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THE
THIRTY-SIXTH ANNUAL REPORT
OF THE
BOARD OF DIRECTORS
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MUSEUMS 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 23rd, 1908.

A PHILADELPHIA:
PRESS OF ALLEN, LANE & SCOTT,
1211-1213 Clover Street.
1908

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THE ZOOLOGICAL SOCIETY OF PHILADELPHIA.

(FAIRMOUNT PARK.)

BOARD OF DIRECTORS:

ELECTED BY THE SOCIETY.

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HENRY PRATT MCKEAN.

ELECTED BY THE CITY COUNCILS.

RICHARD H. HARTE, M. D.,

ALFRED GRATZ.

GENERAL MANAGER.

ARTHUR ERWIN BROWN.

SUPERINTENDENT OF THE GARDENS.

ROBERT D. CARSON.

SOLICITOR.

W. W. MONTGOMERY.

REPORT

OF THE

BOARD OF DIRECTORS.

PHILADELPHIA, April 23rd, 1908.

The Board of Directors of the Zoological Society of Philadelphia presents to the members and loanholders its thirty-sixth annual report, for the year ending February 29th, 1908.

GENERAL AFFAIRS AND FINANCES.

The number of members at the close of the year was:—

Annual members.....	209
Life members.....	1,291
Corresponding members.....	6
Honorary members.....	14
Perpetual members.....	250
Junior members.....	60
Total members.....	1,830

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

Adults (paying at gates).....	164,720
Children (paying at gates).....	47,294
Members (including life and annual members, loanholders' annual, and complimentary annual tickets)	916
Loanholders' single tickets.....	10,836
Free admissions (charitable institutions, donors' tickets, &c.)*.....	4,389
Coupon tickets.....	311
Excursion tickets.....	2,255
	230,721

* In addition to these, 161,000 tickets were issued to the Board of Education, for the admission of pupils of the Public Schools.

*Monthly Record of Receipts from Admissions for 1907-1908
with corresponding account for 1906-1907.*

MONTH	1906-1907	1907-1908	COMPARISON
March.....	\$1,164 70	\$1,896 00	Increase.... \$731 30
April.....	3,112 30	2,018 85	Decrease.... 1,093 45
May.....	3,655 40	4,010 05	Increase.... 354 65
June.....	2,921 05	3,535 95	" 614 90
July.....	3,737 75	4,977 15	" 1,239 40
August....	4,691 90	6,141 45	" 1,449 55
September..	5,329 80	4,207 35	Decrease.... 1,122 45
October....	2,220 60	2,790 30	Increase.... 569 70
November..	1,883 25	1,638 65	Decrease.... 244 60
December..	1,105 90	1,339 45	Increase.... 233 55
January....	991 75	990 85	Decrease.... 90
February...	737 30	684 05	" 53 25
	\$31,551 70	\$34,230 10	Increase....\$2,678 40

THE GARDENS.

The number of living specimens exhibited was as follows:—

Mammals.....	487
Birds.....	952
Reptiles.....	1,012
Amphibians.....	75

2,526

The whole number of accessions during the year was about as usual, and the variety of the exhibits has been maintained, but there has been an increasing scarcity of species new to the collection, and of small mammals and birds of rarity somewhat beyond those received through the ordinary channels of supply. There is no doubt that, in no small measure, this is due to the regulations covering the importation of wild species enforced by the national government. The wisdom of preventing the naturalization in this country of

objectionable exotic animals is not to be questioned, but regret may be expressed that the minute and vexatious details which must be complied with on bringing into the country even single specimens by casual travelers or steamship employés, imposes this serious limitation upon zoological gardens.

The new additions were these:—

Cercopithecus buttikoferi Jent. Büttikofer's Monkey.

Hab., Liberia.

One specimen purchased February 28th.

Hapale pygmaea (Spix.) Pygmy Marmoset.

Hab., Central America to Brazil.

This species is the smallest of the whole group of monkeys, being no more than six inches in length. A pair was purchased on September 11th.

Lycan pictus (Temm.) Cape Hunting Dog.

Hab., South Africa.

Often called "hyena dog" from a marked resemblance in shape to that animal. A male was purchased on April 18th. Later in the year a female was secured in Europe, but unfortunately it died before shipment.

Chondestes grammicus (Say.) Lark Sparrow.

Hab., western United States.

Hyphantornis intermedius (Rüpp.) Chestnut-crowned Weaver.

Hab., East Africa.

Paroaria capitata (D'Orb.) Yellow-billed Cardinal.

Hab., Brazil.

A pair was received November 13th.

Quiscalus major Vieill. Boat-tailed Grackle.

Hab., Texas to Colombia.

Cyanocorax affinis Pelz. Colombian Jay.

Hab., Panama, Colombia.

Tetrao urogallus Linn. Capercaille.

Hab., Europe and Asia.

A pair of these splendid grouse was received on December 17th. As frequently is the case with this species, they arrived in bad condition and lived but a short time.

Guttera cristata (Pallas). Crested Guinea-fowl.

Hab., West Africa.

Chrysotis lilacina (Less.) Lilac-crowned Amazon.

Hab., Ecuador.

Haliastur intermedius Gurney. Malayan Brahminy Kite.

Hab., Siam to the Philippines.

Two examples procured at Singapore and presented on October 17th by Mrs. George W. C. Drexel are still in immature plumage, but appear to belong to this species.

Melierax monogrammicus (Temm.) Throat-striped Hawk.

Hab., Africa.

Polyborus tharus (Molina.) Brazilian Caracara.

Hab., Brazil to Patagonia.

Asio otus otus Linn. European Long-eared Owl.

Hab., Europe and Asia.

Xenorhynchus asiaticus (Lath.) Black-necked Stork.

Hab., India to Australia.

Anser fabalis (Lath.) Bean Goose.

Hab., Europe and Asia.

Querquedula cyanoptera (Vieill.) Cinnamon Teal.

Hab., Oregon to Chili.

Larus fuscus Linn. Lesser Black-backed Gull.

Hab., Europe.

Larus canus Brünn. Mew Gull.

Hab., Europe and Asia.

Larus minutus Pallas. Least Gull.

Hab., Europe and Asia.

Varanus salvator (Laur.) Two-banded Monitor.

Hab., East Indies.

A fine specimen of this lizard, more than six feet long, was purchased June 4th.

A welcome addition was made on April 19th by the purchase of a male spotted hyena. This species has become relatively scarce and has not been represented in the collection since 1896.

A male red river-hog was purchased May 18th. On June 18th a pair of Barbary apes reached the Gardens as a gift from Dr. Thomas Biddle, by whom they were procured at Tetuan, Morocco.

A pair of wild cats, trapped in South Carolina by Dr. Norton Downs, were presented by him February 21st.

Animals were bred as follows:—

- 1 pig-tailed macaque (*Macacus nemestrinus*), ♂, January 21st.
- 1 baboon, hybrid between *Papio langheldi*, ♂, and *P. cynocephalus*, ♀, January 25th.
- 8 lions (*Felis leo*), March 13th, 2♂, 1♀; June 17th, 3; October 1st, 1♂, 1♀.
- 8 pumas (*Felis concolor*), April 29th, 1♂, 1♀; June 1st, 3♂, 1♀; August 18th, 2.
- 3 jackals (*Canis anthus*), April 13th.
- 1 brown bear (*Ursus arctos*), January 10th.
- 3 black bears (*Ursus americanus*), January 25th.
- 2 hog deer (*Cervus porcinus*), April 6th, 1♀; July 22d, 1♂.
- 2 Japanese deer (*Cervus sika*), May 30th, 1♂; June 22d, 1.
- 1 fallow deer (*Cervus dama*), ♂, June 8th.
- 3 Indian antelopes (*Antilope cervicapra*), June 3d, 2♀; February 7th, 1♂.
- 1 American bison (*Bison bison*), ♂, June 14th.
- 1 Himalayan thar (*Hemitragus jemlaicus*), ♀, June 16th.
- 4 peba armadillos (*Tatusia novemcincta*), April 16th.
- 1 robust kangaroo (*Macropus robustus*), ♀, November 21st.
- 4 wild turkeys (*Meleagris gallopavo*), May 24th.
- 4 Amherst pheasants (*Chrysolophus amherstiae*), May 28th.
- 6 Reeves' pheasants (*Phasianus reevesi*), June 12th.
- 2 Canada geese (*Branta canadensis*), June 18th.
- 10 red-headed ducks (*Fuligula f. americana*), June 17th and July 22d.
- 9 mallards (*Anas boschas*), July 13th.
- 1 black mallard (*Anas obscura*), July 13th.
- 7 summer ducks (*Aix sponsa*), June 1st and July 25th.
- 16 banded water snakes (*Tropidonotus fasciatus*), August 5th.
- 9 common water snakes (*T. sipedon*), October 11th.
- 5 striped water snakes (*T. leberis*), October 11th.
- 8 elegant garter snakes (*Eutænia elegans*), August 22d.
- 11 banded rattlesnakes (*Crotalus horridus*), October 20th.

It has long been desired to bring together the large flightless birds, ostriches, cassowaries, and their allies, and the greater part of the appropriation for permanent improvements from the City Councils was expended in the erection

of a building designed for that purpose, on the west walk nearly opposite the restaurant. The house, of somewhat irregular and pleasing design, contains eight inside pens capable of subdivision when required, each having an outdoor enclosure. The heating plant and the outside fences will be added this spring, and the building will be occupied before summer. Much needed space in the Antelope House, where these birds have been previously kept, will then be available.

A cage for anthropoid apes is now under construction in the Monkey House, the glass front of which occupies the centre arch of the conservatory. Its completion will permit the display of oranges and chimpanzees to better advantage than ever before in the Gardens.

In furtherance of the purpose strictly followed of late years, of limiting the occurrence and spread of tuberculosis among the monkeys in this building, all the open iron partitions separating the inside cages have been replaced by solid ones of wood, and the same change is now in progress in the outside cages. A sporadic case of the disease appearing in the building will then have little chance of spreading beyond the cage in which it occurs, the other occupants of which, being few in number, can readily be removed to the quarantine room for examination.

It is gratifying to observe that under the preventive measures which have been developed since the opening of the Laboratory of Pathology, the relative mortality from this disease in the Gardens has been reduced to a point below that of the human records for this city.

The Board desires to express its appreciation of the interest shown by many individuals, and especially of the cordial relations with the Commissioners of Fairmount Park and the officers of the city and members of the City Councils, which have been continued through the year.

By order of the Board,

ARTHUR ERWIN BROWN,

Secretary.

INCOME AND EXPENDITURES.

For fiscal year ending February 29th, 1908.

INCOME.

Membership dues	\$895 00	
Admission receipts.....	34,230 10	
Rents at Gardens.....	250 00	
Interest	1,579 68	
Sale of guide books.....	575 70	
Goat and donkey rides.....	1,327 50	
Sundry receipts.....	1,208 79	
Received from the City of Philadelphia through the Commissioners of Fairmount Park.....	23,000 00	
		<u>\$63,066 77</u>

EXPENDITURES.

(Exclusive of Permanent Improvements.)

Salaries and wages.....	\$24,379 27	
Office expenses.....	568 79	
General expenses.....	31,587 43	
Purchase of animals.....	5,324 10	
Animals contracted for	1,700 00	
		<u>\$63,559 59</u>
Balance to debit of profit and loss.....	492 82	
		<u>\$63,066 77</u>

CAPITAL.

For fiscal year ending February 29th, 1908.

RECEIPTS.

Received from the City of Philadelphia through the Commissioners of Fairmount Park.....	\$10,000 00
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EXPENDITURES.

Ostrich house	\$9,083 95	
Asphalt walks	1,030 05	
		<u>\$10,114 00</u>
Balance, being excess of expenditures over receipts of capital.....	114 00	
		<u>\$10,000 00</u>

HENRY T. COATES,

Treasurer.

Examined and found correct, March 24th, 1908.

STOCKTON BATES,

C. P. A. for Stockton Bates & Son.

CLASSIFIED LIST OF AUTOPSIES MADE DURING THE YEAR
IN THE PATHOLOGICAL LABORATORY.

These were made up of the following groups, and the numbers which precede the names of orders indicate how many of each have come to autopsy.

17 Primates.	7 Lemures.	26 Carnivora.	11 Rodentia.
20 Ungulata.	1 Edentata.	3 Marsupialia.	
Total mammals, 84.			
70 Passeres.	6 Picariæ.	55 Psittaci.	4 Striges.
6 Accipitres.	8 Columbæ.	17 Gallinæ.	5 Alectorides.
7 Herodiones.	12 Anseres.	1 Struthiones.	
Total birds, 191.			
3 Crocodilia.	7 Squamata.		
Total reptiles, 10.			
Total animals examined, 285.			

¶ The following list shows the number of cases of the main changes making up the pathological diagnoses. In some instances contributory causes or concomitant results are also listed for purpose of record, but for the most part the numbers opposite the various animals represent a pronounced condition believed to be of importance in the death of the animal.

Diseases of the Gastro-intestinal Tract.

Proventriculitis.....	2 Birds.		
Proventricle, Impaction of...	4 Birds.		
Proventricle, Worms in.....	14 Birds.		
Gastritis.....	5 Birds.	1 Alligator.	1 Agouti.
	1 Iguana.	1 Wolf.	1 Monkey.
	1 Crocodile.	1 Deer (ulcerative).	
Stomach, Impaction of.....	5 Birds.	1 Seal.	
Acute indigestion.....	1 Coati.	1 Agouti.	
Enteritis.....	55 Birds.	1 Hog.	1 Bear.
	4 Deer.	1 Lemur.	1 Tapir.
	5 Monkeys.	1 Iguana.	1 Wolf.
	1 Jaguarundi.	1 Goat.	1 Cassowary.
	2 Crocodiles.		
Colitis.....	1 Monkey.		
Colon, Impaction of.....	1 Python.	1 Paradoxure.	
Peritonitis.....	1 Lemur.	2 Birds.	1 Deer.
	1 Monkey.		
Peritoneal adhesions.....	1 Hog.		
Peritoneum, Hemorrhage into	1 Bird.	1 Coati.	1 Fox.
	1 Wolf.		
Intestinal toxemia.....	1 Ocelot.		

Diseases of the Circulatory System.

Hypertrophy of the heart...	1 Fox.		
Myocarditis.....	2 Birds.	1 Monkey.	1 Wolf.
Pericarditis.....	3 Birds.	1 Iguana.	1 Paradoxure.
	1 Tapir.	1 Monkey.	1 Deer.
Edema of pericardium.....	1 Wolf.		
Aorta, Aneurysmal dilatation of.....	1 Seal.		

Diseases of the Liver.

Abscess.....	3 Birds.		
Cirrhosis.....	4 Birds.	1 Wolf.	
Cloudy swelling.....	5 Birds.	2 Seals.	
Fatty change.....	7 Birds.	1 Bear.	2 Lemurs.
	1 Paradoxure.	1 Ichneumon.	1 Alligator.
	2 Monkeys.	2 Iguana.	1 Woodchuck.
	1 Python.	1 Fox.	1 Raccoon.
Focal necrosis.....	1 Ichneumon.	1 Crocodile.	3 Birds.
Pigmentation.....	1 Alligator.	1 Raccoon.	1 Python.
	2 Crocodiles.	2 Iguana.	1 Bird.
Cholangitis.....	1 Hog.	1 Bird.	1 Monkey.
	1 Jaguarundi.		
Obstruction to cystic duct...	1 Hog.		
Hepatitis.....	16 Birds.	1 Deer.	
Coccydiosis.....	1 Ichneumon.		
Congestion.....	1 Bird.	1 Deer.	3 Foxes.
Gangrene.....	1 Coati.		
Hemorrhage.....	1 Bird.		

Diseases of the Kidney.

Cloudy swelling.....	3 Birds.	2 Seals.	1 Bear.
	1 Monkey.		
Fatty change.....	2 Birds.		
Nephritis:—			
Acute.....	17 Birds.	2 Rats.	1 Monkey.
	1 Coati.	1 Armadillo.	1 Deer.
	1 Iguana.	1 Kangaroo.	1 Prairie Dog.
	1 Fox.		
Chronic.....	1 Raccoon.	1 Paradoxure.	1 Squirrel.
	1 Wolf.	1 Deer.	1 Bird.
	1 Monitor.		
Sub-acute, diffuse and not specifically determined..	3 Birds.	1 Hog.	1 Lemur.
	1 Ichneumon.	1 Fox.	1 Woodchuck.
	1 Wolf.	1 Tapir.	1 Monkey.
	1 Gazelle.	1 Goat.	1 Deer.
Retention cysts.....	1 Bird.	2 Deer.	
Congenital cysts.....	1 Deer.		
Congestion.....	1 Bird.	1 Fox.	1 Deer.
Pigmentation.....	1 Python.	1 Raccoon.	
Perirenal hemorrhage.....	1 Armadillo.		

Diseases of the Lungs.

Abscess.....	1 Bird.		
Bronchitis.....	1 Ichneumon.	1 Monkey.	2 Birds.
	1 Kangaroo.		
Congestion.....	1 Wolf.	1 Fox.	1 Bird.
Edema.....	1 Bird.	1 Monkey.	1 Gazelle.
	2 Seals.	1 Woodchuck.	1 Wolf.
Pneumonia:—			
Lobar (croupous).....	1 Bird.		
Lobular.....	1 Prairie dog.	1 Seal.	1 Raccoon.
	11 Birds.		
Chronic Pneumonitis.....	1 Ichneumon.		
Pleuritis.....	1 Lemur.	1 Bird.	1 Monkey.
	2 Seals		
Pseudo lobar caseous non-tuberculous pneumonia....	1 Lemur.		
Empyema.....	1 Seal.	1 Raccoon.	
Hemorrhage.....	2 Birds.		

Diseases of the Pancreas.

Cloudy swelling.....	1 Bird.		
Pancreatitis.....	3 Birds.	1 Raccoon.	
Fibrosis.....	1 Bear.		
Cyst formation.....	1 Bird.		

Diseases of the Spleen and Lymphatic System.

Acute tumor.....	10 Birds.	1 Iguana.	1 Deer.
	1 Ichneumon.	1 Raccoon.	
Focal necrosis.....	1 Bird.	1 Raccoon.	
Splenitis.....	1 Deer.		
Pigmentation.....	2 Crocodiles.	1 Deer.	2 Birds.
Hyperplasia.....	1 Tapir.	1 Bird.	1 Monkey.
Amyloid of lymphatics.....	1 Gazelle.		
Lymphostasis.....	1 Seal.		
Follicular degeneration.....	1 Bird.		

Infections.

Tuberculosis.....	15 Birds.	1 Paradoxure.	1 Elk.
	2 Deer.	3 Monkeys (see notes on tuberculin reaction).	
Acute infections of unknown etiology.....	11 Birds.	2 Iguana.	1 Ichneumon.
	2 Seals.	1 Alligator.	1 Opossum.
	2 Rats.		
Mould infection.....	13 Birds.		
Infectious leukemia.....	12 Birds.		
Infection with—			
Bact. mucococcus capsulatus..	1 Lemur.		
Bact. dysenteriae.....	1 Fox.		
B. pyocyaneus and cladothrix fungiformis (?)....	1 Kangaroo.		
Sore mouth.....	1 Alligator.	1 Python.	
Botryomycosis (?).....	1 Bird.		
Mycosis of skin.....	1 Dog.		
Chronic cerebral pachymeningitis.....	1 Monkey.		

Miscellaneous.

Anemia.....	1 Monkey.		
Asphyxia.....	1 Bird.		
"Catching cold".....	1 Cat.		
Disseminated focal necrosis..	1 Monitor.		
Focal fat necrosis.....	1 Bird.	1 Alligator.	
Freezing.....	1 Swan.		
Gangrene of soft tissues of neck.....	1 Fox.		
General congestion.....	4 Birds.	1 Paradoxure.	
General fibrosis.....	1 Wolf.	1 Swan.	
Inanition.....	1 Deer.	1 Antelope.	
Lymphocytomata.....	2 Birds.		
Osteomalacia.....	4 Monkeys.		
Osteoperiostitis.....	1 Monkey.		
Shock.....	1 Bird.		
Traumatism, evidences of...	7 Birds.	4 Deer.	1 Wolf.
	2 Antelopes.	1 Monkey.	1 Lemur.
	1 Monkey.		
Vascular parenchymatous goitre.....	1 Raccoon.		

Cause of Death not Determined.

37 Birds.	1 Mouse.	2 Woodchucks.	2 Lemurs.
1 Opossum.	1 Monkey.	1 Boa.	1 Coati.
2 Marmosets.	1 Fox.	1 Deer.	

Post-mortem Degeneration.

13 Birds.	1 Deer.	1 Rat.
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Healthy.

1 Elk.	2 Monkeys.	1 Lemur.
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Not Posted.

12 Birds.	1 Deer.	1 Cobra.
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Parasites.

Air sacs.....	1 Bird.		
Proventricle.....	21 Birds.		
Stomach and intestines.....	11 Birds.	1 Seal.	3 Rats.
	1 Monitor.	1 Opossum.	1 Coati.
	1 Fox.	2 Pythons.	1 Monkey.
	1 Jaguarundi.	1 Ocelot.	
Liver.....	2 Birds.	1 Lemur.	
Lung.....	2 Birds.	1 Iguana.	
Cysticercus cysts.....	1 Deer.	1 Gazelle.	

The following parasites have been observed and determined. In some other cases the genus has been determined but the species is not yet worked out. These include some specimens obtained in 1906 and not determined in time for the 1907 report.

- Echinostoma ferox* in the intestine of a stork (805).
Monostoma mutabile in the air sacs of a coot (885).
Monostoma mutabile in the air sacs of a carolina rail (917).
Hydatid cysts in the lung of a gazelle (1145).
Tania eunectes (nov. sp.) in the small intestines of an anaconda (939).
Tania unilateralis; *Ascaris ardesæ* (nov. sp.), and *Dispharagus ardææ* (nov. sp.) in the intestine of a blue heron (1158).
Hymenolepis diminuta in the intestine of a Texas cotton rat (1096).
Dibothriocephalus latus in the large intestine of a gray fox (1001).
Bothridium pythonis in the dejecta of a living python.
Ascaris canis in the intestine of a chow dog (1015).
Ascaris canis var. *cati* in a jaguarundi (1157).
Ascaris serpentulus in a demoiselle crane (1165).
Ascaris aquillæ (nov. sp.) in the proventricle of an eagle (959).
Ascaris rubicunda in the intestine of a python (1122).
Ascaris anoura from a living python.
Heterakis papillosa in the ceca of a pheasant (1055).
Oxyuris megatyphlon in the large intestine of an iguana.
Oxyuris microtyphlon (nov. sp.) in the intestine of an iguana (827).
Oxyuris evoluta in the small intestine of a porcupine (991).
Uncinaria canina in an eyra, a jaguarundi and a gray wolf (919).
Physaloptera turgida in the stomach of an opossum (1166).
Filaria libiatio-papillosa in a bison (960).
Filaria gracilis in the peritoneum of a cebus (995).
Filaria pungens in the air sacs of a weaver bird (1028).
Spiroptera (?) *iguanaæ* (nov. sp.) in the lung of a Cuban iguana (1127).
Cotugnia browni (nov. sp.) in the intestine of a banded parakeet (1052).
Spiroptera incerta (nov. sp.) in the proventricle of eight parrots.
Tania paradoxuri (nov. sp.) in the dejecta of a living paradoxure.

The study of these parasites has been made by Dr. Allen J. Smith of the University of Pennsylvania. The descriptions will be found in a systematic manner in an article published by Dr. Smith in University of Pennsylvania Medical Bulletin, February, 1908, "Studies in Metazoan Parasitology." Dr. Smith and Dr. Fox presented to the Pathological Society of Philadelphia in February, 1908, the observation of a ciliated parasite in the liver of a prairie wolf (P. Z., G. 1048) suspected of belonging to the opalina, but not yet determined. The article is as yet unpublished.

Tuberculin Reaction.

During the year 46 monkeys and lemurs have been tested by this means. Of these, 39 passed the test and have since shown no clinical evidences of tuberculous infection. Some of these have died in the exhibition cages, but have not shown any tuberculosis. Two monkeys died in the detention room before injection but were not tuberculous. Two more were killed after suspicious reactions, but autopsy failed to reveal any tuberculosis. The remaining 3 have been held over by reason of suspicious temperature charts.

Neoplasms found during the year.

1059. *Red shouldered Parrakeet.*

Large round cell Sarcoma of the intraperitoneum. There could be some question of this since the size of the tumor and cells makes carcinoma possible. From the nuclei of the cells it seems that sarcoma is the correct determination. The organ is not demonstrable.

1082. *Dingo.*

Carcinoma probably from end ducts and acini of parotid gland. The malignant area is small. One of the pictures is exactly that seen in 1124. The surrounding tissue seems to have undergone some sarcomatous and myxamatous change, and is at least the seat of chronic inflammatory processes.

1124. *Dingo.*

An early carcinoma arising from the radicles of the duct of a salivary gland. The acinus cells are proliferating, probably from chronic inflammation, and are perhaps about to take on malignant change, very similar to 1082.

1153. *Gray Wolf.*

Alveolar angio-sarcoma. This animal presented a malignant tumor of the thyroid which consisted of two large lateral hemispheres and a small mass between the lower poles of these halves. The tumor was cystic and the wall of the cysts were fibrous with plugs of cellular tissue in them. The cellular structure consisted of small faceted cells with small deeply staining nuclei. The interstitial tissue was hyaline and poor in cells, many of which were embryonal in character. The cells were arranged in alveoli, occasionally quite compact but usually loosely grouped. There were many small degenerated areas filled with hyaline matter or blood. The origin of the tumor is not clear. The type of cells approaches that of the parathyroid more than that of the thyroid. No normal tissue was discoverable. Diagnosis of small cell carcinoma of parathyroid was considered, but alveolar angio-sarcoma seems more tenable.

1223. *Black Lemur.*

A noteworthy histological change was observed in a slight swelling in the supracer cervical musculature of the uterine body. An early fibromyomatous metamorphosis was encountered in the great tortuosity of the muscle bundles, lengthening of fibres and evidences of great flexibility of the nuclei.

1238. *Roseate Cockatoo.*

This bird had several large lipomata, three of which lay beneath the skin of the abdomen, disfiguring the shape, but apparently quite benign in character. Bird was killed.

1225. *Dorcas Goat.*

Lymphosarcoma. The growth in this animal consisted of a solid, almost homogeneous mass, the size of a fist, in the superior and posterior mediastina. Some of the anthracosis from the affected glands could be seen on cross section. Microscopically the tumor consists of a densely packed mass of cells with very meagre retaining tissue dividing it into bundles or very large alveoli. This does not present the appearance of an alveolar tumor. The cells are about half-way between the small and large sarcoma types, while their nucleus

is more that of an ectodermic cell. It may be a small round cell sarcoma, but one should not lose sight of the possibility of endotheliomata, the more so when one sees the lymph nodes which are traversed by strands of these cells filling the lymph channels and pulp spaces. The endothelium of the lymph structure is not appreciable. There is a metastasis in the liver and several in the kidney, one of these latter being hematogeneous infarcts of liver of angular shape.

1288. Cuvier's Toucan.

Epithelioma? Warty excrescence on right wing which appeared as an epithelioma or osteosarcoma from some calcified nodules in the upper parts. There was a similar nodule in the right lung and microscopically they are the same. The section shows an epithelioma with much degeneration of the squamous cell plugs. There are some atypical pearls. The metastasis is practically the same as the tumor. Metastasis of this tumor is most unusual.

ACUTE INFECTIOUS LEUKEMIA AMONG THE PARROTS.

From the middle of December, 1907, to the middle of February, 1908, eleven parrots were sent to the Laboratory either after death or shortly before, exhibiting more or less definitely the same symptoms. The usual history was that the birds had been out of condition for some days, refusing to take food and having looseness of the bowels, the evacuations being quite pale. Upon examination of the living bird it was found quiet with bowed head and ruffled feathers, especially of the head and neck. The birds dying of this infection comprised Levaillant's Amazons, 4; Orangewinged Amazons, 2; Rosehill Parrakeets, 2; Panama Amazon, 1; All-green Parrakeet, 1, and Undulated Grass Parrakeet, 1. No bird recovered which presented a clinical course as outlined above. During November there were two small birds which presented the same general pathologic picture and diagnosis, but the condition was not recognized at that time. The true state of affairs with these parrots was not realized until the bacteriological determination led the writer to establish the diagnosis by taking the result of cultures and histologic picture into consideration together. The provisional diagnosis of infection with a member of the hemorrhagic septicemia group was not so far wrong. The process was evidently infectious and hygienic measures were indicated. The gross and microscopical appearances of these birds are very similar, almost identical, save for variations of degree. The infection atrium was apparently the intestinal tract in nine of the cases.

The similarity of the results of pathological examination permits of a general description. The birds were considerably emaciated. The muscles were, however, fairly firm and presented no mottlings. The peritoneal fat was missing. Mucous membranes were pale. There was the usual difficulty in finding the meagre lymphatic tissues. The thorax was almost never involved, there being a mild infiltrative, but not fibrinous pleuritis in a few cases. The lungs were uniformly congested, in some instances hemorrhagic. Microscopically, deposits of lymphocytes were few and far between, but when present corresponded with those to be described in the liver. They were located always around bronchi. The liver was always increased from one-half to three times its normal size. The right lobe was apparently more affected than the left. It was smooth and firm and homogeneous in consistency. The color varied from a red brown to a deep purple, but it was mottled by irregular pale areas varying in size from one to four millimeters. Microscopically the parenchyma was distorted in arrangement and showed

early or late fatty or parenchymatous change. The distortion was due to the presence of accumulations of large lymphocytes of various size and shape. They seemed to begin in the interstitial tissue and rapidly invade the parenchyma. They were quite compact and well preserved, in three cases only a central softening being present. The connective tissue was not increased, the blood vessels were not affected, and only once were the bile ducts the seat of an acute inflammation. A few crystalline eosinophiles, polynuclears and round cells were encountered in these cellular masses. The capsule was frequently edematous and occasionally infiltrated with large lymph cells. The heart was only affected once, showing cloudy swelling of the musculature. The pericardium was once the seat of gelatinous pericarditis, but often a great number of lymphocytes were found scattered irregularly beneath the membrane.

The Spleen. This organ was enlarged two to three times, smooth, firm, with the capsule spanned over it and the pulp springing out on section. It was usually purplish in color with indefinite gray mottlings distributed irregularly through it. The follicular identity was absent and the organ made up of a more or less equal admixture of small and large lymphatic cells, hyperplastic endothelium with a few eosinophiles. The endothelium was not confined to the centre of the follicles and the lining of the sinuses, but was diffusely distributed. The connective tissue was not increased, but the capsule was edematous and contained numerous large lymphocytes. Phagocytosis and pigmentation were not excessive. None of the large lymphatic cells were found phagocytizing. The kidney shows little or no change macroscopically, but histologically a cloudy swelling was usually present. Accumulations of large lymphatics were twice found in the medullæ. The adrenals were usually rich in cells, but no accumulations were found.

The intestines were always swollen out with a yellow or yellowish gray granular material. This consisted chiefly of cellular débris, since little food was present. The coats of the gut were thickened, apparently edematous to the naked eye, and always congested. On two occasions definite small hemorrhages were found. The duodenal loop was most often affected. There was present, under the microscope, an enteritis varying from simple catarrhal to hemorrhagic. The sub-mucosa was the seat of large lymphocytic accumulations in eight of eleven cases, very extensive in a few instances. Follicular masses were not prominent, indeed small round cells were rather rare. No degeneration of these masses had occurred.

The serous membranes, notably the peritoneum in the space behind the proventricle, spleen and stomach, in front of the kidney, and above the coil of the intestine, were the seat of a sub-fibrinous inflammation three times, and histologically these membranes were almost always the seat of more or less lymphatic invasion.

The bone marrow was hyperemic to the naked eye. Microscopically the predominating cells were the large lymphocytes and the neutrophilic myelocytes. No accumulations of the former were encountered. The general structure of the marrow was very little disturbed. The blood was aleukemic. A few myelocytes were present. The morphology of the blood elements seemed normal. These observations were made on four birds.

Bacteriology. Cultural tests were not made on five birds because of the length of time elapsing between death and autopsy. In two more no growths were obtained, in another a *Str. brevis* was isolated. In the other three, an organism indistinguishable from the *Bacterium sanguinarium* was isolated.

This organism, however, failed to show pathogenicity on laboratory animals. The uniformity of the pathologic picture in these birds, conforming in many respects with that of leukemia, the finding of *Bacterium sanguinarium*, if only in three of the eleven, seemed to justify the conclusion that we are dealing with a limited epidemic of acute infectious leukemia. Bacteria could not be found in the parenchymatous cell masses, but in the intestinal wall short polar staining bacteria could be found corresponding to the morphology of the isolated organism.

Respectfully submitted,

HERBERT FOX, M. D.,

Pathologist.

LIST OF ADDITIONS TO THE MENAGERIE DURING THE YEAR
ENDING FEBRUARY 29TH, 1908.

1907.

- March 2. 1 Virginia quail presented by Miss Stella Banks, Camden, N. J.
 " 6. 1 banded toucan, 2 bernicle geese, 2 bean geese and 2 garter snakes purchased. 1 painted terrapin presented by F. W. Cressey, Philadelphia.
 " 9. 1 long-eared owl presented by Mrs. T. W. Van Hoesen, Jr., Philadelphia.
 " 13. 3 lions born in the Gardens. 1 water snake and 2 spotted terrapins purchased. 1 painted terrapin and 2 spotted terrapins presented by F. W. Cressey, Philadelphia.
 " 14. 2 garter snakes and 2 water snakes purchased.
 " 17. 2 alligators presented by Masters S. R. and H. Y. Skinner, Philadelphia. 2 alligators presented by Dr. L. Caskin, Philadelphia.
 " 19. 1 Levaillant's amazon presented by Walter Trout, Philadelphia.
 " 23. 1 yellow baboon, 1 pig-tailed macaque, 2 ring-tailed lemurs, 2 black and white lemurs and 1 crested guinea fowl purchased. 1 alligator presented by F. P. Crossan, Philadelphia.
 " 24. 1 bullfrog purchased.
 " 25. 2 raccoons presented by Dr. Norton Downs, Germantown, Philadelphia.
 " 28. 3 cinnamon teal, 2 brown cranes, 2 water snakes and 2 garter snakes purchased. 1 DeKay's snake captured in the Gardens.
 " 29. 1 diamond rattlesnake, 7 water moccasins, 2 ground rattlesnakes, 4 black snakes, 1 chicken snake, 1 corn snake, 1 hog-nosed snake, 2 garter snakes, 2 indigo snakes, 1 scarlet king snake, 6 banded water snakes, 1 brown water snake, 1 Florida terrapin, and 1 red-bellied terrapin purchased.
 " 30. 1 garter snake and 1 bullfrog presented by Master Charles Hill, Philadelphia.
 " 31. 1 otter purchased.
- April 1. 2 garter snakes and 1 water snake purchased.
 " 4. 1 ground rattlesnake, 2 water moccasins, 5 black snakes, 1 chicken snake, 1 Sacken's garter snake, 1 keeled green snake, 7 hog-nosed snakes, 3 king snakes, 1 pine snake, 1 banded water snake and 2 whip snakes purchased.
 " 6. 1 hog deer born in the Gardens. 2 garter snakes purchased. 7 spotted terrapins presented by Master J. Zophar Howell, Ardmore, Pa.
 " 9. 4 California hair seals purchased.
 " 10. 1 American merganser captured in the Garden.
 " 11. 1 common macaque presented by W. G. Eshleman, Philadelphia. 1 alligator presented by Louis Wilkie, Philadelphia. 2 water moccasins, 2 garter snakes, 3 keeled green snakes, 6 hog-nosed snakes, 1 scarlet king snake, 3 pine snakes and 3 whip snakes purchased.
 " 12. 1 mountain finch presented by P. F. Harpel, Philadelphia.
 " 13. 3 jackals born in the Gardens.
 " 16. 4 nine-banded armadillos born in the Gardens.

- April 18. 1 Cape hunting dog (♂), 2 black lemurs, 2 black swans, 12 undulated grass parrakeets, 1 cutthroat finch, 1 bullfinch, 2 common waxbills and 4 crimson-eared waxbills purchased.
- “ 19. 1 spotted hyena (♂) purchased. 1 painted terrapin presented by F. W. Cressey, Philadelphia.
- “ 20. 2 black apes purchased. 1 sparrow hawk and 1 screech owl presented by J. F. Livezey, Philadelphia.
- “ 21. 1 alligator presented by Master Reinhardt, Philadelphia.
- “ 22. 1 blue-fronted amazon presented by Leroy Shisler, Philadelphia.
- “ 23. 1 European red fox purchased.
- “ 25. 2 diamond rattlesnakes, 1 ground rattlesnake, 2 garter snakes, 1 keeled green snake, 1 indigo snake, 2 scarlet snakes, 1 slender snake, 1 banded water snake, 5 gopher tortoises, 7 American green lizards and 6 wave-lined lizards purchased.
- “ 27. 1 orange-winged amazon presented by Mrs. Annie Walter, Philadelphia.
- “ 29. 2 pumas born in the Gardens. 2 raccoons purchased.
- “ 30. 1 musk turtle presented by H. A. Coady, Philadelphia. 2 vervet monkeys, 4 Senegal fire finches, 1 cutthroat finch, 2 gray parrots, 2 red-headed pochards, 2 European widgeons, 2 European teal, 4 angulated tortoises, 1 ribbon snake, 1 water snake, 1 box tortoise and 1 bullfrog purchased.
- May 1. 1 black-necked stork purchased.
- “ 2. 1 screech owl presented by Master Thomas L. Barratt, Philadelphia.
- “ 3. 2 white-eared conures purchased.
- “ 4. 6 screech owls caught in the Gardens. 1 barn owl presented by Lewis H. Benzon, Philadelphia. 3 painted terrapins presented by F. W. Cressey, Philadelphia. 1 chicken snake and 1 Mobile terrapin purchased.
- “ 5. 2 garter snakes and 11 DeKay's snakes presented by D. H. Ward, Philadelphia.
- “ 9. 5 musk turtles, 1 Muhlenberg's terrapin and 1 spotted terrapin purchased.
- “ 11. 1 alligator presented by Alfred T. Yungman, Philadelphia, Pa.
- “ 12. 1 red-headed weaver presented by P. F. Harpel, Philadelphia.
- “ 13. 1 raccoon presented by Mrs. J. W. Confer, Philadelphia. 1 American green lizard presented by Master Reuben Hartmann, Philadelphia.
- “ 17. 7 banded rattlesnakes purchased.
- “ 18. 1 red river hog (♂) purchased. 1 red-winged blackbird presented by Melvin F. Hubley, Philadelphia.
- “ 20. 1 striped water snake presented by David Hoffman, Philadelphia. 1 alligator presented by W. De Haven Eaches, M. D., Phoenixville, Pa.
- “ 21. 1 otter, 1 gray ichneumon, 2 orchard orioles, 1 Wagler's troupial, 1 Bullock's troupial, 1 Scott's troupial, 2 Cuban bullfinches and 2 melodious finches purchased.
- “ 22. 1 common cassowary, 1 pochard, 1 European widgeon, 1 diamond rattlesnake, 1 harlequin snake, 1 water moccasin, 1 keeled green snake, 5 hog-nosed snakes, 3 garter snakes, 1 indigo snake, 4 king snakes and 4 pine snakes purchased.
- “ 24. 1 European red fox purchased.

- May 25. 1 milk snake presented by W. C. F. Goll, Philadelphia. 1 Emory's snake, 2 Marcy's garter snakes, 7 Lindheimer's snakes, 1 Say's pine snake, 6 whip snakes, 7 Graham's water snakes, 5 Woodhouse's water snakes, 2 Graham's leaf-nosed snakes and 34 Fairies' garter snakes purchased.
- " 27. 4 Western diamond rattlesnakes and 5 Say's pine snakes purchased. 1 yellow-bellied liothrix presented by C. F. Knoll, Philadelphia.
- " 28. 2 Beechey's spermophiles purchased. 4 Amherst's pheasants born in the Gardens. 1 San Domingo tree boa presented by Michael Gold, Philadelphia.
- " 29. 1 mountain black snake presented by J. W. Booth, McVeytown, Pa.
- " 30. 1 Japanese deer born in the Gardens. 7 common water snakes purchased.
- " 31. 1 common water snake presented by Master David Hoffman, Philadelphia.
- June 1. 5 summer ducks born in the Gardens.
- " 3. 2 Indian antelopes born in the Gardens. 1 emperor boa, 1 two-banded monitor, 3 European green lizards, 6 wall lizards and 6 European spotted salamanders purchased.
- " 4. 3 hamadryas cobras and 1 hooded cobra purchased.
- " 6. 1 Indian python, 2 long-tailed weavers, 2 zebra finches, 2 red-headed finches, 2 Gouldian grass finches, 2 chestnut-bellied finches, 4 cinereus waxbills, 3 spotted-sided finches, 2 chestnut-eared finches, 2 yellow-rumped seedeaters and 2 singing seedeaters purchased.
- " 7. 1 pine snake presented by A. Henderson, Philadelphia.
- " 8. 1 fallow deer born in the Gardens. 1 gray squirrel presented by Master Roger Schofield, Philadelphia.
- " 10. 45 green lizards, 1 wave-lined lizard, 3 six-lined lizards, 1 glass snake, 2 corn snakes and 1 black snake purchased.
- " 11. 2 Say's rattlesnakes, 1 western diamond rattlesnake, 2 yellow-bellied black snakes, 8 Marcy's garter snakes, 4 Say's king snakes, 1 LeConte's snake, 4 Say's pine snakes, 3 whip snakes purchased.
- " 12. 6 Reeves' pheasants born in the Gardens. 1 common water snake presented by F. R. Taylor, Philadelphia.
- " 14. 1 American bison and 4 pumas born in the Gardens. 1 spotted cavy purchased. 7 painted terrapins presented by A. Cadwalader, Philadelphia.
- " 15. 1 milk snake presented by Victor Gardner, Philadelphia.
- " 16. 1 Himalayan thar born in the Gardens. 1 alligator presented by B. Haney, Philadelphia.
- " 17. 5 red-headed ducks born in the Gardens.
- " 18. 2 Barbary apes (♂ and ♀) and 1 European red fox (♀) presented by Dr. Thomas Biddle, Philadelphia. 2 Canada geese born in the Gardens. 1 mountain black snake presented by Frank Gowan, Maxwells, Md. 1 pine snake presented by Dr. J. R. Clausen, Philadelphia.
- " 19. 6 demoiselle cranes, 2 Brazilian caracaras, 2 Harris buzzards, 2 European long-eared owls and 2 American crocodiles purchased. 3 lions born in the Gardens.

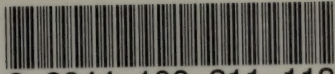
- June 20. 1 gray fox presented by Theodore D. Bentley, Philadelphia.
 " 22. 1 Japanese deer born in the Gardens.
 " 25. 6 copperheads, 1 common garter snake, 3 milk snakes, 1 black snake, 3 water snakes and 1 fence lizard purchased. 2 summer ducks born in the Gardens.
 " 26. 2 banded rattlesnakes presented by C. A. Potterfield, Charleston, W. Va. 1 black snake presented by Charles A. Benner, Farrandville, Pa.
 " 27. 1 Fournier's capromys, 1 cutthroat finch, 4 zebra waxbills, 4 blue-headed doves, 2 Cuban sparrow hawks and 1 pale-headed tree boa purchased.
 " 28. 1 Canada lynx purchased. 1 screech owl presented by Mrs. A. R. Iliff, Philadelphia.
 " 29. 1 painted terrapin presented by F. W. Cressey, Philadelphia.
 " 30. 1 American crow presented by Miss E. Tustin, Philadelphia. 1 American crow presented by T. N. Pearson, Philadelphia.
- July 1. 1 milk snake presented by Master Arthur Lofft, Philadelphia.
 " 2. 24 prairie dogs and 2 Cuban iguanas purchased. 1 common garter snake presented by Master William Knitter, Philadelphia.
 " 3. 1 gray squirrel presented by E. A. Thompson, Philadelphia.
 " 4. 2 American crows presented by M. Blackman, Philadelphia.
 " 5. 2 smooth green snakes, 1 milk snake and 1 ring-necked snake presented by Otto Behr, Lopez, Pa.
 " 7. 1 jaguarundi purchased.
 " 8. 1 snapping terrapin presented by John Wiegner, Philadelphia.
 " 13. 4 fallow deer purchased. 6 mallard ducks and 1 black duck born in the Gardens. 1 copperhead, 1 garter snake and 1 milk snake presented. 1 milk snake presented by Master C. Magel, Philadelphia.
 " 14. 1 alligator presented by Miss Laura M. Bowman, Philadelphia.
 " 15. 1 woodchuck purchased. 1 yellow-shouldered amazon presented by Mrs. B. Robson, Philadelphia.
 " 16. 3 mallard ducks born in the Gardens. 4 mallard ducks presented by I. C. Wetherell, Fairton, N. J.
 " 22. 1 white-fronted amazon presented by Mrs. Harry Hamilton, Philadelphia. 1 yellow-cheeked amazon presented by Mrs. John F. Dunn, Philadelphia. 4 red-headed ducks born in the Gardens.
 " 25. 2 black-spider monkeys, 1 green monkey, 2 brown-throated conures, 1 goldfinch and 1 cutthroat finch purchased. 2 box tortoises presented by Gertrude A. Pickens, Philadelphia.
 " 27. 2 pine snakes presented by W. D. Levis, Philadelphia. 1 short-nosed horned lizard presented by Miss Helen Lukens, Philadelphia. 1 changeable tree toad presented by Master David Lane Hoffman, Philadelphia.
 " 29. 1 garter snake presented by W. E. Ringel, Camden, N. J.
 " 30. 1 pine snake presented by Warrington & Co., Philadelphia.
 " 31. 1 great blue heron presented by the Millard Construction Co., Philadelphia. 1 water snake presented by John W. Lawton, Philadelphia. 1 American green lizard presented by S. W. Pavonarius Philadelphia. 3 sirens purchased.
- Aug. 1. 1 gray squirrel presented by Howard J. Wilson, Philadelphia.

- Aug. 5. 4 white storks purchased. 16 banded water snakes born in the Gardens.
- " 6. 12 common water snakes and 1 striated terrapin presented by Douglass H. March, Philadelphia.
- " 7. 1 alligator presented by Chester A. Orr, Philadelphia. 2 bullfrogs presented by William F. Schaeffer, Philadelphia.
- " 10. 2 painted terrapins, 1 red-eared terrapin, 2 musk turtles and 3 mud turtles presented by Ray Weber, Philadelphia.
- " 12. 1 green lizard presented by Vida White, Philadelphia. 1 white stork purchased.
- " 13. 1 great horned owl presented by W. W. Posey, Philadelphia.
- " 16. 1 common macaque presented by Charles C. French, Philadelphia. 1 banded rattlesnake presented by W. J. Grimes, Catawissa, Pa. 1 box tortoise presented by E. C. Eiriech, Philadelphia. 3 elegant garter snakes, 2 European green lizards and 2 hellbenders purchased.
- " 17. 2 Canada porcupines and 2 red-shouldered lizards purchased.
- " 18. 2 pumas born in the Gardens. 1 alligator presented by John Bradford Ives, Philadelphia.
- " 21. 1 least bittern presented by William Millar, Philadelphia.
- " 22. 8 elegant garter snakes born in the Gardens.
- " 24. 1 tayra and 2 anacondas purchased.
- " 26. 2 banded rattlesnakes presented by C. A. Potterfield, Charleston, W. Va.
- " 29. 1 common macaque presented by R. Nixon, Philadelphia.
- " 30. 4 crimson eared waxbills purchased.
- " 31. 2 spotted snakes purchased.
- Sept. 1. 1 bald eagle purchased.
- " 4. 1 copperhead presented by W. M. Anderson, Philadelphia.
- " 6. 1 alligator presented by Master Mark Barrett Cosby, Philadelphia. 1 water snake presented by Master William Patton, Philadelphia.
- " 11. 1 mountain black snake presented by J. A. E. Norcross, Vincentown, N. J. 1 yellow baboon, 1 pig-tailed macaque, 1 sooty mangabey, 2 pygmy marmosets, 2 black and white lemurs, 1 yellow-crowned night heron and 3 Gila monsters purchased.
- " 12. 1 Barbary turtle presented by Mrs. R. Kirgus, Philadelphia. 1 banded rattlesnake presented by C. A. Potterfield, Charleston, W. Va.
- " 13. 1 red-tailed buzzard presented by Prof. H. A. Surface, Harrisburg, Pa. 1 bullfrog presented by Thomas B. Manley, Philadelphia.
- " 16. 1 Fairies' garter snake, 8 indigo snakes, 7 Say's pine snakes and 5 whip snakes purchased.
- " 18. 4 African silver-bill finches, 4 Senegal fire finches, 2 cutthroat finches, 2 yellow-rumped seedeaters, 2 zebra waxbills, 2 Japanese nun finches and 1 paradise whydah bird purchased.
- " 19. 1 hog-nosed snake presented by Miss Laurie Virginia Groves, Philadelphia.
- " 20. 1 wood owl purchased. 1 sulphur-crested cockatoo presented by Mrs. J. Reynolds, Philadelphia.
- " 21. 2 Senegal fire finches purchased.
- " 22. 1 striated terrapin presented by Miss Jeanette Reeves, Philadelphia.

- Sept. 23. 1 banded rattlesnake presented by Lewis Hockenberry, East Waterford, Pa.
- " 24. 8 banded rattlesnakes presented by C. A. Potterfield, Charleston, W. Va. 3 European sheldrakes purchased.
- " 25. 6 banded rattlesnakes, 5 ground rattlesnakes, 1 water moccasin, 26 copperheads, 1 smooth green snake, 1 keeled green snake, 2 common water snakes, 1 striped water snake, 1 brown water snake, 5 garter snakes, 3 black snakes, 1 ribbon snake, 1 chicken snake, 2 indigo snakes, 4 whip snakes, 2 king snakes, 5 hog-nosed snakes and 1 pine snake purchased. 2 hog-nosed snakes presented by Dr. D. J. Allcutt, Philadelphia.
- " 27. 1 alligator presented by Miss Anna Oechsle, Philadelphia. 7 painted terrapins presented by Charles Laddly, Philadelphia.
- " 30. 1 grenadier weaver and 4 Java sparrows presented by Mrs. A. C. Craig, Philadelphia.
- Oct. 1. 2 red salamanders presented by William Beisel, Philadelphia. 2 lions born in the Gardens.
- " 3. 4 yellow-throated parrakeets presented by George B. Clemence, Philadelphia.
- " 4. 6 indigo snakes, 3 Say's pine snakes purchased.
- " 5. 1 screech owl presented by Frank Coulson, Philadelphia. 1 box tortoise presented by Master Charles C. Harrison, Philadelphia.
- " 9. 3 black snakes, 2 chicken snakes, 7 garter snakes, 1 keeled green snake, 1 harlequin snake, 3 hog-nosed snakes, 1 slender snake, 3 common water snakes and 2 whip snakes purchased.
- " 11. 9 common water snakes and 5 striped water snakes born in the Gardens.
- " 12. 1 common mynah purchased. 1 alligator presented by Miss C. Aschenbach, Philadelphia.
- " 14. 2 common water snakes presented by Samuel M. Harrison, Media, Pa.
- " 15. 1 white nosed coati purchased.
- " 16. 1 common horned lizard presented by H. E. Holland, Philadelphia. 1 nine-banded armadillo purchased.
- " 17. 2 Malayan brahminy kites presented by Mrs. George W. Childs Drexel, Bryn Mawr, Pa.
- " 18. 1 Virginia deer purchased, 1 garter snake presented by John Presser, Philadelphia.
- " 19. 1 alligator presented by Randolph Lake, Philadelphia.
- " 20. 11 banded rattlesnakes born in the Gardens. 1 alligator presented by John Clement, Philadelphia.
- " 24. 1 black-eared marmoset presented by Miss Jennie Ohmit, Ardmore, Pa.
- " 25. 1 brown-fronted macaw purchased.
- " 26. 3 European rollers purchased.
- " 29. 1 great blue heron presented by Walter F. Schirmer, Philadelphia.
- " 30. 2 whooper swans purchased.
- " 31. 2 American peregrine falcons purchased.
- Nov. 1. 6 Say's rattlesnakes, 6 yellow-bellied black snakes, 6 Say's pine snakes, 2 harlequin snakes, 1 American glass snake, 1 keeled green snake, 2 common garter snakes, 1 hog-nosed snake, 2 indigo snakes, 3 rainbow snakes and 2 whip snakes purchased.

- Nov. 4. 1 alligator presented by W. G. Hetherington, Philadelphia.
 " 5. 1 blue jay presented by Dr. Ida E. Gaston, Philadelphia, 1 roseate cockatoo presented by C. C. French, Philadelphia.
 " 13. 2 yellow-billed cardinals, 2 bishop weavers, 1 throat-striped hawk, 8 crested ground parrakeets, 8 undulated grass parrakeets, 6 rosehill parrakeets and 2 blood-rumped parrakeets purchased.
 " 14. 1 black-handed spider monkey, 1 white-nosed coati, 1 Guatemalan amazon, 1 harlequin snake, 4 black snakes, 3 garter snakes, 1 Sacken's garter snake, 2 chicken snakes, 8 hog-nosed snakes and 6 king snakes purchased.
 " 16. 1 weeper cebus and 1 brown cebus presented by Paul Denckler Mills, Radnor, Pa.
 " 17. 1 alligator presented by G. Adolphe Wiedmann, Philadelphia.
 " 21. 1 red squirrel presented by Miss Kathleen Darrach, Philadelphia.
 " 22. 1 roseate cockatoo presented by Mrs. W. R. Furness, Philadelphia.
 " 23. 1 great horned owl presented by Joseph Salus, Philadelphia.
 " 25. 1 red-shouldered hawk presented by Harry Cole, Grater's Ford, Pa.
 " 26. 4 sooty mangabeys, 1 black spider monkey, 1 black-handed spider monkey and 1 Mueller's parrakeet purchased.
 " 27. 3 western diamond rattlesnakes purchased.
 " 28. 1 bonnet macaque presented by Dr. John S. Sharpe, Bryn Mawr, Pa. 1 striated terrapin presented by Carl Toom, Philadelphia.
 " 30. 1 Douglas' horned lizard presented by W. W. Foulke, Philadelphia.
- Dec. 7. 1 painted terrapin presented by M. Hansson, Philadelphia. .
 " 10. 2 prairie wolves purchased.
 " 11. 1 European wolf, 1 polecat, 2 upland geese, 2 Swinhoe's pheasants, 2 great eagle owls, 2 lesser black backed gulls, 3 least gulls, 2 mew gulls purchased. 1 starling presented by Walter G. Pierce, Liberty Grove, Md.
 " 12. 1 great blue heron presented by Charles Jack, Riverside, N. J.
 " 17. 2 capercaillies purchased.
 " 18. 1 eyra purchased. 2 screech owls presented by Dr. Wm. F. Berkenstock, Philadelphia.
 " 19. 1 American robin, 1 cat-bird presented.
 " 27. 1 white-nosed coati presented by F. Rose, U. S. Ship Adams, League Island Navy Yard.
 " 31. 1 raccoon, 8 rosehill parrakeets and 1 boa constrictor purchased.
- 1908.
- Jan. 4. 1 Baltimore oriole, 1 brown-throated conure and 1 boat-tailed grackle purchased.
 " 5. 1 Canada lynx and 3 mule deer purchased.
 " 6. 1 snapping terrapin purchased.
 " 9. 2 rosy-billed ducks purchased.
 " 10. 1 brown bear born in the Gardens.
 " 14. 2 black-handed spider monkeys, 1 black spider monkey, 1 larger hill mynah and 1 cassowary purchased.
 " 15. 1 chaema baboon, 2 grivet monkeys and 2 gray wolves purchased. 1 black-handed spider monkey presented by Mrs. A. Van Rensselaer, Fort Washington, Pa.
 " 21. 1 pig-tailed macaque born in the Gardens.
 " 22. 12 pintail ducks, 9 red-headed ducks, 3 gadwall ducks purchased.
 " 25. 1 baboon (hybrid yellow and long armed) and 3 black bears born in the Gardens.

- Jan. 28. 1 alligator presented by Miss F. Grime, Philadelphia.
 " 30. 1 alligator presented by Fred. Pepper, Philadelphia. 1 European marten purchased.
 " 31. 1 gopher tortoise presented by Thomas Billingsfelt, Philadelphia.
 Feb. 3. 1 great horned owl presented by Frank G. Bedford, Philadelphia.
 " 7. 1 Indian antelope born in the Gardens.
 " 8. 5 shoveller ducks, 1 red-headed duck, 2 gadwall ducks and 3 ruddy ducks purchased. 1 alligator presented by Master J. Zopher Howell, Ardmore, Pa.
 " 9. 1 whistling swan and 1 Canada goose purchased.
 " 10. 4 turtle doves presented by Mrs. M. Friend, Philadelphia.
 " 16. 1 alligator presented by Daniel Smith, Philadelphia.
 " 17. 3 pumas, 1 elegant bull snake, 3 Emory's snakes, 3 Fairies' garter snakes, 2 Say's king snakes, 1 Graham's water snake, 5 Holbrook's water snakes and 2 Woodhouse's water snakes purchased. 1 opossum presented by Joseph L. Davidson, Philadelphia.*
 " 21. 1 Colombian jay purchased. 2 wild cats presented by Dr. Norton Downs, Three Tuns, Pa.
 " 26. 2 common waxbills, 2 cinereus waxbills, 2 crimson-eared waxbills and 2 moorhens purchased.
 " 28. 1 Buttikofer's monkey and 1 blue-crowned conure purchased.



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Date Due

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