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of Philadelphia.

No. 6110

May 26, 1891 — May 11, 1896





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THE

NINETEENTH 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 LOAN-HOLDERS OF THE SOCIETY.

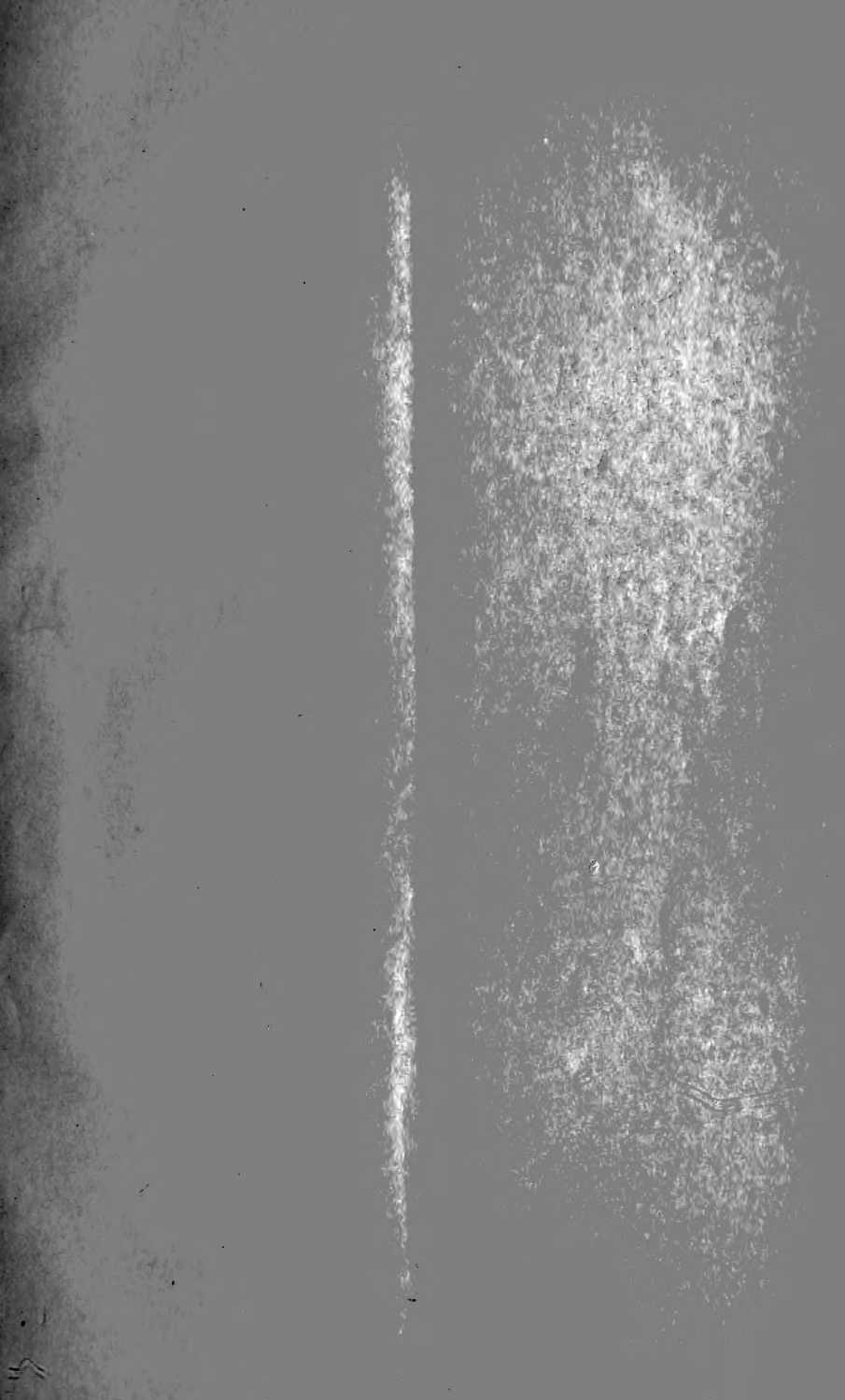
APRIL 23d, 1891.

PHILADELPHIA :

ALLEN, LANE & SCOTT'S PRINTING HOUSE,  
229-231-233 South Fifth Street.

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THE  
ZOOLOGICAL SOCIETY OF PHILADELPHIA.

OFFICE, FAIRMOUNT PARK.

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OFFICERS FOR THE YEAR ENDING APRIL 28th, 1892.

**PRESIDENT,**  
CHARLES PLATT.

**VICE-PRESIDENTS:**  
GEORGE W. CHILDS, J. VAUGHAN MERRICK.

**CORRESPONDING SECRETARY,**  
PROF. HENRY C. CHAPMAN.

**RECORDING SECRETARY,**  
THOMAS HOCKLEY.

**TREASURER,**  
WILLIAM HACKER.

**DIRECTORS:**

|                     |                          |
|---------------------|--------------------------|
| WILLIAM H. MERRICK, | GALLOWAY C. MORRIS,      |
| HENRY C. GIBSON,    | HENRY T. COATES,         |
| ISAAC J. WISTAR,    | FRANCIS W. LEWIS, M. D., |
| CHARLES W. TROTTER, | CHARLES M. LEA,          |
| PROF. JOSEPH LEIDY, | CHRISTIAN C. FEBIGER,    |
| FRANCIS T. FASSITT, | WM. L. SPRINGS.          |

**ACTUARY,**  
CHARLES L. JEFFERSON,

**SUPERINTENDENT OF THE GARDEN,**  
ARTHUR ERWIN BROWN.

**SOLICITORS:**  
SAMUEL WAGNER, WM. W. MONTGOMERY.



REPORT  
OF THE  
BOARD OF DIRECTORS.

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PHILADELPHIA, April 23d, 1891.

THE Board of Directors of the Zoological Society of Philadelphia submit to the members and loan-certificate holders this their Nineteenth Annual Report of the business and operations of the Society from 1st of March, 1890, to 1st of March, 1891.

MEMBERS.

The number of members on the 1st of March, 1891, was:—

|                                 |       |
|---------------------------------|-------|
| Annual members . . . . .        | 407   |
| Life members . . . . .          | 1,276 |
| Corresponding members . . . . . | 7     |
| Honorary members . . . . .      | 14    |
| Perpetual members . . . . .     | 259   |

Total members (exclusive of loan-holders), 1,963

After careful consideration the Board has resolved to reduce the price of admission to the Garden on Saturdays and legal holidays, except the 4th of July, to ten cents for adults and five cents for children. It is hoped that a largely-increased attendance will be the result, so that the Board will not be compelled to recall this effort made to popularize the Garden.

With the present receipts from all sources it is necessary to practice the strictest economy in order to prevent a deficit at the end of each year. An increase of membership, gifts of the outstanding loan of the Society, or contributions to the Endowment Fund would tend to relieve the Garden from its uncertain financial condition.

The necessities of the Garden for certain additions of permanent buildings and enclosures are becoming more urgent with each year. The need of a new monkey house has been referred to in previous reports, and in the event of the required means being supplied its erection will be of double value, as the present house can then be made use of for a portion of the collection of birds, thus relieving the present overcrowding of the aviary.

Suitable outdoor aviaries for the keeping of pheasants and birds of prey, as well as a series of properly-inclosed ponds for the breeding of water-fowl, are also much to be desired.

The following is a report in detail of the admissions and receipts for the year:—

|   |         |
|---|---------|
| Adults (paying twenty-five cents at gates) . . . .  | 101,667 |
| Children (paying ten cents at gates) . . . . .  | 32,199  |
| Members (including Life and Annual Members,<br>loan-holders' annual, and complimentary annual<br>tickets) . . . . . | 3,015   |
| Loan-holders' single tickets . . . . .  | 53,983  |
| Free admissions (charitable institutions, donors'<br>tickets, &c.) . . . . .  | 2,899   |
| Coupon tickets . . . . .  | 3,070   |
| Excursion tickets . . . . .   | 15,051  |
|   | 211,884 |

*Monthly Record of Visitors for 1890-91, with corresponding account for 1889-90.*

| MONTH.              | 1889-90. | 1890-91. | COMPARISON.        |
|---------------------|----------|----------|--------------------|
| March . . . . .     | 11,179   | 6,501    | Decrease . . 4,678 |
| April . . . . .     | 16,759   | 17,488   | Increase . . 729   |
| May . . . . .       | 21,541   | 22,759   | " . . 1,218        |
| June . . . . .      | 22,443   | 23,018   | " . . 575          |
| July . . . . .      | 25,299   | 29,124   | " . . 3,825        |
| August . . . . .    | 39,240   | 35,935   | Decrease . . 3,305 |
| September . . . . . | 27,615   | 25,357   | " . . 2,258        |
| October . . . . .   | 16,272   | 18,101   | Increase . . 1,829 |
| November . . . . .  | 10,946   | 15,970   | " . . 5,024        |
| December . . . . .  | 10,544   | 5,237    | Decrease . . 5,307 |
| January . . . . .   | 6,919    | 4,561    | " . . 2,358        |
| February . . . . .  | 6,846    | 7,833    | Increase . . 987   |
|                     | 215,603  | 211,884  | Decrease . . 3,719 |

Average daily admissions . . . . . 581  
 The greatest number of visitors on any one day was  
 on Friday, July 4th . . . . . 4,765

*Monthly Record of Receipts from Admission for 1890-91, with corresponding account for 1889-90.*

| MONTH.              | 1889-90.    | 1890-91.    | COMPARISON.          |
|---------------------|-------------|-------------|----------------------|
| March . . . . .     | \$2,105 98  | \$1,213 59  | Decrease . \$892 39  |
| April . . . . .     | 2,974 15    | 2,954 19    | " . 19 96            |
| May . . . . .       | 3,679 47    | 3,366 70    | " . 312 77           |
| June . . . . .      | 3,661 66    | 3,331 91    | " . 329 75           |
| July . . . . .      | 3,936 55    | 4,325 82    | Increase . . 389 27  |
| August . . . . .    | 5,970 72    | 4,846 12    | Decrease . 1,124 60  |
| September . . . . . | 4,579 81    | 3,600 74    | " . 979 07           |
| October . . . . .   | 2,766 49    | 2,624 67    | " . 141 82           |
| November . . . . .  | 1,808 92    | 2,204 01    | Increase . . 395 09  |
| December . . . . .  | 1,763 62    | 873 57      | Decrease . 890 05    |
| January . . . . .   | 1,264 79    | 855 80      | " . 408 99           |
| February . . . . .  | 1,240 27    | 1,275 07    | Increase . . 34 80   |
|                     | \$35,752 43 | \$31,472 19 | Decrease, \$4,280 24 |

|   |         |
|---|---------|
| Average daily receipts from admissions . . . . .  | \$86 22 |
| The largest amount of receipts at the gates on any<br>one day was on Friday, July 4th . . . . . | 691 34  |

*Total Receipts on the several days of the week, and their respective averages, for 1890-91.*

| RANK. | DAYS.               | TOTAL RECEIPTS. | AVERAGE. |
|-------|---------------------|-----------------|----------|
| 1     | Sunday . . . . .    | \$13,721 29     | \$263 87 |
| 2     | Saturday . . . . .  | 3,744 52        | 70 65    |
| 3     | Friday . . . . .    | 3,217 84        | 61 88    |
| 4     | Thursday . . . . .  | 2,883 59        | 55 45    |
| 5     | Monday . . . . .    | 2,784 48        | 53 55    |
| 6     | Wednesday . . . . . | 2,750 08        | 52 89    |
| 7     | Tuesday . . . . .   | 2,370 39        | 45 58    |
|       |                     | \$31,472 19     |          |

The financial condition of the Society is fully shown in the Treasurer's statement, Appendix A, and the report of the General Superintendent, Appendix B, shows the present condition of the menagerie and the details attending the operation of the Garden during the year.

The Board desires to express its thanks for the many donations of animals which have been received.

By order of the Board,

THOMAS HOCKLEY,  
*Secretary.*



# INCOME AND EXPENDITURES.

For fiscal year ending March 1st, 1891.

## INCOME.

|  |            |                    |
|--|------------|--------------------|
| Members' fees and dues . . . . .         | \$1,085 00 |                    |
| Admission receipts . . . . .             | 31,472 19  |                    |
| Rents at Garden, on account of . . . . . | 600 00     |                    |
| Sale of Guide-books . . . . .            | 199 35     |                    |
| Interest, discount, &c. . . . .          | 829 90     |                    |
| Sundry receipts . . . . .                | 779 15     |                    |
|  |            | <u>\$34,965 59</u> |

## EXPENDITURES.

(Exclusive of Permanent Improvements, &c.)

|  |             |                    |
|--|-------------|--------------------|
| Salaries . . . . .                                     | \$17,954 43 |                    |
| Office expenses . . . . .                              | 191 32      |                    |
| General expenses . . . . .                             | 17,234 69   |                    |
|  |             | <u>\$35,380 44</u> |
| Estimated loss and depreciation on animals . . . . .   | 6,270 06    |                    |
|  |             | <u>\$41,650 50</u> |
| Balance to debit of profit and loss for year . . . . . | 6,684 91    |                    |
|  |             | <u>\$34,965 59</u> |

# CAPITAL.

Receipts and expenditures for the year ending March 1st, 1891.

## RECEIPTS.

|  |             |                    |
|--|-------------|--------------------|
| Legacy, estate of George S. Pepper, deceased . . . . .   | \$14,287 50 |                    |
| Life membership . . . . .  | 50 00       |                    |
| Sales of animals . . . . .   | 141 50      |                    |
| Add the following amount charged to profit and loss for estimated loss and depreciation on animals . . . . . | 6,270 06    |                    |
|  |             | <u>\$20,749 06</u> |

## EXPENDITURES.

|  |            |                    |
|--|------------|--------------------|
| Permanent improvement and animals as per items in Treasurer's statement (Appendix A) . . . . . | \$5,776 30 |                    |
| Balance credited to capital . . . . .  | 14,972 76  |                    |
|  |            | <u>\$20,749 06</u> |

# APPENDIX A.

## TREASURER'S STATEMENT.

From March 1st, 1890, to March 1st, 1891.

DR.

|  |             |
|--|-------------|
| To Balance March 1st, 1890 . . . . .                     | \$5,813 79  |
| “ Collateral loan . . . . .                              | 5,000 00    |
| “ Legacy, estate of George S. Pepper, deceased . . . . . | 14,287 50   |
| “ Sales of animals . . . . .                             | 141 50      |
| “ Life membership . . . . .                              | 50 00       |
| “ Members' fees and dues . . . . .                       | \$1,085 00  |
| “ Admission receipts . . . . .                           | 31,472 19   |
| “ Rents at Garden . . . . .                              | 600 00      |
| “ Sunday receipts . . . . .                              | 779 15      |
| “ Interest, discount, &c. . . . .                        | 829 90      |
| “ Sale of Guide-books . . . . .                          | 199 35      |
| Transferred to credit of profit and loss . . . . .       | 34,965 59   |
|  | \$50,258 38 |

CR.

By warrants paid for:—

|                                   |             |
|-----------------------------------|-------------|
| Salaries and wages . . . . .      | \$17,954 43 |
| Office expenses . . . . .         | 191 32      |
| Subsistence . . . . .             | 7,016 47    |
| Advertising . . . . .             | 2,520 58    |
| Insurance . . . . .               | 225 04      |
| Fuel and lights . . . . .         | 1,023 10    |
| Printing . . . . .                | 415 08      |
| Expressage . . . . .              | 164 40      |
| Repairs . . . . .                 | 2,051 93    |
| Extra labor and jobbing . . . . . | 1,927 95    |
| Hardware and tools . . . . .      | 310 64      |
| Lumber . . . . .                  | 437 38      |
| Water-rent . . . . .              | 150 00      |
| Carried forward . . . . .         | \$34,388 32 |

|   |             |                    |
|---|-------------|--------------------|
| Brought forward . . . . .                         | \$34,388 32 |                    |
| Uniforms and equipments . . . . .                 | 200 50      |                    |
| Commissions on collections . . . . .              | 141 40      |                    |
| Sundries . . . . .                                | 650 22      |                    |
|   | <hr/>       |                    |
| Transferred to debit of profit and loss . . . . . |             | \$35,380 44        |
| Purchase of animals . . . . .                     | \$5,701 56  |                    |
| Horticulture . . . . .                            | 74 74       |                    |
| Investment account . . . . .                      | 4,000 00    |                    |
|   | <hr/>       | 9,776 30           |
| Collateral loan . . . . .                         |             | 3,000 00           |
| Balance on hand March 1st, 1891 . . . . .         |             | 2,101 64           |
|   |             | <hr/>              |
|   |             | <u>\$50,258 38</u> |

WILLIAM HACKER,  
*Treasurer.*

Examined and found correct,  
F. T. FASSITT,  
HENRY T. COATES,  
*Committee on Audit.*

## BALANCE-SHEET.

Dr.

*Zoological Society, March 1st, 1891.*

|                           |            |
|---------------------------|------------|
| Cash                      | \$2,101 64 |
| Collateral loan           | 3,000 00   |
| Investment account        | 21,500 00  |
| Water supply and drains   | 11,583 37  |
| Animal account            | 46,608 00  |
| Eagle aviary              | 2,744 19   |
| Bear pits                 | 6,618 48   |
| Monkey house              | 7,926 80   |
| Cages                     | 4,252 94   |
| Fencing                   | 3,843 75   |
| Vulcanite walks           | 33,156 96  |
| Deer parks and enclosures | 5,056 20   |
| Prairie-dog village       | 890 64     |
| Gate houses               | 11,705 21  |
| Buffalo house             | 1,494 15   |
| Horticulture              | 8,184 89   |
| Lake                      | 10,447 50  |
| Walks, roads, and grading | 64,924 96  |
| Houses for sundry animals | 6,325 71   |
| Carnivora house           | 55,638 48  |
| Greenhouses               | 4,622 47   |
| Barn                      | 3,557 12   |
| Elephant house            | 40,672 08  |
| Seal ponds                | 4,749 75   |
| Carriage sheds            | 3,681 11   |
| Restaurant                | 14,341 96  |
| Settees and chairs        | 2,124 00   |
| Photograph stand          | 699 20     |
| New aviary                | 12,525 75  |
| Deer house                | 20,624 71  |
| Reptile house             | 7,000 00   |
| Camel house               | 886 82     |
| Small mammal house        | 1,659 00   |
| Music stand               | 1,583 65   |
| Permanent enclosure       | 9,150 84   |
| Yard and store-room       | 2,203 04   |

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\$438,285 37

Cr.

|                 |              |
|-----------------|--------------|
| Loan            | \$309,900 00 |
| Donations       | 11,855 74    |
| Life membership | 9,885 00     |
| Permanent fund  | 26,687 50    |
| Profit and loss | 79,957 13    |

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\$438,285 37

## APPENDIX B.

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*To the Board of Directors of the Zoological Society of Philadelphia.*

GENTLEMEN:—I submit to you my report for the year ending on the 28th of February, 1891.

The number and value of the animals forming the collection are as follows:—

|                         |          |
|-------------------------|----------|
| 303 Mammals . . . . .   | \$40,721 |
| 454 Birds . . . . .     | 4,958    |
| 205 Reptiles . . . . .  | 787      |
| 58 Reptilians . . . . . | 142      |
| 1,020                   | \$46,608 |

The accessions during the year were:—

**MAMMALS:—**

|                     |     |
|---------------------|-----|
| Purchased . . . . . | 64  |
| Presented . . . . . | 74  |
| Bred . . . . .      | 38  |
|                     | 176 |

**BIRDS:—**

|                     |     |
|---------------------|-----|
| Purchased . . . . . | 94  |
| Presented . . . . . | 116 |
|                     | 210 |

**REPTILES:—**

|                     |     |
|---------------------|-----|
| Purchased . . . . . | 388 |
| Presented . . . . . | 158 |
| Bred . . . . .      | 125 |
|                     | 671 |

**AMPHIBIANS:—**

|                     |       |
|---------------------|-------|
| Purchased . . . . . | 111   |
| Presented . . . . . | 9     |
|                     | 120   |
|                     | 1,177 |

The additions which are deserving of especial note were:—

MAMMALS:—

1. A specimen of the red-bellied spider monkey (*Ateles rufiventris*), Sclater, received on the 12th December from Bocas del Toro, Columbia. The animal is young, and is closely similar to the type specimen figured by Dr. Sclater (Proceedings Zoological Society of London, 1872, pl. LVII.), but would appear to have come from the westward of the Atrato River, from whence that specimen was derived.

2. On the 27th of February another spider monkey was received, which I have little hesitation in referring to *Ateles vellerosus*, Gray. Unfortunately, the animal had passed through several hands before reaching the Garden, and it has been impossible to determine the exact locality from whence it came, but it is almost certain to have been somewhere on the east coast of Central America. The species is of great rarity, and in the uncertainty which has attended all attempts to classify the monkeys of this variable group, the acquisition of this and the preceding specimen—two of the least-known forms—is of much interest. It is much to be regretted that the poor accommodations offered by the present building render it next to impossible to keep alive the rare specimens of monkeys which from time to time come into the possession of the Society.

3. Some lemurs purchased in September from Charles Jamrach, of London, were of two kinds—the black and white lemur (*Lemur varius*) and the white-fronted lemur (*L. albifrons*).

4. A specimen of the North-African jackal (*Canis anthus*) was presented in June.

5. Three pine martens (*Mustela martes*) were received from Germany in August.

6. Two small squirrels in bad condition were purchased in April from a dealer. They were said to have come from Japan, but comparison with the collection in the British

Museum renders it probable that they are *Sciurus plantani*, a species from Java.

7. On the 12th of April a pair of nyllghaie (*Boselaphus pictus*) were received by purchase. This species, the largest of Indian antelopes, does well under confinement, and usually breeds freely.

8. Three reindeer (*Rangifer tarandus*) were procured in June, by exchange, from the Zoological Gardens at Copenhagen. Though probably identical with the caribou of northern America, the reindeer has been domesticated for so long a period in its native home that it was hoped they would better endure the unfavorable climate and food of this latitude than is usually the case with our native specimens. The female, however, died shortly after arrival, and the youngest male some months later. The old male still appears to be in fair health, but it has been found necessary to supply him constantly with moss from the Adirondacks as a substitute for that which forms their main food in their native range.

9. A Merian's opossum (*Didelphys dorsigera*) from South America, was presented on September 19th, by the "Eight O'clock Club" of the *Times*.

#### BIRDS:—

1. A pair of silver-blue tanagers (*Tanagra cana*) from Mexico and Central America, purchased March 1st.

2. A pair of paradise weaver birds (*Vidua paradisica*) of South Africa.

3. A specimen of the red-backed hangnest (*Cassicus hæmorrhous*) of South America. A closely related species (*C. persicus*), also represented in the collection, is said to have the strange habit of attaching its long, hanging nest to the under side of a branch in close proximity to the similarly hanging nest of a species of fiercely stinging wasp commonly found in the Guianas, the association serving to protect the eggs and young birds from their worst enemy—the monkey.

4. The European roller (*Coracias garrulus*).

5. A specimen of the beautiful Tabuan parrakeet (*Pyrrhuloxia tabuensis*), from the Fiji Islands, was purchased in October.

6. A black-headed conure (*Conurus nanday*), native of Paraguay, was added in the same month.

7. Several representatives of the golden-crowned conure (*C. aureus*) of Brazil were also procured by purchase.

8. A great horned owl, purchased from a dealer in December and said to have come from the extreme northwest, is, without doubt, *Bubo virginianus arcticus*—the northern form of the common American species.

9. An interesting contribution was received in July from Mr. Herbert Brown, of Tucson, in a specimen of the flammulated screech-owl (*Scops flammeola*), found from Mexico northward to Colorado.

10. A pair of Pondichery vultures (*Vultur calvus*), from India, were received in February by purchase.

11. A number of Greek partridges (*Caccabis saxatilis*), purchased in December.

12. In January a specimen of the boat-billed heron (*Cancroma cochlearia*) was received from South America, and has attracted considerable attention in the aviary.

#### REPTILES :—

1. A specimen of the rough-eyed caiman (*Caiman sclerops*), received in August from South America.

2. In January several Le Suer's terrapins (*Malacoclemmys lesueri*) were received from Missouri in exchange.

3. The eastern representative of the above species is *M. geographicus*, a specimen of which, from Lake George, was presented in June by Mr. Galloway Morris.

4. On the 4th of April a number of iguanas were received from Fortune Island, West Indies. They appear to be of a little known species—the low-crested iguana (*Cyclura basolopha*), Cope.

5. A specimen of the spiny lizard, from near Tucson, Arizona, presented in April by Mr. Herbert Brown, is probably *Sceloporus spinosus clarkii*.



6. A horned lizard (*Phrynosoma orbiculare*), from Mexico, contributed in June by Miss Stewart, added another to the long series of these lizards which have been shown in the collection.

7. In April several specimens of *Uta elegans*, one of the small lizards of the Pacific coast, were received from Mr. F. R. Whiteside, having been collected near Los Angeles, Cal., and a subsequent collection from the same locality contained some Skilton's skinks (*Eumeces skiltonianus*).

8. On April 15th a tree boa (*Xiphosoma canina*) was received from the West Indies.

9. In August a small collection of snakes was received from Trinidad in exchange. Among them were the thick-necked tree boa (*Epicrates cenchria*) and the carinated tree snake (*Herpetodryas carinatus*).

10. A small boa received on September 1st from an unknown locality proved to be the emperor boa (*Boa imperator*).

11. On the 27th of the same month another boa was purchased, said to have come from the island of St. Kitts, West Indies, which appears to be *Boa divini loquax*, a species rarely met with.

12. Among a collection of snakes from Lake Kerr, Florida, made by Mr. N. P. Fry early in the summer, was one belonging to the colubrine group, which it was not possible to refer to any previously defined genus. It was described by me, under the name of *Stilosoma extenuata*, in the Proceedings of the Academy of Natural Sciences of Philadelphia, 1890, page 199. The Society has received many reptiles from this locality during the past three years, and as that portion of Florida is fairly well-known zoologically, the species must be of great rarity.

13. A small snake, known as the crowned tantilla (*Tantilla coronata*), was also received from Florida.

14. The California form of king snake (*Ophibolus getulus boylii*) was presented in May by Mr. Whiteside from Pasadena, and was accompanied by Hammond's garter snake (*Eutaenia hammondi*).

15. Several specimens of Couper's indigo snake (*Spilotes couperi*) were purchased during the summer.

16. On the 8th of August a dusky rat snake (*Spilotes pul-latus*) from South America was also received.

17. The dark-green snake (*Zamenis atrovirens*) was represented by several specimens in a collection brought from Europe in September by Mr. Fred Moesler.

18. Specimens of Allen's snake (*Liodytes alleni*) were procured in May from Lake Kerr, Florida; they are among the little known species of that region.

#### AMPHIBIA:—

1. The collection above referred to, brought from Europe in September, included specimens of the fire-bellied toad (*Bombinator igneus*), the common European tree-toad (*Hyla arborea*), the crested newt (*Molge cristata*), the smooth newt (*M. vulgaris*), and the Alpine newt (*M. alpestris*).

2. The sole species of amphibia belonging to the American fauna, which was added during the year was the spotted salamander (*Amblystoma punctata*).

Other additions of interest, though not new to the collection, were a pair of lions, about fifteen months old, purchased in March. The female of this pair was bred at the Zoological Garden of Cologne, and the male at the Garden at Breslau, Germany. In May a pair of young wolverines (*Gulo luscus*) were procured from northern Minnesota. The shy and retiring habits of this animal renders it uncommon in living collections, and as these were the first which had reached the Garden in condition for exhibition, they formed a welcome addition. Specimens of Agassiz's gopher tortoise and the Mexican pine snake (*Pityophis sayi mexicana*) were among a number of contributions made during the year by Mr. Herbert Brown, of Tucson.

Three unusually fine amphiumas were presented by Mr. Harry McCall, of Louisiana; these were of the three-toed form, sometimes known as *Amphiuma tridactyla*. In August a pair of Himalayan bears were purchased, the female

being a pure albino. In this month three young wild boars and several badgers were received from Germany.

A specimen of Salle's amazon parrot, from San Domingo, was presented by Dr. W. T. Urie, of Chester, Pa. In December a lesser sheath-bill (*Chionis minor*), a bird having a wide range among the islands of the Antarctic seas, and a fine male South African ostrich were purchased. The latter bird is of the form known to some systematists as (*Struthio australis*).

On the 2d of February a fine Esquimaux dog from southern Labrador was presented by Mrs. Balch, of Philadelphia.

The following animals were bred in the collection :—

- 1 Macaque Monkey (*Macacus cynomolgus*), India, 27th January.
- 2 Lions (*Felis leo*), Asia and Africa, 2d April.
- 3 Leopards (*Felis pardus*), Asia and Africa, 22d June.
- 1 Puma (*Felis concolor*), America, 1st September.
- 6 Prairie Wolves (*Canis latrans*), America, 22d April and 8th of May.
- 4 Gray Foxes (*C. virginianus*), North America, 22d April.
- 3 Prairie Dogs (*Cynomys ludovicianus*), North America, May.
- 1 Bactrian Camel (*Camelus bactrianus*), Asia, 1st March.
- 1 Llama (*Lama peruana*), South America, 16th June.
- 1 Bison (*Bison americanus*), North America, 2d May.
- 1 Indian Buffalo (*Bubalus buffelus*), India, 13th February.
- 1 Zebu (*Bos indicus*), Asia, 18th December.
- 1 Gazelle (hybrid between *Gazella subgutturosa* and *G. dorcas* ♀), 21st April.
- 1 Indian Antelope (*Antelope cervicapra*), 3d August.
- 2 Wapiti (*Cervus canadensis*), North America, 14th and 30th June.
- 1 Axis Deer (*C. axis*), India, 26th March.
- 1 Hog Deer (*C. porcinus*), India, 5th February.
- 1 Fallow Deer (*C. dama*), Europe, 14th June.
- 2 Common Deer (*Cariacus virginianus*), North America, 26th April and 3d July.

1 Red Kangaroo (*Macropus rufus*), Australia, February.

2 Brush-tailed Wallabys (*Petrogale pencillata*), Australia, February.

3 Wallabys (hybrid between *Halmaturus derbianus* ♂ and *H. dorsalis* ♀), Australia.

30 Slow Worms (*Anguis fragilis*), Europe, August and September.

23 Banded Water Snakes (*Tropidonotus fasciatus*), United States, 13th July.

20 Brown Water Snakes (*T. taxispilotus*), United States, August.

10 Cyclops Water Snakes (*T. cyclopeum*), Florida, August.

9 Garter Snakes (*Eutænia sirtalis*), United States, August.

3 Garter Snakes (hybrid between *E. hammondi* ♂ and *E. marciana* ♀), United States, 5th September.

16 Dekay's Snakes (*Storeria dekayi*), United States, 7th August.

6 Ground Rattlesnakes (*Crotalophorus miliarius*), United States, September and October.

9 Diamond Rattlesnakes (*Crotalus adamanteus*), United States, August.

Beyond the construction of an enclosure for badgers, at a small cost, no new work has been done during the year. The iron railing along the Thirty-fifth Street boundary of the Garden, and many of the fences and inclosures, have been repainted and put in condition.

The filling of the old forebay, which was ordered by the Board in May, has steadily progressed, and is now almost completed, without any expense to the Society.

The attention of all institutions devoted to zoological pursuits is being directed more strongly each year to the almost unprecedented destruction of many of the more valuable and important animals of our native fauna, and to the need for immediate adoption of every means which can be employed to save them from complete extinction. In furtherance of this important object an increase of enclosures, both in number and in space, is urgently required at the Garden. In number, that the herds may be

separated to avoid improper crossing and inbreeding and in space, that the best conditions may be afforded for favorable development of the young, which are attainable under the limitations of a zoological garden.

With the best efforts of our own and similar institutions existing in this country and the facilities for exchange of specimens, which is growing with the establishment of new ones, as well as the private preserves of a few individuals who are devoting both time and money to the same purpose, it cannot be doubted that valuable services may be rendered to a cause whose importance is denied by few.

Perhaps the most practical demonstration of these possibilities may be found in the statement that in the case of the bison alone, probably nine-tenths of all now surviving outside of the National Park, are comprised in a few herds owned by private individuals and zoological gardens.

Respectfully,

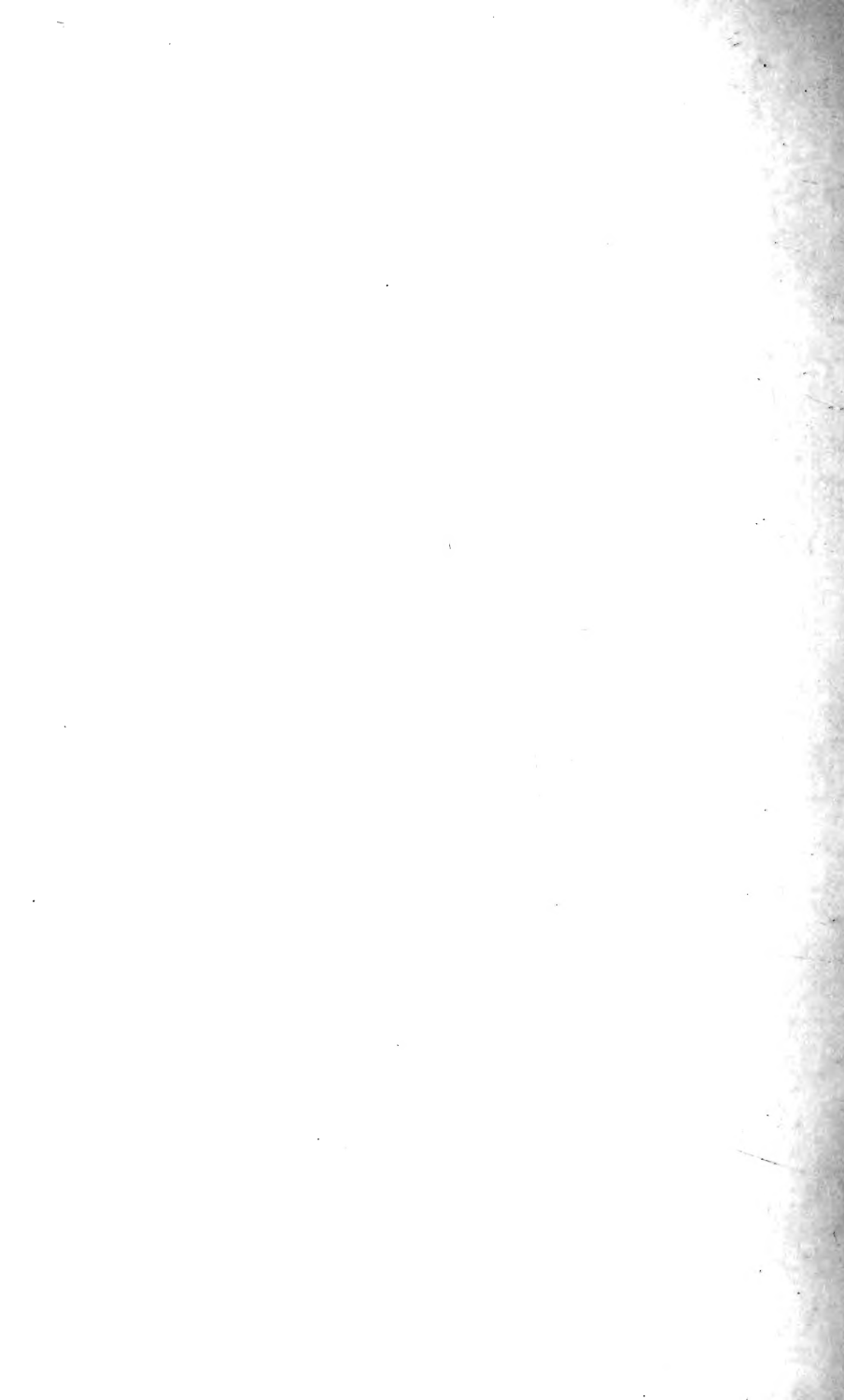
ARTHUR ERWIN BROWN,

*Superintendent.*

ZOOLOGICAL GARDEN, March 1st, 1891.











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