Aquarium is a fertile field for the study of such diseases. It has been shown that while confinement is conducive to the development and spread of certain parasites, in other cases the parasites appear to be unable to withstand the conditions of confinement as well as their hosts. It is unsafe as yet to draw any conclusions as to the comparative frequency of disease in fishes in the Aquarium and in outside waters. Parasites and diseases are common in nature, but to what extent they affect wild fishes is difficult to say, for the reason that when such fishes are weakened by whatever cause they readily fall a prey to their enemies and disappear. Under the protected conditions of the Aquarium they remain for observation.

In the early part of the year Dr. George G. Scott of the College of the City of New York, was provided with laboratory space and material for conducting his researches on the constitution of the blood of fishes and on respiration and asphysia.

The Whale Shark.—Prof. E. W. Gudger of the State Normal College at Greensboro, N. C., a collaborator of the U. S. Bureau of Fisheries, and the Carnegie Institution of Washington, submitted an important paper on the Whale Shark. The document was heartily recommended by the director, and was accepted by the Executive Committee for publication, with illustrations, in *Zoologica.*

A brief account of the whale shark was published in the *Zoological Society Bulletin* for November, 1913. This, the largest of all fishes, exceeding fifty feet in length, is known to sci-

ence from less than a dozen specimens. One of these, captured in Florida waters in 1912, was carefully studied by Prof. Gudger, who includes in his paper such limited information as exists respecting other captures of this remarkable shark.

Dr. Sergius Morgulis is at present conducting at the Aquarium an extended investigation into the nutrition of fishes for the United States Bureau of Fisheries. For this work Dr. Morgulis has been provided with laboratory space and tanks necessary for the pursuit of the work.

Dr. W. H. Bates has been supplied with material and working space for his studies on the physiology and mechanism of accommodation in vision. In the course of his experiments Dr. Bates has examined the eyes of numerous species of fishes in the Aquarium. A short paper in the November, 1914, *Bulletin* explains in a simple way some of the results of these studies.

Profs. George S. Huntington and H. von W. Schulte of the Department of Anatomy of the College of Physicians and Surgeons have conducted the autopsies on the porpoises and other mammals that have died during the past year. In all cases pulmonary trouble seems to have been the immediate cause of death.

As in former years the Aquarium has assisted many of the public school teachers to establish balanced salt water aquaria for the instruction of their classes. Sea water and sea lettuce (ulva) are supplied together with sea anemones, shrimps, hermit crabs, snails and whatever may be in stock at the time of the request. The Aquarium has been at practically no expense in this matter as the material has been brought in by our own collector along with other things. These aquaria have been much appreciated by the teachers.

In addition to this some living material has also been supplied to the College of the City of New York, Cornell Medical College, The College of Physicians and Surgeons and Columbia University for purposes of research.

BIOLOGICAL WORK IN LONG ISLAND SOUND.

The steamer *Fish Hawk*, one of the vessels of the U. S. Bureau of Fisheries, was detailed in June and July for a biological reconnaisance in Long Island Sound.

This work was placed under the supervision of Dr. C. B. Davenport, Director of the Marine Laboratory at Cold Spring Harbor, and Dr. C. H. Townsend, Director of the Aquarium.

By authority of the Bureau and with the permission of the Zoological Society, Dr. Townsend had personal charge of the vessel.

The investigations were undertaken for the purpose of ascertaining the character, distribution and abundance of animal life on the bottom, a work never before attempted in the western part of the Sound. Seventy hauls were made with the beam trawl, and at each dredging station occupied, the temperature and salinity of the water were recorded at both surface and bottom.

The animal collections consisted largely of crustaceans, bottom fishes, mollusks and starfishes, in about the order named. Among the fishes, flounders predominated and were abundant enough to be worth taking for market by trawling vessels.

The work was confined to the deeper central portion of the Sound from New York to Bridgeport.

Among the invertebrates were spider crabs, rock crabs, hermit crabs, large whelks, starfishes and an abundance of small mollusks.

Among the fishes there were, in addition to flounders, many small hake and a few large ones, but the beam trawl is not well adapted for taking fishes other than the more sluggish bottom species.

The dredgings show the conditions existing in midsummer only; winter conditions would be different when the fishes and invertebrates of the shore region descend into deeper water.

The collections made by the Fish Hawk were largly identified on board, the balance being landed at the Cold Spring Harbor Laboratory for further examination by Dr. Davenport and at the Aquarium by Dr. R. C. Osburn.

All dredging stations were plotted on charts, and studies of the material obtained are practically ready for publication. The work in general has a fishery interest. Numerous fishes and invertebrates were saved alive for exhibition at the Aquarium.

ATTENDANCE.

The following table shows the attendance for 1914, by months:

January visitors	100,783	Daily average	3,251
February "	100,024	" "	3,572

March	"	.....	127,092	"	"	.....	3,928
April	"	.....	147,631	"	"	.....	4,921
May	"	.....	253,994	"	"	.....	8,193
June	"	.....	216,872	"	"	.....	7,229
July	"	.....	267,234	"	"	.....	8,623
August	"	.....	276,885	"	"	.....	8,931
September	"	.....	206,564	"	"	.....	6,663
October	"	.....	151,447	"	"	.....	4,885
November	"	.....	114,006	"	"	.....	3,800
December	"	.....	72,075	"	"	.....	2,325
Total	"	.....	2,029,707	"	"	.....	5,560
Total for 18 years							36,969,215

The number of persons annually visiting the Aquarium has been slowly increasing for some years and in 1913 amounted to 2,205,729. There has been a falling off in visitors for the past five months, which although scarcely noticeable to the employees, is indicated by the records kept by the doorman. The attendance for 1914, was 2,029,707, a decrease of 176,022, as compared with 1913. This decrease may safely be attributed to conditions resulting from the war in Europe. It is well known that transatlantic travel has been greatly reduced. The decrease in the number of persons visiting New York enroute to Europe, and the remarkable drop in immigration have both affected the Aquarium in the matter of visitors and may be expected to do so for some time to come.

During the year 1,599 specimens were purchased by the New York Zoological Society as follows:

Two Yellow-finned Angelfishes, 5 French Angelfishes, 9 Spadefishes, 4 Queen Angelfishes, 70 Blue Angelfishes, 58 Black Angelfishes, 11 Gray Snappers, 26 Spot Snappers, 13 Dog Snappers, 1 Grunt, 32 White Grunts, 17 Gray Grunts, 8 Yellow Grunts, 1 Brown Grunt, 30 Rainbow Parrotfishes, 13 Blue Parrotfishes, 1 Mud Parrotfish, 2 Red Snappers, 19 Blue Striped Grunts, 17 Triggerfishes, 5 Queen Triggerfishes, 13 Yellow-finned Groupers, 26 Nassau Groupers, 7 Red Groupers, 3 Black Groupers, 14 Red Hogfishes, 1 Spanish Hogfish, 9 Grass Porgies, 9 Jolt-head Porgies, 3 Green Morays, 3 Spotted Morays, 1 Brown Moray, 22 Rock Hinds, 6 Red Hinds, 1 Hind, 1 Amberfish, 1 Sandfish, 3 Scamp, 11 Margate, 2 Ladderfishes, 71 Porkfishes, 6 Shark Suckers, 1 Pudding Wife, 4 Croakers, 11 Cowfishes, 19 School-masters, 9 Muttonfishes, 1 Flying Curnard, 1 Coney, 6 Pompano, 4 Surgeonfishes, 1 Alligator Gar, 15 Squirrelfishes, 1 Slimy Toadfish, 2 Spiny Boxfishes, 2 Sturgeons, 2 Scorpionfishes, 4 Butterflyfishes, 79 Sunfishes, 16 Large-mouthed Black Bass, 5 Catfishes, 2 White Bass, 3 Crappie, 1 Short-nosed Gar, 1 Fresh-water Drumfish, 98 African Fishes, 7 African Catfishes (2 Var.), 1 Ladyfish, 1 Black Rockfish, 2 Graysby, 6 Jewfishes, 2 Common Rockfishes, 11 Yellow Tails, 17 Trunkfishes, 11 Sea Catfishes, 2 Bream, 1 Blue Tang, 4 Chubbs, 3 Puffers, 2 Jacks, 2 Yellow Mackerel, 10 Filefishes, 1 Sheepshead, 1

Cobia, 25 Sergeant Majors, 12 Beau Gregory, 1 Tarpon, 1 Grouper, (*Dermatolepis marmoratus*), 2 Octopi, 16 Stone Crabs, 252 Fiddler Crabs, 59 Spiny Lobsters, 1 Alligator Snapping Turtle, 35 Map Turtles, 7 Soft-shelled Turtles, 6 Muhlenberg Turtles, 4 Water Snakes, 241 Seahorses, 1 Snapping Turtle, 1 Box Crab, 8 Hermit Crabs, 1 Horse Conch, 1 Giant Lobster, 1 Harbor Porpoise (*Phossena*), 1 Porpoise (*Delphinus*), 1 Leather-back Turtle, 1 Rock Crab.

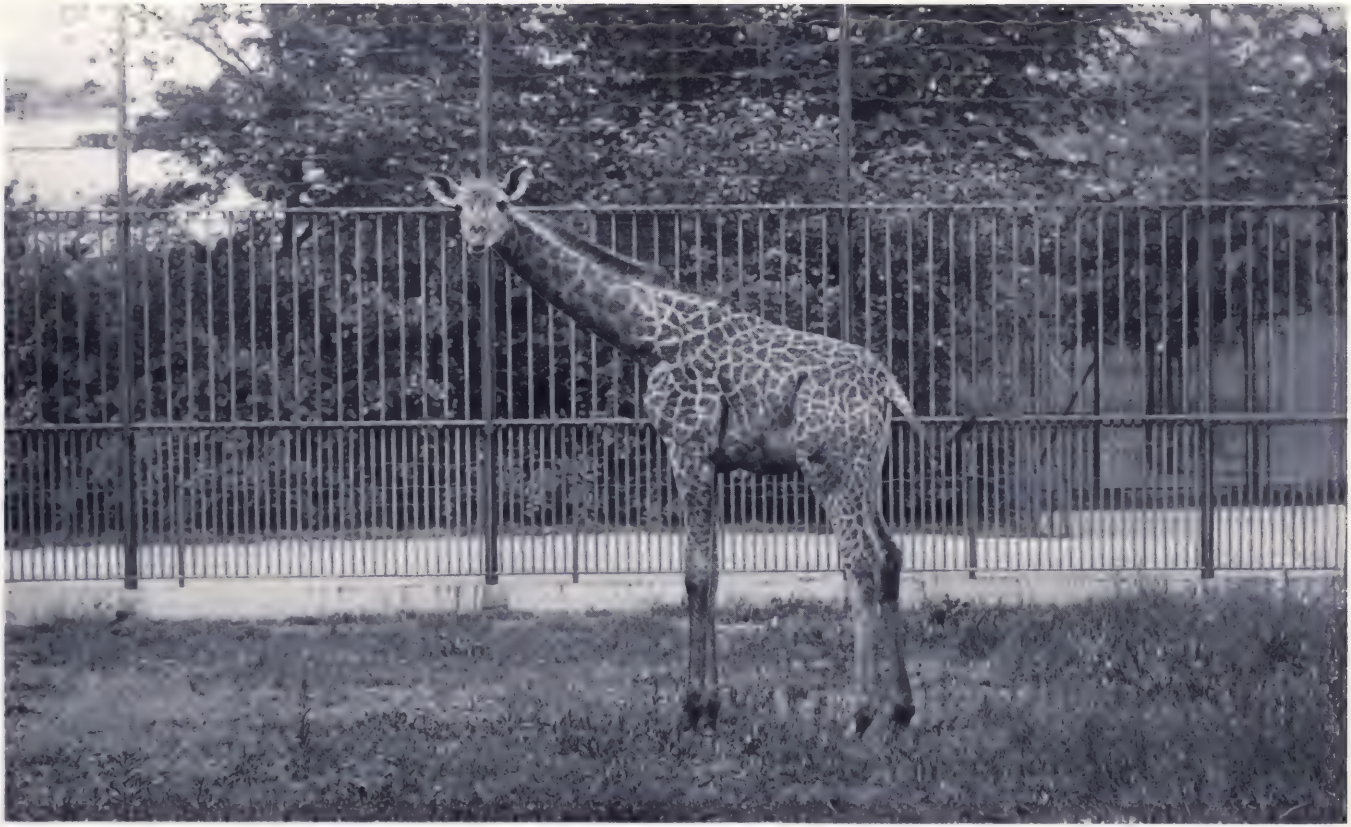
In the same period 591 specimens were donated to the New York Zoological Society as follows:

Seventeen Alligators, 2 Albino Catfishes, 15 Painted Turtles, 5 Diamond-back Terrapin, 2 Box Turtles, 2 Green Turtles, 2 Channelled Whelk, 15 Blue Angelfishes, 1 Surgeonfish, 3 Coneys, 13 Squirrelfishes, 5 Blue-striped Grunts, 2 Mud Parrotfishes, 11 Red Hinds, 7 Nassau Groupers, 3 Spiny Lobsters, 3 Bream, 3 Red Salamanders, 1 Wood Turtle, 14 Loggerhead Turtles, 3 Bull Frogs, 1 Seahorse, 1 Hawksbill Turtle, 1 Cumberland Turtle, 1 Box Tortoise, 2 German Frogs, 1 Crayfish, 6 Marbled Salamanders, 14 Common Goldfishes, 1 Comet Goldfish, 2 Lion-head Goldfishes, 2 Devil-eyed Goldfishes, 1 Celestial Goldfish, 2 Black-Dragon-eyed Goldfishes, 1 Calico Telescope Goldfish, 1 Mottled Goldfish, 1 Tiger Telescope Goldfish, 3 Fringe-tailed Goldfishes, 7 East Indian Shubunkins, 7 Spotted Turtles, 6 Tree Toads, 1 Horseshoe Crab, 2 Chameleons, 2 Brazilian Turtles, 2 Sea Lions, 54 Rock Bass, 28 Sunfishes, 35 Suckers, 4 Catfishes, 8 Pickerel, 1 Snapping Turtle, 6 Whitefishes, 12 Pike Perch, 4 Burbot, 8 Red-Horse Suckers, 18 White Catfishes, 14 Spotted Catfishes, 14 White Bass, 90 Brook Trout, 20 Spur Frogs, 2 *Platyposes*, 2 *Xiphophorus*, 2 *Boscilia sponops*, 30 Rainbow Trout, 42 Calico Bass.

The total of 2,190 specimens were received during the year by purchase and donation.

Respectfully submitted,

C. H. TOWNSEND,
Director.



BLOTCHED GIRAFFE

Treasurer's Report

FOR THE YEAR ENDING DECEMBER 31, 1914.

RECEIPTS AND EXPENDITURES

OF THE

Income Account

Schedule 1.

Unexpended Balance as of December 31, 1913:		
Available for expenditure during 1914	$14,949.53	
Received from Sustaining Memberships in advance for 1915, 1916, 1917, 1918	160.00	
Investments:		
$7,000 New York, Lackawanna & Western Terminal 4% Bonds	6,930.00	$22,039.53
RECEIPTS.		
Annual Dues	$16,439.98	
Sustaining Memberships	840.00	
Special Subscriptions:		
Oil Paintings of American Wild Game $3,750.00		
Miscellaneous 20.00	3,770.00	
Transfer from Endowment Fund Income Account	14,070.00	
Interest on balances	648.92	
Interest on investments	280.00	36,048.90
		$58,088.43
EXPENDITURES.		
Annual and separate Reports	$ 2,320.72	
Bulletin	2,387.21	
Photographs and slides	1,180.29	
Preparation and mailing of circulars	440.80	
Zoologica	1,018.13	
Cost of distribution of publications	136.00	
Expenses, Annual Meeting	746.20	
Expenses of Receptions	1,096.95	
Treasurer's office expenses	1,010.05	
General office expenses	3,173.72	
Salary of Secretary	5,000.00	
Aquarium expenses	120.00	
Office supplies and printing	2,006.08	
Aquarium specimens	1,792.99	
Wild Life Fund (Transfer)	500.00	
Salary of Assistant Secretary	750.00	
Insurance	257.50	
Aid to employees	485.00	
Oil paintings of American Wild Game	3,200.00	
Engineering expenses	919.00	
Audits of accounts	850.00	
Employer's insurance	766.24	
Collection of Heads & Horns (Publications & Labels)	52.75	
Pension Fund Income Account, Payment for period Aug. 1 to Dec. 31, 1914	1,795.12	
Laboratory for Curator of Birds	1,256.13	
Miscellaneous expenses	2,908.67	36,169.55
Carried forward		$36,169.55

Brought forward		$36,169.55
Unexpended balance as of December 31, 1914:		
Available for expenditure during 1915	$15,858.88	
Received from Sustaining Memberships in advance for 1916, 1917, 1918	120.00	15,978.88
Investments:		
$6,000 New York, Lackawanna & Western Terminal 4% Bonds (One bond sold during year for $990.)		5,940.00
		$58,088.43

H. R. MITCHELL,
Chief Clerk.
January 1, 1915.

PERCY R. PYNE,
Treasurer.

Maintenance Fund

ZOOLOGICAL PARK

Schedule 2.

RECEIPTS.

Received from the City on account of Park Maintenance Appropriation of $200,000.00 for the year	$176,156.77	
Due from the City on account of Park Maintenance Appropriation	23,843.23	$200,000.00

EXPENDITURES.

Maintenance of buildings and care of collections	$ 53,817.00
Maintenance and care of grounds	52,917.20
General administration	18,892.36
Food for animals	40,420.38
Fuel	13,117.65
Lumber	1,875.61
Uniforms and badges	1,762.00
Hardware	1,556.47
Hire of horses and vehicles	1,551.00
Electric service	1,544.38
Paints and oils	1,234.92
Miscellaneous supplies	1,084.05
Office supplies	860.46
Telephone service	765.87
Stationery and printing	745.90
Miscellaneous equipment	713.53
Miscellaneous materials	709.87
Plumbing materials	600.84
Janitors' supplies	511.36
Tools and machinery	399.13
Office furniture and fittings	391.50
Expressage and deliveries	385.83
Fuel oil and gasoline	359.87
Disinfectants	357.95
Glaziers' supplies	266.46
Apparatus and machinery repairs	265.63
Janitors' equipment	237.15
Medical attendance (employees)	220.00
Steel and iron	210.81
Furnace repairs	207.89
Carried forward	$197,983.07

Brought forward	$197,983.07	
Bolts, nails and hardware	206.21	
Drugs and medicines	201.61	
Sand, cement and brick	184.33	
Rubber hose	179.63	
Sanitary service	168.00	
Painting labels	136.00	
Lubricating oils	124.87	
Nursery stock and seeds	122.20	
Painters' equipment	120.91	
Harness and vehicle repairs	115.65	
Fencing and netting	93.27	
Park baskets	90.00	
Telegraph, cable and messenger service	55.82	
Nursery supplies	46.50	
Electrical supplies	28.30	
Engineering supplies	23.22	
Awnings and shades	20.00	
Gas service	19.84	
Medical and surgical supplies	18.17	
Laundry service	17.16	
Surgical instruments	15.74	
Ice	12.80	
Miscellaneous expenses	9.20	
Mats and floor coverings	7.50	$200,000.00

H. R. MITCHELL,
Chief Clerk.
January 13, 1915.

PERCY R. PYNE,
Treasurer.

Ground Improvement Fund

Schedule 3.

Unexpended balance as of December 31, 1913:		
Grading Concourse, Planting, New Walks, etc.	$ 413.90	
Furnishings and Fittings for Administration Building	349.87	
Erection of Bear Dens, Removal of Moose House, Yak Shelter and Yards	67.76	
Erection and Equipment of Power Plant and Work Shops	830.12	
Development East of Bronx River	7,648.25	
Construction of Hospital Building	7,518.32	
Construction of Fences and Other Permanent Improvements	5,253.80	$22,082.02

EXPENDITURES.

By the Zoological Society:		
Grading Concourse, Planting, New Walks, etc.:		
Administration Building	$ 56.28	
Reconstruction of walks	127.67	
Miscellaneous	152.48	$336.43
Carried forward		$336.43

Brought forward		$336.43	
Erection of Bear Dens, Removal of Moose House, Yak Shelter and Yards:			
Yak Shelter and Yards		66.00	
Erection and Equipment of Power Plant and Work Shops		26.00	
Developments, East of Bronx River		14.10	
Construction of Fences and Other Permanent Improvements:			
Forestry and planting	549.57		
Yak shelter and yards	628.77		
Guard Rails	12.00		
West Farms Block	24.00		
Concrete benches	224.81		
Installing new puma cage	215.07		
Grading around pavilion east of Bronx River	98.25		
Changing location of scale	205.93		
Miscellaneous	1,682.00	3,640.40	4,082.93
By the Zoological Society through Park Dept.:			
Grading Concourse, Planting, New Walks, etc.:			
Administration building	$ 42.41		
Reconstruction of walks	21.75	64.16	
Furnishings and fittings for Administration Building		345.87	
Erection and equipment of Power Plant and Work Shops		712.93	
Construction of Fences and Other Permanent Improvements:			
Yak Shelter and yards	$ 695.21		
West Farms Block	147.95		
Concrete benches	61.76		
Changing location of scale	146.47		
Miscellaneous	525.00	1,576.39	2,699.35
Through Park Department:			
Contract, Elton Contracting Co., Pavilion east of Bronx River		$ 7,323.00	
Miscellaneous expenditures through Park Dept.		311.15	
Unexpended balances rescinded by City		2.16	7,636.31
Balance available for expenditure, December 31, 1914:			
Construction of Hospital Building		$ 7,518.32	
Erection and Equipment of Power Plant and Work Shops		91.19	
Construction of Fences and Other Permanent Improvements		34.40	
Miscellaneous items to be rescinded by the City		19.52	7,663.43
			$22,082.02

H. R. MITCHELL,
Chief Clerk.
January 1, 1915.

PERCY R. PYNE,
Treasurer.

Animal Fund

Schedule 4.

Unexpended balance as of December 31, 1913:		
Cash in Bank	$20,241.36	
Cash on hand	100.00	$20,341.36
RECEIPTS.		
Admissions (Jan. 1 to June 30, 1914)	$ 3,831.15	
Checking	35.60	
Miscellaneous	46.75	
Sale of Animals	1,012.00	
Boating, account 1914 receipts	3,000.00	
Privilege Account, account 1914 receipts	11,500.00	
Rocking Stone Restaurant, account 1914 receipts	1,000.00	20,425.50
		$40,766.86
EXPENDITURES.		
Mammals	$16,231.73	
Birds	6,541.95	
Reptiles	1,585.30	
Insect collection	61.62	24,420.60
Express and other charges	$ 1,205.64	
Travelling and other expenses	795.35	2,000.99
Improvement and Repair Account, Transfer of Park Admissions (Jan. 1 to June 30, 1914)		3,831.15
Unexpended balance as of December 31, 1914:		
Cash in Bank	$10,414.12	
Cash on hand	100.00	10,514.12
		$40,766.86

H. R. MITCHELL,
Chief Clerk.

PERCY R. PYNE,
Treasurer.

January 1, 1915.

Stokes' Bird Fund

Schedule 5.

Unexpended balance as of December 31, 1913	$ 266.69	
Investment: $5,000 Illinois Central Railway 4% Gold Bonds	5,056.46	5,323.15
RECEIPTS.		
Interest on investment		200.00
		$5,523.15
EXPENDITURES.		
Preservation of bird life		332.00
Carried forward		$332.00

Brought forward		$332.00
Investment: $5,000 Illinois Central Railway 4% Gold Bonds	$ 5,056.46	
Unexpended balance as of December 31, 1914	134.69	5,191.15
		$5,523.15

H. R. MITCHELL,
Chief Clerk.
January 1, 1915.

PERCY R. PYNE,
Treasurer.

National Collection of Heads and Horns

Schedule 6.

Unexpended balance as of December 31, 1913		$ 579.00

RECEIPTS.

Special Subscriptions:

John J. Paul	$ 15.00	
Wm. R. Coe	10.00	
Henry A. Caesar	5.00	
John T. Pirie, Jr.	5.00	
W. H. Chase	5.00	40.00
		$ 619.00

EXPENDITURES.

Miscellaneous expenses	$ 76.50	
Heads and horns	232.13	
Express and other charges	30.10	338.73
Unexpended balance as of December 31, 1914		280.27
		$ 619.00

H. R. MITCHELL,
Chief Clerk.
January 1, 1915.

PERCY R. PYNE,
Treasurer.

Library Fund

Schedule 7.

Unexpended balance as of December 31, 1913:		$ 487.72
No receipts during 1914		

EXPENDITURES.

Books, pamphlets, etc.	$ 207.00	
Subscription to periodicals	134.15	341.15
Unexpended balance as of December 31, 1914		146.57
		$ 487.72

H. R. MITCHELL,
Chief Clerk.
January 1, 1915.

PERCY R. PYNE,
Treasurer.

Maintenance Fund

AQUARIUM

Schedule 8.

RECEIPTS.

Received from the City on account of Aquarium Maintenance Appropriation of $47,000.00 for the year	$ 43,790.11	
Due from the City on account of Aquarium Maintenance Appropriation	3,205.42	
Unexpended balance	4.47	$47,000.00

EXPENDITURES.

Salaries	$ 32,841.86	
Fish Food	2,474.11	
Fuel	4,647.76	
Office supplies	126.67	
Laundry, cleaning and disinfecting supplies	91.18	
Refrigerating supplies	145.32	
General plant supplies	549.68	
Office equipment	26.00	
General plant equipment	1,060.12	
General plant materials	469.37	
Repairs	2,469.11	
Lighting	1,530.11	
Expressage	267.43	
Telephone	163.86	
Contingencies	132.95	
Unexpended balance	4.47	$47,000.00

ROBERT SUTCLIFFE,
Clerk.

PERCY R. PYNE,
Treasurer.

January 21, 1915.

New Building Fund

AQUARIUM

Corporate Stock, C. D. P. No. 92.

Schedule 8-A.

Construction of Foundations and Wall of Wings, New York Aquarium, Battery Park.

Balance on hand as per last report	$ 466.12

EXPENDITURES.

Rescinded by Board of Estimate and Apportionment, January 23, 1914	366.12
Balance available, December 31, 1914	100.00
	$ 466.12

MORRIS MAYER,
Bookkeeper, Department of Parks, Manhattan and Richmond.

January 1, 1915.

Endowment Fund

Schedule 9.

Funds as of December 31, 1913:		
Cash in Bank	$ 1,886.52	
Investments at cost	316,832.50	
Balance due by Endowment Fund Income Account	343.78	$319,062.80

RECEIPTS.

Special Subscription:		
Mortimer L. Schiff		$ 1,000.00
Subscriptions received through Ladies' Auxiliary:		
Mrs. Andrew Carnegie	$ 250.00	
Mrs. Wm. G. Nichols	200.00	
Mrs. Wm. Church Osborn	100.00	
Mrs. Cleveland H. Dodge	100.00	
Mrs. Joseph Pulitzer	100.00	
Mrs. Hamilton Fish	50.00	
Mrs. Cabot Ward	50.00	
Mrs. Finley J. Shepard	25.00	
Mrs. Henry R. Hoyt	25.00	
Miss Elvine Richard	25.00	
Mrs. Charles D. Dickey	25.00	
Mrs. Frank S. Witherbee	25.00	
Miss S. Grace Fraser	25.00	
Miss Jane K. Fraser	25.00	
Mrs. Edwin Henry Weatherbee	25.00	
Mrs. L. P. Bayne	15.00	
Mrs. C. C. Stillman	10.00	
Arthur George Sedgwick	10.00	
Miss Jean Walker Simpson	5.00	
Miss Marie F. C. Stockmann	5.00	
Miss Eliza O'B. Lummis	5.00	1,100.00
Life Memberships		2,800.00
		$323,962.80

Investments as of December 31, 1914, at cost:		
$20,000 Westchester Racing Association 5% First Mortgage Bonds	$ 20,000.00	
3,000 Second Mortgage, Clara N. Gibert and others, 6% over land and buildings, Broadway and 17th Street	3,000.00	
5,000 Colorado & Southern 4% Bonds	4,750.00	
5,000 Michigan Central R. R. Co. 4% Bonds	4,950.00	
10,000 New York City 1957 4% Corporate Stock	9,925.00	
10,000 New York City 1957 4% Corporate Stock	9,962.50	
20,000 New York City 1958 4% Corporate Stock	19,875.00	
10,000 New York City 1958 4% Corporate Stock	9,962.50	
10,000 St. Paul, Minneapolis & Manitoba 4% Bonds	9,800.00	
50,000 U. S. Steel Sinking Fund 5% Bonds	51,812.50	
50,000 American Telephone & Telegraph 4% Bonds	45,000.00	
25,000 Rhode Island Suburban Ry. Co. 4% Bonds	21,250.00	
20,000 Chicago & Northwestern Ry. Co. General Mortgage 4% Bonds	19,750.00	
Carried forward	$230,037.50	

Brought forward	$230,037.50	
20,000 Vandalia Railroad Co. Consolidated Mortgage 4% Bonds	19,400.00	
5,000 Missouri & Illinois Bridge & Belt R. R. Co. 1st Mortgage 4% Bonds	5,000.00	
10,000 Chicago, Milwaukee & Puget Sound, 1st Mortgage 4% Bonds	9,525.00	
12,000 Chicago, Milwaukee & Puget Sound, 1st Mortgage 4% Bonds	11,250.00	
4,000 New York, Lackawanna & Western 4% Terminal Improvement Bonds	3,960.00	
20,000 Milwaukee, Sparta & Northwestern 1st Mortgage 4% Bonds	18,900.00	
25,000 New York & Westchester Lighting Company, General Mortgage 4% Gold Coupon Bonds	19,750.00	
1,000 Morris & Essex R. R. 3½% Bond	876.25	
5,000 Illinois Central & Chicago, St. Louis & New Orleans joint 5% Bonds	5,000.00	323,698.75
Uninvested balance December 31, 1914		264.05
		$323,962.80

H. R. MITCHELL,
Chief Clerk.
January 1, 1915.

PERCY R. PYNE,
Treasurer.

Endowment Fund Income Account

Schedule 10.

Unexpended balance as of December 31, 1913	$ 6,544.68	
Less due to Endowment Fund	343.78	$ 6,200.90

RECEIPTS.

Interest collected from Endowment Fund Investments	14,075.42
	$20,276.32

EXPENDITURES.

Transferred to Income Account	14,070.00
Unexpended balance as of December 31, 1914	6,206.32
	$20,276.32

H. R. MITCHELL,
Chief Clerk.
January 1, 1915.

PERCY R. PYNE,
Treasurer.

Cadwalader Animal Fund

Schedule 11.

RECEIPTS.

Bequest from John L. Cadwalader, deceased	$ 20,000.00
Interest on investment	188.89
	$20,188.89

EXPENDITURES.

Investment:	
$20,000 (at par) Illinois Central and Chicago, St. Louis & New Orleans joint 5% bonds	$ 20,000.00
Unexpended balance as of December 31, 1914	188.89
	$20,188.89

H. R. MITCHELL,
Chief Clerk.
January 1, 1915.

PERCY R. PYNE,
Treasurer.

Wild Life Fund

Schedule 12.

RECEIPTS.

Transferred from Income Account, January 1, 1914		$ 500.00
Sale of "Our Vanishing Wild Life"		725.56
		$ 1,225.56

EXPENDITURES.

Virginia Game Law	$ 100.00	
Telegraph and express	126.91	
Director's Emergency Fund for Wild Life Protection	400.00	
Miscellaneous expenses	81.20	708.11
Unexpended balance as of December 31, 1914		517.45
		$ 1,225.56

H. R. MITCHELL,
Chief Clerk.
January 1, 1915.

PERCY R. PYNE,
Treasurer.

Improvement and Repair Account

Schedule 13.

RECEIPTS.

Transferred from Animal Fund, July 28th, 1914, Gate Receipts Jan. 1 to June 30, 1914		$ 3,831.15
Gate Receipts, July 1 to Dec. 31, 1914	$ 6,655.60	
Miscellaneous receipts	20.25	6,675.85
		$10,507.00

EXPENDITURES.

Outside gorilla cage	$ 201.90
Bear dens	586.32
Primates house	2,864.55
Resurfacing walks	967.41
Reptile house	657.53
Flying cage	918.53
Buffalo barn	742.60
Heating repairs	338.00
Guard rails	271.95
Carried forward	$7,548.79

Brought forward	$7,548.79	
Lion house	1,570.04	
Miscellaneous	118.98	9,237.81
Unexpended balance as of December 31, 1914		1,269.19
		$10,507.00

H. R. MITCHELL,
Chief Clerk.
January 1, 1915.

PERCY R. PYNE,
Treasurer.

Carnegie Pension Fund

Schedule 14.

RECEIPTS.

Special Subscription:	
Andrew Carnegie	$100,000.06

EXPENDITURES.

Investments at cost:		
$25,000 Philadelphia & Baltimore 1st Mortgage 4% Gold Bonds	$23,250.00	
25,000 Lehigh Coal & Navigation 4½% Bonds	24,875.00	
25,000 Illinois Central 4% Bonds	23,062.50	
5,000 Morris & Essex 3½% Bonds	4,373.75	
25,000 Chicago & Northwestern 4% Bonds	23,687.50	99,248.75
Adjustment of interest on bonds at time of purchase		3.11
Uninvested balance as of December 31, 1914		748.14
		$100,000.00

H. R. MITCHELL,
Chief Clerk.
January 1, 1915.

PERCY R. PYNE,
Treasurer.

RECEIPTS AND EXPENDITURES

OF THE

Pension Fund Income Account

Schedule 15.

RECEIPTS.

Interest on Carnegie Pension Fund Investments	$ 1,490.51	
Interest on uninvested balance, Farmers Loan and Trust Company	47.70	
Society's payment for period Aug. 1 to Dec. 31, 1914	1,795.12	$ 3,333.33
Dues collected from Zoological Society employees		1,044.54
Interest on Bank Balance, "Pension Fund Income Account"		14.25
		$ 4,392.12

EXPENDITURES.

Refund of dues with accrued interest	$ 4.22	
Printing blank books and forms	124.30	
Clerical services	83.33	211.85
Carried forward		$211.85

Brought forward		$211.85
Unexpended balance as of December 31, 1914:		
Deposited with Farmers Loan & Trust Co.	$ 3,639.95	
Deposited with Corn Exchange Bank (Bronx)	540.32	4,180.27
		$ 4,392.12

PERCY R. PYNE,
Treasurer.

H. R. MITCHELL,
Asst. Treasurer,
In Charge of Pensions.
January 1, 1915.

U. S. A.
NEW YORK, 79 WALL STREET
BOSTON, 6 CONGRESS STREET
PHILADELPHIA, 1421 CHESTNUT STREET
WASHINGTON, 733 FIFTEENTH STREET, N.W.
NEW ORLEANS, 926 CARONDELET STREET
PITTSBURGH, 948 FOURTH AVENUE
CHICAGO, 108 SOUTH LA SALLE STREET
MILWAUKEE, PABST BUILDING, WISCONSIN STREET
ST. LOUIS, 417 PINE STREET CORNER BROADWAY
KANSAS CITY, 924 WALNUT STREET
ST. JOSEPH, 519 FRANCIS STREET
MINNEAPOLIS, 115 SOUTH FOURTH STREET
SALT LAKE CITY, WALKER BANK BUILDING
PORTLAND, 329 MORRISON STREET CORNER BROADWAY
SAN FRANCISCO, 310 CALIFORNIA STREET

CANADA
MONTREAL, 11 PLACE D'ARMES
TORONTO, 65 YONGE STREET
WINNIPEG, 211 PORTAGE AVENUE
MOOSE JAW, 505 WALTER SCOTT BLOCK
CALGARY, HERALD BUILDING, FIRST STREET, W.
VANCOUVER, 739 HASTINGS STREET, W.

EUROPE
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MARWICK, MITCHELL, PEAT & CO.

CHARTERED ACCOUNTANTS

PARTNERS
MARWICK, MITCHELL & CO. W. B. PEAT & CO.

79 WALL STREET

NEW YORK

Auditors' Certificate

We have audited the books and accounts of the New York Zoological Society for the year ended December 31, 1914, and certify that the foregoing Schedules "1" to "13" of cash receipts and expenditures are in accordance with the books, and correctly record the transactions relating to the Funds of the Society for the year 1914 and the condition of the various Funds as of December 31, 1914. Schedule "3" includes records of expenditures amounting to $2,699.35 and $7,636.31, made through the Park Department of the City of New York, and Schedule "8-A" an amount of $366.12 rescinded by the Board of Estimate and Apportionment of the City of New York; we have not verified the expenditures so made, but we have incorporated them in the statements submitted so that these may be complete. The subscriptions, donations and dues reported as received, and the income from investments, have been properly accounted for, and the securities and cash in bank and on hand at December 31, 1914, as shown in the accounts of the Funds presented herewith, have been duly checked and found in order.

We have audited also the books and accounts of the "Carnegie Pension Fund" and certify that Schedules "14" and "15" correctly record the cash receipts and expenditures relating thereto, and the condition of the Pension Fund and of the Pension Fund Income Account as of December 31, 1914. The securities and cash in bank as shown in the accounts have been duly checked and found in order.

MARWICK, MITCHELL, PEAT & Co.,
Chartered Accountants.

79 Wall Street, New York,
February 15, 1915.

Report of the Auditing Committee

OF THE

NEW YORK ZOOLOGICAL SOCIETY

New York, Feb. 20, 1915.

To The President and Board of Managers
Of The New York Zoological Society:

Dear Sirs:—

We beg to report we have examined the annual audit of the books and accounts of the New York Zoological Society for the year ending December 31, 1914, as made by Messrs. Marwick, Mitchell, Peat & Company, Chartered Accountants, and herewith submit the same to you as a complete and satisfactory audit of said books and accounts, including the Carnegie Pension Fund and the Pension Fund Income Account, all expenditures and receipts of the various accounts being clearly set forth, and it appearing that the cash on hand and at the various depositories has been verified and found correct, and all securities in which the funds of the Society are invested have been examined and found as reported.

Expenditures made through the Park Department of the City of New York have not been verified by this audit as such moneys have not passed through the hands of this Society, but are in due course checked and verified by the Comptroller of the City.

Respectfully submitted,

WILLIAM WHITE NILES,
Chairman.

LISPENARD STEWART,

H. CASIMIR DERHAM.

List of Gifts

TO THE ZOOLOGICAL SOCIETY

From January 1, 1914, to December 31, 1914.

TO THE ZOOLOGICAL PARK.

ABRAMOWITZ, MASTER LOUIS, New York City:
Wood Tortoise.

ACRES, P. H., Mamaroneck, N. Y.:
2 Gray Squirrels.

AMERICAN MUSEUM OF NATURAL HISTORY, New York City:
South American Gopher Tortoise.

ANDERSON, CAPTAIN, Steamer "Roman Prince," New York City:
Snowy Owl.

ANDREWS, C. G., S. S. "Philadelphia," New York City:
Wilson Petrel.

ARNSHEIMER, H., New York City:
European Song Thrush.

AVERELL, ELLIOTT, Brooklyn, N. Y. C.:
Sky Lark, Red Billed Hill-Tit.

AXIEN, MRS. G., New York City:
Canary.

BACON, W. C., Milbrook, Dutchess Co., N. Y.:
2 Sapajous.

BALDWIN, MRS. LOUISE, New York City:
Java Monkey.

BANNON, MRS. THOMAS J., New York City:
Maryland Yellow Throat.

BARNEWALL, A. V. R., Bocas del Toro, Republic of Panama:
14 Central American Frogs.

BARRS, GEORGE B., Roulette, Pa.:
Canadian Porcupine.

BECHTEL, W. A., New York City:
European Robin.

BECK, HENRY, Woodhaven, N. Y.:
2 Meadow Larks.

BECKER, JOHN F., Rochelle Park, N. Y.:
4 Sparrow Hawks.

BEDFORD, H. M., New York City:
Salamander, Dragon Lizard.

BEHAN, JAMES J., Otisville, N. Y.:
Great Horned Owl.

BELL, E. L., Flushing, N. Y.:
11 Florida Garter Snakes, 1 Gopher Snake, 8 Ground Snakes, 10 Ribbon Snakes, 10 Garter Snakes, 1 Ring-Neck, 2 Red Salamanders, 15 Moccasins, 3 Water Snakes, 1 Horned Toad, 4 Copperhead Snakes, 15 Black Snakes, 5 Dekay Snakes, 1 Milk Snake, 1 Pilot Black Snake. Total, 88 specimens.

BEROLZHEIMER, MASTER CHARLES, New York City:
2 Alligators.

BIRCH, H. G., Dan Creek, Alaska:
2 Franklin Spermophiles.

BIRCHALL, MRS. F. T., Kingsbridge, N. Y.:
Southern Palm Tanager.

BLACKBURN, MRS. A. H., Fishkill-on-Hudson, N. Y.:
15 Barbary Turtle Doves.

BONAT, MRS. L., Middletown, Newport, R. I.:
Gray Parrot.

Bostlik, Frank, New York City:
2 Tovi Parrakeets.
Boulger, Lewis, New York City:
Blue Jay.
Bowdish, B. S., Demarest, N. J.:
Greenfinch.
Britton, Mrs. N. L., New York City:
Raccoon.
Brodes, Master Arthur, New York City:
Painted Turtle.
Bronx Parkway Commission, New York City:
2 Snapping Turtles.
Brown, Barnum, Brooks, Alberta, Canada:
Lynx.
Bush, Horace G., Harriman, Orange County, N. Y.:
Gray Fox.
Caffarella, Master Anthony, New York City:
Box Tortoise.
Carpenter, Miss Alethea, Ossining, N. Y.:
1 Red-Billed Weaver, 1 Madagascar Weaver, 2 Bengalees, 1 Combasou, 1 Zebra Finch, 1 African Silver-Bill. Total, 7 specimens.
Carter, Mrs. W. H., New York City:
Red Fox.
Cassazza, Charles Joseph, New York City:
2 Box Tortoises.
Cattell, Master Owen, Garrison, New York:
Copperhead Snake, Hognosed Snake.
Cary, Mrs. William S., New York City:
Grass Parrakeet.
Chapin, Miss L., New York City:
Spotted Salamander.
Children's Museum (through Miss Anna B. Gallup, Curator), Bedford Park, Brooklyn, N. Y.:
1 Rat Snake, 2 Swifts, 1 Horned Lizard, 3 Collared Lizards.
Chemical Fire Engine Company, Mount Vernon, N. Y.:
Snapping Turtle.
Chinn, George, White Plains, N. Y.:
Lesser Sulphur-Crested Cockatoo.
Cohen, J. Francis, New York City:
Blue-Fronted Amazon Parrot.
Coe, M. S., New York City:
Linnet.
Conklin & Cummins, Goshen, N. Y.:
Barred Owl.
Clark, Master Carlos, New York City:
Snapping Turtle.
Craigie, Mrs. A. Walpole, New York City:
Flicker.
Crane, Mrs. Monroe, Dover Plains, N. Y.:
2 Blue-Fronted Amazon Parrots.
Cronemeyer, Miss Ethel, New York City:
Gopher Turtle.
Crowley, A. W., New York City:
Barbary Turtle Dove.
Cush, Dr. J. F., New York City:
Alligator.
Daley, G. Herbert, New York City:
Snapping Turtle.
Dashe, T. W., Arlington, N. J.:
2 St. Helena Waxbills.

DAY, A. GARNETT, New York City:
Green-Wing Macaw, Greater Razor Billed Curassow.
DEVRY, C. B., Lincoln Zoological Park, Chicago, Ill.:
Central American Boa.
DIESTAL, MIRIAM, Mount Vernon, N. Y.:
Alligator.
DITMARS, R. L., Scarsdale, N. Y.:
1 Blind Salamander (Adelsburg Cave), 1 Bird Spider, 1 Giant Grasshopper, 1 Hognosed Snake, 2 Black Snakes, 3 Ring-Necked Snakes, 1 Spiny Tenrec, 1 Long-Nosed Tenrec, 1 Argentine Armadillo, 1 Bennet Galago, 1 Greater Jerboas, 3 Rattlesnakes, 1 Black Snake, 1 Ring-Necked Snake, 1 Water Snake, 11 Garter Snakes, 1 Pilot Snake, 3 Milk Snakes, 1 Storer Snake, 1 Green Snake, 1 Greater Katydid. Total, 41 specimens.
DOWNER, L. DEF., New York City:
Brown Thrasher.
DUEL, DR. ARTHUR B., Holmes, N. Y.:
Great Horned Owl.
EDMONDSON, MASTER JOHN, New York City:
7 Dusty Salamanders, 15 Salamanders.
ELLIS, EDMUND AND GUILIAN, New York City:
Painted Turtle.
EGGELING, OTTO, New York City:
6 Cuarami Fish.
EIGHMIE, G. D., New York City:
Domestic Pigeon.
ENGELHARD, G. P., Brooklyn, New York:
3 Ameivas, 1 Anolis.
ENGINEERS OF THE BOARD OF WATER SUPPLY, Elmsford, N. Y.:
Black Snake.
ERWIN, R. P., Boise, Idaho:
Horned Lizard.
EUREKA FIRE HOSE COMPANY, New York City:
Lindheimer Snake.
FAIRBANKS, A. S., New York City:
Black Duck.
FARRINGTON, EDWIN R., Glendale, R. I.:
Green Snake.
FERRIS, MISS M. O., Westchester, N. Y.:
Alligator.
FITZPATRICK, MR., New York City:
Opossum.
FLECKENSTEIN, FRANK, New York City:
Cumberland Terrapin.
FOETY, MR., New York City:
Screech Owl.
FOODY, T. B., New York City:
1 Rattle Snake, 1 Black Snake, 11 Water Snakes, 2 Garter Snakes.
FOLSOM, MISS E. F., Lenox, Mass.:
Marmoset.
FOX, H. G., New Yor City:
Raccoon.
FRAMBACH, MRS. WILLIAM, Jersey City, N. J.:
South American Tortoise.
FRANK, MISS EDNA, New York City:
Northern Yellow Throat.
FREISINGER, MRS. GEORGE, New York City:
Ring-Tailed Sapajou.
FROST, A. D., Yonkers, N. Y.:
2 Wolves.

GAGE, MASTER JACKSON, Yonkers, N. Y.:
Opossum.

GANDING, F. J., Canajoharie, N. Y.;
Holbœll Grebe.

GATELY, MASTER JOHN, New York City:
Iberian Tortoise.

GENNUG, MISS EDITH W., Flushing, N. Y.:
Gopher Tortoise.

GILLAM, ARTHUR L., Flushing, N. Y.:
8 Ground Rattlesnakes, 10 Ribbon Snakes, 10 Florida Garter Snakes, 2 Garter Snakes, 15 Black Snakes, 15 Moccasins, 3 Water Snakes, 1 Horned Toad, 4 Copperhead Snakes, 16 Banded Water Snakes, 8 Banded Rattlers. Total, 92 specimens.

GILLETT, MRS. HENRY WEBSTER, New York City:
Fox Sparrow.

GLIMM, C. MONSEY, New York City:
Rhesus Monkey.

GOLDENBERG, I. M., New York City:
Raccoon.

GRAHAM, MISS B. A., Natchitoches, La.:
4 Fence Swifts, 1 Red-Headed Lizard, 1 Green Snake.

GRANNIS, HERMAN W., Yonkers, N.Y.:
Golden Pheasant.

GREEN, COL. E. H. R., New York City:
Opossum.

GREENLAW, R. W., New York City:
2 Horned Lizards.

GREVE, GEORGE, New York City:
19 Garter Snakes.

HALL, JR., FRANK A., New York City:
Silver Pheasant.

HANAN, 3RD, MASTER A. P., New York City:
2 Opossums.

HANSON ESTATE, New York City:
Barn Owl.

HART, MRS. L. M., New York City:
1 Grass Parrakeet, 1 Yellow Parrakeet, 2 White Javas, 1 Gray Java, 1 Saffron Finch, 1 Lavender Finch, 2 White-Headed Mankins, 1 Bronze Mankin, 1 Red-Tailed Finch, 1 Bengallee, 1 Grassquit, 3 Weavers. Total, 16 specimens.

HEIDE, WILLIAM F., New York City:
American Black Bear.

HERMAN, DR. A. W., New York City:
Lindheimer Snake.

HICKEY, MASTER EDWARD, New York City:
Alligator.

HIGBEE, MRS. S. C., New York City:
Hummingbird's Nest.

HIRSCH, GUSTAVE, New York City:
American Redstart.

HITCHCOCK, MRS. THOMAS, Long Island:
White-Faced Sapajou.

HOPKINS, JOHN B., Jersey City, N. J.:
Sharp-Shinned Hawk.

HOLT, RENFREW & COMPANY, Quebec, Canada:
Cross Fox.

HOUST, WALTER, Mount Vernon, N. Y.:
2 Snapping Turtles, 1 Musk Turtle, 1 Wood Tortoise, 1 European Starling.

HOWLAND, GEORGE B., Specular, N. Y.:
Bald Eagle.

Hubbard, Mrs. S. A., New York City:
Box Turtle.
Huggins, George F., Port of Spain, Trinidad, B. W. I.:
Anaconda.
Hubly, H. C., New York City:
Alligator.
Hurter, Julius, St. Louis, Mo.:
Central American Boa.
Johannsen, Henry, Roslindale, Mass.
Diamondback Terrapin.
Johnson, J. M., Brooklyn, N. Y. C.:
7 Horned Lizards.
Kafka, Frank, Greeley, Pa.:
Banded Rattlesnake.
Keith, Sylvia, New York City:
American Sparrow Hawk.
Keller, Robert H., New York City:
3 Strawberry Finches, 1 Pond Frog, 1 Painted Turtle.
Kessler, Julian, Westwood, N. J.:
American White Pelican.
Kich, Anthony, New York City:
Goldfinch-Canary hybrid.
Kiefer, Alfred, New York City:
Garter Snake.
Krog, Frank, New York City:
15 Salamanders.
Kuck, Master Fred, Brooklyn, N. Y. C.:
Terrapin.
Kunhardt, Mr., New York City:
1 Common Troupial, 2 Yellow-Winged Sugar-Birds, 1 Green Tanager.
Kussrow, Henry, New York City:
Wood Tortoise.
Kyff, Herman, Yonkers, N. Y.:
Opossum.
Leon, Miss Sophie, New York City:
Yellow-Naped Amazon, 2 Canaries.
Lee, William R., New Brunswick, N. J.:
American Sparrow Hawk.
Lewis, W. G., New York City:
Oven Bird.
Letkemann, Master Siegfried A. V., New York City:
Fence Swift.
Lincoln, C. L., Bridgeport, Conn.:
Copperhead Snake.
Long, Mrs. A. Francis, New York City:
American Magpie.
Lutz, S., Demerest, N. J.:
Milk Snake.
Lutz, M. J., Bayonne, N. J.:
Chameleon.
McCarthy, Mrs., New York City:
Ring-Tailed Sapajou.
McClure, Mrs. H. H., New York City:
Ring-Tailed Sapajou.
McCluskey, George, New York City:
Virginia Rail.
McCrea, W. S., Chicago, Ill.:
3 Blue Geese.
McDermott, Bernard J., New York City:
2 Silver Pheasants.

MACDONALD, MRS. JOHN, Brooklyn, N, Y. C.:
Red-Billed Hill-Tit.
MCGLORY, WILLIAM J., New York City:
3 White-Tailed Deer.
MCKELVEY, MRS. R. H., Spuyten Duyvil, N. Y. C.:
Red-Tailed Hawk.
MACMAHON, MR., New York City:
English Ringneck Pheasant.
MACKENSEN, WILLIAM J., Yardly, Pa.:
4 Black Vultures.
MAIDHOF, MISS C., New York City:
Parula Warbler.
MANNING, T. J., New York City:
Screech Owl.
MARCKRES, G. M., Sharon, Conn.:
Pine Grosbeak.
MARTIN, MISS ANNA, Weehawken, N. J.:
Alligator.
MAYER, CHARLES A., New York City:
Praying Mantis.
MAXWELL, MRS. E. A., Englewood, N. J.:
Blue-Fronted Amazon Parrot.
MEESKE, DR. H., Brooklyn, N. Y. C.:
South American Giant Toad.
MEGEATH, MISS JESSIE, Ardsley-on-Hudson, N. Y.:
2 Raccoons.
MERRYWEATHER, MRS. CHARLES A., New Rochelle, N. Y.:
1 Pair Undulated Parrakeets.
METZGER, F. G., Yulan, N. Y.:
Broad-Winged Hawk.
MILLER, MRS. H., New York City:
4 Gray Squirrels.
MILLER, L. E.:
2 Wooley Monkeys, 1 Squirrel Monkey, 1 Golden Agouti.
MILLER, MISS PAULINE M., New York City:
Box Tortoise.
MILLER, RALPH, New York City:
Canary.
MILLWARD, RUSSELL HASTINGS, New York City:
South American Red Squirrel, Variable Squirrel, White-Nosed Coati-Mundi.
MITTENZWEI, MISS KATRINE, New York City:
Alligator.
MORRIS, C. H., McConnelsville, Ohio:
2 Red-Tailed Hawks.
MORRISON, D. L., New York City:
2 Alligators.
MULLIKEN, CHAMPLIN, Pelham, N. Y.:
Alligator.
MURPHY, PATRICK, New York City:
Woodchuck.
MURRAY, HAROLD, Warwick, N. Y.:
1 Spotted Turtle, 1 Milk Snake, 11 Water Snakes, 5 Garter Snakes.
NAEGELEN, JOSEPH, New York City:
1 Central American Boa, 1 Ground Boa, 1 Central American Boa, 1 Tree Boa, 1 Opisthoglyph.
NEGGERSMITH, HERMIE, New York City:
Turtle Dove.
NEILSON, ROBERT, 3RD, Bronxdale, N. Y.:
2 Undulated Grass Parrakeets, 1 White Java Sparrow.

New York Catholic Protectory, New York City:
2 Rhesus Monkeys.
New York Quebracho Co., Greenpoint, L. I.:
South American Toad.
Nichols, J. T., New York City:
Diamondback Terrapin.
Nichols, J. W. P., Cold Springs, N. Y.:
3 Red Foxes.
Nirdlinger, Armond, West Hoboken, N. J.:
Gray-Headed Amazon.
Niven, Albert W., East Norwich, L. I.:
Tegu Salamander.
Olson, Mrs. J., Mount Vernon, N. Y.:
2 Alligators.
Oertel, Dr. T. E., Augusta, Ga.:
King Snake.
Oastler, Mrs. F. R., New York City:
1 Canary, 1 Red-Billed Hill-Tit.
Osborn, Miss Josephine, New York City:
3 Russian Racers.
Painter, Kenyon V., Cleveland, Ohio:
2 Black-Headed Conures, 1 Golden Crowned Conure, 1 Japanese Gray Thrush, 1 Orange-Spotted Bulbul, 2 Black-Eared Grosbeaks, 3 Red-Billed Pigeons, 1 Japanese Blue Flycatcher, 2 White-Throated Jay Thrushes. Total, 13 specimens.
Paul, J. J., Watertown, Fla.:
2 Florida Barred Owls, 2 Skunks, 3 Raccoons.
Pepper, M., Mount Vernon, N. Y.:
European Starling.
Pein, Mr., S. S. "Creole," New York City:
American Bittern.
Pershaw, Mrs., New York City:
Bonneted Macaque.
Peterson, Master Andrew, New York City:
Wood Tortoise.
Pinto, Mrs. L., New York City:
Blue-Fronted Amazon Parrot.
Pitt, William, New York City:
Hutia.
Potter, Mrs. A. L., New York City:
Song Thrush.
Priore, Victor, New York City:
Painted Turtle.
Probst, Master William, New York City:
4 Fence Swifts.
Prout, Mrs. J. S., Garden City, N. Y.:
American Robin.
Pullen, C. D., New York City:
Guinea Pig.
Quinby, William, White Plains, N. Y.:
Cinnamon Sapajou.
Ramsay, Mrs. O. E., Temple, Pa.:
Black-Hooded Sapajou.
Reagan, Master William, New York City:
2 White Rabbits.
Reeves, Master Howell, New York City:
White Rabbit.
Reiffin, Joseph, New York City:
White Rabbit.
Resler, Adolph F., New York City:
3 Red Newts.

Rice, Ralston F., New York City:
2 Red Lynx.
Rosenberg, Joseph, New York City:
2 Alligators.
Rowland, Mrs. E. D. M., New York City:
2 Alligators.
Russell, Richard, Mount Holly Springs, Pa.:
2 Queen Snakes.
Sachs, Master Louis, New York City:
Painted Turtle.
Sage, Mrs. Mary Searl, New York City:
Chipmunk.
Sargent, Martin, Cache, Okla:
1 pair Coyotes, 4 Pack Rats, 1 Texas Rattlesnake, 2 Rattlesnakes.
Schauer, Morris, New York City:
Box Turtle.
Scholding, Samuel, Yonkers, N. Y.:
Flicker.
Scudder, Master Townsend, Glen Head, L. I.:
Raccoon.
Sheahan, John F., New York City:
European Starling.
Sicree, Albert, New York City:
Angora Rabbit.
Sid Olcott International Productions, New York City:
Texas Rattlesnake.
Sigler, Mrs. L., New York City:
3 Canaries.
Simpson, Mrs. J., New York City:
2 Alligators.
Smith, A. H., Kingston, N. Y.:
Coyote.
Smith, Philip, New York City:
Pilot Black Snake.
Smith, Robert, New York City:
Box Tortoise.
Smith, R., U. S. S. "Utah," Brooklyn Navy Yard, Brooklyn, N. Y.:
Limpkin.
Snyder, Charles E., Scarsdale, N. Y.:
1 Wood Tortoise, 3 Storer Snakes, 3 Milk Snakes, 1 Spotted Salamander, 1 Green Snake, 9 Garter Snakes, 7 Ring-Necked Snakes. Total, 25 specimens.
Sommermeyer, Mr., Passaic N. J.:
Red-Tailed Hawk.
Speenburgh, D. C., Hunter, N. Y.:
Woodchuck.
Spooner, William H., New York City:
3 White-Tailed Deer.
Stark, A. O., New York City:
American Egret, Snowy Egret.
Stebbins, Miss D. H., New York City:
Wood Tortoise.
Stern, Morris, New York City:
Painted Turtle.
Steifel, M. S., New York City:
Red-Billed Hill-Tit.
Stone, Alan Adams, Falls Village, Conn.:
Mud Turtle.
Stuyvesant, Mrs. F. S., Bay Shore, N. Y.:
Alligator.

SULLIVAN, MISS LUCY, New York City:
Box Tortoise.
SUMMERHAYES, MISS E., New York City:
Virginia Rail.
SWANSON, MRS. MATILDA, Brooklyn, N. Y.:
Central American Gray Squirrel.
SWENSON, MISS ANNA, New York City:
Painted Turtle.
SWINNERTON, JAMES, New York City:
Horned Rattlesnake.
SYKES, MRS. G. H., Brooklyn N. Y. C.:
White-Faced Sapajou.
TABLES, M., New York City:
Flicker.
TALAMADGE, MRS., New York City:
2 Alligators.
TAYLOR, IRVING, Orange, N. J.:
2 Green Monkeys.
TAYLOR, SAMUEL P., New York City:
American Sparrow Hawk.
THOMAS, DR. EMERY J., New York City:
Marmoset, Shama Thrush.
THOMPSON, MISS C., New York City:
Blue and Yellow Macaw.
TOMBACK, MAURICE, New York City:
Alligator.
TOOP, MRS. W. H., Mount Vernon, N. Y.:
Owl Monkey.
TRIESNER, JR. LOUIS, Lake George, N. Y.:
Screech Owl.
TUCKER, MRS. FRANK, New Rochelle, N. Y.:
Undulated Grass Parrakeet.
VANDERBILT, W. K., New York City:
2 Ring-Tailed Monkeys.
VAN DER SMISSEN, DR. GILBERT J., New York City:
1 Wood Tortoise, 3 Storer Snakes, 9 Garter Snakes, 1 Spotted Salamander, 1 Green Snake, 7 Ring-Necked Snakes, 3 Milk Snakes. Total, 25 specimens.
VAN HAERST, JOHN, New York City:
White-Faced Sapajou.
VAN LOAN, CHARLES, New York City:
2 Marble Salamanders, 1 Tree Frog, 34 Red Newts, 1 Spotted Salamander, 2 Red Salamanders, 2 Millipedes, 1 Slimy Salamander, 2 Red Salamanders. Total, 45 specimens.
VAN NORDEN, MISS J., New York City:
1 Yellow-Fronted Amazon, 1 Blue-Winged Parrakeet.
VASTENHOUW, J., New York City:
Box Tortoise.
VICTORIUS, L. M., New York City:
2 Alligators, 4 Cumberland Terrapins, 1 Painted Turtle.
VILLALOBOS, MRS. J. N., New York City:
Mockingbird.
VOSSLER, MR., New York City:
Alligator.
WALDRON, E. D., New York City:
Hooded Sapajou.
WALKER, HENRY H., New York City:
Guiana Cowbird.
WALTY, ARTHUR RINOLDO, New York City:
Orange Weaver.

Warneck, John E., Yonkers, N. Y.:
Gray Fox.

Weaver, Mrs. A. C., New York City:
2 Canaries.

Weisse, B., New York City:
Canary.

Weller, A. E., Manderson, Wyo.:
Prairie Rattlesnake.

Wells Fargo & Co. Express, New York City:
Florida Gallinule.

Wenzel, Edmond, New York City:
Puff Adder.

Wessel, John, New York City:
Alligator.

Whiffen, E. T., East Syracuse, N. Y.:
Massasauga.

Whyland, O. M., New York City:
Bald Eagle.

Wicht, Frank, Yonkers, N. Y.:
Alligator.

Wildfang, Mrs., New York City:
Flicker.

Wilhelmy, Miss M., Hartford, Conn.:
Alligator.

Wilkinson, F. E., Merchantville, N. J.:
Mourning Dove.

Williams, Mrs. George W., Brooklyn, N. Y. C.:
Coyote.

Worrad, A. C., Coram, L. I.:
Storer Snake.

Yates, Trevor C., New York City:
Painted Turtle, Pond Frog.

Young, Mrs. A. B., New York City:
Canary.

Zahn, Mrs. Warren W., New York City:
Screech Owl.

Zangenberg, A. E., New York City:
Painted Turtle.

Zippel, Albert, Mount Vernon, N. Y.:
Alligator.

Plants

Baker, George F., Tuxedo, N. Y.:
2 Sanseveria zeylanica.

Fielder, Mrs. F., New York City:
Rubber Plant.

Leuholt, G., New York City:
Rubber Plant.

Lipps, Jr. Henry, Mount Vernon, N. Y.:
Rubber Plant.

Ovastien, Miss, New York City:
Euphorbia splendens.

PARK DEPARTMENT BOROUGH OF BRONX, New York City:
2 Livistonia, 2 Pandanus utilis.
TURF AND FIELD CLUB, Queens, N. Y. C.:
5 Kentias, 4 Chamaerops, 1 Livistonia australis, 2 Cycas revoluta, 6 Rubber Plants, 6 Phoenix, 3 Rhapis, 2 Seaferthias, 15 Musa, 5 Curculigo, 2 Latania, 4 Dracaena indivisa.

To the Gallery of Oil Paintings

FRANK K. STURGIS,	MORTIMER L. SCHIFF,	EDWARD S. HARKNESS,
PERCY R. PYNE,	CLEVELAND H. DODGE,	WATSON B. DICKERMAN,
LISPENARD STEWART,	C. LEDYARD BLAIR,	JOSEPH A. MCALEENAN.

Prong-Horned Antelope in Wyoming, by Carl Rungius, size 60 x 75 inches.
Mule Deer in the Montana Bad-Lands, by Carl Rungius, size 60 x 75 inches.
Snow Leopard in the Himalayas, by Charles R. Knight, size 32 x 46 inches.
Jaguar, by Charles R. Knight, size 32 x 46 inches.
Portrait of Female Gorilla, "Dinah," by Carl Rungius, size 30 x 36 inches.

To the National Collection of Heads and Horns

GIFTS:

CALLBREATH, J. FRANK, Telegraph Creek, British Columbia:
Black Mountain Sheep (*Ovis stonei*). Horns on Skull.
OGDEN, CHAS. W., New York:
Scotch Red Deer (*Cervus elaphus*). Scotland Mounted Head.
SAUTER, FRED., New York:
White-Tailed Deer (*Odocoileus virginianus*). Nova Scotia Antlers.
TAYLOR, IRVING K., New York:
Nile, or Abyssinian Buffalo (*Bos equinoctialis*). Kaka, White Nile, Mounted Head.

DEPOSITS:

BY THE ESTATE OF BARTLETT RICHARDS, through Edmond Seymour:
Mule Deer (*Odocoileus hemionus*). Mounted Head.
BY A. P. PROCTOR:
Rocky Mountain Big Horn Sheep (*Ovis canadensis*). 4 Mounted Heads.

PURCHASES:

German Roebuck (*Capreolus caprea*), Horns. German Roebuck (*Capreolus caprea*), Horns. Fallow Deer (*Dame vulgaris*), Germany, Antlers. White-Tailed Deer (*Odocoileus virginianus*), Minnesota, Mounted Head. Sable Antelope (*Hippotragus niger*), Horns on Skull. White-Tailed Deer, Nova Scotia, Antlers. White-Tailed Deer, Series of 15 pairs of Antlers, from Texas.

List of Gifts

TO THE ZOOLOGICAL SOCIETY

January 1, 1914, *to December* 31, 1914.

TO THE AQUARIUM.

Andreas, Miss A., New York City:
Alligator.

Applegate, Mr. H. R., Rahway, N. J.:
Alligator (2 specimens).

Balentine, Mr. D. H., New York City:
Albino Catfish (2 specimens).

Banks, Mr. M., Brooklyn, N. Y. C.:
Painted Turtle.

Barbee, Mr. A. M., Savannah, Georgia:
3 Diamondback Terrapin, 2 Box Turtles.

Bartlett, Mr. Phillip H., New York City:
Painted Turtle.

Bassford, Mr. Thomas S., New York City:
Green Turtle.

Baum, Mr. E., Brooklyn, N. Y. C.:
Alligator.

Beller, Mr. William F., New York City:
Chanelled Whelk (2 specimens).

Bermuda Bureau of Agriculture, (Through Mr. E. J. Wortley, Director), Paget, East, Bermuda:
15 Blue Angelfishes, 1 Surgeon-Fish, 3 Coneys, 13 Squirrelfishes, 5 Blue-striped Grunts, 2 Mud Parrotfishes, 11 Red Hind, 7 Nassau Groupers, 3 Spiny Lobsters, 3 Bream. Total, 63 specimens.

Bogart, Mrs. Marie, Brooklyn, N. Y. C.:
Red Salamander (3 specimens).

Cohen, Mr. Jacob, New York City:
Wood Turtle.

Dash, Mr. C. L., New York City:
Loggerhead Turtle.

Dougherty, Miss Dorothy, Rosebank, S. I., N. Y.:
Painted Turtle (2 specimens).

Dowd, Miss Kitty, Brooklyn, N. Y. C.:
Bull Frog (2 specimens).

Eckert, Mr. A., New York City:
Sea Horse.

Frick, Mr. George H., New York City:
Alligator.

Gilbert, Mr. J., New York City:
Alligator (2 specimens).

Gottsleben, Mr. Emil, Nassau, Bahamas:
Hawksbill Turtle.

Greenstein, Mr. Lewis, New York City:
Cumberland Turtle.

Grodinsky, Mr. Benjamin, New York City:
Box Tortoise.

Hollenback, Mrs. W. F., New York City:
Alligator.

HARRIS, MR. CHARLES, New York City:
Diamondback Terrapin (2 specimens).
HEFFELE, MADAM BETTY, New York City:
German Frog (2 specimens).
HERZ, MR. JOSEPH, New York City:
Crayfish.
HOSOHOE, MR. LEO, Brooklyn, N. Y. C.:
Painted Turtle.
KETCHAM, MR. IRVING W., Glenhead, Long Island, N. Y.:
6 Marbled Salamanders, 1 Frog.
KAUP, MR. W. W., Tamaqua, Pa.:
Alligator.
KRAUSE, MISS MILDRED, New York City:
Alligator.
KRUSER, MR. PALMER, Staten Island, N. Y.:
Painted Turtle.
LARRO, MR. LAWRENCE, New York City:
Alligator (2 specimens).
LEIGH, MR. R. W., New York City:
12 Common Goldfishes, 1 Comet Goldfish.
LLOYD, MR. CHESTER, Brooklyn, N. Y. C.:
2 Lionhead Goldfishes, 2 Devil-Eyed Goldfishes, 1 Celestial Goldfish, 2 Black Dragon-Eyed Goldfishes, 1 Calico Telescope Goldfish, 1 Mottled Calico Goldfish, 1 Tiger Telescope Goldfish, 3 Fringetail Goldfishes, 7 East Indian Shubunkins. Total, 20 specimens.
LUTKINS, MR. T. L., JR., New York City:
Alligator (2 specimens).
MACCALLUM, DR. C. A., New York City:
7 Spotted Turtles, 8 Painted Turtles.
MACSORLEY, MR. RAY F., New York City:
Loggerhead Turtle.
MAYER, DR. A. C., Dry Tortugas, Florida:
Young Loggerhead Turtles (11 specimens).
MILLER, MR. W., Colonial Surveyor, Surveyor-General's Office, Nassau, Bahamas:
Tree Toads (6 specimens).
OSBORNE, MRS. FREDERICK KING, New York City:
Green Turtle.
PATTON, MR. NORMAN, New York City:
Alligator.
PETERS, MR. JOHN, New York City:
Horseshoe Crab.
PETERSEN, MR. E. E., New York City:
2 Chameleons, 2 Brazilian Turtles.
PETTY, MR. GEORGE B., Brooklyn, N. Y. C.:
Alligator.
THOMPSON, MR. W. O., New York City:
Alligator.
TRAVILLA BROTHERS, Minneapolis, Minn.:
Sea Lion (2 specimens).
U. S. BUREAU OF FISHERIES, Washington, D. C.:
5,000 Rainbow Trout Eggs, 5,000 Brook Trout Eggs, 100,000 Whitefish Eggs, 1,000,000 Yellow Perch Eggs, 10,000 Black-spotted Trout Eggs, 1,000 Land-locked Salmon Eggs. Total number of Fish Eggs received, 1,121,000.
VISHNEFSKI, MR. HARRY, New York City:
Painted Turtle.
WASKOW, MR. ALBERT, Brooklyn, N. Y. C.:
Goldfish (2 specimens).
WEISENBERGER, MRS. A., Brooklyn, N. Y. C.:
Loggerhead Turtle.

To the Aquarium Library

American Museum of Natural History, New York City:
Annual Reports and Journals.

Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y. C.:
Annual Reports and "Museum News."

Bureau of Fisheries (through Dr. H. M. Smith, Commissioner), Washington, D. C.:
Reports and Bulletins for 1914.

Carnegie Institution of Washington, Washington, D. C.:
Special papers.

Illinois State Laboratory of Natural History (through Dr. S. A. Forbes, Director), Urbana, Ill.:
Publications for 1914.

Kansas State Fish and Game Department (through L. L. Dyche, Warden), Pratt, Kansas:
Reports and Bulletins for 1914.

Jennings, Mr. G. E., New York City:
"Fishing Gazette."

New York Conservation Commission (through Dr. T. H. Bean, State Fish Culturist), Albany, N. Y.:
Publications for 1914.

New York State Museum (through John M. Clark, Director), Albany, N. Y.:
Special papers.

Pennsylvania Department of Agriculture, Division of Zoology (through Dr. H. A. Surface), Harrisburg, Pa.:
Economic Amphibians of Pennsylvania.

Virginia Fish Commission (through John S. Parsons, Commissioner), Accomac, Va.:
Reports for 1914.

Wingate, Mr. Harold, New York City:
Proceedings of the Philadelphia Academy of Natural Sciences.

Brown, Mr. A. C., Copake, N. Y.:
500,000 Yellow Perch eggs, 12 Rock Bass, 23 Sunfishes, 20 Suckers, 2 Catfishes, 8 Pickerel, 1 Snapping Turtle.

Exchanges

Detroit Aquarium (through R. J. Conway, Director), Detroit, Michigan:
6 Whitefishes, 12 Pike Perch, 4 Burbot, 8 Red Horse Suckers, 15 Suckers, 18 White Catfishes, 14 Spotted Catfishes, 2 Catfishes, 42 Rock Bass, 5 Sunfishes, 14 White Bass.

"Forest and Stream" (through W. G. Beecroft, Editor), New York City:
90 Brook Trout.

Hagenbeck, Mr. Lorenz, Hamburg, Germany:
20 Spur Frogs.

Halterbeck, Mr. J. J., New York City:
2 Platyposes, 2 xiphophorus, 2 Poecilia sponops.

New York Conservation Commission (through Dr. T. H. Bean, State Fish Culturist), Cold Spring Harbor, Long Island, N. Y.:
30 Rainbow Trout.

Fairmount Park Aquarium (through Wm. E. Meehan, Supt.), Philadelphia, Pa.:
42 Calico Bass.

CHARTER

OF THE

NEW YORK ZOOLOGICAL SOCIETY

CHAPTER 435, LAWS OF 1895.

AN ACT to incorporate the New York Zoological Society and to provide for the establishment of a zoological garden in the city of New York.

As amended by Chapter 146 of the Laws of 1902; and by Chapter 240 of the Laws of 1910.

See Chapter 432 of the Laws of 1900.

See Chapter of the City of New York, Secton 626 of the Laws of 1901.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Charles A. Dana, Oswald Ottendorfer, Andrew H. Green, William H. Webb, Henry H. Cook, Samuel D. Babcock, Charles R. Miller, George G. Haven, J. Hampden Robb, Frederick W. DeVoe, J. Seaver Page, Rush C. Hawkins, David James King, Wager Swayne, Charles A. Peabody, Jr., Charles E. Whitehead, Charles R. Flint, Samuel Parsons, Jr., Mornay Williams, Henry E. Gregory, Isaac W. Maclay, Isaac Rosenwald, Hugh N. Camp, Andrew D. Parker, Cornelius Van Cott, William F. Havemeyer, Frederick Shonnard, William W. Thompson, Alexander Hadden, Edward L. Owen, John H. Starin, Rush S. Huidekoper, William W. Goodrich, Albert H. Gallatin, Frederick S. Church, Edward C. Spitzka, Robert L. Niles, Madison Grant, C. Grant La Farge, William Van Valkenburg, and such other persons as may, under the provisions of its by-laws, become members of the corporation hereby created, are hereby created a body corporate and politic, by and under the name of the New York Zoological Society.

SEC. 2. Said corporation shall have power to establish, maintain and control zoological parks, gardens, or other collections for the promotion of zoology and kindred subjects, and for the instruction and recreation of the people. Said corporation may collect, hold, and expend funds for zoological research and publication, for the protection of wild animal life, and for kindred purposes, and may promote, form, and co-operate with other associations with similar purposes, and may purchase, sell, or exchange animals, plants, and specimens appropriate to the objects for which it was created.

SEC. 3. The managers of said corporation shall have power to make and adopt by-laws for the management and government of its affairs and business, for the admission, suspension, and expulsion of its members, and for the terms and conditions of membership; to prescribe the number and mode of election of its officers; to define their duties; to provide for the safe-keeping of its property, and from time to time to alter and modify its by-laws.

SEC. 4. The affairs and business of said corporation shall be managed and controlled by a board of managers, the number of whom shall be prescribed by the by-laws. The first board of managers shall be divided by lot into three classes, equal in number, one of which classes shall hold office for one year, another for two years, and the other for three years; and all persons elected to be managers at any subsequent election shall hold office for three years, and until others are elected in their stead. There shall be a president, two vice-presidents, treasurer and secretary, to be elected by the board of managers annually, who shall hold office until others are elected in their stead. The first meeting under

this act may be held at any time upon a notice of five days, signed by any five of the incorporators named in the first section of this act, fixing a time and place for such meeting, a copy whereof shall be mailed to each of said incorporators at his usual post-office address, and twelve of such incorporators shall be a quorum for the purpose of organization, adoption of by-laws, and election of officers. No manager of said corporation shall be interested, directly or indirectly, in any contract concerning its property or affairs.

SEC. 5. Said corporation may raise money by the issue of bonds, secured by a mortgage on any or all of its property not acquired from said city or state.

SEC. 6. Said corporation may take, purchase, and hold real and personal estate necessary for the purpose of its incorporation, and shall possess the general powers and be subject to the restrictions and liabilities prescribed in Article II of Chapter 23 of the Consolidated Laws entitled "General Corporation Law," being chapter 28 of the Laws of 1909.

SEC. 7. The commissioners of the sinking fund of the said city are authorized in their discretion to allot, set apart, and appropriate for the use of said corporation, any of the lands belonging to said city north of One Hundred and Fifty-fifth street, but not in the Central Park, and such appropriation may be revoked if, after the expiration of five years from the passage of the act, a zoological garden is not established thereon; said grounds thus set apart and appropriated shall be used for no purpose whatsoever except those aforesaid. As soon as any lands are set apart the Mayor of the said city of New York, and the President of the Department of Parks of said city, shall become and be *ex-officio* members of the board of managers of said corporation. If at any time the animals now composing the menagerie at Central Park shall be removed therefrom by the authorities having charge thereof, said authorities may make an arrangement with the incorporators named in this act or the corporation formed by them for leasing or sale of such animals to such incorporators or corporation, and said incorporators or corporation shall have a preference over any other person or corporation in respect thereto upon the same terms which said authorities could make with any such other person or corporation, or upon such other terms as to such authorities may seem proper, but nothing herein provided shall be construed as giving the commissioners of the Department of Public Parks authority to sell, lease, transfer, or in any other wise dispose of said animals or other property connected with or belonging to said menagerie.

SEC. 8. Admission to the said gardens shall be free to the public for at least four days, one of which shall be Sunday, in each week, subject to such rules and regulations as shall be prescribed by said corporation.

SEC. 9. This act shall take effect immediately.

NEW YORK ZOOLOGICAL SOCIETY

AND THE

NEW YORK AQUARIUM

CHAPTER 441. LAWS OF 1902.

AN ACT to authorize a further appropriation to the New York Zoological Society for the support of the New York Aquarium.
As amended by Chapter 239 of the Laws of 1910.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Chapter four hundred and forty-one of the laws of nineteen hundred and two, entitled "An act to authorize a further appropriation to the New York Zoological Society for the support of the New York Aquarium," is hereby amended to read as follows:

SECTION 1. The Board of Estimate and Apportionment of the City of New York may annually, in its discretion, include in the budget for the then next ensuing financial year, in addition to any sum or sums which may be appropriated for the adequate support and maintenance of the New York Zoological Park or gardens, situated in the borough of the Bronx, and administered and controlled by the New York Zoological Society, a further sum or sums, in its discretion, for the use of the said New York Zoological Society, provided, however, that the additional appropriation hereby authorized shall be made only in case an agreement is entered into between the said New York Zoological Society and the city of New York, acting by its Board of Estimate and Apportionment for the adequate keeping, maintenance, extension, preservation and exhibition of the building and approaches thereto and collection of aquatic animals and plants contained therein, known as the New York Aquarium, situated in the Battery park in the Borough of Manhattan in said city, and also for furnishing opportunities for study, research and publication in connection with said collections, which contract the said Board of Estimate and Apportionment is hereby expressly authorized, in its discretion, to make upon such terms and conditions as may be agreed upon with the said New York Zoological Society, and which contract shall also provide how the duty of the commissioner of parks for the boroughs of Manhattan and Richmond in respect to maintaining the said aquarium now imposed upon him by law shall be performed.

SEC. 2. This act shall take effect immediately.

BY-LAWS

OF THE

NEW YORK ZOOLOGICAL SOCIETY

AMENDED TO JANUARY 21, 1914.

ARTICLE I.

MEETINGS OF THE SOCIETY.

SECTION 1. The office and place of business of the New York Zoological Society shall be in the City of New York, unless otherwise ordered.

SEC. 2. The Society shall hold its annual meeting for the election of Managers, and other business, on the second Tuesday of January, or such day thereafter during the month of January to which said annual meeting shall adjourn.

SEC. 3. Special meetings of the Society shall be called by the Secretary, upon the request of the President or the Chairman of the Executive Committee, or at the written request of ten members.

SEC. 4. Notices of all meetings shall be mailed to each member of the Society at least three days before such meeting.

SEC. 5. At meetings of the Society twenty members shall constitute a quorum.

SEC. 6. The order of business shall be as follows:

1. Roll Call.
2. Reading of minutes not previously read.
3. Report of Executive Committee.
4. Report of Secretary.
5. Report of Treasurer.
6. Report of the Director of the Zoological Park.
7. Report of Director of the Aquarium.
8. Election of Managers.
9. Communications.
10. Miscellaneous business.
11. Reports and resolutions.

ARTICLE II.

BOARD OF MANAGERS.

SEC. 1. The Board of Managers shall consist of thirty-six members, together with the Mayor of New York and President of the Park Board, or Commissioner for the Bronx, who shall be members *ex-officio* of the Board.

SEC. 2. Nineteen Managers shall constitue a quorum, but ten Managers may transact current business, and adjourn, subject to the subsequent approval of a meeting at which a quorum shall be present.

SEC. 3. The Board of Managers shall hold an annual meeting on the third Tuesday of January, or on such day thereafter to which said annual meeting shall adjourn. Regular meetings of the Board may also be called by the Secretary on the third Tuesdays of October and April upon the request of the President or Chairman of the Executive Committee. Special meetings of the Board shall be called at any time by the Secretary upon the request of the President or Chairman of the Executive Committee, or at the written request of five Managers.

SEC. 4. Notices of meetings of the Board shall be mailed to each Manager at least three days before such meetings.

SEC. 5. The successors to the outgoing class of Managers shall be elected by the Society at its annual meeting, but vacancies in the board may be filled for the unexpired term by the Board of Managers, or by the Executive Committee.

SEC. 6. A Nominating Committee shall be annually appointed by the Executive Committee, and shall consist of three members of the Society at large, who shall nominate and post ten days before the annual election the names of twelve persons to succeed the outgoing class of Managers in a conspicuous place in the office of the Society.

SEC. 7. No person shall be eligible for the election to the Board of Managers, except to fill vacancies, unless his name shall have been posted as a candidate by such committee, or by not less than ten members, in writing, in a conspicuous place in the office of the Society ten days before the annual election. All candidates for election as Managers must be Life Members, Patrons, Associate Founders, or Founders of the Society.

SEC. 8. Any Manager who shall fail to attend three consecutive meetings of the Board, unless excused by a vote of the Board, shall cease to be a Manager.

SEC. 9. The Board of Managers shall at its annual meeting elect a President, two Vice-Presidents, a Secretary, and Treasurer, who shall hold office for one year, or until their successors are elected. The President, Vice-Presidents, and Treasurer shall be members of the Board.

SEC. 10. The Director of the Zoological Park, the Director of the Aquarium, and all other persons employed by the Society, shall be appointed by the Board or by the Executive Committee, and shall hold office during the pleasure of the Board.

SEC. 11. The Board shall, at its annual meeting, elect an Executive Committee and Auditing Committee, which shall hold office for one year, or until their successors are elected. The Board of Managers and the Executive Committee shall also have authority to appoint such other Committees or officers as they may at any time deem desirable, and to delegate to them such powers as may be necessary.

SEC. 12. The order of business of the meetings of the Board shall be as follows:

1. Roll Call.
2. Reading of minutes not previously read.
3. Report of Executive Committee.
4. Report of Secretary.
5. Report of Treasurer.
6. Report of Auditing Committee.
7. Report of Director of Zoological Park.
8. Report of the Director of the Aquarium.
9. Election of Officers.
10. Election of Committees.
11. Election of new members.
12. Communications.
13. Miscellaneous business.

SEC. 13. All reports and resolutions shall be in writing, and the ayes and nays may be called on any resolution at the request of one Manager.

SEC. 14. Whenever the funds of the Society shall permit, the Board of Managers or the Executive Committee may award medals or other prizes for meritorious work connected with the objects of the Society.

ARTICLE III.

OFFICERS.

SEC. 1. The officers of the Society shall consist of a President, two Vice-Presidents, a Treasurer, a Secretary, and a Director of the Zoological Park. These Officers, with the exception of the Director, shall be elected at the annual meeting of the Board of Managers, but any vacancy may be filled for an unexpired term by the Board of Managers, or by the Executive Committee, until the next annual election.

SEC. 2. The President shall preside at all meetings of the Board and of the Society, and shall be *ex-officio* a member of the Executive and Auditing Committees.

SEC. 3. The Vice-Presidents shall, in the absence of the President, perform his duties and possess his powers, acting in the order of their election.

SEC. 4. The Treasurer shall receive, collect and hold, subject to the order of the Board of Managers, or the Executive Committee, all dues, subscriptions, warrants from the City, fees and securities. He shall pay all bills as ordered by the Board of Managers or the Executive Committee, and shall report to the Society at its annual meeting, and to the Board of Managers at all regular meetings, and to the Executive Committee at each meeting. He shall keep all moneys and securities in some bank or trust company to be approved by the Board of Managers or Executive Committee. The books of the Society shall at all times be open to the inspection of the Managers.

SEC. 5. The Secretary shall be a salaried officer of the Society. He shall be present, unless otherwise relieved by the Board or Executive Committee, at all meetings of the Society, of the Board and of the Standing Committees. He shall keep a careful record of all proceedings, shall have the custody of the seal, archives and books, other than books of account, and shall conduct the correspondence of the Society. He shall issue all notices and tickets, and shall perform such other duties as the Board may direct. He shall be a member *ex-officio* of the Executive, Aquarium, and Auditing Committees, and of the Scientific Council.

SEC. 6. The Director of the Zoological Park shall be elected annually by the Executive Committee at a salary to be determined by said Committee, and shall hold office until removed or his successor chosen by said Committee. He shall be the responsible administrative officer of the Park, and shall recommend to the Executive Committee candidates for the various positions in the Park. He shall also perform all such other duties in connection with the business, scientific, and literary administration of the Society as may be assigned to him by the Executive Committee.

SEC. 7. The Director of the Aquarium shall be elected annually by the Executive Committee and shall hold office until removed or his successor is chosen by said Committee. He shall be the responsible administrative officer of the Aquarium, and shall recommend to the Executive Committee all candidates for positions in the Aquarium. The director of the Aquarium shall be *ex-officio* a member and Chairman of the Aquarium Committee. He shall perform such other duties in connection with the Aquarium as may be assigned to him by the Executive Committee.

ARTICLE IV.

COMMITTEES.

SEC. 1. There shall be two standing committees, the Executive Committee and the Auditing Committee, which shall hold office for one year or until their successors are elected.

SEC. 2. The Executive Committee shall consist of seven Managers, together with the President and Secretary of the Society *ex-officio*. Four members shall constitute a quorum, and all meetings shall be called by the Chairman. The Executive Committee shall fill all vacancies in its own number and shall have the full powers of the Board of Managers, except so far as such delegation of power may be contrary to law.

SEC. 3. The Executive Committee shall have the control and regulation of the collections, library, and all other property of the Society, and shall have power to purchase, sell, and exchange specimens and books, to employ and control all officials and employees of the Society, Park, and Aquarium, and generally to carry out in detail the directions of the Board of Managers and the terms of any contract between the City, or Park Board, and the Society.

SEC. 4. All the rules and regulations for the examination of applicants for the various positions in the Park and Aquarium shall be made or approved by the Executive Committee.

SEC. 5. The Executive Committee may regulate the auditing and payment for all current accounts.

SEC. 6. The Executive Committee shall annually appoint an Aquarium Committee, whose duties and powers are set forth in Section II of Article IV of these By-Laws.

SEC. 7. The Executive Committee shall annually appoint a Nominating Committee, whose duties and powers are set forth in Sections 6 and 7, Article II, of these By-Laws.

SEC. 8. It shall also appoint a Scientific Council, whose powers and duties are set forth in Section 2 of Article V of these By-Laws.

SEC. 9. The Committee shall make a written report at each regular meeting of the Board of Managers.

SEC. 10. The Auditing Committee shall consist of three regular members of the Society, in addition to the President and Secretary, members *ex-officio*, and vacancies shall be filled by the Executive Committee. It shall be the duty of the Auditing Committee to audit, annually, the accounts of the Treasurer, of the Director of the Zoological Park, and of the Director of the Aquarium, and any other accounts of the Society, and shall report to the Board of Managers at its annual meeting.

SEC. 11. The Executive Committee shall annually appoint an Aquarium Committee, not to exceed eight members of this Society, who shall hold office until their successors are chosen. All vacancies shall be filled by the Executive Committee. The Director of the Aquarium shall be *ex-officio* a member and the Chairman of the Aquarium Committee, and such Committee may vest in him any or all of its powers. The Chairman of the Executive Committee and the Secretary of the Society shall also be *ex-officio* members of the Aquarium Committee. Three members shall constitute a quorum. The Executive Committee may delegate to the Aquarium Committee such powers as it may deem proper.

ARTICLE V.

SCIENTIFIC COUNCIL.

SEC. 1. The Executive Committee shall annually appoint a Scientific Council of not more than ten members, and shall fill all vacancies. Members of the Council shall hold office until their successors are appointed.

SEC. 2. The duties of the Council shall be to act as an advisory board in all matters pertaining to the scientific administration of the Society, and especially as to the scientific features of the Park, the promotion of zoology by publications and otherwise, and the preservation of the native fauna of America.

SEC. 3. Four members, including the Chairman, shall constitute a quorum. The Chairman shall be elected annually by the Council. The Chairman of the Executive Committee and the Secretary of the Society shall be members *ex-officio* of the Council.

ARTICLE VI.

MEMBERS.

SEC. 1. The present members and such others as shall become associated with them, under the conditions prescribed by the By-Laws, shall be members of this Society as long as they shall comply with the By-Laws.

SEC. 2. Members failing to comply with these By-Laws, or for other good and sufficient cause, may be expelled from the Society by the Executive Committee.

SEC. 3. Candidates for membership shall be proposed and seconded by members of the Society. The name, occupation, and place of residence of every member as proposed shall be submitted for election to the Board of Managers or the Executive Committee, and such person, when elected, shall become a member upon payment of the annual dues, or of the fees as prescribed below.

SEC. 4. There shall be a class known as Fellows, which shall consist of members of the Society who have rendered marked services to science, and shall be chosen by the Executive Committee. The privileges of Fellows shall be in all respects the same as those of regular members of the Society, but they shall be exempt from the payment of annual dues.

SEC. 5. The annual dues shall be ten dollars, payable in advance, on the first day of May of each year, but the Executive Committee may remit the dues for the current year in the case of members elected between January 1st and May 1st of each year. The classes of membership shall be as follows:

SEC. 6. The payment of $200 at one time shall constitute any member a Life Member.

A member who has paid annual dues for a period of five years may thereafter, at any time, upon the payment of the difference between the amount of dues already paid and $200, become a Life Member, but such payment shall be not less than $100.

SEC. 7. The payment of $1,000 at one time, or in the case of a Life Member, of $800, shall constitute any member a Patron.

SEC. 8. The payment of $2,500 at one time, or in the case of a Patron of $1,500, or of a Life Member of $2,300, shall constitute any member an Associate Founder.

SEC. 9. Any member who shall donate to the Society $5,000, or property of equal value, or any Associate Founder who shall donate $2,500, or any Patron who shall donate $4,000, may be elected by the Board of Managers or Executive Committee a Founder.

SEC. 10. Any member who shall have donated to the Society ten thousand dollars ($10,000), or its equivalent, may be elected by the Board of Managers or the Executive Committee a Founder in Perpetuity. Such Founder in Perpetuity shall have the power to designate by a last will and testament his successor, who shall thereupon be entitled to all the rights and privileges of the original Founder in Perpetuity, including the right of designating in turn his successor.

SEC. 11. Any member who shall have donated to the Society $25,000, or its equivalent, may be elected by the Board of Managers, or the Executive Committee, a Benefactor. Benefactors shall have the rights and privileges of a Founder in Perpetuity.

SEC. 12. Persons who have rendered marked service in the science of zoology or natural history may be elected Honorary Members, but not more than three such Honorary Members shall be elected in any one calendar year.

SEC. 13. A resident member who shall have rendered marked scientific or professional services to the Society in any branch of its work may be elected by the Executive Committee a Life Member, Patron, Associate Founder, or Founder. A resident of New York who shall have rendered marked service in zoology or natural history may be elected by the Executive Committee a Permanent Fellow.

SEC. 14. Non-residents who communicate valuable information to the Society, or who have rendered marked service in the science of zoology or natural history, may be elected Corresponding Members.

SEC. 15. Benefactors, Founders in Perpetuity, Founders, Associate Founders, Patrons, Life Members, Honorary Members, Permanent Fellows, Fellows, and Corresponding Members shall be be exempt from annual dues.

ARTICLE VII.

PRIVILEGES OF MEMBERS.

SEC. 1. A member's ticket admits the member and his immediate family to the Park on reserve days, and to all lectures and special exhibitions, and may be used by the member's immediate family, and shall be good for the current year.

SEC. 2. Admission tickets to the Park and Aquarium on reserve days are issued to members for distribution, and are good for the current year.

SEC. 3. Each member of the Society is entitled annually to a member's ticket and to ten admission tickets.

SEC. 4. Each member shall also receive one copy of the catalogue or handbook, the report and official publication of the Society, and shall have all the privileges of the Library and Member's Building.

SEC. 5. No member shall be entitled to the privileges enumerated in this Article unless his annual dues shall have been paid.

SEC. 6. The Life Members shall have all the privileges of members and ten additional admission tickets.

SEC. 7. Benefactors, Founders in Perpetuity, Founders, Associate Founders and Patrons shall have all the privileges of Life Members, and shall in addition receive copies of all scientific works published by the Society.

SEC. 8. Any member who shall fail to pay his annual dues within three months after the same shall have become due, and after notice of thirty days, by mail, shall cease to be a member of the Society; subject, however, to reinstatement by the Board of Managers or Executive Committee for good cause shown.

SEC. 9. Any person elected to membership who shall fail to qualify within three months after notice of his election shall be considered to have declined his election; but such term may be extended by the Board of Managers, or Executive Committee.

ARTICLE VIII.

FINANCES.

SEC. 1. The fiscal year of the corporation shall be the calendar year commencing January 1st and ending December 31st.

SEC. 2. Neither the Society nor any of its Managers or Officers shall contract any debt which, with existing debts, shall exceed in amount the funds then in the Treasury, except to meet expenditures for which the City is liable, and for which the Society will be reimbursed by warrants from the Comptroller's office.

ARTICLE IX.

AMENDMENTS.

SEC. 1. Amendments to these By-Laws may be proposed, in writing, at any meeting of the Board of Managers, and adopted by unanimous consent of the Managers present, or if such proposed amendment shall fail to receive unanimous consent, the Secretary shall, with the notices of the next meeting, send a copy of it to each Manager and state that it will be brought up for action at such meeting, when it may be passed by a majority vote.

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