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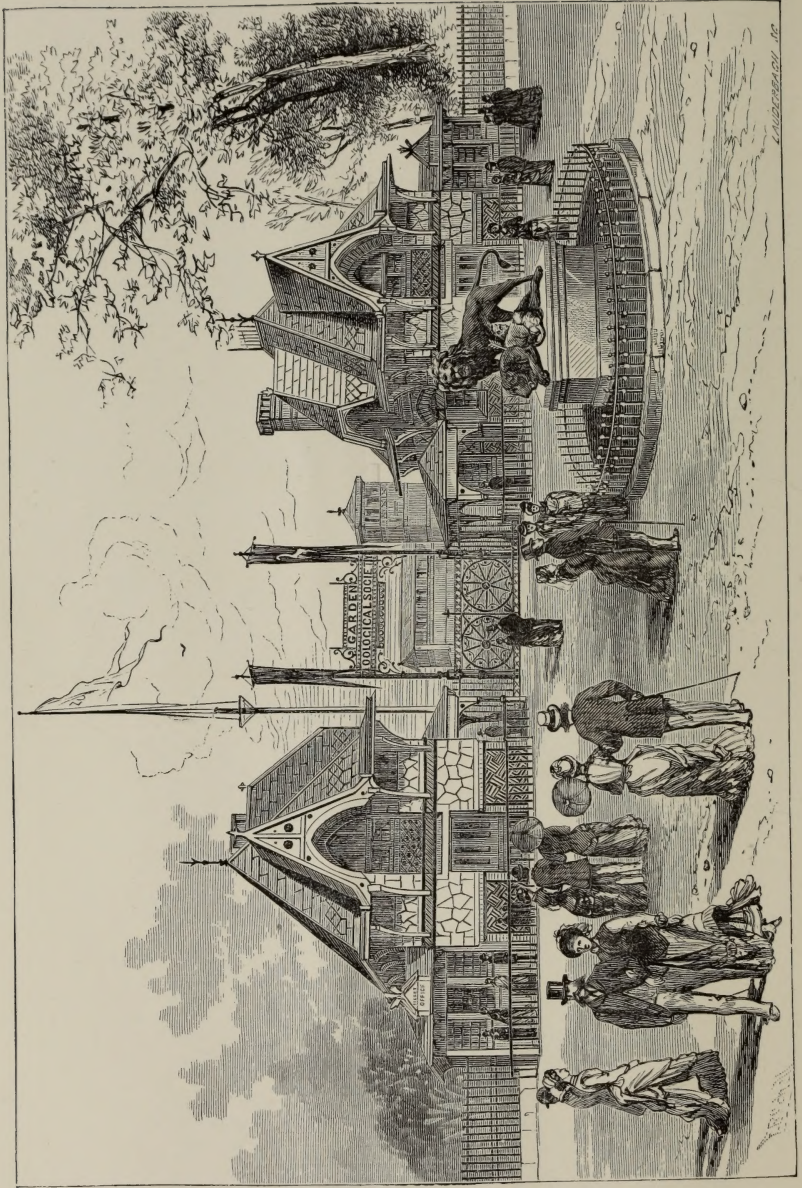
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COMPARATIVE ZOÖLOGY,

AT HARVARD COLLEGE, CAMBRIDGE, MASS.

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No. 6110



GIRARD AVENUE ENTRANCE.

THE
FIFTH ANNUAL REPORT
OF THE
BOARD OF DIRECTORS
OF
THE ZOOLOGICAL SOCIETY
OF PHILADELPHIA.

(Incorporated March 21st, 1859.)

READ AT THE ANNUAL MEETING OF THE MEMBERS AND LOANHOLDERS
OF THE SOCIETY,

APRIL 26th, 1877.

PHILADELPHIA:

1877.

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THE
Zoological Society of Philadelphia,

OFFICE, 206 WALNUT PLACE.

OFFICERS FOR THE YEAR ENDING APRIL 27, 1878.

PRESIDENT,

WILLIAM CAMAC, M. D.

VICE-PRESIDENTS,

J. GILLINGHAM FELL, GEORGE W. CHILDS.

CORRESPONDING SECRETARY,

JOHN L. LECONTE, M. D.

RECORDING SECRETARY,

JOHN SAMUEL.

TREASURER,

EDWARD BIDDLE.

DIRECTORS,

WILLIAM S. VAUX,	S. FISHER CORLIES,
FREDERICK GRAFF,	THEO. L. HARRISON,
CHARLES W. TROTTER,	HENRY C. GIBSON,
J. VAUGHAN MERRICK,	ISAAC J. WISTAR,
JOHN WAGNER,	WILLIAM HACKER,
WILLIAM H. MERRICK,	PROF. JOSEPH LEIDY.

ACTUARY,

CHARLES L. JEFFERSON.

SUPERINTENDENT OF THE GARDEN,

ARTHUR E. BROWN.

SOLICITORS,

S. WAGNER, JR., W. W. MONTGOMERY.

REPORT
OF THE
BOARD OF DIRECTORS.

PHILADELPHIA, *April 26th, 1877.*

The Board of Directors of the Zoological Society of Philadelphia submit to the members and loan-certificate holders, this, their fifth annual report, of the business and operations of the Society, from 1st of March, 1876, to 1st of March, 1877.

MEMBERS.

The number of members of the Society, on the 1st of March, 1877, was:—

Annual members,	774
Life members,	188
Corresponding members,	9
Honorary members,	16

Total members (exclusive of loan-holders,) 977

An increase over preceding year of

Annual members,	4
Life members,	9
Honorary members,	2

Total increase of members, 15

During the year three members have died, and four transferred from Annual to Life Members.

The number of loan-holders is 496. Professor Spencer F. Baird, of the Smithsonian Institution, Washington, D. C., and Dr. Henry C. Yarrow, U. S. A., were elected honorary members.

VISITORS.

The influx of strangers coming to the Centennial Exhibition, as was expected, has largely added to the number of visitors to the garden. But although the number was great, the crowd was not of so long a duration as was anticipated; two months including half the number of visitors for the year. From 1st March, 1876, to 1st March, 1877, 657,295 persons visited the garden; a larger number, it is believed, than ever entered a similar institution during the same space of time, and an increase over the preceding twelve months of 237,519 persons. The total receipts at the gates were \$151,060.63—an amount from such a source the largest ever known. The largest receipts of the London Zoological Society, which was in the year 1875, were \$143,690; the increase of which, according to the report of that year, was due to two sources—interest on investments, and donations and bequests. Since the closing of the exhibition, the garden has felt the financial depression under which the country is laboring, and its receipts are sensibly affected. In the next year we must look for a very material reduction in our revenue from this source.

The following tables show the number of admissions and gate receipts in detail for the past year:—

Adults (paying 25 cents at the gates),	579,249
Children (paying 10 cents at the gates),	57,114
Members (including life and annual members, loan-holders' annual and complimentary annual tickets,)	5,299
Loan-holders' tickets (single),	11,489
Free admissions, charitable institutions, donors' tickets, etc.,	1,564
Package tickets received,	2,490
Tickets sold by local agents (1875-6) received,	90
	<hr/>
Total visitors,	<u>657,295</u>

Visitors entered through north gate,	.	.	439,932
Visitors entered through south gate,	.	.	217,363
Receipts from north gate,	.	.	\$101,625 18
Receipts from south gate,	.	.	49,435 45
Total receipts,	.	.	\$151,060 63
Counterfeits received,	.	.	\$30 00
Tickets sold 1875-6,	.	.	14 45
			44 45
Total net gate receipts,	.	.	\$151,016 18
Average daily admission,	.	.	1,801
Average daily receipts from admission,	.	.	\$413 86

Monthly Record of Visitors for 1876-77, with the corresponding accounts of prior years.

Month.	1874-5.	1875-6.	1876-7.	Comparison with 1875-6.
March,		8,493	12,607	Increase, 4,114
April,		21,377	25,573	Increase, 4,196
May,		43,396	32,952	Decrease, 10,444
June,		49,981	47,574	Decrease, 2,407
July,	54,399	53,730	50,377	Decrease, 3,353
August,	61,128	64,501	67,318	Increase, 2,817
September,	34,420	57,197	122,586	Increase, 65,389
October,	31,374	52,426	207,306	Increase, 154,880
November	16,383	19,981	69,980	Increase, 49,999
December,	8,519	15,058	7,721	Decrease, 7,337
January,	12,434	19,887	7,207	Decrease, 12,680
February,	8,900	13,749	6,094	Decrease, 7,655
	227,557	419,776	657,295	Total Inc., 237,519

The greatest number of visitors on any one day was on Sunday, October 29th, 1876, 20,715
The least, on Monday, December 18th, 1876, 2
Average daily admissions, 1874-5, 936
" " 1875-6, 1,150
" " 1876-7, 1,801
Increase of daily admissions over 1875-6, 651

Monthly record of Receipts from Admissions for 1876-7, with the corresponding accounts of prior years.

Month.	1874-5.	1875-6.	1876-7.	Comparison with 1875-6.
March,		\$1,763 78	\$2,716 75	Increase, \$952 97
April,		4,507 11	5,337 40	Increase, 830 29
May,		9,100 79	7,047 90	Decrease, 2,052 89
June,		10,357 46	10,531 15	Increase, 173 69
July,	\$11,601 45	11,350 35	11,356 40	Increase, 6 05
August,	13,147 40	13,505 36	15,203 13	Increase, 1,697 77
September,	7,360 90	12,131 83	28,949 35	Increase, 16,817 52
October,	6,447 60	11,083 16	49,529 80	Increase, 38,446 64
November,	3,305 85	4,148 79	16,471 55	Increase, 12,322 76
December,	1,790 95	3,141 90	1,425 75	Decrease, 1,716 15
January,	2,492 04	4,130 08	1,308 60	Decrease, 2,821 48
February,	1,755 46	2,763 50	1,182 85	Decrease, 1,580 60
	\$47,901 65	\$87,984 11	\$151,060 63	Tot. Inc. \$63,076 52

The largest amount of receipts at the gates on any one day was Sunday, October 29th, 1876, \$4,974.10.

The least, on Saturday, February 24th, 1877, 0.45.

Average daily receipts from admissions, 1874-5, 197 13

“ “ “ 1875-6, 241 05

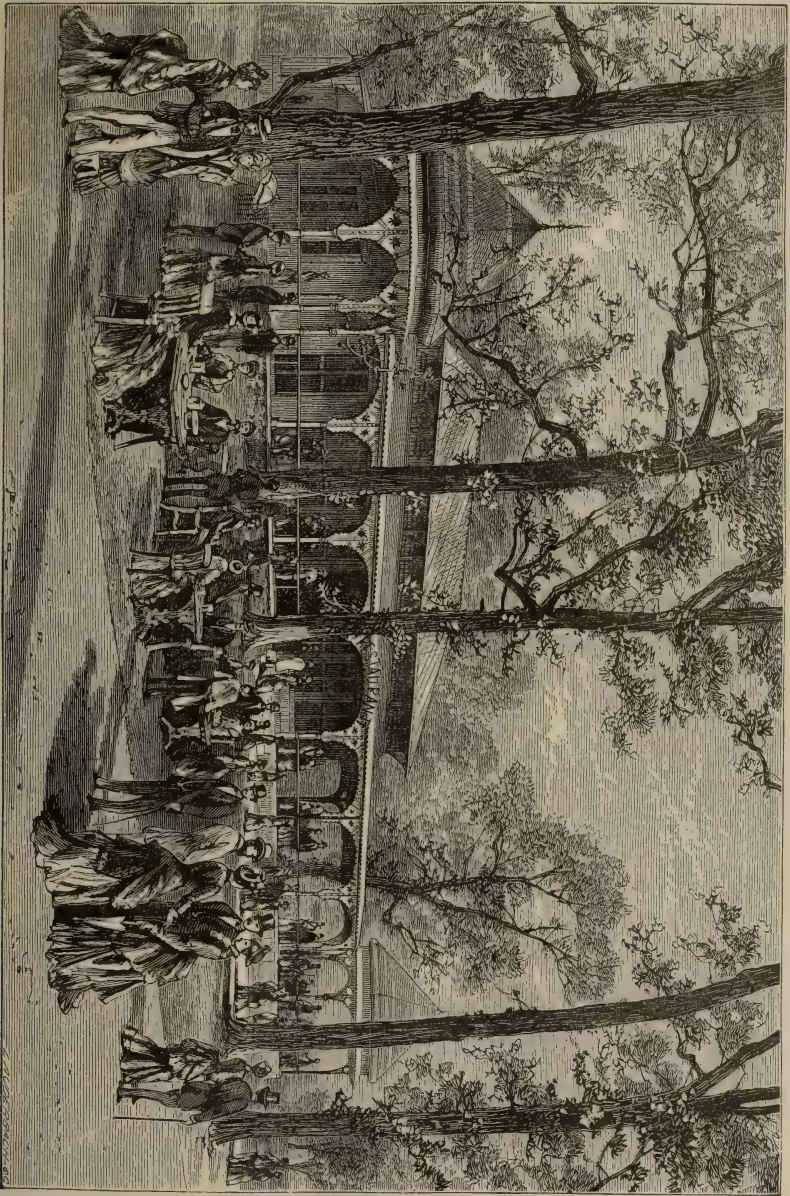
“ “ “ 1876-7, 413 86

Increase of daily receipts from admissions over 1875-6, \$172.81.

Total receipts on the several days of the week, and their respective averages, for 1876-7.

Days	Total Receipts.	Average.
Sunday,	\$51,395 78	\$988 38
Thursday,	20,741 55	398 87
Friday,	20,325 45	390 87
Wednesday,	18,441 25	347 94
Tuesday,	14,834 25	285 23
Saturday,	13,425 35	258 18
Monday,	11,897 00	228 78
	\$151,060 63	*\$413 86

* Daily average for the year.



IMPROVEMENTS.

During the year the entire northern end of the garden has been graded, underdrained, and planted. Two handsome lodge gate houses, with ornamental iron entrance gates and sign, the whole costing \$9,150, have been erected. The concourse in front of the northern entrance has been graded, graveled, and curbed. By an arrangement between the Fairmount Park Art Association and this Society, the circle in the centre of this place will be occupied by the bronze statue of the Dying Lioness—thus adding an appropriate ornament to the already handsome approach. The carriage sheds, capable of accommodating twenty-six carriages, have been completed at a cost of \$4,078.80. A Reptile house, which, although not intended for a permanent structure, will sufficiently answer our needs in this respect for some time, costing \$1,200, rabbit warrens, costing \$855, and ponds for Seals, Otters, etc., costing \$5,640.75, have been finished. Also a palm house for the protection during the winter of the tropical and ornamental plants of the society, at a cost of \$3,275. A house for the accommodation of warm-climated hay-eating animals is now under construction, from the plans of George W. Hewitt, Esq. When finished it will be one hundred and thirty feet long by fifty-eight feet six inches broad, with outside open-air paddocks; it will contain eighteen pens of good dimensions, and its estimated cost is \$18,000. Revolving way-out-gates have been fixed at convenient points, and a permanent pointed stone wall and coping, surmounted with a handsome iron fence, has been constructed on the east boundary line of the garden from the horse shelters to the forebay.

FINANCES.

The financial condition of the society is exhibited by the following figures, and the Treasurer's statement and balance sheet, in Appendix A:—

INCOME AND EXPENDITURES

For the fiscal year ending March 1st, 1877.

INCOME.

(Exclusive of subscription to Loan, Donations and Life Memberships).

Members' Initiation Fees and Dues,	\$1,627 50	
Admission Receipts,	151,016 18	
Rents,	4,500 42	
Profit on sale of Guides,	665 75	
Sundry Receipts,	190 39	158,000 24

EXPENDITURES.

(Exclusive of Permanent Improvements and Animals).

Salaries,	\$24,343 83	
Office expenses,	3,022 52	
General expenses,	32,502 53	
		59,868 88
Estimated loss for the year on Animals,	9,327 75	
Interest account,	15,789 64	
Commissions,	2,508 50	87,494 77
Balance of Income acct. for year ending March 1st, 1877,		\$70,505 47

In pursuance of the policy adopted by the Board in making the last annual report, the following items have been charged to Profit and Loss:—

Depreciation for the year on Cages,	\$1,240 09	
Depreciation for the year on Deer Park and Enclosure,	433 75	
Depreciation for the year on Horticulture,	1,233 00	
Fencing,	2,600 00	
Wharf,	600 00	
Aquaria,	486 82	6,593 66

Balance to Credit of Profit and Loss for year ending March 1st, 1877, \$63,911 81

CAPITAL.

Receipts and Expenditures of Capital for the year ending March
1st, 1877:—

RECEIPTS.

Subscriptions paid on Loan,	56,489 00	
Life Memberships,	540 00	
Donations,	1,614 66	
	<hr/>	\$58,643 66

EXPENDITURES.

Permanent Improvements and animals, per items in Treasurer's Statement, (Appendix A),	\$95,972 05	
Time Warrants, (Balance March 1st, 1876, since paid),	13,515 10	
Temporary Loan,	15,000 00	
	<hr/>	124,487 15
Less am'ts charged to Profit and Loss:		
Loss on Animals,	\$9,327 75	
Depreciation on Cages,	1,240 09	
Depreciation Deer Park and Enclos- ure,	433 75	
Depreciation Horticulture,	1,233 00	
Fencing,	2,600 00	
Wharf,	600 00	
Aquaria,	486 82	
	<hr/>	15,921 41
Balance, (being in excess of Investments over Receipts of Capital, which has been pro- vided from Profit and Loss),		49,922 08
	<hr/>	<hr/>
	\$108,565 74	\$108,565 74
	<hr/>	<hr/>

MENAGERIE.

The condition of the menagerie will appear in the reports of the General Superintendent and Prosector, hereto annexed, Appendix B and C.

In pursuance of their intention to make the society an auxiliary in the educational system of our community, the directors have initiated a series of popular lectures on zoological subjects. Three of them have been delivered during the past winter, viz.: By Prof. B. Waterhouse Hawkins, on "Cats"; by Prof. Edward D. Cope, on "Special Characters of American Life"; and by Prof. Joseph Leidy, on "Protozoa." It is to be hoped that the efforts of the directors in this respect will awaken an increased and wider interest in scientific research and natural objects.

The thanks of the society are due to the Trustees of the Cope Fund for donations of interest, to Messrs. W. P. Clyde & Co., Adams Express Co., and to Pennsylvania and Union Pacific Railroads for many kindnesses in regard to transportation, and to the donors of animals.

The Board of Directors feel sensibly the loss occasioned by the retirement, on account of ill health, of their treasurer, Mr. Frank H. Clark, and they desire to express their sense of the zealous activity and efficient services rendered by him to the society.

All of which is submitted by order of the Board.

JOHN SAMUEL,

Secretary Zoological Society.

APPENDIX A.

TREASURER'S STATEMENT,

March 1st, 1876, to March 1st, 1877.

DR.

To Balance on hand March 1st, 1876,		\$7,906 56
" Loan Subscriptions paid,		56,489 00
" Donations,		1,614 66
" Life Memberships,		540 00
" Members' Initiation fees and dues,	\$1,627 50	
" Admission Receipts,	151,016 18	
" Rents at Garden,	4,500 42	
" Profit on sale of Guides,	665 75	
" Sundries,	190 39	
Transferred to Credit of Profit and Loss,		158,000 24
		<u>\$224,550 46</u>

CR.

By Warrants, paid for :		
Salaries,	\$24,343 83	
Subsistence,	11,633 80	
Advertising,	4,896 57	
Music,	5,259 00	
Fuel and Light,	1,432 58	
Printing,	856 13	
Expressage,	390 53	
Telegraph Line,	341 79	
Repairs,	754 12	
Extra Labor and Jobbing,	1,847 04	
Hardware and Tools,	849 84	
Lumber,	808 12	
Flags and Poles,	471 02	
Uniforms and Equipment,	918 45	
Sundry expenses,	1,446 17	
Insurance,	401 52	
Lectures,	195 85	
Office expenses,	3,022 52	
Maintenance &c., trans. to Dr. of Profit and Loss,		\$59,868 88

Amount brought forward,		\$59,868 88
Purchase of Animals,	14,741	75
Aviaries,	101	50
Bear Pits,	79	00
Monkey House,	25	88
Cages,	28	00
Vulcanized Walks,	16,414	11
Fencing,	472	56
Aquaria,	4	25
Penn Mansion,	165	00
Gate Houses,	9,005	96
Walks, Roads, and Grading,	12,783	13
Houses for Sundry Animals,	864	71
Carnivora House,	3,144	33
Green House,	3,287	05
Elephant House,	259	25
Horticulture,	1,841	85
Signs,	263	73
Seal Ponds,	5,640	77
Water Supply and Drainage,	3,160	91
Carriage Sheds,	3,536	00
Music Stand,	1,667	00
Restaurant,	4,852	00
Settees and Chairs,	1,730	00
Photograph Stand,	330	00
New Aviary,	416	50
Deer House,	8,277	00
Reptile House,	1,246	31
Camel House,	933	50
Permanent Enclosure,	700	00
Total Permanent Improvements and Animals,	95,972	05
Temporary Loan,	15,000	00
Time Warrants, (Balance March 1st, 1876, since paid),	13,515	10
Interest, &c.,	15,789	64
Commissions on Loan,	2,508	50
Balance on hand March 1st, 1877,	21,896	29
		<u>\$224,550 46</u>

BALANCE SHEET

Zoological Society, March 1st, 1877.

Dr.

Cr.

Cash.....	\$21,896 29	
Water Supply and Drainage.....	10,697 88	
Animal Account.....	55,665 00	
Aviaries.....	10,257 04	
Bear Pits.....	5,996 19	
Monkey House.....	8,343 99	
Cages.....	4,960 40	
Vulcanized Walks.....	33,292 06	
Fencing.....	5,663 94	
Deer Park and Enclosure.....	3,903 75	
Prairie Dog Enclosure.....	937 52	
Penn Mansion.....	1,547 66	
Gate Houses.....	11,750 91	
Buffalo House.....	1,572 78	
Horiculture.....	4,931 96	
Lake.....	10,997 36	
Walks, Roads, and Grading.....	74,435 97	
Houses for sundry animals.....	6,720 79	
Carnivora House.....	58,566 82	
Green-houses.....	4,757 42	
Skating House.....	1,378 41	
Barn.....	3,744 34	
Elephant House.....	38,440 42	
Signs.....	544 26	
Seal Ponds.....	9,564 73	
Carriage Sheds.....	4,078 80	
Restaurant.....	15,996 79	
Settees and Chairs.....	2,832 00	
Photograph Stand.....	730 00	
New Aviary.....	416 50	
Deer House.....	8,277 00	
Reptile House.....	1,746 31	
Camel House.....	933 50	
Music Stand.....	1,667 00	
Permanent Enclosure.....	700 00	
Loan.....		\$300,000 00
Donations.....		10,225 14
Life Memberships.....		9,455 00
Profit and Loss Account.....		107,312 25
		\$426,992 39

\$426,992 39



AVIARY

TAYLOR-SMITH, PHILA.

APPENDIX B.

*To the President and Board of Directors of
The Zoological Society:*

GENTLEMEN:—I have the honor to submit to you a brief statement of the condition of the collection of vertebrate animals in the garden of the Society at the present time, and also as compared with that of the previous year.

The total number of specimens now living in the garden is 1,073—being an increase of 172 over the last statement, as shown in the table below:—

	March 1, 1876.	March 1, 1877.	Increase.
Mammals,	342	405	63
Birds,	485	506	21
Reptiles,	74	162	88
Total,	901	1,073	172
Valuation,	\$50,251	\$55,665	\$5,414

The whole number of animals which have been exhibited in the garden since its opening is 2,461, representing many different genera and species. The table immediately following will show that, considering the infancy of the collection, there has been much diversity in the typical forms presented to visitors:—

	Genera.	Species.	Specimens.
Mammals,	88	152	878
Birds,	154	207	968
Reptiles,	40	59	490
Fishes,	16	17	125
	298	435	2,461

Among the animals received during the past year the following were placed for the first time on exhibition in the garden:—

MAMMALIA.

Primates :

- Entellus Monkey (*Semnopithecus entellus*).
- Red Monkey (*Cercopithecus ruber*).
- Bonnet Monkey (*Macacus radiatus*).
- Black Spider Monkey (*Ateles ater*).
- Black-handed Spider Monkey (*Ateles melanochir*).
- Common Marmoset (*Hapale jacchus*).

Carnivora :

- Azara's Fox (*Canis azarae*).
- Black Fisher (*Mustela pennanti*).
- Polar Bear (*Ursus maritimus*).
- Himalayan Bear (*Ursus tibetanus*).

Rodentia :

- Mexican Squirrel (?).
- Red Squirrel (*Sciurus hudsonius*).
- Gray Gopher (*Spermophilus franklinii*).

Ungulata :

- Malayan Tapir (*Tapirus malayanus*).
- Oryx Antelope (*Oryx leucoryx*).
- Angora Goat (*Capra hircus*).

Edentata :

- Peba Armadillo (*Tatusia peba*).

AVES.

Passeres :

- English Blackbird (*Turdus merula*).
- Olive-backed Thrush (*Turdus swainsonii*).
- Olive-gray Tanager (*Tanagra olivescens*).

Picarie :

- Red-headed Woodpecker (*Melanerpes erythrocephalus*).

Psittaci :

- Rose-crested Cockatoo (*Cacatua moluccensis*).
- Parrot Macaw (*Ara macavanua*).
- Hahn's Parrot (*Ara hahni*).
- Brown-throated Conure (*Conurus æruginosus*).
- Yellow-throated Parrakeet (*Brotogerys tovi*).
- Cayenne Parrakeet (*Brotogerys tuipara*).
- Ring-necked Parrakeet (*Palæornis torquata*).
- Red-vented Parrot (*Pionus menstruus*).

Raptores :

- Short-eared Owl (*Brachyotus palustris*).
- Burrowing Owl (*Spheotyto cunicularia* var. *hypogæa*).
- Red-shouldered Buzzard (*Buteo lineatus*).
- Lanier's Falcon (*Falco lanarius* var. *polyagrus*).
- Cooper's Hawk (*Accipiter cooperii*).

Columbæ :

- Zenæda Dove (*Zenæda amabilis*).
- Key West Dove (*Geotrygon martinica*).

Gallinæ:

- Ruffed Grouse (*Bonasa umbellus*).
- Common Quail (*Ortyx virginianus*).
- Cuban Quail (*Ortyx cubanensis*).

Grallatores:

- American Woodcock (*Philohela minor*).
- Least Bittern (*Ardetta exilis*).
- Adjutant (*Leptoptilus argala*).

Alectorides:

- Florida Gallinule (*Gallinula chloropus var. galeata*).

Anseres:

- Red-billed Tree Duck (*Dendrocygna autumnalis*).
- Pintail Duck (*Dafila acuta*).
- Red-headed Duck (*Fuligula ferina var. americana*).
- Eider Duck (*Somateria mollissima*).

Gavidae:

- Laughing Gull (*Larus atricilla*).

Pygopodes:

- Pied-billed Grebe (*Podilymbus podiceps*).

Steganopodes:

- Common Gannet (*Sula bassana*).

REPTILIA.

Testudinata:

- Loggerhead Turtle (*Thassalochelys caouana*).
- Musk Tortoise (*Aromochelys odoratus*).

Lacertilia:

- Horned Toad (*Phrynosoma orbiculare*).

Ophidia:

- Black Snake (*Bascanion constrictor*).
- Whip Snake (*Masticophis flavigularius*).

BATRACHIA.

Proteida:

- Menobranchus (*Menobranchus maculatus*).

Urodela:

- Salamander (*Spelerpes ruber*).
- Salamander (*Spelerpes bilineatus*).
- Salamander (*Plethodon cinercus var. erythronotus*).
- Triton (*Desmognathus nigra*).

Among the animals received since last March, those most worthy of mention are a pair of Bengal Tigers, (male and female) and a fine male Jaguar, purchased April 5th; a male Entellus or Sacred Monkey, from India; a Patas or Red Monkey, from the West Coast of Africa; three Black-handed Spider Monkeys and a Black Spider Monkey, from Central America. A pair of Sun Bears from the Himalayas, were purchased, but one of them, unfortunately, died of heart disease before reaching the Garden; the other

arrived in safety, and has proved to be a most attractive resident.

An attempt to imitate one of Nature's most remarkable associations, by domesticating some Burrowing Owls in the Prairie Dog enclosure, failed signally, a terrific contest having been the result. It was therefore abandoned, and the Owls given quarters by themselves.

A valuable addition was made on Nov. 1st, consisting of a Malayan or Saddle-backed Tapir, from the jungles of Southern Asia; two small Indian Elephants, a male and female, respectively three and four years old; a female Black Leopard, to mate the one previously owned by the Society, and a beautiful specimen of the African Oryx Antelope. In December, a pair of young Polar Bears arrived from Hamburg, and were transferred to temporary quarters in the Garden, where they were shortly followed by a half-grown pair of Moose, from Nova Scotia, which are doing finely, and promise well for future developement.

During the summer an attempt was made for the third time to keep a living specimen of the Manatee or Sea Cow (*Manatus americanus*).

A nearly grown female was procured in the Orinoco River, and arrived from Demerara on the fifteenth of June, apparently in good condition. Everything was in readiness for its reception—a spacious tank, water of an even and suitable temperature, well ærated and supplied with an excellent imitation of marine salt, in sufficient quantity to keep it brackish. It was fed on such river grasses as were to be procured, which seemed to be suited to its tastes, principally the *Vallisneria spiralis*, and several of the *Potamogettons*, the last of which is closely allied to those plants which probably supplied its necessities in its native haunts.

Notwithstanding these favorable circumstances, the animal steadily lost condition, and finally died on September 5th—two months and twenty-one days after its arrival. It is probable, owing to the impossibility of providing (in confinement and in this region) for the peculiar wants of this species, that any further attempt towards its domestication in the Garden would be unsuccessful.

The species which have bred in the Garden are somewhat limited in number, owing, in my opinion, to the fact that the present unfinished state of the grounds requires many of them to be kept for the time in cages not adapted in all

respects to their habits. The reproductive system of all animals being most easily affected by unfavorable conditions of life, it is scarcely to be wondered at that a collection of wild animals, in its early stages, should feel the effects of their surroundings.

The animals which have been bred in the Garden during the past year, are as follows:—

- 3 Lions (*Felis leo*).
- 1 Leopard (*Felis pardus var. javanensis*).
- 6 Prairie Wolves (*Canis latrans*).
- 1 Dingo (*Canis dingo*).
- 21 Prairie Dogs (*Cynomys ludovicianus*).
- 4 Fournier's Capromys (*Capromys pilorides*).
- 2 Javan Porcupines (*Hystrix javanica*).
- 1 Zebu (*Bos indicus*).
- 1 Savannah Deer (*Cervus savannarum*).
- 1 Common Camel (*Camelus dromedarius*).
- 1 Bactrian Camel (*Camelus bactrianus*).
- 1 Red Kangaroo (*Macropus rufus*).
- 1 Great Kangaroo (*Macropus giganteus*).
- 4 Golden Pheasants (*Thaumalea picta*).
- 2 Common Peafowls (*Pavo cristata*).

The most serious losses by death since last March have been:—the female Tiger, purchased in April, which received injuries from its mate, resulting shortly in its death; a female Leopard, which died in the act of producing the unusual number of seven young in one litter; a Seal, (*Zalophus gillespii*) which died in May, from peritonitis. Another young female of the same species had the habit of generally staying in the water at night. During a very cold night, early in the winter, she lost the air-hole she had kept open to breathe through, and not having strength to break the ice which formed over her, she was found in the morning drowned.

The Malayan Tapir purchased in the fall also died in January, from the indirect results of an old inflammation of the lungs. These animals, with a Giraffe which died during the winter, and the Manatee, form the greater part of the \$9,327.75, estimated to be the loss on animals during the year. If it be taken into consideration that the summer of last year was one of unparalleled heat, and that the early part of the winter was almost as remarkable for continued cold, both of which extremes bear with great severity upon animals from milder climates, it will appear that the Society has reason for congratulation, in that the loss for the year was no greater in proportion to the increased value of the collection, than in the year previous.

In conclusion, I desire to state that a correspondence has recently been opened with persons in different parts of the United States, who take much personal interest in the fulfillment of the objects to which this Society has devoted itself, and it is hoped that through their aid much may be done towards perfecting a collection of the North American Batrachia and Reptilia—in both of which classes of animals our own country is peculiarly rich.

A list of all animals placed in the Garden, by donation and by purchase, from March 1st, 1876, to March 1st, 1877, will be found accompanying.

Respectfully,

ARTHUR E. BROWN,
Superintendent.

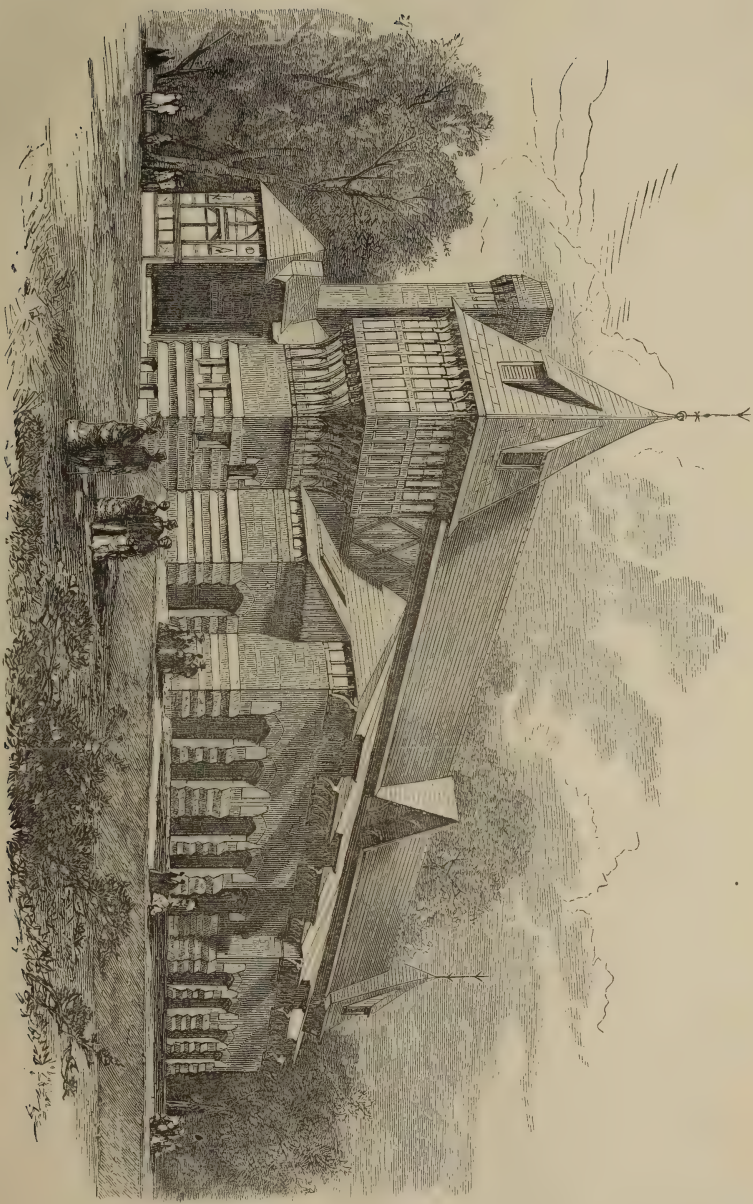
ZOOLOGICAL GARDEN, *March 1st, 1877.*

LIST OF ADDITIONS TO THE SOCIETY'S MENAGERIE
DURING THE YEAR ENDING
FEBRUARY 28, 1877.

1876.

- March 4. 1 Wood Duck (*Aix sponsa*). Presented by Fred. Mather.
 1 Gray Squirrel (*Sciurus carolinensis*). Presented by S. N. and G. R. Still, Malvern, Pa.
 1 Lion (*Felis leo*). Born in the garden.
5. 1 Indigo Bird (*Cyanospiza cyanea*). Presented by John Pearsall, Philadelphia.
 2 Lions (*Felis leo*). Born in the garden.
7. 1 Red-tailed Hawk (*Buteo borealis*). Presented by P. Reuter, Philadelphia.
 2 Red Squirrels (*Sciurus hudsonius*). Presented by Masters S. & J. Wagner, Germantown.
 1 Red-head Duck (*Fuligula ferina var. americana*). Presented by John Siner, Philadelphia.
10. 1 Muskrat (*Fiber zibethicus*). Captured in garden.
11. 2 Red-tailed Hawks (*Buteo borealis*). Presented by N. H. Johnson, Marple, Pa.
 1 Mocking Bird (*Mimus polyglottus*). Presented by Miss Markley, Philadelphia.
 1 Ring-necked Parrakeet (*Palaeornis torquata*).
 1 Thrush. Presented by W. S. Ellis, Philadelphia.
12. 1 Red Fox (*Vulpes fulvus*). Presented by Thos. Thompson, Sons & Co., Philadelphia.
14. 1 Young Alligator (*Alligator mississippiensis*). Presented by J. Louis Kates, Philadelphia.
15. 2 Red-tailed Hawks (*Buteo borealis*). Presented by Geo. Schumacker, Jr., Abingdon, Pa.
17. 1 Wild Goose (*Branta canadensis*). Presented by The Maxwell's Point Ducking Club.
18. 1 Young Alligator (*Alligator mississippiensis*). Presented by Gen. Isaac J. Wistar, Philadelphia.
19. 2 Red-tailed Hawks (*Buteo borealis*). Presented by Geo. Schumacker, Jr., Abingdon, Pa.
21. 1 Opossum (*Didelphys virginiana*). Presented by Joseph Carpenter, Philadelphia.
22. 1 Red-tailed Hawk (*Buteo borealis*). Presented by J. C. Doyle, Philadelphia.
24. 4 Flying Squirrels (*Pteromys volucella*). Presented by Miss Mary H. Morris, Overbrook, Pa.

- Mar. 25. 1 Red-tailed Hawk (*Buteo borealis*). Presented by J. B. Eshelman, Ephrata, Pa.
 1 Red-tailed Hawk (*Buteo borealis*). Presented by Wm. Gibson, Concordville, Pa.
29. 1 Woodcock (*Philohela minor*). Presented by Fred. Lentz, Philadelphia.
30. 1 Great Horned Owl (*Bubo virginianus*). Presented by E. Mawson, Philadelphia.
 1 Woodchuck (*Arctomys monax*). Presented by Rev. A. J. Hires, Baltimore, Md.
31. 1 Red Fox (*Vulpes fulvus*).
 1 Opossum (*Didelphys virginiana*). Presented by Jos. M. Wilson, Washington, D. C.
 1 Opossum (*Didelphys virginiana*). Presented by J. B. Eshelman, Ephrata, Pa.
- April 1. 1 Black Squirrel (*Sciurus carolinensis*). Presented by Thos. M. Robinson, Kellyville, Pa.
 1 Raccoon (*Procyon lotor*). Presented by Edward Macharg, Philadelphia.
3. 1 Opossum (*Didelphys virginiana*) Presented by Emt. Engwight, Marietta, Pa.
4. 4 Angora Goats and 3 Kids (*Capra hircus*). Purchased.
5. 1 Fisher (*Mustela pennantii*).
 1 Black Iguana (*Metopoceros cornutus*). } Purchased.
8. 1 Pair Irish Rabbits (*Lepus cuniculus*). Presented by Ph. J. Lauber, Philadelphia.
 1 Pair Mule Deer (*Cervus macrotis*). } Purchased.
 4 French Rabbits (*Lepus cuniculus*). }
 6 Prairie Wolves (*Canis latrans*). Born in the garden.
11. 1 Javan Porcupine (*Hystrix javanica*). Born in the garden.
 1 Pintail Duck (*Dasila acuta*). Presented.
14. 1 Common Rabbit (*Lepus cuniculus*). Presented by G. H. Eddy, Philadelphia.
15. 1 Pair Bengal Tigers (*Felis tigris*). } Purchased.
 1 Jaguar (*Felis onca*), ♂. }
 1 Bittern (*Botaurus minor*). Presented by Jos. M. Wilson, Washington, D. C.
19. 1 Common Boa (*Boa constrictor*). Purchased.
20. 1 Young Alligator (*Alligator mississippiensis*). Presented by Master Geo. English, Philadelphia.
22. 3 Golden Pheasants (*Thaumalea picta*). 1 ♂ 2 ♀. } Pur-
 5 Silver Pheasants (*Euplocamus nyctemerus*), 2 ♂ 3 ♀. } chased.
23. 1 Robin (*Turdus migratorius*). Presented by John Pearsall, Philadelphia.
 1 Rose-crested Cockatoo (*Cacatua moluccensis*). Loaned by J. J. Springer, Lancaster, Pa.
24. 1 Pied-billed Grebe (*Podilymbus podiceps*). Presented by Wm. Phillips, Philadelphia.
26. 2 Great Horned Owls (*Bubo virginianus*). Presented by Jos. M. Wilson, Washington, D. C.
 1 Bactrian Camel (*Camelus bactrianus*). Born in the garden.
 1 Snowy Owl (*Nyctea nivea*). Presented by Henry N. Stewart, Philadelphia.
27. 2 Guinea Baboons (*Cynocephalus sphinx*), 2 ♂. }
 2 Pig-tailed Monkeys (*Macacus nemestrinus*), ♂, ♀. } Pur-
 4 Macaque Monkeys (*Macacus cynomolgus*), 3 ♂ 1 ♀. } chased.
 1 Sooty Mangabey (*Cercocebus fuliginosus*), ♂.



ELEPHANT HOUSE.

- April 27. 1 Cinnamon Bear (*Ursus Americanus var.*). Presented by Chas. B. Lamborn, South Pueblo, Col.
 2 Mexican Dogs (*Canis familiaris*). Presented by Dr. H. C. Yarrow, Washington, D. C.
28. 1 American Woodcock (*Philohela minor*). Presented by Philip Rhoads, Lancaster, Pa.
 1 Horned Grebe (*Podiceps cornutus*). Presented by John Siner, Philadelphia.
 3 Red Foxes (*Vulpes fulvus*). Presented by Master Edgar F. Jordan, Philadelphia.
 1 Moose (*Alce americanus*). Purchased.
 1 Barn Owl (*Strix flammea var. americana*). Presented.
29. 2 Screech Owls (*Scops asio*). Presented by Edgar Wiestling and John Wiegand, Philadelphia.
 1 Young Alligator (*Alligator mississippiensis*). Presented by Frank M. Scanlan, Philadelphia.
 1 Loon (*Colymbus torquatus*). Presented by Jos. M. Wilson, Washington, D. C.
 1 Common Rattlesnake (*Crotalus durissus*). Presented by E. Krauser & Brother, Milton, Pa.
 2 Caribous (*Rangifer caribou*). } Purchased.
 4 Mute Swans (*Cygnus olor*). }
 1 Pair Zebus (*Bos indicus*). }
30. 1 Young Alligator (*Alligator mississippiensis*). Presented by Wm. Trimble, Jr., Philadelphia.
- May 1. 1 Brown Thrush (*Harporhynchus rufus*). Presented by Jos. F. Vogels, Camden, N. J.
 1 Brown Thrush (*Harporhynchus rufus*). } Presented by L.
 1 White-throated Sparrow (*Zonotrichia albicollis*). } Schneider, Philada.
3. 1 Black Iguana (*Metopoceros cornutus*). Purchased.
4. 2 Pig-tailed Monkeys (*Macacus nemestrinus*), 2 ♂. }
 3 Macaque Monkeys (*Macacus cynomolgus*), 2 ♂, 1 ♀. } Purchased.
 1 Rhesus Monkey (*Macacus erythraeus*), ♂. }
 1 Entellus Monkey (*Semnopithecus entellus*), ♂. }
5. 1 Young Alligator (*Alligator mississippiensis*). Presented by Jas. W. M. Cardeza, Philadelphia.
 1 Black Snake (*Bascanion constrictor*). Presented by Peter Snyder, Centrebridge, Pa.
6. 1 Garter Snake (*Eutainia sirtalis*). Presented by Wm. T. Wiegand, Philadelphia.
 3 Wild Geese (*Branta canadensis*). Presented by Amos R. Little, Philadelphia.
 2 Gray Squirrels (*Sciurus carolinensis*). Presented by Mrs. E. M. Wright, Philadelphia.
 2 Brant Geese (*Branta bernicla*). } Presented by D. R. Goudy,
 1 Wild Goose (*Branta canadensis*). } West Creek, N. J.
8. 2 Young Alligators (*Alligator mississippiensis*). Presented by Dr. S. Weir Mitchell, Philadelphia.
10. 1 Water Snake (*Nerodia fasciata*). Presented by Jos. M. Wilson, Washington, D. C.
11. 1 Great Horned Owl (*Bubo virginianus*). Presented by Stacy B. Shryock, Philadelphia.
 2 Flying Squirrels (*Pteromys volucella*). Presented by Miss Mary H. Morris, Overbrook, Pa.
12. 4 Water Snakes (*Nerodia fasciata*). } Presented by Jos. M. Wilson,
 1 Garter Snake (*Eutainia sirtalis*). } Washington, D. C.

- May 13. 1 Horned Toad (*Phrynosoma cornuta*). Presented by Henry Opensham, Manayunk, Pa.
 1 Loon (*Colymbus torquatus*). Presented by John Krider, Philadelphia.
14. 2 Fournier's Capromys (*Capromys pilorides*). Presented by Geo. W. Boyd, Philadelphia.
 1 Common Rabbit (*Lepus cuniculus*). Presented.
15. 1 Common Camel (*Camelus dromedarius*) ♂. Born in the garden.
 1 Peba Armadillo (*Tatusia peba*) ♂. Purchased.
 1 Red Fox (*Vulpes fulvus*). Presented by William K. Krips, Philadelphia.
 1 Young Alligator (*Alligator mississippiensis*). Presented by John K. Valentine, Philadelphia.
16. 1 Opossum and young (*Didelphys virginiana*). Presented by Robins Debow, Cassville, N. J.
 1 Laughing Gull (*Larus atricilla*). Presented by Isaac M. Cochran, Philadelphia.
17. 1 Mocking Bird (*Mimus polyglottus*). Presented by Harry P. Mawson, Philadelphia.
 1 Carolina Dove (*Zenaidura carolinensis*). Presented by Mrs. Sarah Wilson, Woodstown, N. J.
 1 Mule Deer (*Cervus macrotis*) ♀. Purchased.
19. 2 Young Alligators (*Alligator mississippiensis*). Presented by Mrs. John K. Valentine, Philadelphia.
20. 1 Brown Coati (*Nasua nasica*) ♂. Purchased.
 1 White Rat (*Mus rattus*). Presented by Charles Dagit, Philadelphia.
21. 1 Javan Leopard (*Felis pardus var. javanensis*). Born in the garden.
22. 1 Mocking Bird (*Mimus polyglottus*) ♀. Presented by Mrs. L. Guistwhite, Philadelphia.
 1 Lamprey Eel. Presented by H. R. Allen, Bridesburg, Pa.
23. 1 Garter Snake (*Eutainia sirtalis*). Presented by R. H. Lea, Jr., Philadelphia.
23. 1 Common Rattle-snake (*Crotalus durissus*). Presented by Wm. Brown, Philadelphia.
 1 Virginia Deer (*Cervus virginianus*) ♂. Presented by Hugh McIlvain, Philadelphia.
25. 1 Garter Snake (*Eutainia sirtalis*).
 2 Specked Turtles (*Emys guttata*).
 1 Mud Tortoise (*Cinosternum pennsylvanicum*).
 1 Musk Tortoise (*Sternotherus odoratus*).
 1 Salt-water Terrapin (*Emys terrapin*).
 1 Fournier's Capromys (*Capromys pilorides*) ♂. Presented.
26. 2 Black-handed Spider-Monkeys (*Ateles melanochir*) 2 ♂. Purchased.
27. 1 Opossum (*Didelphys virginiana*). Presented by E. T. Fenton, Philadelphia.
 1 Adjutant (*Leptoptilos argala*). Purchased.
29. 1 Salt-water Terrapin (*Emys terrapin*). Presented.
 1 Woodchuck (*Arctomys monax*). Presented by S. F. Platt, Norristown, Pa.
 1 Horned Toad (*Phrynosoma cornuta*). Presented by J. Kaufman, Philadelphia.
30. 1 Pine Snake (*Pituophis melanoleucus*). Presented by George Cramer, West Creek, N. J.

- May 30. 1 Brown Coati (*Nasua nasica*). Purchased.
 1 Bald Eagle (*Haliaeetus leucocephalus*). Presented.
 13 Horned Toads (*Phrynosoma cornuta*). Presented by F. R. Brown, Philadelphia.
- June 1. 4 Golden Pheasants (*Thaumalea picta*). Bred in garden.
 2 Great Horned Owls (*Bubo virginianus*). Presented by Thomas Berstler, Doe Run, Pa.
 2 Crow Blackbirds (*Quiscalus purpureus*).
 3 Screech Owls (*Scops asio*).
 1 Great Horned Owl (*Bubo virginianus*). } Presented by John Krider, Philadelphia.
 3. 1 Black Snake (*Bascanion constrictor*). Presented.
 2 Racers (*Scotophilis alleghaniensis*). Presented by Master Harrison L. Verts, Philadelphia.
4. 1 Red Monkey (*Cercopithecus ruber*).
 1 Squirrel Monkey (*Saimaris sciurea*).
 2 Weeper Capuchins (*Cebus capucinus*).
 2 Brown Capuchins (*Cebus fatuellus*).
 1 Guinea Baboon (*Cynocephalus sphinx*), ♀.
 1 Green Monkey (*Cercopithecus callitrichus*), ♂. } Purchased.
 1 Spotted Cavy (*Calogenys paca*).
 1 Ocelot (*Felis pardalis*), young.
 2 Coatis (*Nasua nasica*).
 1 Collared Peccary (*Dicotyles torquatus*).
 1 White-lipped Peccary (*Dicotyles labiatus*).
6. 13 Horned Toads (*Phrynosoma cornuta*). Presented by Charles Noble, Philadelphia.
 5 Prairie Dogs (*Cynomys ludovicianus*). Born in the garden.
 1 Golden-naped Amazon (*Chrysotis auripalliata*). Presented by Willie W. Walker, Philadelphia.
7. 1 Wild Cat (*Lynx rufus*). Purchased.
 1 Loggerhead Turtle (*Thassalochelys caouana*). Presented by Jerry Nolan, Philadelphia.
8. 6 Prairie Dogs (*Cynomys ludovicianus*). Born in the garden.
10. 2 Screech Owls (*Scops asio*). Presented by M. C. Taylor, Tough Kenamon, Pa.
 3 Loggerhead Turtles (*Thassalochelys caouana*). Presented by John Fletcher, Philadelphia.
- 11 Gray Gophers (*Spermophilus franklinii*). Purchased.
12. 1 Screech Owl (*Scops asio*). Presented by Rev. Edgar M. Levy, Philadelphia.
13. 1 Alligator (*Alligator mississippiensis*). Presented.
 1 Water Snake (*Nerodia fasciata*). Presented by Jos. M. Wilson, Washington, D. C.
- 9 Prairie Dogs (*Cynomys ludovicianus*). Born in the garden.
15. 1 Manatee (*Manatus americanus*), ♀. Purchased.
 48 Bull Frogs (*Rana pipiens*). Presented by John H. Dusenbury, Philadelphia.
17. 1 Loon (*Colymbus torquatus*). Presented by Adam Matsinger, Philadelphia.
 4 Beavers (*Castor canadensis*). Purchased.
19. 1 Woodchuck (*Arctomys monax*). Presented by Wm. R. Strievy, Philadelphia.
20. 1 Woodchuck (*Arctomys monax*). Presented by McCadden & Sloan, Philadelphia.
 3 Barn Owls (*Strix flammea var. am.*). Purchased.
21. 1 Chaparral Cock (*Geococcyx californianus*). Purchased.
 2 Screech Owls (*Scops asio*). Presented by Frank Mowrey, Phila.

- June 21. 26 Horned Toads (*Phrynosoma cornuta*). Presented.
 2 Peafowls (*Pavo cristata*). Bred in the garden.
22. 1 Horned Toad (*Phrynosoma cornuta*). Presented by Mrs. Paschall, Paschallville, Pa.
23. 1 Red Fox (*Vulpes fulvus*). Presented by W. W. Whildin, Philadelphia.
 1 Woodchuck (*Arctomys monax*). Presented by Martin Goldsmith, Camden, N. J.
28. 2 Guinea Pigs (*Cavia capreva*). Presented by Master Walter Godfrey, Philadelphia.
 1 Common Rabbit (*Lepus cuniculus*). Presented by Miss Emmie Ralph, Philadelphia.
 1 Green Monkey (*Cercopithecus callitrichus*).
 1 White-throated Capuchin (*Cebus hypoleucus*). Purchased.
29. 2 Wild Geese (*Branta canadensis*). Presented by The Maxwell's Point Ducking Club.
 1 Himalayan Bear (*Ursus tibetanus*). Purchased.
30. 1 Black Iguana (*Metopoceros cornutus*). } Purchased.
 1 Albino Squirrel (*Sciurus carolinensis*). }
- July 1. 5 Crested Curassows (*Crax alector*).
 7 Trumpeters (*Psophia crepitans*).
 12 Passerine Parakeets (*Psittacula passerina*).
 1 Cayenne Rail (*Aramides cayennensis*).
 2 Cinereus Tinamous (*Tinamus cinereus*).
 3 Parakeets (*Brotogerys tuipara*).
 1 Dove.
 3 Olive-Gray Tanagers (*Tanagra olivescens*).
 1 Troupial (*Icterus vulgaris*).
 1 Crow Blackbird (*Quiscalus purpureus*).
 4 Greey's Guans (*Penelope greeyi*). } Purchased.
4. 2 Gray Foxes (*Vulpes virginianus*). Presented by A. R. McHenry, Jr., Philadelphia.
 1 Red-bellied Terrapin (*Emys rubriventris*). Presented.
6. 1 Screech Owl (*Scops asio*). Presented.
7. 1 Marmoset Monkey (*Hapale jacchus*). Presented.
8. 2 Macaque Monkeys (*Macacus cynomolgus*), 2 ♂.
 2 Pig-tailed Monkeys (*Macacus nemestrinus*), 2 ♀. Purchased.
11. 1 Flicker (*Colaptes auratus*). Presented by S. N. Still, Malvern, Pa.
11. 1 Cat, White Maltese, one eye blue, the other green. Presented by Miss Mary E. Cattell, Woodbury, N. J.
12. 2 Burrowing Owls (*Speotyto cunicularia* var. *hypogaea*).
 3 Swift Foxes (*Vulpes velox*). Purchased.
13. 3 Prairie Wolves (*Canis latrans*). Presented by Charles Noble, Philadelphia.
14. 1 Young Alligator (*Alligator mississippiensis*). Presented by Louis Schneider, Philadelphia.
 3 Common Rattlesnakes (*Crotalus durissus*). Presented by S. W. Hudson, Hudsondale, Pa.
 2 Whip Snakes (*Masticophis flavigularis*). Purchased.
15. 1 Bittern (*Botaurus minor*). Presented by R. McClinton, Philadelphia.
 6 Burrowing Owls (*Speotyto cunicularia* var. *hypogaea*). Purchased.
16. 2 Red Foxes (*Vulpes fulvus*). Presented by Jos. M. Wilson, Washington, D. C.
17. 2 Ring Doves (*Turtur risorius*), ♀ ♂. Presented by E. M. Bruce, Philadelphia.

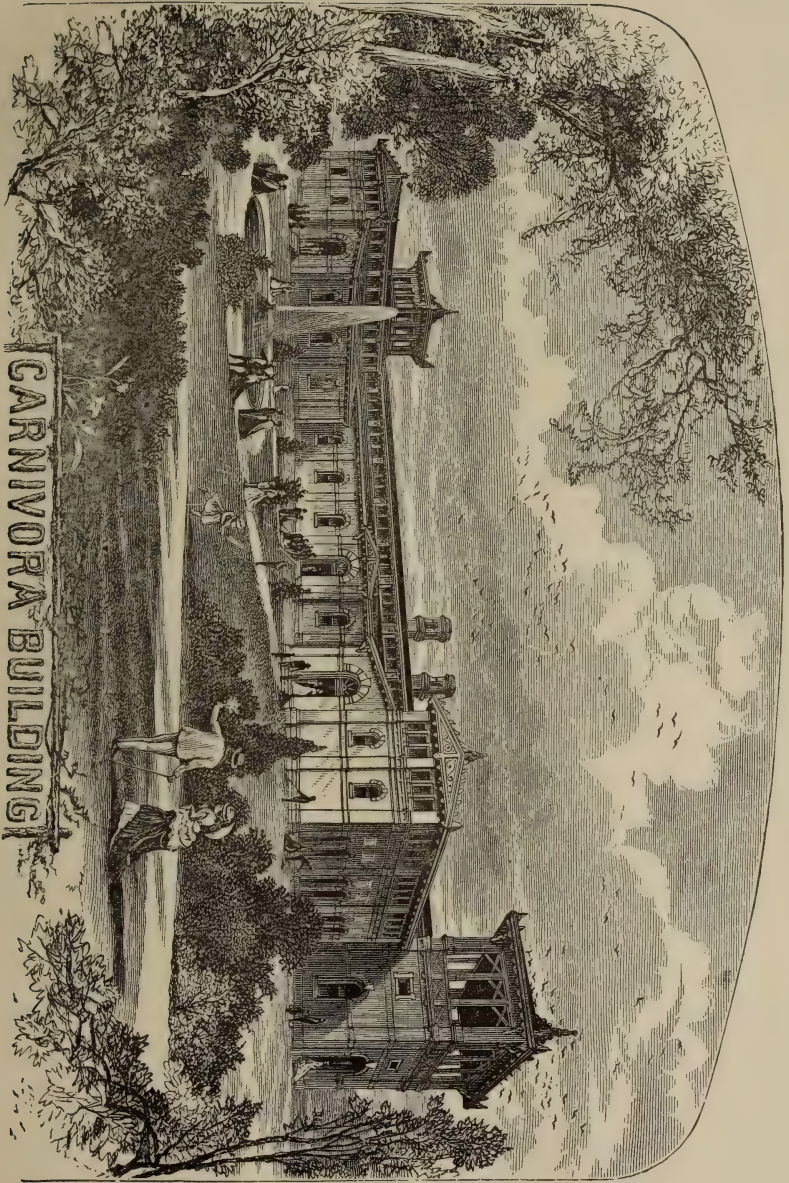
- July 18. 1 Loggerhead Turtle (*Thassalochelys caouana*). Presented.
 2 Horned Toads (*Phrynosoma cornuta*). Presented by Mr. E. E. Kerper, Philadelphia.
 2 Barred Owls (*Syrnium nebulosum*). Presented by Jos. M. Wilson, Washington, D. C.
 19. 2 Ring Doves (*Turtur risorius*). Presented by John Emery, Cheltenham, Pa.
 1 Wood Ibis (*Tantalus loculator*). Purchased.
 21. 6 Horned Toads (*Phrynosoma cornuta*). Presented by James Stewart, Jr., Philadelphia.
 25. 1 Belted Kingfisher (*Ceryle alcyon*). Presented by Martin Goldsmith, Camden, N. J.
 1 Lanier Falcon (*Falco lanarius var. polyagrus*). Presented.
 26. 2 Great Horned Owls (*Bubo virginianus*). Presented by S. N. Hill, Concordville, Pa.
 1 Turkey Buzzard (*Cathartes aura*). Presented by S. N. Still, Malvern, Pa.
 28. 1 Opossum (*Didelphys virginiana*) and young. Presented by J. Brainard, Washington, D. C.
 1 English Blackbird (*Turdus merula*). Presented by L. J. Clark, Philadelphia.
 31. 1 Great Blue Heron (*Ardea herodias*). Purchased.
- Aug. 1. 1 Young Alligator (*Alligator mississippiensis*). Presented by Jos. B. Moore, Philadelphia.
 2. 2 American Bitterns (*Botaurus minor*). Presented by Wm. & Frank Bowen, Chestnut Hill, Pa.
 3. 2 Spotted Cavies (*Celogenys paca*).
 2 Agoutis (*Dasyprocta aguti*).
 2 Azara's Foxes (*Canis azarae*).
 1 Ocelot (*Felis pardalis*).
 2 Squirrel Monkeys (*Saimaris sciurea*).
 2 Brown Capuchins (*Cebus fatuellus*).
 5 Blue-and-Yellow Macaws (*Ara ararauna*).
 3 Red-and-Blue Macaws (*Ara macao*).
 2 Red-and-Yellow Macaws (*Ara chloroptera*).
 4 Hahn's Parrots (*Ara hahni*).
 2 Blue-headed Parakeets (*Pionus menstruus*).
 2 Brown-throated Parakeets (*Conurus aruginosus*).
 2 Parrot Macaws (*Ara macarouana*).
 1 Trumpeter (*Psophia crepitans*).
 1 Cayenne Rail (*Aramides cayennensis*).
 1 Guan.
 1 Florida Gallinule (*Gallinula chloropus var. galeata*).
 1 Cuvier's Toucon (*Ramphastos cuvieri*).
 1 Crested Curassow (*Crax alector*).
 1 White-crested Guan (*Pipile jacutinga*).
 1 Tinamou (*Tinamus cinereus*).
 1 Greey's Guan (*Penelope greayi*).
 1 Gray Rabbit (*Lepus sylvaticus*).
 2 Chequered Turtles (*Emys picta*).
 4. 3 Sparrow Hawks (*Falco sparverius*). Presented by James Mellor, Hopedale, Pa.
 5. 1 Young Alligator (*Alligator mississippiensis*). Presented by James H. Keyser, Philadelphia.
 9. 1 Great White Egret (*Ardea egretta*). Purchased.
 10. 2 Green Snakes (*Chlorosoma vernalis*). Presented by The Academy of Natural Sciences, Philadelphia.

Purchased.

- Aug. 11. 1 Garter Snake (*Eutamias sirtalis*). Presented by Jas. P. Stabler, Sandy Spring, Md.
 1 Spotted Cavy (*Calogenys paca*). Presented by Wm. G. Bolton, Philadelphia.
15. 1 Horned Toad (*Phrynosoma cornuta*). Presented by Hugh Dugan, Philadelphia.
 1 Brown Capuchin (*Cebus fatuellus*). Presented by Charles Barrett, Philadelphia.
18. 3 White Rats (*Mus rattus*). Presented by A. W. Mitchell, Elkton, Md.
19. 1 Brown Capuchin (*Cebus fatuellus*). Purchased.
26. 2 Mexican Squirrels. Purchased.
27. 1 Cat-bird (*Mimus carolinensis*).
 1 Yellow-breasted Chat (*Icteria virens*).
 1 Indigo-Bird (*Cyanospiza cyanea*).
 1 Wilson's Thrush (*Turdus fuscescens*). } Presented by John Pearsall, Philada.
28. 2 Horned Toads (*Phrynosoma orbiculare*). Presented by Wm. G. Seddinger, Philadelphia.
30. 1 Young Alligator (*Alligator mississippiensis*). Presented by Jas. MacIntyre, Philadelphia.
 1 Common Rattlesnake (*Crotalus durissus*). Presented by Howard A. Kelly, Philadelphia.
- Sept. 2. 1 Red-headed Woodpecker (*Melanerpes erythrocephalus*). Presented by Geo. Pavonarius, Philadelphia.
3. 1 Horned Toad (*Phrynosoma cornuta*). Presented by John Seddinger, Philadelphia.
4. 4 Reed Birds (*Dolichonyx oryzivorus*). Presented by John Pearsall, Philadelphia.
 1 Chewink (*Pipilo erythrophthalmus*); 1 Brown Thrush (*Harpophynchus rufus*); 1 Olive-backed Thrush (*Turdus swainsoni*). Presented by L. Schneider, Philadelphia.
- 1 Copperhead Snake (*Agkistrodon contortrix*). Presented by A. W. Mitchell, Elkton, Md.
8. 1 Pair Flying Squirrels (*Pteromys volucella*); 1 Common Rabbit (*Lepus cuniculus*). Presented by Miss Fannie H. Bryan, Vincentown, N. J.
 1 Pair Raccoons (*Procyon lotor*). Presented by George H. Johnson, Philadelphia.
9. 1 Green Snake (*Chlorosoma vernalis*). Presented by Howard A. Kelly, Philadelphia.
12. 1 Tern. Presented by Walter Godfrey, Philadelphia.
14. 2 Virginia Deer (*Cervus virginianus*), 2 ♀. Presented by Dr. Givin, Philadelphia.
15. 2 Common Rattlesnakes (*Crotalus durissus*). Presented.
 1 Red Fox (*Vulpes fulvus*). Presented by Andrew Rudolph, Philadelphia.
16. 1 Macaque Monkey (*Macacus cynomolgus*). Purchased.
 1 Tern. Presented by John Pearsall, Philadelphia.
17. 4 Beavers (*Castor canadensis*). Purchased.
21. 1 Striped Snake. Presented by James P. Stabler, Sandy Spring, Maryland.
22. 1 Alligator (*Alligator mississippiensis*). Purchased.
26. 1 Javan Porcupine (*Hystrix javanica*). Born in the garden.
 1 Brown Capuchin (*Cebus fatuellus*). Presented by John W. Beebe, Philadelphia.
27. 2 Copperhead Snakes (*Agkistrodon contortrix*). Presented by Kirk Brown, Pleasant Grove, Pa.

- Oct. 2. 3 Catbirds (*Mimus carolinensis*). Presented by John Pearsall, Philadelphia.
4. 1 Great Horned Owl (*Bubo virginianus*). Presented by Philip Hohl, Philadelphia.
5. 4 White Rabbits (*Lepus cuniculus*).
8 Guinea Pigs (*Cavia caprera*). Presented by Master Charles N. Backus, Germantown, Pa.
2 Cuban Boas. Purchased.
7. 1 Young Alligator (*Alligator mississippiensis*). Presented by J. L. Haines, Philadelphia.
10. 1 Common Rabbit (*Lepus cuniculus*). Presented by Mrs. J. C. Givens, Camden, N. J.
1 Water Snake (*Nerodia fasciata*). Presented by Theo. Roberts, Philadelphia.
12. 2 Fournier's Capromys (*Capromys pilorides*). Born in the garden.
13. 2 Common Boas (*Boa constrictor*). Purchased.
1 Young Alligator (*Alligator mississippiensis*). Presented.
14. 1 Muscovy Drake. Presented by the Park Commissioners, Philadelphia.
16. 3 Alligators (*Alligator mississippiensis*). Presented by William Yewdall, Philadelphia.
1 Garter Snake (*Eutania sirtalis*). Presented by Miss J. S. F. Kerr, Philadelphia.
1 Jackass (*Equus asinus*). Presented by P. S. Hutchinson, Philadelphia.
17. 2 Woodchucks (*Arctomys monax*). Presented by James Davis, Oakdale, Pa.
1 Oryx (*Oryx leucoryx*), ♂. Purchased.
18. 1 Opossum (*Didelphys virginiana*), ♂. Presented by J. W. Pike, Vineland, N. J.
2 Bald Eagles (*Haliaetus leucocephalus*). Purchased.
19. 1 Macaque Monkey (*Macacus cynomolgus*). Presented by Gen. A. T. Torbert, Milford, Del.
20. 2 Prong-horn Antelopes (*Antilocapra americana*). Purchased.
1 Short-eared Owl (*Brachyotus palustris*). Presented by John Pearsall, Philadelphia.
21. 2 Blue-headed Ground Doves (*Starnanus cyanocephala*). 1 Key West Pigeon (*Geotrygon martinica*). 2 Carolina Doves (*Zenaidura carolinensis*), from Cuba. 2 Zenaida Doves (*Zenaida amabilis*). 1 Barred Dove (*Geopelia striata*). 2 Cuban Quails (*Ortyx cubanensis*). Presented by E. F. Cabada, Philadelphia.
1 Least Bittern (*Ardetta exilis*). Presented by George DeHaven, Jr., Philadelphia.
22. 1 Ring Dove (*Turtur risorius*). Presented by Dr. Noah Martin, Philadelphia.
25. 1 Rhesus Monkey (*Macacus erythraeus*). Presented by Moses Johnson, Yardville, N. J.
26. 1 Virginia Quail (*Ortyx virginianus*). Presented by Mrs. M. R. Sweeney, Philadelphia.
27. 2 Great Horned Owls (*Bubo virginianus*). Presented.
28. 3 Raccoons (*Procyon lotor*); 2 Great Horned Owls (*Bubo virginianus*). Presented by J. D. Towner, Blount Spring, Ala.
29. 1 Red-tailed Hawk (*Buteo borealis*). Presented by James P. Massey, Philadelphia.
30. 1 Great Horned Owl (*Bubo virginianus*). Presented.
2 Ravens (*Corvus corax*). Presented by John W. LeMaistre, Philadelphia.

- Oct. 31. 1 Maltese Cat (*Felis domestica*), ♂. Presented by Henry G. Mehring, Philadelphia.
- Nov. 1. 1 Malayan Tapir (*Tapirus malayanus*), ♂. 2 Indian Elephants (*Elephas indicus*), ♂ ♀. 1 Black Leopard (*Felis pardus*), ♀. 1 Chacma Baboon (*Cynocephalus porcarius*), ♂. 2 Eider Ducks (*Somateria mollissima*). Purchased.
3. 2 Fournier's Capromys (*Capromys pilorides*). Born in the garden.
4. 1 Menopoma (*Menopoma allegheniensis*). Presented by Dr. Henry C. Chapman, Philadelphia.
7. 1 Snowy Owl (*Nyctea nivea*). Presented by Josiah Fitzgerald, Philadelphia.
8. 1 Red-tailed Hawk (*Buteo borealis*). Presented by Windle & Doan, Coatesville, Pa.
9. 1 Snowy Owl (*Nyctea nivea*). Presented by W. Carpenter, Jr., Salem, N. J.
13. 1 Alligator (*Alligator mississippiensis*). Presented by Dr. E. J. Eldridge, Americus, Ga.
- 1 White-throated Capuchin (*Cebus hypoleucus*); 1 Black-handed Spider-Monkey (*Ateles melanochir*); 1 Red-billed Tree-Duck (*Dendrocygna autumnalis*); 4 Parrakeets (*Brotoperys tovi*). Purchased.
14. 1 Badger (*Taxidea americana*). Purchased.
15. 1 Vervet Monkey (*Cercopithecus lalandii*); 2 Macaque Monkeys (*Macacus cynomolgus*); 2 Pig-tailed Monkeys (*Macacus nemestrinus*); 1 Mandrill (*Cynocephalus mormon*), ♀; 1 Bonnet Monkey (*Macacus radiatus*), ♀. Purchased.
- 1 Wild Turkey (*Meleagris gallopavo*). Presented.
17. 1 Robin (*Turdus migratorius*). Presented by Mrs. Lewis W. Moxey, Philadelphia.
- 1 Barn Owl (*Strix flammea var. am.*). Purchased.
20. 1 Barred Owl (*Syrnium nebulosum*). Purchased.
21. 1 Screech Owl (*Scops asio*). Presented by Mrs. Stewart, Philadelphia.
22. 1 Snowy Owl (*Nyctea nivea*). Presented.
- 1 Pair Spanish Bantams. Presented by A. B. Goodyear, Philadelphia.
- 1 Green Monkey (*Cercopithecus callitrichus*). Presented by Alex. Cattell, Jr. Philadelphia.
23. 1 Young Alligator (*Alligator mississippiensis*). Presented by Samuel F. Kelly, Roxborough, Philadelphia.
24. 1 Horned Toad (*Phrynosoma cornuta*). Presented by Wm. N. Famous, Philadelphia.
- 1 Black Spider Monkey (*Ateles ater*). Presented by Robt. Kevin, Philadelphia.
- 1 Bald Eagle (*Haliaeetus leucocephalus*). Purchased.
25. 1 Loon (*Colymbus torquatus*). Presented.
26. 1 Common Gannet (*Sula bassana*). Presented by W. H. Zern, Atlantic City, N. J.
- 1 Red-tailed Hawk (*Buteo borealis*). Presented by Lemuel Xavier, Philadelphia.
28. 1 Snowy Owl (*Nyctea nivea*). Purchased.
- Dec. 2. 1 Bittern (*Botaurus minor*). Presented by H. B. Case, Loudonville, Ohio.
- 3 Bantams. Presented by Spencer Trotter, Philadelphia.
- 5 Ruffed Grouse (*Bonasa umbellus*). Purchased.
3. 1 Opossum (*Didelphys virginiana*). Presented by Ellwood Johnson, Germantown, Philadelphia.



CARNIVORA BUILDING

- Dec. 5. 2 Moose (*Alce americanus*), 2 ♂. Purchased.
 6. 2 Polar Bears (*Ursus maritimus*). Purchased.
 7. 1 Snowy Owl (*Nyctea nivea*). Presented by W. C. Farnsworth, Philadelphia.
 8. 1 Virginia Deer (*Cervus virginianus*), ♀. Presented by W. F. Whitner, Philadelphia.
 11. 1 Red-tailed Hawk (*Buteo borealis*). Presented by J. Richardson, Rutland, Vt.
 12. 4 Goldfinch Hybrids. Presented by A. W. Stevenson, Philad'a.
 1 Bald Eagle (*Haliaetus leucocephalus*). 1 Caracara Vulture (*Polyborus tharus var. audubonii*). Purchased.
 14. 1 Screech Owl (*Scops asio*). Presented by John Krider, Philadelphia.
 16. 1 Dusky Duck (*Anas obscura*). Presented by W. H. Zern, Atlantic City, N. J.
 1 Rough-legged Hawk (*Archibuteo lagopus*). Presented by W. R. Miller, Lewisburg, Pa.
 10 Quail (*Ortyx virginianus*). Purchased.
 18. 1 Mexican Squirrel. Purchased.
 21. 1 Lynx (*Lynx canadensis*). Purchased.
 22. 2 Cardinal Grosbeaks (*Cardinalis virginianus*). Purchased.
 23. 1 Zebu (*Bos indicus*), ♀. Born in the garden.
 24. 1 Screech Owl (*Scops asio*). Presented by Melvin Lawton, Philadelphia.
 28. 1 Red-shouldered Hawk (*Buteo lineatus*). Presented by T. C. Ivins, Tullytown, Pa.
 1 Newfoundland Dog (*Canis familiaris*), ♂. Presented by T. Mason Mitchell, Roxborough, Philadelphia.
 1 Red-tailed Hawk (*Buteo borealis*). Purchased.
1877.
 Jan. 1. 1 Red Kangaroo (*Macropus rufus*). Born in the garden.
 2. 1 Dingo (*Canis dingo*). Born in the garden.
 3. 1 Virginia Deer (*Cervus virginianus*). Presented by Louis J. Ladner, Jr., Philadelphia.
 5. 1 Screech Owl (*Scops asio*). Presented by S. N. Still, Malvern, Pa.
 6. 1 Lynx (*Lynx canadensis*). 1 Snowy Owl (*Nyctea nivea*). Purchased.
 1 Ocelot (*Felis pardalis*). Presented by John D. Bliss, Philadelphia.
 8. 1 Golden Eagle (*Aquila chrysaetus*). Purchased.
 9. 9 Salamandra bilineata. 6 *S. erythronata*. 8 Triton niger. Captured by Keeper Shepherd.
 12. 15 Triton niger. Captured by Keeper Shepherd.
 17. 1 Weeper Capuchin (*Cebus capucinus*). Presented by C. P. Tunnell, Georgetown, Del.
 3 White-haired Porcupines (*Erethizon dorsatus*). Purchased.
 19. 1 Hybrid Fowl (*Cross between Turkey and Guinea*). Presented by Hon. S. B. Conover, of Florida.
 20. 1 Red-shouldered Hawk (*Buteo lineatus*). Presented.
 23. 1 Screech Owl (*Scops asio*). Presented by J. G. Hand, Philadelphia.
 25. 4 Menobranchus maculatus. Purchased.
 26. 9 Salamandra bilineata. 2 *S. ruber*. Captured by Keeper Shepherd.
 27. 4 Blue Jays (*Cyanurus cristatus*). 1 Sparrow Hawk (*Falco sparverius*). Purchased.

- Jan. 29. 2 Salamandra ruber. Captured by Keeper Shepherd.
 30. 1 Cooper's Hawk (*Accipiter cooperii*). Purchased.
- Feb. 1. 1 Great Horned Owl (*Bubo virginianus*). Presented by H. S. Thomson, Indiana, Pa.
 1 Common Rabbit (*Lepus cuniculus*). Presented by J. H. Barry, Philadelphia.
 3. 1 Blue Jay (*Cyanurus cristatus*). Purchased.
 7. 1 Red-shouldered Hawk (*Buteo lineatus*). Presented by Sergeant Jas. Spear, Fairmount Park Guard.
 9. 1 Virginia Deer (*Cervus virginianus*). Presented by F. G. Thorn, Philadelphia.
 10. 1 Great Horned Owl (*Bubo virginianus*). Presented by Emanuel Spitz, Philadelphia,
 11. 1 Yellow Terrapin (*Pseudemys concinna*). Presented by Theodore L. Harrison, Philadelphia.
 13. 1 Opossum (*Didelphys virginiana*). Presented by J. W. Sharp, Jr., Reeseville, Pa.
 15. 2 White Rats (*Mus rattus*). Presented by Miss Florence M. Jones, Philadelphia.
 1 Golden Eagle (*Aquila chrysaetus*). Presented by Andrew Bate-
 man, Dover, Del.
 2 Common Rabbits (*Lepus cuniculus*). Presented by Edward K. McEwan, Philadelphia.
 16. 1 Ring Dove (*Turtur risorius*). Presented by Miss Tryon, Philadelphia.
 17. 1 Red Fox (*Vulpes fulvus*). Presented by Geo. Grim, Philadelphia.
 18. 1 Quail (*Ortyx virginianus*). Presented by Edward S. Miles, Philadelphia.
 20. 1 Pair White Rats (*Mus rattus*) and young. Presented by Jas. B. Thomas, Philadelphia.
 1 Opossum (*Didelphys virginiana*). Presented by Jesse L. Johnson, Eddington, Pa.
 1 Sparrow Hawk (*Falco sparverius*). Presented by Master Henry Sargent, Philadelphia.
 22. 2 Common Rabbits (*Lepus cuniculus*). Presented by Master Edw. Hacker, Germantown, Philadelphia.
 23. 3 Lynxes (*Lynx canadensis*); 3 Menobanchus maculatus. Purchased.
 24. 1 Opossum (*Didelphys virginiana*). Presented by E. S. Power, Philadelphia.
 1 Red-shouldered Hawk (*Buteo lineatus*); 1 Red-tailed Hawk (*Buteo borealis*). Presented by Emanuel Spitz, Philadelphia.
 27. 2 White Rats (*Mus rattus*). Presented.
 28. 1 Turkey Buzzard (*Cathartes aura*). Purchased.

APPENDIX C.

*To the Board of Directors of
The Zoological Society of Philadelphia:*

GENTLEMEN:—I have the honor of presenting my report as Prosector of the Society.

It is with much satisfaction that I call your attention to the very marked improvement in the condition of the menagerie, and have great pleasure in attributing it to the many excellent hygienic measures recently introduced at the garden. Not only has the mortality diminished absolutely, but also relatively. When the many numerous additions to the garden are taken into consideration—by comparing the tabular list of the animals which have died in the garden, and sent to me for examination by the Superintendent, during the past twelve months, with that in the preceding report—it will be seen that the causes of death are generally the same—usually unavoidable—being evils inherent to the nature of animals in Zoological Gardens. Where no organic disease is specified the animal seems to have simply wasted away. As regards the disposition of the remains, whenever anything valuable presented itself it was preserved, prepared, and deposited either in the Museum of the University of Pennsylvania, or that of the Academy of Natural Sciences. Among those specimens, in addition to skeletons, viscera, etc., may be mentioned a collection of brains, which have been photographed by Dr. Andrew Parker, and made use of as the basis of his prize essay on the “Convulsions of the Brain,” recommended for publication by the Faculty of the University.

Below will be found the list of animals which have been subjected to me for examination:—

1876.	Name of Animal.	Cause of Death.
May	1. Weeper Capuchin (<i>C. capucinus</i>).	Inf. of Intestines.
	1. Macaque Monkey (<i>M. nemestrinus</i>).	" "
	8. Ostrich (<i>S. camelus</i>).	Fracture of Thigh.
	8. Caribou (<i>R. caribou</i>).	Heart Disease.
	9. Llama (<i>L. peruana</i>).	
	15. Macaque (<i>M. nemestrinus</i>).	
	16. Sun-Bear (<i>H. euryspilus</i>).	Tuberculosis.
	16. Hair Seal (<i>Z. gillespii</i>).	Inf. of Intestines.
	16. Wedge-tailed Eagle (<i>A. audax</i>).	
	17. Macaque (<i>M. cynomolgus</i>).	
	30. Antelope (<i>A. americana</i>).	Valvular disease of heart.
June	5. Caribou (<i>R. caribou</i>).	Heart Disease.
	7. Tiger (<i>F. tigris</i>).	Wound in Leg.
Sept.	6. Mute Swan (<i>C. olor</i>).	Inf. of Trachea.
	6. Manatee (<i>M. americanus</i>).	Pericarditis.
	7. Coati (<i>N. nasica</i>).	Phthisis.
	11. Australian Crane (<i>G. australasiana</i>).	Inf. of Trachea.
	12. Entellus Monkey (<i>S. entellus</i>).	Apoplexy.
Oct.	2. Rhea (<i>R. americana</i>).	Inf. of Stomach.
	7. Flamingo (<i>P. ruber</i>).	
	31. Paca (<i>C. paca</i>).	Rupture of Stomach.
Nov.	9. Kangaroo Rat (<i>H. rufescens</i>).	Inf. of Liver.
	10. Coati (<i>A. nasica</i>).	Ascites.
	10. Macaque (<i>M. nemestrinus</i>).	Hydrothorax.
	14. Brown Capuchin (<i>C. fatuellus</i>).	Phthisis.
	14. Wh.-throated Capuchin (<i>C. hypoleucus</i>).	Inf. of Liver.
Dec.	10. Tasmanian Devil (<i>D. ursinus</i>).	Bone in throat.
	10. Chacma Baboon (<i>C. porcaricus</i>).	Hypertrophy of Heart.
	10. Macaque Monkey (<i>M. nemestrinus</i>).	Tuberculosis.
	13. Lioness (<i>F. leo</i>).	Hydrothorax.
	13. Australian Crane (<i>G. australasiana</i>).	
	13. Green Monkey (<i>C. callitrichus</i>).	Effusion on Brain.
	19. Macaque (<i>M. cynomolgus</i>).	
	30. Flamingo (<i>P. ruber</i>).	Inf. of Lungs.
	30. Kangaroo Rat (<i>H. rufescens</i>).	
1877.		
Jan.	4. Caribou (<i>R. caribou</i>).	Pericarditis.
	15. Peccary (<i>D. labiatus</i>).	Pleurisy.
	16. Black Spider Monkey (<i>A. ater</i>).	
	29. Green Monkey (<i>C. callitrichus</i>).	Tuberculosis.
	Tapir (<i>T. malayanus</i>).	Inf. of Intestines.
Feb.	9. Ocelot (<i>F. pardalis</i>).	Cong. of Spinal Marrow.
	15. Giraffe (<i>C. giraffa</i>).	Abscess in Neck.
	26. Vervet Monkey (<i>C. lalandii</i>).	Phthisis.

Respectfully,

HENRY C. CHAPMAN,
Prosector.

March 1, 1877.



BEAR PITS

D. L. G. & S. W. P. H. L.

