

REPORTS  
OF THE  
COUNCIL AND AUDITORS  
OF THE  
ZOOLOGICAL SOCIETY  
OF LONDON,  
FOR THE YEAR 1923.

PREPARED FOR THE ANNUAL GENERAL MEETING,

TO BE HELD ON

TUESDAY, APRIL 29<sup>TH</sup>, 1924.

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# REPORT OF THE COUNCIL

*for the year ending 31st December, 1923.*

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## ANNUAL GENERAL MEETING.

1. The Ninety-fifth Annual General Meeting of the Society will be held on Tuesday, April 29th, 1924, at 4 p.m., at the Offices of the Society, in the Gardens, Regent's Park, N.W.8.

### 2. PROCEDURE AT THE ANNUAL GENERAL MEETING.

*(By-laws, Chapter VIII., Sections 1 and 2.)*

SECT. I. Notice of the time and place of the Annual General Meeting shall be advertised by the Council in four or more of the public Newspapers, at least fourteen days before the same shall take place.

SECT. II. The course of proceeding at the Annual General Meeting, after the Chair has been taken, shall be as follows:—

1. The reading of the Minutes of the previous Annual Meeting.
2. The appointment of Scrutineers and opening of the Ballot.
3. Presentation of the Auditors' Report, previously issued to Fellows.
4. Discussion of the Auditors' Report.
5. Presentation of the Council's Annual Report, previously issued to Fellows.
6. Discussion of the Council's Annual Report.
7. To receive the Report of the Scrutineers on the result of the Ballot.

No other business shall be transacted at such Meeting.

3. ROLL OF MEMBERS.—The number of Fellows and Fellows-Elect on January 1st, 1923, was 5,425, and on January 1st, 1924, was 5,697.

	1922.	1923.
Compounders at £30 ... .. (Elected before 1906)	606	579
Compounders at £45 .. ... (Elected since 1905)	216	230
Compositions remitted ... ..	31	26
Paying annually £3 ... ..	4,323	4,587
Dormant (paying £1 since 1911)... ..	174	189
Do. subscriptions remitted... ..	14	14
*Admission Fees unpaid ... ..	61	72
	5,425	5,697

\* This entry relates almost entirely to Fellows elected at the December Meeting, who did not pay their dues until January, 1924.

4. CORRESPONDING MEMBERS.—The following were elected to fill vacancies in the List of Corresponding Members during 1923 :—

James Roy Kinghorn, Esq., Zoologist in Charge of Herpetology and Ornithology, Australian Museum, Sydney, New South Wales, Australia.

Ned Hollister, Esq., Superintendent of the National Zoological Park, Washington, D.C., U.S.A.

Lieutenant R. M. Hall, of the West African Frontier Force, Sierra Leone, West Africa.

The Baron Francis Nopcsa, Singerstrasse 12, Vienna, Austria.

J. N. C. Cumming, Esq., of the McMahon Museum of Natural History, Quetta, Baluchistan, India.

Dr. Thomas L. Bancroft, Eidsvold, Queensland, Australia.

Percivale Helyar, Esq., H.B.M. Consul, Antananarivo, Madagascar.

5. LIST OF FELLOWS.—A revised edition will be published during the Summer of 1924. Any corrections should be sent to the Secretary before April 30th, 1924.

6. RETIREMENT OF CHIEF CLERK.—Mr. W. H. Cole retired on pension from his post as Chief Clerk on July 15th, 1923. Mr. Cole had been in the Society's Office since 1878 and will be much missed by a large number of Fellows to whom his courteous and efficient services were known personally. He has been succeeded by Mr. W. C. Harris, his senior Assistant.

7. MEDALS.—No Medal was conferred in 1923.

8. SCIENTIFIC GRANTS.—The Council made a donation of £10 to the National Trust towards the preservation of Wicken Fen and of £100 to a fund for the purchase of the Farne Islands as a permanent sanctuary for birds. The life composition fees were paid in respect of four Fellows on account of special services they had rendered to the Society.

9. THE WORLD LIST OF SCIENTIFIC PERIODICALS.—Permission was given to register the Society's House as the office of the "World List of Scientific Periodicals" an Association which is engaged in preparing and publishing a list of all the periodicals which publish the results of scientific research, with indications of libraries in Great Britain and Ireland filing the periodicals. It is hoped that this list when printed will be of great use to zoologists as well as to those engaged in other branches of science.

10. SCIENTIFIC MEETINGS.—The usual twelve meetings for scientific business were held. The Society's Rooms were also lent to the British Ornithologists' Union, to the Avicultural Society, and to the Society for the Protection of the Fauna of the Empire.

11. SCIENTIFIC PUBLICATIONS.—The *Abstract* was issued as usual. The *Transactions*, suspended during the war, have not yet been resumed. The *Proceedings*, Part IV of 1922, were issued on February 15th, 1923; Part I of 1923 on April 12th, 1923; Part II on July 6th, 1923; Part III on September 3rd, 1923; and Part IV on December 27th, 1923.

In the following table are given the numbers of plates and pages of the *Proceedings* for the last ten years:—

		Plates.		Pages.
1914	...	75	...	1077
1915	...	21	...	712
1916	...	22	...	756
1917	...	11	...	338
1918	...	3	...	310
1919	...	23	...	499
1920	...	19	...	656
1921	...	35	...	887
1922	...	57	...	1276
1923	...	15	...	1097

12. ZOOLOGICAL RECORD.— Volume 58, containing Records of the literature chiefly of 1921, was published on October 22nd, 1923, under the editorship of Mr. W. L. Sclater, with a portrait and memoir of the late Dr. Sharp, F.R.S., F.Z.S., who had edited the annual volumes since 1892. Parts I to X inclusive and Parts XII, XIII and XV had been published on September 8th, 1923, and Parts XI, XIV and XVI on October 9th, 1923.

Volume 59, dealing with the literature of 1922, is now passing through the Press, and it is hoped that it will be issued complete early this summer, the separate Parts being issued as they are ready.

It will be remembered that in the Report for the year 1922, the Council stated that although it had sanctioned the compilation of Volume 59, it would not pay for the printing and publication of that volume or of subsequent volumes unless substantial aid came from other sources, especially from institutions or persons more directly concerned than this Society with zoological bibliography. In order to clarify the issue, the Secretary, with the cognisance of Council, made it known that a net loss of about £500 on each annual volume was to be regarded as a sufficient contribution from the Society to this part of its scientific work. By direction of the Council, the Secretary took steps to make this policy known to those who might be interested in the maintenance of the Record.

The response, of which particulars are given on page 10, was sufficiently encouraging to justify the publication of Volume 59. The Council has further sanctioned the compilation of Volume 60 (literature of 1923) and 61 (literature of 1924) in order that there may be no delay if the continuation of outside support justifies publication. The Council are gratified to report that the Imperial Entomological Bureau which had undertaken the preparation of the Parts dealing with Insecta for 1922 and 1923 on receipt of the usual recorder's fees, has now agreed to undertake the same work for 1924 without fee. In consideration of this the Bureau is to be supplied with copies of the Insecta Record at a rate that will just cover cost.

The outlook for the Zoological Record is thus more promising than last year, but even with continued direct assistance it cannot be regarded as secure unless there is a great increase in the number of copies sold. The price of the whole volume makes a large circulation very unlikely, but there seems little reason why many more individual zoologists should not purchase the Sections with which they are specially concerned. These will be published and issued to subscribers as they are ready, in most cases considerably before the issue of the complete volume. On the advice of the Zoological Record Committee, the Editor and Recorders of Sections are to expand the subject index in future.

The present price of the Record and Parts is appended.

13. ZOOLOGICAL RECORD: PRICES.—On account of the greatly increased cost of production it has been found necessary to fix the price of the Annual Volumes of the *Zoological Record* at £3 (or Subscription price, paid in advance, £2 10s.).

#### SEPARATE DIVISIONS.

	s.	d.
General Zoology ... ..	3	0
Protozoa ... ..	3	0
Porifera or Spongida ... ..	2	6

SEPARATE DIVISIONS—*continued.*

	s.	d.
Coelenterata ... ..	2	6
Echinoderma ... ..	4	0
Vermes ... ..	3	6
Brachiopoda and Bryozoa ... ..	2	6
Mollusca ... ..	5	0
Crustacea ... ..	3	0
Trilobita, Arachnida, Myriopoda ... ..	4	0
Insecta ... ..	15	0
Prochordata ... ..	2	0
Pisces ... ..	3	6
Reptilia and Batrachia ... ..	3	0
Aves ... ..	7	6
Mammalia ... ..	3	0
List of abbreviations and Journals	2	6
List of New Genera ... ..	2	6

Societies or others subscribing before publication for one dozen or more copies of any Division, may be supplied with them at a reduction.

14. DONATIONS AND PROMISES TO *Zoological Record.*

*Donations Received to December 31st, 1923 :—*

	£	s.	d.	£	s.	d.
Association of Economic Biologists ... ..	5	0	0			
Malacological Society ... ..	5	0	0			
Seamen's Hospital Society ... ..	20	0	0			
Royal Society ... ..	100	0	0			
British Ornithologists' Club ... ..	11	5	0			
British Ornithologists' Union ... ..	11	5	0			
Conchological Society ... ..	2	2	0			
Wellcome Bureau... ..	15	0	0			
American Ornithological Union ... ..	11	7	6			
Liverpool School of Trop. Med. ... ..	10	10	0			
Quekett Microscopical Club ... ..	5	5	0			
Dr. W. C. McIntosh, F.R.S. ... ..	5	5	0			

—————201 19 6



<i>Donations Promised, or Received since</i>				
January 1st, 1924 :—		£	s.	d.
Hawaiian Entomological Society	...	7	6	0
Marine Biological Association	... ..	5	5	0
T. Barbour (Mus. Comp. Zool., Camb., Mas.)	... ..	25	0	0
S. Henshaw (Mus. Comp. Zool., Camb., Mas.)	... ..	10	0	0
University of Michigan	... \$100	22	4	6
Challenger Society	... ..	5	5	0
Linnean Society	... ..	25	0	0
British Museum of Natural History	...	150	0	0
British Association	... ..	50	0	0
Entomological Society	... ..	50	0	0
Dr. W. C. McIntosh, F.R.S. (2nd donation)		3	3	0
The Academy of Natural Sciences of Philadelphia	... ..	23	0	4
Royal Society of Tropical Medicine and Hygiene	... ..	20	0	0
Linnean Society of N.S. Wales	...	10	0	0
Entomological Society of America	...	16	0	0
		<hr/>		
		422	3	10
		<hr/>		
		624	3	4
		<hr/>		

15. GARDEN GUIDE AND PICTURE POST CARDS.—The twenty-first edition of the Garden Guide was issued in 1923, and in the course of the year 64,825 copies were sold. Since 1904, when the Guide became the property of the Society, 1,035,029 copies have been sold. The twenty-second edition, revised, and with many new photographs, will be published about Easter. Of picture post cards, 233,002 were sold in 1923.

16. EXCHANGE LIST.—A full list of the Institutions, etc., on the Exchange List of the Society's Publications was printed in the Report for 1902. Since that date the following additions have been made:—

- 1904. The Carnegie Museum, Pittsburgh, Pa., U.S.A.
- 1915. The University of Illinois, U.S.A.
- 1916. Ministry of the Belgian Colonies.  
Imperial Society of Naturalists, Petrograd.
- 1919. California Academy of Sciences, San Francisco, U.S.A.

1920. Great Britain, The Ministry of Agriculture,  
Department of Fisheries.  
Naturhistorisches Staatsmuseum, Vienna.  
The Straits Branch of the Royal Asiatic  
Society.
1921. The Philippine Journal of Science, Manila.
1922. Musée Zoologique de l'Université et de la  
Ville, Strasbourg.
1923. L'Institute Océanographique, Monaco.

17. LIBRARY.—The Visitors' Book was signed by 517  
Fellows and persons introduced by them, and 1,244  
volumes were borrowed under the usual regulations.

The following is a list of the chief additions made  
to the Library during the past year:—

## PRESENTED.

<i>Donor.</i>	<i>Donation.</i>
BAHR, P. H. MANSON-, M. D., F. R. C. P., D.S.O., F.Z.S.	Album of 12*Tempera drawings of the Magnificent Bird-of-Paradise ( <i>Diphyl- lodes magnifica hunsteini</i> ) in Display.
BEVAN, COSMO.	Autograph Letter of Sir Stamford Raffles.
BIGELOW, FRANCIS, H.	Illustrations of Diurnal Lepidoptera with Descriptions. 2 Vols. By Andrew Gray Weeks, Jr. 1905.
	A Treatise on some of the Insects in- jurious to Vegetation. By Thaddeus William Harris. New Edition edited by Charles L. Flint. 1862.
BUTLER, SIR HARCOURT, K.C.S.I., F.Z.S., ETC.	A Big Game Shoot in Upper Burma, 1923. By Sir Harcourt Butler. 1923.
CHEESMAN, MISS L. E., F.Z.S.	The Psychic Life of Insects. By E. L. Bouvier. English Translation by L. O. Howard. 1922.
COMBER, EDWARD, F.Z.S.	The Mammals of India. 2 Vols. By T. C. Jerdon. 1867.
DRIBERG, J. H., F.Z.S.	The Lango, a Nilotic Tribe of Uganda. By J. H. Driberg. 1923.
DUNCAN, F. MARTIN, F.Z.S.	Through Central Africa from East to West. By Cherry Kearton and James Barnes. 1915.
	The Kingdom of Man. By E. Ray Lankester. 1907.
	An Essay on the Indigenous Fossorial Hymenoptera; comprising a Descrip- tion of all the British Species of Burrowing Sand Wasps contained in the Metropolitan Collections. By W. E. Shuckard. Author's advance copy, 1836.

- DUNCAN, F. MARTIN, F.Z.S.—*continued.* Board of Agriculture and Fisheries Leaflets Nos. 1-300. 1916-1917.  
The Minor Horrors of War. 1915.  
More Minor Horrors. By Sir A. E. Shipley, G.B.E., F.R.S., F.Z.S. 1916.  
Discovery or the Spirit and Service of Science. By Sir R. E. Gregory. 1918.
- FINN, FRANK, F.Z.S. Birds of our Country. 2 Vols. By Frank Finn and E. Kay Robinson 1923.
- FLOWER, MAJOR S. S., O.B.E., F.Z.S. History and Description of the Royal Museum of Natural History. By M. Deleuze. Translated from the French of M. Deleuze, by A. Royer. 1823.  
A Monograph of the Genus *Bos*. The Natural History of Bulls, Bisons, and Buffaloes. By George Vasey. 1857.  
The Tower Menagerie. By E. T. Bennett. 1829.  
Catalogue of Mammalia in the Indian Museum, Calcutta. Parts I-II. By John Anderson and W. L. Sclater. 1881-1891.  
Records of Sport in Southern India. By Douglas Hamilton. 1892.  
The Wild Cat of Europe. By Douglas Hamilton. 1896.  
The Sportsman in South Africa. By James A. Nicolls and William Eglington. 1892.  
Album of Miscellaneous photographs and picture post-cards of Zoological subjects collected by Major S. S. Flower, O.B.E., F.Z.S.  
The Municipal Gardens and Zoological Collection, Karachi. By H. P. Farrell and F. Ludlow. 1913.  
Report on the Improvement of the Victoria Gardens, Bombay. By Cavasji D. Mahaluxmivala. 1915.  
Recensement des Planorbes et des Valvées de l'Égypte. By Walter Innes. 1884.  
Contribution a l'étude des Vertébrés Miocènes de l'Égypte. By R. Fourtau. 1918.  
A Monograph of the Canidae. By St. George Mivart, F.R.S., F.Z.S. 1890.
- GLADSTONE, HUGH S., F.Z.S. A Collection of Autographs of Naturalists.

- HARMER, SIR SIDNEY F.,  
K.B.E., F.R.S., F.Z.S. The Library of Entertaining Knowledge.  
Vol. I. The Menageries (Quadrupeds).  
1829.
- HOWORTH, SIR HENRY,  
K.C.I.E., F.R.S.,  
F.Z.S. The Executors  
of the late A collection of 29 works on Zoology from  
the Library of the late Sir Henry  
Howorth, K.C.I.E., D.C.L., F.R.S.
- JONES, PROF. FREDERIC  
WOOD-, F.Z.S. The Mammals of South Australia. Part  
I. By Dr. Frederic Wood-Jones. 1923.
- KERVILLE, HENRI  
GADEAU DE, C.M.Z.S. Voyage Zoologique en Syrie (Avril-Juin  
1908). Mollusques Vols. II, III.  
Batraciens, Reptiles et Mammifères  
Vol. IV. By Henri Gadeau de Kerville.  
1921-1923.
- KIRKPATRICK, R., F.Z.S. Tunicata. Faune de la Russie. Liv. I.  
By V. V. Redikorzev. 1916.
- MAINLAND, L. G. Secrets of the Zoo. By L. G. Mainland.  
1923.
- MITCHELL, DR. P.  
CHALMERS, C.B.E.,  
F.R.S., F.Z.S. Fisheries of Great Britain and Ireland.  
Report 1902.  
North Sea Fisheries Investigations Re-  
ports and Correspondence. Vols. I, II.  
1902-5.  
Fishery and Hydrographical Investiga-  
tions in the North Sea and Adjacent  
Waters. 1902-1903. Report (No. 2  
Southern Area) 1902, 1903.
- MURRAY, CAPTAIN H.  
W., F.Z.S. Savage Sudan: Its Wild Tribes, Big-  
Game and Bird-Life. By A. Chapman.  
1921.
- THE LORD QUEEN-  
BOROUGH, F.Z.S. The English Moths and Butterflies :  
Together with the Plants, Flowers and  
Fruits whereon they feed and are  
usually found. By Benjamin Wilkes.  
1773.  
Deliciæ Naturæ Selectæ of Kabinet van  
Zeldzaamheden der Natur. By Philip  
Ludwich Statius Muller. 1771.
- SAUNDERS, J. E., F.Z.S. Familiar London Birds. By Frank Finn.  
British Museum. Synopsis of the Contents  
of the British Museum. 23rd Edition,  
36th Edition and 52nd Edition. 1826,  
1838, 1847.
- SHERBORN, C. DAVIES,  
F.Z.S. Verh. der Gesellschaft des Vaterländis-  
chen Museums in Böhmen in de zwolften  
allgemeinen Versammlung 2nd April,  
1834.
- TAVERNER, P. A. Birds of Eastern Canada. 2nd Edition.  
By P. A. Taverner. 1922.

- VEEVERS, DR. G. M.,  
F.Z.S. Nouvelle Description du Cap de Bonne-  
espérance ; avec un Journal Historique  
d'un voyage dans l'intérieur de  
l'Afrique. By Henri Hop. 1778.  
Traité de Zoologie Médicale. By Raphaël  
Blanchard. 1889-1890.  
Transactions Roy. Soc. Tropical Med. and  
Hygiene. Vol. XV, Nos. 4-8 ; Vol.  
XVI, complete ; Vol. XVII, Nos. 1-5.  
1921-1923.
- YOUNG, G. E. Episodes of Insect Life. By Acheta  
Domestica. 1849.

## PURCHASED.

- BAKER (E. STUART). A Hand-List of Genera and Species of Birds  
of the Indian Empire. 1923.
- BARNS (ALEXANDER). Across the Great Craterland. 1923.
- BOULE (MARCELLIN). Fossil Men : Elements of Human Palæon-  
tology. 1923.
- BRANDER (A. A. DUNBAR). Wild Animals in Central India. 1923.
- BRUNETTI (E.). Diptera Vol. III. Fauna of British India. 1923.
- BUCKHURST (A. S.), STANILAND (L. N.), WATSON (E. B.). British  
Hymenoptera. 1923.
- BUTLER (EDWARD A.). A Biology of the British Hemiptera-Heter-  
optera. 1923.
- BUXTON (P. A.). Animal Life in Deserts. 1923.
- FABRE (J. H.). The Life of the Scorpion. (English Translation.)  
1923.
- GLADSTONE (HUGH S.). Notes on the Birds of Dumfriesshire. 1923.
- GREGORY (WILLIAM K.). The Origin and Evolution of the Human  
Dentition. 1923.
- HEDGES (F. A. MITCHELL). Battles with Giant Fish. 1923.
- HINGSTON (R. W. G.). A Naturalist in Hindustan. 1923.
- JACKSON (B. DAYDON). Linnæus. 1923.
- LEFROY (H. MAXWELL). Manuel of Entomology. 1923.
- LEIPER (R. T.). Periodicals of Medicine and the Allied Sciences  
in British Libraries. 1923.
- NEDERLANDSCHE OOST-INDIE, DE ZEEEN VAN. Uitgegeven door  
het Koninklijk Nederlandsch Aardrijkskundig Genootschap.  
1922.
- PARKER (G. H.). Smell, Taste and Allied Senses in the Vertebrates.  
1922.
- PESTA (OTTO). Die Decapodenfauna der Adria. 1918.
- PHILLIPS (JOHN C.). A Natural History of the Ducks. Vol. I  
1923.
- WOOLDRIDGE (GEORGE H.). Encyclopædia of Veterinary Medicine  
Surgery and Obstetrics. 1923.

Periodicals and Zoological Works in course of publication, of which parts were added to the Library for the first time in 1923 :—

Bios.

British Journal of Experimental Biology.

Heredity.

Journal of Helminthology.

Publications of the Société des Sciences Naturelles du Maroc.

Singapore Naturalist.

18. CARD CATALOGUE.—The Librarian and his Assistant have made further progress with the Subject Card Index and the Geographical (Zoological) Card Index of the Works in the Library.

19. CINEMATOGRAPH RECORDS.—Mr. Martin Duncan and the operators of British Instructional Films, Ltd., have taken a further series of records in the Gardens. In this they have been assisted by the voluntary efforts of Miss Grace M. Callow, a Fellow of the Society who devotes most of her leisure to making friends with animals in the collection, acquiring their confidence by unusual patience and natural disposition. Some of the records have been exhibited commercially through the Instructional Films Company and under the agreement profits are accruing to the Society, most of which went last year in expenditure on electric equipment.

20. PROSECTORIUM.—Dr. Sonntag has continued to act as Anatomist, with general supervision of the Prosectorium, and Dr. Lucas as Pathologist. Professor R. T. Leiper, F.R.S., working through a panel of experts, has been responsible for the collection and identification of parasites. As before, type specimens of new species are presented to the British Museum (Natural History) in the name of the Society, and other material is dealt with under the direction of the Prosectorial Committee.

Reports from Dr. Sonntag, Dr. Lucas and Professor Leiper follow :—

Dr. C. F. Sonntag, the Society's Anatomist, reports : "During the year five papers, containing results of my investigations, have been published in the Society's

*Scientific Proceedings.* These included studies on the nervous system, tongue, and generative organs, and the second of a series of monographs on the Primates.

The Department is proving of great use to students who are supplementing their course of human anatomy at University College by dissections of the Anthropoid Apes. Miss Kahan and Messrs. Henderson, Meneces, Ogden, Jackson, Awrounin, and Scheinfein have worked in the Prosectorium. Miss Knobel, and Dr. R. H. Hunter have carried out private investigations.

Anatomical material has been sent for research or teaching purposes to:—

*University College.*—Professor J. P. Hill, Professor G. Elliot Smith, Drs. Harris, Hunter and Tudor Jones.

*The Royal College of Surgeons.*—Sir Charles Ballance and Mr. A. I. T. Fisher.

*University College Hospital.*—Sir Thos. Lewis and Mr. Barrington.

*Cambridge University.*—Professor J. T. Wilson.

*Oxford University.*—Drs. Gunther and Gibson.

*Shropshire Orthopædic Hospital.*—Dr. Lucy Smith.

*St. Thomas's Hospital.*—Mr. Lester.

*St. Bartholomew's Hospital.*—Dr. Hannay.

Specimens have also been sent to the British Museum, and the National Museum of Wales."

Dr. Lucas, the Society's Pathologist, reports: "During 1923, as a result of the systematic post-mortem examination of specimens dying in the menagerie, a large number of interesting pathological conditions have been observed and described in the special catalogue kept for the purpose. The more remarkable of these have been preserved as far as possible in the original colours, by means of the Kaiserling process, and microscopical specimens have also been kept. These specimens have been used for demonstration to the Society and to medical societies. Some illustrating diseases of birds

were lent to Capt. Rice, F.R.C.V.S., of the Ministry of Agriculture. In addition to this, material has been sent to the Royal Army Medical College, Millbank; types of organisms isolated have been sent to the Collection of Type Cultures at the Lister Institute, and a strain of avian pneumococcus has been sent to the Pathological Department of St. Bartholomew's Hospital.

Material has also been sent to the following individuals:—Professor Wooldridge, F.R.C.V.S., of The Royal College of Veterinary Surgeons; Dr. J. Gaskell, Addenbrooke's Hospital, Cambridge; Professor S. L. Cummings, C.B., C.M.G., The University of Cardiff; Dr. Barnard, Mr. Timbrell Fisher, Mr. F. S. Barrington, Dr. M'Nee, Dr. Wilson, University College Hospital.

The pathologist has isolated several organisms causing disease among the animals belonging to the Society. His work of isolating the active principle of the poison in the spores of the mould *Aspergillus fumigatus* has made considerable progress and it is hoped that it will be completed in the near future.

A summary of the pathological records for 1923 was read at the Scientific Meeting of February 5, 1924, and printed in the Part I. of the *Scientific Proceedings* for 1924."

Professor R. T. Leiper, F.R.S., reports:—"All animals dying in the Gardens during the past year, with the exception of rare specimens reserved for morphological studies by the Anatomist, have been examined for parasitic entozoa and the material collected has been identified and reported upon monthly to the Prosectorial Committee. The task of visiting the Prosectorium daily and of making the monthly returns has been undertaken by a panel of parasitologists formed by the Staff's associated workers of the Institute of Agricultural Helminthology (Ministry of Agriculture), and the Helminthological Department of the London School of Tropical Medicine. The following have participated in the scheme:—T. W. M. Cameron, M.R.C.V.S., Ph.D.,



B.Sc., R. J. Ortlepp, M.A., Ph.D., F.Z.S., H. H. Scott, M.D., M.R.C.P., F.R.S.E., T. Goodey, D.Sc., D. O. Morgan, B.Sc., G. S. Thapar, M.Sc., R. T. Leiper, M.D., D.Sc., F.R.S., F.Z.S.

A series of identified parasites has been formed and placed in a suitable cabinet in the Offices of the Society."

21. SANATORIUM.—During the War, the Sanatorium could not be fully used. It was refitted in 1922, both as a quarantine station and for the treatment of sick animals. Dr. Vevers, Superintendent of the Gardens, is in charge of it, with the assistance of Drs. Sonntag and Lucas in collaboration with the Curators and Professor Wooldridge, F.Z.S., Honorary Consulting Veterinary Surgeon to the Society.

22. VISITORS TO THE GARDENS.—The total number of visitors to the gardens in 1923 was 1,613,125, the largest in the history of the Society. The following Tables give comparative figures:—

*Visitors to the Gardens.*

1914 .	1,055,208	1919 .	1,515,042
1915 .	1,058,728	1920 .	1,590,642
1916 .	1,084,249	1921 .	1,386,745
1917 .	898,758	1922 .	1,427,849
1918 .	855,477	1923 .	1,613,125

*Visitors on Bank Holidays.*

	1922.	1923.
Easter Monday ... ..	59,532	61,688
Whit Monday ... ..	34,186	53,985
First Monday in August	47,578	32,590
Boxing Day ... ..	5,585	4,752

*Visitors on Sundays and Week-days.*

	1922.	1923.
Sundays ... ..	134,227	160,504
Week-days ... ..	1,293,622	1,452,621

23. ADMISSION TO THE GARDENS.\*—The Gardens are open daily throughout the year (except Christmas Day, when they are closed) from 9 a.m. until sunset, or 8 p.m., when sunset is later. The arrangements for admission are as follows:—

*Fellows.*—Every Fellow, Honorary Member, Foreign Member, Imperial Fellow or Corresponding Member may enter with two visitors by signing his or her name in the Gate-Book, but is not entitled to admit more than two visitors in this way on the same day. The husband or wife of a Fellow may use this privilege in the absence of the Fellow, but both husband and wife may not admit visitors on the same day.

*Other Visitors.*—On SUNDAYS only when personally accompanied and signed for as above, or on presentation of tickets. Written messages or the visiting cards of Fellows cannot be accepted. On WEEK-DAYS, when personally accompanied and signed for as above; on presentation of tickets; or by payment. The prices for admission by payment are as follows:—

Mondays throughout the year, except Bank Holidays, 6d. each person.

Bank Holidays, 1s. each adult; 6d. each child under 12 years.

Other Days, except Sundays, 1s. each adult; 6d. each child under 12 years.

Infants in arms are admitted free.

The following reduced prices for EXCURSION TICKETS for Parties on any fixed date (except Sunday) may be obtained upon application at the Society's Office. Should the date chosen for the visit to the Gardens be found unsuitable, the tickets, upon being returned will be re-dated for another day during the year of issue.

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\*For Admission to the Aquarium see paragraph 35 page 33.

<i>Adults.</i>	<i>Children under 14 Years.</i>
25 to 100 at 11d. each.	25 to 100 at 5d. each.
101 to 200 at 10d. each.	101 and upwards at 4d. each.
201 to 300 at 9d. each.	
301 and upwards at 8d. each.	

CHEAP ORDERS for the admission from 9 a.m. to 1 p.m. of Children from Elementary Council Schools on Tuesday, Wednesday, Thursday or Friday (except during Easter and Whitsun weeks) may be obtained for parties of not less than 25 Children and one Teacher at the rate of one penny each child and fivepence for each Teacher. There must be at least one Teacher to every 25 children. The Children, with their Teachers, must be out of the Gardens by 1 p.m.

24. GARDENS' STAFF.—As stated in the Annual Report last year, Mr. R. I. Pocock, F.R.S., retired on pension last March, and Dr. G. M. Vevers became chief of the Gardens' staff on a year's probation. Dr. Vevers carried out his duties with such energy and success that in December, 1923, the Council shortened his year of probation and placed him on the regular annual staff from January 1, 1924. Mr. D. Seth-Smith, formerly Curator of Birds and Inspector of Works, gave up his duties in connection with works on the appointment of Dr. Vevers, and became Resident Curator of Mammals and Birds, and has occupied his new post with characteristic devotion. As the Aquarium approached completion it was found that it left Mr. Boulenger little time for other duties. Accordingly he was appointed Director of the Aquarium and was succeeded as Curator of Reptiles by Miss Joan B. Procter, F.Z.S., F.L.S., who was already highly distinguished for her scientific work on Reptiles and Batrachians at the British Museum (Nat. Hist.) and in addition had been accustomed from childhood to the care of living examples of these difficult creatures. Miss Cheesman, the Curator of Insects, was given ten months leave of absence from October, 1923, as she desired to go on a projected expedition to the South Seas, and Mr.

Bushby from the Entomological Department of the Imperial College of Science is acting as Curator during her absence.

Professor G. H. Wooldridge, F.R.C.V.S., F.Z.S., Honorary Veterinary Surgeon to the Society, has given most valuable advice and treatment. The Society is much indebted to his skill and attention.

Dr. Vevers after experience of his duties for some months, at the suggestion of the Secretary and in consultation with the Curators, drew up a scheme for the reorganisation of the Menagerie staff and a new set of rules for their direction. These were discussed by the Garden Committee and on its recommendation finally approved by the Council.

The chief change has been the formation of the new rank of Overseer and the abolition of the old rank of Head Keeper. There are at present four men holding the rank of Overseer

J. Shelley in charge of Ungulates,  
C. Dixon in charge of Carnivora and Small Mammals,  
J. Bailey in charge of Birds,  
H. Vinall in charge of the Aquarium.

The Overseers are responsible to the Curators for the sections allotted to them and in control of the keepers and helpers attached to the sections. Apart from sectional duties they are responsible generally for the conduct of the Menagerie staff and for the organisation of the Riding. The remainder of the staff have been classed as 1st class, 2nd class and 3rd class keepers, helpers and miscellaneous staff.

All salaries and war bonuses have been consolidated.

The Council are glad to report that the changes made in staff and in organisation in the course of the year appear to have been followed by much greater efficiency which has already led to marked improvement in the general appearance of the Gardens and in the health of the animals.

25. GATEKEEPERS.—Until last year there were only three permanent Gatekeepers, but this number was too small on Bank Holidays and busy days and it was the practice to call upon keepers from the various houses to act as relief men. This meant that in many cases certain houses and stations were neglected.

Two additional permanent Gatekeepers have been taken on, and on busy days and Bank Holidays extra men, skilled in turnstile management, have been obtained from the Corps of Commissionaires.

26. GARDENING DEPARTMENT.—Under the supervision of Mr. Wall, the Society's Head Gardener, there has been an excellent display of flowers throughout the year. In addition to the ordinary routine, bedding and other work, many improvements have been made. Old shrubberies have been cleared and a number of new flowering and evergreen shrubs have been planted. The turf surrounding the flower beds in front of the Birds of Prey Aviaries has all been raised and relaid. New turf has been laid in all the Aviaries and Pheasantries.

There has been a marked improvement in the general cleanliness and absence of litter throughout the Gardens; this is a matter upon which the Gardening staff are to be congratulated.

#### 27. WORKS, EXTRAORDINARY.

*Roads.*—It is intended, within the next few years, to make the main roads in the Gardens sufficiently strong to withstand the heavy traffic to which they are continually being subjected. The first section of this work was completed in the early part of the year. The road from the Stores yard to the Sanatorium was widened and laid with tarmacadam over a specially prepared foundation of hard core. A similar road from the Time-keeper's gate to the back of the Refreshment Rooms was also made.

*Fellows' Tea Pavilion.*—The service accommodation in this building, which was insufficient for busy days, has been greatly enlarged and additional seating for Fellows has been provided behind the Pavilion.

*Artesian Well.*—A boring has been sunk to a depth of 605 ft. in the chalk, to provide an adequate supply of pure water for the Gardens and Aquarium. It is hoped that the yield will be 8,000 gallons per hour, but at the time of going to press with this Report the tests were not complete.

*Lion House.*—The fourteen show cages in the Lion House have been cleaned, steam disinfected and tiled with glazed tiles to a height of 5 feet. Corner shelves of wood and scratching posts have been provided in all the cages and large windows have been cut through the wall into the sleeping dens to provide light and ventilation.

The roof over the cages and sleeping dens has been entirely re-slatted and made waterproof.

28. WORKS, ORDINARY.—In addition to a large number of minor work and repairs, the following more important works have been successfully carried out by the Works staff of the Gardens, under the supervision of Mr. W. Ball, Clerk of Works to the Society.

#### NORTH BANK GARDENS.

*The Brush Turkey Aviary* and *The Cranes' Paddocks* have been re-wired and painted.

*Pheasantries.*—The floors of the Pheasantries have been laid in concrete throughout and dusting baths provided. The paths in each aviary have been dug up and relaid with ashes and gravel.

*Lemur House.*—A new boiler has been installed in this house.

MIDDLE GARDEN—*Hippopotamus House.*—Owing to the arrival of the young Pigmy Hippopotamus it was found necessary to provide extra accommodation in this house. A reinforced concrete partition was made dividing the sleeping place of the larger Hippos into two; a sliding door was made in this and both iron gates leading into the pond were put in working order.

*Gazelle Sheds.*—The outside yards have been walled round with reinforced concrete and wire fencing, all the drains have been put in order and wallowing troughs for Tropical Swine have been constructed in two of the yards.

*Canal Bank Aviary.*—This aviary has been thoroughly repaired, the side walls renewed and the whole painted. Large shelters of canvas have been put up at each end and new perches fixed.

*Beavers' Paddock.*—The Paddock has been considerably enlarged and a concrete platform has been made for the animals to feed on. All foul earth and turf has been removed and a new surface laid down.

*Insect House and Butterfly Cage.*—Twenty two cases for Insects have been made to the design of the Curator of Insects and five of the Bays in the House have been fitted with blinds and sloping ceilings.

The Butterfly Cage has been re-covered with copper gauze.

**MAIN GARDENS—Lion House.**—In addition to the alterations and tiling of the show cages, the sleeping dens have all been disinfected and limewashed, breeding boxes have been provided in several of the outside and inside dens and the whole of the service passage cleared and whitewashed.

A metal bridge has been constructed connecting the two sides of the house, which will do away with the necessity of boxing up any animals which have to be moved from one end of the house to the other.

A large cage, for the reception of newly arrived or sick animals, has been constructed in the service passage.

The service yard at the back of the house has been enlarged and a fly-proof meat safe provided.

An additional outside cage has been constructed at the East end of the house; this communicates with a new den in the service passage.

*Mappin Terraces.*—Two enclosures for Musk Oxen have been made in front of the Mappin Terraces, in one of which a concrete shelter has been erected.

*Cattle Paddocks.*—Ferro-concrete partitions have been erected between the Paddocks to replace the wooden ones, which had fallen into a state of disrepair. Concrete paths have been made in each paddock. The old surface of ashes has been removed and a thick layer of Thames ballast laid down.

*Deer Paddocks.*—The drains in these paddocks have all been put in order, and a new surface of Thames ballast has been laid.

*Eastern Aviary.*—The roof of the outside cages has been entirely re-wired.

*Monkey House.*—This house was thoroughly overhauled in the early spring. All the windows were made to open, the centre cages were re-wired, and small boxes with sliding doors were placed in each wall cage so that animals could be shut in for cleansing.

False bottoms of wire have been made for all the wall cages to prevent the food being fouled.

*Ostrich Paddocks.*—The old surface has been removed and a thick layer of Thames Ballast has been laid down in each Paddock.

*Small Bird House.*—It was found that the wooden aviary at the end of this house was unsuitable for small birds as it could not be properly cleaned. This was removed and two tiers of smaller cages were made and put in its place.

*Llama House.*—This house was altered to provide accommodation for two female Llamas and their calves. The passage behind was divided and two sleeping rooms made. Two extra paddocks have also been made on each side of the house, and these have been surrounded with a high fence.

29. WORKS, MISCELLANEOUS.—*Cinematograph Studio.*—An outdoor studio has been made behind the Society's Offices to enable films of animals to be taken under the most favourable and natural conditions.



*Tarring the Roads.*—In addition to the extensive repair to roads mentioned under special works, most of the main paths in the Gardens have been tarred and topped with shingle.

*Ticket Office for Riding Tickets.*—Owing to the large queues for Riding Tickets it has been found necessary to open another Ticket Office on busy days; this has been constructed in the porch of the Antelope House.

*Canal Bank.*—The Path along the South side of the canal has been widened and a number of recesses for seats have been made.

*Laboratories.*—The Laboratory over the Reptile House has been divided into two by a partition, one side being used by the Anatomist and Pathologist, the other by the Curator of Reptiles.

*Sanatorium.*—An operating theatre and pharmacy have been fitted up, and extra radiators for heating installed.

*Seating Accommodation.*—Thirty seven garden seats were purchased with a legacy of £150 left to the Society by the late C. Bogler, F.Z.S. A bronze tablet suitably inscribed has been attached to each seat. Forty garden arm-chairs were purchased for use on the Fellows' Lawn.

During the past year a great effort has been made to clean, overhaul, and paint all the houses in the Gardens. With the exception of the Elephant House the interiors of all large houses were cleaned, painted and distempered; it is hoped that this year it will be possible to paint and overhaul the exterior of most of the houses.

Early in the year the Society purchased an Aerograph paint-spraying machine; this has been in continual use and proved very satisfactory a great saving being made in labour, time and brushes.

Another machine of the same type has been purchased with a view to increasing the amount of painting and distempering.

In the case of many of the Houses the painting and distempering has been done by the keepers of the various sections, with very good result.

The following is a list of Houses and Aviaries which have been cleaned, painted, and distempered during 1923 :

Apes' House (interior)	*Western Aviary.
Canal Bank Aviary.	*Small Cat House.
Sanatorium.	Camel House.
*Prosectorium	Band Stand.
Laboratories.	Kiosk.
Takin Enclosure.	Refreshment Rooms and Tea Room.
Summer Aviary.	
*Small Mammal House.	*Kites Aviary.
Monkey House.	*Birds of Prey Aviary.
*Lemur Houses.	Hippopotamus House.
*Civet House.	Brush Turkey Aviary.
*Raccoons Cages.	*Pheasantries.
*Ostrich House.	Giraffe House.
*Antelope House.	Parrot House.
*Cattle Sheds.	Small Bird House.
Eastern Aviary.	*Wolves Dens.
Lion House.	Two Canal Bridges.

\* Denotes that the work was done by the keepers and helpers of the various Sections.

### 30. NEW WORKS FOR 1924.

*Roads.*—In continuation of the scheme, started last year, for laying down all the main roads of the Gardens with tarmacadam, the road from the South to Main Gates and the road from the Timekeeper's Gate to join it have been laid with tarmacadam suitable for withstanding heavy traffic.

*Lion House.*—It is considered that the successful breeding of the Lion Cubs during the past year was in a measure due to the fact that they had free access to the open air. In order to extend the accommodation for breeding, two new outside Lion Cages with breeding boxes are being constructed, which will communicate by bridges with the interior of the Lion House.

*Engineer's Workshop.*—The large room at the western end of the Mappin Terraces will be converted into a workshop for the Engineers of the Aquarium.

*Reptile House.*—The Pythons' Cage in the Reptile House has been altered and divided into three compartments by sliding doors so that the snakes can be more easily shut away for cleaning.

*Tortoise House.*—An enclosure is to be made in the Tortoise House for Monitor Lizards, which have hitherto had unsuitable quarters in the Reptile House.

*Antelope Paddock.*—A large rock shelter is being constructed in the Antelope Paddock.

*Diving Bird House.*—The Diving Bird House has been altered to provide accommodation for Tropical Wading Birds during the winter months.

31. **HYGIENE AND SANITATION.**—A special effort has been made during the past year to improve the surroundings of the animals from the hygienic point of view, and also to ensure a clean and wholesome food supply.

Particular attention has been paid to the Butcher's Shop and Stores Department; many changes have been made in the method of distribution of food to the different houses, a higher standard of quality of every class of food being insisted upon; meat safes and storage bins have been issued to all houses, and new cutting-up tables and butcher's blocks have been provided.

A regular inspection of these ensures that they are kept clean; as a result there is already a marked improvement in the condition and health of all the animals.

Experiments with various types of disinfectants have been made with the result that a derivative of sodium hypochlorite has been found to be the most satisfactory for fish-eating birds and mammals, both as an antiseptic and a deodoriser.

32. **COLOURED LABELS.**—The coloured labels, painted in fusible enamels on tiles, appear to stand the weather successfully and their use is being extended as quickly as possible.

33. **BAND.**—On the advice of a special committee, with the object of improving the quality of the performances of music given in the Gardens, the Council appointed the Band of the 65th (8th London) Brigade, R.F.A., to play last season. The results were judged highly successful and the same band of 25 men and the conductor have been selected to play in the Gardens on Saturday and Sunday afternoons from May 31st, 1924, to August 31st, 1924, both dates inclusive.

34. **REFRESHMENT DEPARTMENT.**—The Accounts have been audited, as usual, by Messrs. Edward Moore & Sons. The gross profits for 52 weeks amounted, after feeding the Staff, to £31,090 5s. 9d. The working expenses for the same period amounted to £14,381 17s. 9d., leaving a trading profit of £16,708 8s. 0d. After making the usual allowances for rent, depreciation, and licence duties, etc., and allotting the receipts from the lavatories on the same lines as last year, and deducting the Manager's salary and percentage, there was a net profit to the Society amounting to £10,880 9s. 1d. Of that amount, the sum of £330 9s. 1d. was allotted to repaying the Works Department for work carried out at the Refreshment Rooms. The balance of £10,550 has been carried forward, but out of this £2,500 must be reserved towards the payment of Income Tax, Schedule D.

At the request of the Council, the Committee of Auditors appointed in January, 1923 held a special meeting to audit the accounts of the Refreshment Department. The results of their investigations have been incorporated in the accounts of the Society for the current year.

In addition to the ordinary repairs and redecoration of the Refreshment Department's premises, the following improvements were put in hand early in 1924 and will be completed or well-advanced by the Annual Meeting :—

- (1) A Small Refreshment Bar is being built in the corner between the Small Bird House and the Old Bears' Den in the place of the Shed which has been used for that purpose since the war.

- (2) A Cheap Tea Pavilion is being erected on the concrete base prepared last year between the Wolves' Dens and the Reptile House, hitherto occupied by a tent.
- (3) A Soda Fountain and Bar is being erected on the Old Terrace. There will be covered-in seating accommodation provided in connection with this building.
- (4) The Service Department of the Refreshment Room is being rebuilt.

35. AQUARIUM.—As announced to the Fellows by circular letter in March of this year, the opening of the new Aquarium by the President was arranged for April 5th. On that day and the following Sunday it was reserved for Fellows each of whom was invited to have one guest. From Monday, April 7th, it was open to Fellows and visitors under the Rules for Admission which were announced at the Monthly General Meeting last July and are set on p. 33 and on the cover.

The decision to complete the Mappin Terraces by the construction of a first-rate aquarium for fresh-water and marine animals was explained in the Report for 1921 (par. 24) and further details were given in the Report for 1922 (par. 27). The Aquarium contains a fresh-water hall, a sea-water hall, a tropical room, large service accommodation and laboratories for research. The tanks on the north side are lighted both by daylight and by electricity; those on the south side by electricity alone. The filters are on ground level and there are large storage reservoirs in the basement and high level reservoirs under the peaks of the Terrace. The heating is by steam and the circulating and aerating plant have electric motors. The course of circulation is from the high level reservoirs by gravity to the exhibition tanks and from these also by gravity through the filters to the underground storage tanks from which the water is pumped to the high level reservoir. The sea water has been obtained from the Atlantic near the entrance to the English Channel and the first supply will probably be sufficient for many years, although it may be useful to refresh it by the addition of small quantities every other year.

Since 1912 the Secretary and Mr. E. G. Boulenger, by personal visits and correspondence, had been making themselves acquainted with the details of all the existing Aquaria. They also received specially valuable advice from Dr. E. J. Allen, F.R.S., F.Z.S., Director of the Plymouth Laboratory of the British Marine Biological Association, Mr. A. F. J. Portielje, C.M.Z.S., Inspector of the Amsterdam Aquarium, Dr. C. F. Townsend, Director of the Aquarium of the New York Zoological Society, and from many other experts. Acting on their instructions, Mr. J. J. Joass, F.Z.S., of Messrs. Belcher and Joass, prepared the detailed architectural plans and Sir Alexander Gibb and Partners designed and superintended the construction of the circulating, lighting, heating and ventilating plant. Miss Joan B. Procter, now the Society's Curator of Reptiles, designed and constructed scale models from which the very successful rockwork of the exhibition tanks was carried out. The Council desire to record their appreciation of the devotion and energy which Mr. E. G. Boulenger has given to superintending every detail of the construction, equipment and stocking of the Aquarium. They regard it as a special advantage that he will bring to his new duties as Director a complete knowledge of all the details of construction and equipment. He has taken as his chief assistant at the Aquarium, Vinall, formerly head-keeper at the Reptile House, who, under his direction, has shewn great aptitude for his new duties. In the course of last summer Vinall was sent to Amsterdam for a fortnight where, by the courtesy of Dr. Kerbert, Director of the Zoological Gardens, he was given every facility for studying a well-managed aquarium in actual operation.

It will be remembered that the preliminary estimate of the cost of the Aquarium was £50,000. This was to be met by the proceeds of the sale of the Society's freehold in Hanover Square which realised £23,000, and by a loan from the Bankers of £27,000, generously guaranteed by the President, His Grace the Duke of Bedford, K.G., F.R.S., and the Fishmongers' Company. At the time of writing this Report, the complete accounts had not been received. There were some unforeseen details which entailed additional expenditure and the decision to defer the opening

from late autumn to the spring of this year, although doubtless advantageous in the long run, added to the cost of maintenance. But, including stocking and professional fees, the total cost will be only between £2,000 and £3,000 over the estimate. It has been arranged to defray this additional cost as well as £5,000 of the estimated cost out of the surplus of 1923, so that at the end of 1924 the loan from the Bankers will be less than the amount arranged for.

An Illustrated Guide to the Aquarium has been prepared and is on sale at the price of 6d. It belongs to the Society.

#### RULES FOR ADMISSION TO THE AQUARIUM.

Fellows (including Honorary Members, Foreign Members and Corresponding Members) have free personal admission on Sundays and Week-days by signing in the book at the Aquarium Entrance Hall; but this privilege cannot be transferred.

They also have the privilege of purchasing books of 20 Aquarium tickets for £1, each ticket to admit 1 adult or 2 children. Smaller numbers of Aquarium tickets can be purchased by Fellows at the Office, but not at the Aquarium.

The Public have admission to the Aquarium on Week-days by paying an extra charge, which follows the charge for admission to the Gardens: that is to say, 1/- for adults and 6d. for children under 12 on Week-days and Bank Holidays, except ordinary Mondays, when it is 6d for everyone. On Sundays admission is limited to Fellows and to those to whom they have given Aquarium tickets.

Children from the Public Elementary Schools admitted to the Gardens on five Week-day mornings at the rate of 1d. each, are also admitted to the Aquarium at the rate of an additional 1d. each, the tickets to be purchased in advance, but the regulation as to the children keeping in queue in charge of their teachers must be strictly observed.

Parties admitted to the Gardens at reduced rates pay the full price for admission to the Aquarium.

36. MENAGERIE.—The collection of animals has now been more than restored to its pre-war condition and in many sections is finer than ever before in the history of the Society.

The general health of the collection has been good. Crude statistics give misleading accounts when they relate, as in the case of the Zoological Gardens, to collections of animals with different natural lengths of life. The Society's pathologist reads each year, usually at one of the Scientific Meetings in February, an analysis of the deaths in the preceding year with their causes. Fellows who desire information are referred to Part I of the *Scientific Proceedings* each year in which the pathologist's report is published in full.

The statistics as to breeding are also not wholly satisfactory as an indication of the general state of health of the animals, for the obvious reason that a collection intended primarily for exhibition requires different arrangements from one suitable for breeding. An instructive example is the breeding of lions. For the first time for over a quarter of a century the Society bred and reared two litters of lions. The success was due to several reasons. Sir Edward Northey had presented two very fine young males which were mated with two lionesses already in the collection. Very special care was given by the new Curator of Mammals to the housing and feeding of the mothers, both before and after birth. But probably the most important factor was securing absolute privacy for the mother and cubs for many weeks, which could be done only by forbidding the keepers to take Fellows or visitors "behind the scenes"—a step which caused many protests.

*Animals in the Gardens on December 31st, 1923.*

Animals of all kinds (except Fish and Invertebrates)	
on January 1st, 1923	3,287
Animals of all kinds (except Fish and Invertebrates)	
received in 1923 by presentation, exchange, deposit, purchase or birth	2,585
	<hr/>
	5,872



Animals of all kinds (except Fish and Invertebrates) dead, sold, sent in exchange, and returned to depositors in 1923	... ..	2,790
Animals of all kinds (except Fish and Invertebrates) in the Gardens on December 31st, 1923	...	3,082

*Additions to the Collection, 1921-1923.*

	Presentation.	Purchase.	Deposit.	Exchange.	Birth.	TOTAL.
1921 ...	891	609	730	64	140	2,434
1922 ...	1,198	559	462	42	187	2,448
1923 ...	1,067	578	613	46	281	2,585

ANIMALS BRED DURING 1923.

1923.

*Mammals.*

- May 25. 1 Indian Fruit Bat (*Pteropus medius*), died,  
June 6, 1923.
- Sept. 1. 2 Pumas (*Felis concolor*), one died Dec. 8, 1923;  
one died Dec. 12, 1923.
- Aug. 1. 2 Lions (*Felis leo*), reared.
- Aug. 25. 4 Lions (*Felis leo*), one died Dec. 31, 1923;  
three sold.
- Aug. 25. 5 Shaw's Gerbilles (*Meriones shawi*), reared.
- Oct. 13. 6 Shaw's Gerbilles (*Meriones shawi*), reared.
- Dec. 1. 4 Fat-tailed Desert Mice (*Pachuromys dupresi*),  
reared.
- Dec. 15. 4 Fat-tailed Desert Mice (*P. dupresi*), reared.
- Dec. 12. 5 Coucha Rats (*Rattus coucha*), reared.
- April 11. 1 Hairy-rumped Agouti (*Dasyprocta prym-  
nolopha*), reared.
- May 11. 1 Long-tailed Porcupine (*Acanthion longi-  
cauda*), reared.
- Aug. 6. 1 Long-tailed Porcupine (*A. longicauda*), reared.
- Nov. 8. 1 Nylghaie (*Boselaphus tragocamelus*).
- Nov. 26. 2 Nylghaie (*B. tragocamelus*).
- Dec. 29. 2 Nylghaie (*B. tragocamelus*).

These 5 Nylghaie were alive on Dec. 31.

- April 3. 2 Barbary Sheep (*Ammotragus lervia*), one died, April 4, 1923.
- April 13. 1 Barbary Sheep (*Ammotragus lervia*), reared.
- April 17. 2 Barbary Sheep (*Ammotragus lervia*), one died, April 20, 1923.
- Mar. 10. 1 Hybrid Soa Sheep and Sardinian Mouflon (*Ovis aries* × *O. musimon*), killed by order, April 3, 1923.
- Mar. 26. 1 Hybrid Soa Sheep and Sardinian Mouflon (*Ovis aries* × *O. musimon*), reared.
- Mar. 29. 2 Hybrid Soa Sheep and Sardinian Mouflon (*Ovis aries* × *O. musimon*), reared.
- May 25. 2 Hybrid Caucasian and Himalayan Ibexes (*Capra cylindricornis* × *C. sibirica*), reared.
- June 4. 2 Hybrid Caucasian and Himalayan Ibexes (*Capra cylindricornis* × *C. sibirica*), reared.
- June 17. 1 Hybrid Caucasian and Himalayan Ibexes (*Capra cylindricornis* × *C. sibirica*), reared.
- June 26. 1 Thar (*Hemitragus jemlaicus*), reared.
- Aug. 1. 1 Thar (*Hemitragus jemlaicus*), reared.
- Aug. 6. 1 Thar (*Hemitragus jemlaicus*), reared.
- Jan. 15. 1 Sambur Deer (*Rusa unicolor*), reared.
- April 11. 1 Hog Deer (*Axis porcinus*), reared.
- June 2. 1 Virginian Deer (*Odocoileus virginianus*), reared.
- Dec. 3. 1 Thamin Deer (*Cervus eldi*), alive, Dec. 31.
- Feb. 20. 1 Indian Muntjac (*Muntiacus muntjak vaginalis*), died, Mar. 6, 1923.
- Aug. 30. 1 Indian Muntjac (*Muntiacus muntjak vaginalis*), reared.
- July 7. 1 Llama (*Lama glama*), reared.
- Aug. 16. 1 Llama (*Lama glama*), reared.
- Feb. 6. 1 Red Kangaroo (*Macropus rufus*), died April 3, 1923.
- Sept. 16. 1 Red Kangaroo (*Macropus rufus*), alive.
- Aug. 13. 1 Rufous-necked Wallaby (*Macropus ruficollis*), died Dec. 8, 1923.

1923.

## Birds.

- Oct. 2. 2 Bronze-winged Mannikins (*Spermestes cucullatus*), reared.
- Aug. 17. 1 Zebra Finch (*Taeniopygia castanotis*), reared.
- Aug. 17. 2 Pagoda Starlings (*Temenuchus pagodarum*), reared.
- Apr. to } 132 Budgerigars (*Melopsittacus undulatus*), all  
Sept. } reared.
- June 3. 1 Sacred Ibis (*Ibis aethiopicus*), reared.
- Aug. 29. 3 Muscovy Ducks (*Cairina moschata*), reared.
- June 9. 3 Upland Geese (*Chloephaga magellanica*), two reared.
- June 6. 2 Chilian Teal (*Nettion flavirostre*), reared.
- Aug. 17. 2 Californian Quails (*Lophortyx californica*), reared.
- Oct. 2. 3 Plumbeous Quails (*Synoecus plumbeus*), reared.
- Aug. 1. Reeves's Pheasant (*Syrnaticus reevesi*), reared.
- Aug. 8 Amherst Pheasants (*Chrysolophus amherstiae*), reared.
- Aug. 8 Gold Pheasants (*Chrysolophus pictus*), reared.
- Aug. 1 Silver Pheasant (*Gennæus nycthemerus*), reared.
- Aug. 2 Hybrid Silver and Siamese Pheasants (*Gennæus nycthemerus* and *Diardigallus diardi*), reared.
- Aug. 22. 2 Peacock Pheasants (*Polyplectrum chinquis*), 1 reared.
- Aug. 22. 2 Hybrid Burmese and Black-winged Peafowls (*Pavo muticus* × *P. nigripennis*), reared.
- Oct. 1. 1 Dwarf Turtle Dove (*Onopelia humilis*), reared.
- Oct. 2. 2 Bar-shouldered Doves (*Geopelia humeralis*), reared.

## Reptiles.

- Feb. 24. 20 Terrific Rattlesnakes (*Crotalus terrificus*), some lived until May 18.

*List of the Species new to the Collection exhibited during  
1923.*

(The figures placed before each animal indicate its approximate position in the List of Animals.)

I.—MAMMALS.

- 15 *c.* *Presbytes senex* Erxleben. White Langur.  
*Hab.* Ceylon.  
*a.* Deposited, Jan. 12th, 1923.
- 52 *d.* *Cercocebus congicus* Selater. Congo Mangabey.  
*Hab.* Upper Congo.  
*a* ♀. Deposited, Sept. 11th, 1923.
- 136 *b.* *Mystax illigeri* Pucheran. Illiger's Marmoset.  
*Hab.* S. America.  
*a-b.* Deposited, Feb. 6th, 1923.
- 236 *d.* *Ariela gambiana* Thomas. Gambian Mongoose.  
*Hab.* Gambia.  
*a.* Presented by Dr. E. Hopkinson, C.M.G.,  
D.S.O., F.Z.S., July 22nd, 1923.
- 306 *a.* *Mephitis amazonica* Licht. Amazonian Skunk.  
*Hab.* Morro Velho, Brazil.  
*a-b.* Presented by George Chalmers, Esq., C.M.Z.S.,  
Aug. 9th 1923.
- 388 *Sciurus persicus* Erxl. Persian Squirrel.  
*Hab.* Mosul.  
*a.* Presented by Major Dickson, C.I.E., Jan. 25th,  
1923.
- 433 *f.* *Gerbillus pæba* Smith. Red Gerbille.  
*Hab.* S. Africa.  
*a.* Received in exchange, Nov. 20th, 1923.
- 694 *d.* *Potamochoerus hassama* Heuglin. Abyssinian River-  
Hog.  
*Hab.* Abyssinia.  
*a-b.* Purchased, May 5th, 1923.

II.—BIRDS.

- 116 *b.* *Niltava macgrigoræ* Burton. Lesser Niltava.  
*Hab.* Himalayas.  
*a.* Presented by E. W. Harper, Esq., F.Z.S.,  
Jan. 24th, 1923.

- 156 b. *Arremon silens* Bodd. Silent Tanager.  
*Hab.* Amazons.  
 a. Presented by Walter Goodfellow, Esq., F.Z.S.,  
 Aug. 21st, 1923.
- 248 b. *Passerina amœna* Say. Blue-Headed Bunting.  
*Hab.* Mexico.  
 a. Presented by Capt. H. W. Murray, Esq., F.S.A.,  
 F.Z.S., July 18th, 1923.
- 399 c. *Spreo superbus* Rüpp. Superb Glossy Starling.  
*Hab.* N.E. Africa.  
 a-b. Presented by Alfred Ezra, Esq., O.B.E.,  
 F.Z.S., April 15th, 1923.
- 444 c. *Gymnocorax senex* Less. New Guinea Raven.  
*Hab.* New Guinea.  
 a-b. Deposited, July 18th, 1923.
- 556 a. *Irrisor viridis* A. A. H. Licht. Wood Hoopoe.  
*Hab.* S. Africa.  
 a-b. ♂ ♀. Purchased, Nov. 20th, 1923.
- 577 b. *Trachyphonus margaritatus* Rüpp. Abyssinian  
 Barbet.  
*Hab.* N.E. Africa.  
 a. Presented by Alfred Ezra, Esq., O.B.E., F.Z.S.,  
 April 15th, 1923.
- 682 c. *Psittacula cyanopygia* Bp. Blue-winged Parrot.  
*Hab.* Tres Maria Island.  
 a-b. ♂ ♀. Presented by H. E. Rogers, Esq., July  
 31st, 1923.
- 741 b. *Pœocephalus rufiventris* Rüpp. Red-breasted Parrot.  
*Hab.* Abyssinia.  
 a-b. Purchased, Dec. 19th, 1923.
- 1002 a. *Necrosyrtes monachus* Temm. Hooded Vulture.  
*Hab.* Gambia.  
 a. Presented by H. E. Capt. C. H. Armitage,  
 C.M.G., D.S.O., F.Z.S., April, 30th, 1923.
- 1292 a. *Otidiphaps cervicalis* Ramsay. Grey-naped Ground-  
 Pigeon.  
*Hab.* S.E. New Guinea.  
 a. Deposited, July 18th, 1923.

- 1374 a. *Alectoris græca kurdistanicus* Meinertzhagen.  
Kurdistan Chukar Partridge.  
*Hab.* Kurdistan.  
*a-b.* Presented by Dr. Sinderson, through Major-Gen. Sir Percy Cox, G.C.M.G., K.C.S.I., F.Z.S., and Capt. R. E. Cheeseman, C.M.Z.S., June 8th, 1923.
- 1489 b. *Creciscus cayennensis* Bodd. Cayenne Crane.  
*Hab.* Brazil.  
*a-b-c-d.* Deposited, Dec. 27th, 1923.
- 1517 a. *Fulica armillata* Vieill. Red-fronted Coot.  
*Hab.* Southern S. America.  
*a-b.* Purchased, April 13th, 1923.
- 1672 b. *Struthio camelus syriacus* Rothschild. Syrian Ostrich.  
*Hab.* Jauf, Central Arabia.  
*a. ♂.* Presented by Maj.-Gen. Sir Percy Cox, G.C.M.G., K.C.S.I., G.C.I.E., I.A., F.Z.S., and Capt. R. E. Cheesman, I.A., C.M.Z.S., June 8th, 1923.

### III.—REPTILES.

- 122 d. *Gymnodactylus miluisii* Bory. Flat-tailed Gecko.  
*Hab.* Australia.  
*a.* Presented by Mr. W. J. C. Frost, July 18th, 1923.
- 226 g. *Lygosoma sundevalli* Smith. Sundevall's Skink.  
*Hab.* Dodoma, G. E. A.  
*a.* Presented by Arthur Loveridge, Esq., C.M.Z.S., June 25th, 1923.
- 303 d. *Zamenis arenarius* Boulenger. Indian Sand Snake.  
*Hab.* India.  
*a.* Presented by A. A. L. Flynn, Esq., C.M.Z.S., July 26th, 1923.
- 303 e. *Zamenis korros* Schlegel. Indo-Chinese Rat-Snake.  
*Hab.* Hong Kong.  
*a.* Presented by H. E. Sir Reginald E. Stubbs, K.C.M.G., F.Z.S., Nov. 30th, 1923.

- 318 a. *Coluber hodgsonii* Günther. Hodgson's Snake.  
*Hab.* India.  
 a. Presented by A. A. L. Flynn, Esq., C.M.Z.S.,  
 July 26th, 1923.
- 354 a. *Leptodira albofusca* Lacépède. White and Brown  
 Snake.  
*Hab.* West Indies.  
 a. Presented by John Taylor, Esq., April 25th,  
 1923.

## IV.—BATRACHIANS.

- 14 c. *Rappia marmorata* Rapp. Marbled Tree-Frog.  
*Hab.* E. Africa.  
 a. Presented by E. Smith, Esq., Sept. 24th, 1923.
- 56 a. *Pseudis paradoxa* L. Paradoxical Frog.  
*Hab.* S. America.  
 a-b. Purchased, Dec. 22nd, 1923.
- 58 b. *Amblystoma aterrimum*, Cope. Rocky Mountain  
 Salamander.  
*Hab.* Rocky Mountains.  
 a. Presented by Miss MacFarlane, Oct. 13th, 1923.

## DONORS.

- ABBOTT, Mr. Arthur. 2 Brazilian Tortoises.  
 ABEOKUTA, H.H. The Alake of. 1 African Civet.  
 ACOTT, Mr. P. J. 1 Mozambique Cercopitheque.  
 ACTON, Mr. F. H. 1 Common Boa.  
 ACTON, Miss M. M. 1 Cunningham's Skink.  
 ADENEY, Miss Noel. 1 Budgerigar.  
 ALDER, Dr. Noel Sauville, F.Z.S. 1 Rusty-spotted Genet.  
 ALEXANDER, Sir Claud, Bt. 1 English Park Cow, 1  
 Egyptian Goose, 1 Brent Goose.  
 ALLEN, Mrs. E. 1 Grey Parrot.  
 ALLISON, Miss Ruth. 2 Red-Headed Cardinals.  
 ALROE, Mrs. Sara, F.Z.S. 1 Grey Parrot.  
 AMEY, Mrs. L. 1 Tawny Owl.  
 ARNISON, Miss Betty. 1 Budgerigar.  
 ARTHUR, Mr. M. P. 1 Ring-necked Parrakeet.

- ARMITAGE, H.E. Capt. C. H., C.M.G., D.S.O., F.Z.S.  
 1 Abyssinian Cercopitheque, 1 Patas Cercopitheque,  
 6 Guinea Baboons, 1 Pardine Genet, 1 White-tailed  
 Mongoose, 1 African Porcupine, 1 Maxwell's Duiker,  
 1 Ælian's Wart Hog, 2 Grey Eagle-Owls, 2 White-  
 eared Scops-Owls, 1 Hooded Vulture, 1 African  
 Tantalus, 2 Marabou Storks, 4 Collared Guinea-Fowls,  
 6 Triangular-spotted Pigeons, 1 Ostrich, 1 Nilotic  
 Crocodile, 2 Nilotic Monitors, 1 Bell's Cinixys, 3  
 Senegal River-Turtles, Land Crabs.
- ATHERLEY, Major Evelyn, F.Z.S. 2 Black-necked  
 Crowned-Cranes.
- AULD, Mrs. 1 Roseate Cockatoo.
- AYLER, Mr. M. 1 Blue-fronted Amazon.
- BAILEY, Major F. M., C.I.E., F.Z.S. 1 Takin.
- BAILWARD, Mrs. Sybil. 1 Green-billed Toucan.
- BAILY, Mr. W. Shore, F.Z.S. 1 Shag.
- BAKER, Mr. R. St. Barbe. 1 Serval.
- BAKER, Mr. R. S. 1 Lesser White-nosed Cercopitheque, 1  
 Red-eared Cercopitheque, 1 Bosman's Potto.
- BAKER, Miss. 1 Squirrel Monkey.
- BALL, Major G. J. 13 Perch.
- BANBURY, Mr. Horace C. 1 Radiated Tortoise.
- BARKER, Capt. Sir David Wilson. 1 Common Dormouse.
- BARNATO, The Misses V. and D. 2 Crimson-eared  
 Waxbills.
- BARRETT, Mrs. Wilson. 1 Drill, 1 White-collared  
 Mangabey, 1 Brown Capuchin.
- BEAGLEY, Mr. G. H. L. 1 Ring-tailed Lemur.
- BEECH, Mrs. Jack. 1 Jackdaw.
- BENTHAM, Mr. E. E. 1 Mozambique Cercopitheque.
- BERRY, Mr. A. J. 1 Mozambique Cercopitheque.
- BESSBOROUGH, The Earl of, C.M.G., F.Z.S. 1 Ocelot.
- BIDDELL, Mrs. C. 1 Budgerigar.
- BILES, Mr. Owen James. 1 Rhesus Macaque.
- BISHOP, Mr. E. W. 4 Japanese Bantams.
- BLACKBURNE, Mrs. Rosalind. 1 Silver Pheasant.
- BOLAM, Mr. H. G. 1 Giant Zonure, 1 Green Lizard, 2  
 Common Lizards, 3 Slowworms.
- BOLTON, Mrs. 1 Rose-ringed Parrakeet.
- BOMBAY, Natural History Society of. 1 Yellow-throated  
 Marten.



- BOONE, Mrs. 1 Ceylon Mynah.  
 BOOTH, Capt. C. 1 Lesser White-nosed Cercopitheque.  
 BOULENGER, Dr. G. A., F.Z.S., F.R.S. 20 Alpine Newts.  
 BOULENGER, Mr. E. G., F.Z.S. 1 Yellow-fronted Amazon.  
 BOURKE, The Hon. Mrs. 1 Chestnut-fronted Tanager.  
 BOUTCHER, Mr. H. W. 3 Common Pheasants.  
 BOWLES, Mr. Augustus. 1 Wiegmann's Amphisbœna.  
 BOWLES, Col. Henry Ferryman, F.Z.S. 1 Hilaire's  
 Terrapin.  
 BOWMAN, Miss Lyra. 1 Ring-necked Parrakeet.  
 BRETT, Mr. J. 1 Alexandrine Parrakeet.  
 BRIGHT, Mr. Herbert. 1 Scaly Dove.  
 BROOKE, Mr. H. C. 2 Black Rats (White var.), 1 Brown  
 Rat (var.).  
 BROWN, Mr. C. 1 Red and Yellow Macaw.  
 BROWN, Major H., O B.E. 3 Basilisk Chameleons.  
 BROWN, Mrs. 1 Sparrow-Hawk.  
 BROWN, Lady Richmond, F.Z.S. 1 Tigrine Cat.  
 BUCKWORTH, Mrs. Ernest. 1 Blue-fronted Amazon.  
 BURGESS, Mrs. Margaret Alice Dalton, F.Z.S. 4 Blue  
 Budgerigars.  
 BURNE, Mr. Cecile M. 1 Neumann's Vervet Cerco-  
 pitheque.  
 BURNSIDE, Mr. T. D. M., F.Z.S. 1 Egyptian Goose.  
 BURTON, Mrs. L. 1 Sooty Mangabey.  
 BUTLER, Dr. Alban. 2 Yellow-fronted Amazons.  
 BUTLER, Sir Harcourt, K.C.S.I., C.I.E., F.Z.S. 2 Burmese  
 Peafowl.  
 BYATT, H. E., Sir Horace, K.C.M.G., Hon. Member Z.S.  
 1 African Elephant.  
 CAMPBELL, Mr. A. 1 Mozambique Cercopitheque.  
 CAMPBELL, Mr. A. Middleton. 1 Yellow-fronted Amazon.  
 CAMPBELL, Mr. Archibald M., F.Z.S. 2 Zebra Finches,  
 2 Nutmeg Finches, 3 Lavender Finches, 2 Scaly-  
 fronted Finches, 2 Cuban Finches, 1 Common Fire  
 Finch, 3 Avadavats, 1 green Avadavat, 6 Blue-  
 breasted Waxbills, 3 Common Waxbills, 1 Crimson-  
 eared Waxbill, 2 St. Helena Waxbills, 2 Orange-  
 cheeked Waxbills, 1 Golden-breasted Waxbill, 2  
 African Silverbills, 2 Bronze-winged Mannikins, 2  
 Chestnut backed Mannikins.  
 CAMPBELL, Master Colin. 1 Blackbird.

- CAMPBELL, The Hon. Ivor M. 2 Mink.
- CAMPBELL, Master Richard. 1 Algerian Tortoise.
- CAMPBELL, Mrs. 1 Budgerigar.
- CATER, Mr. B. A. 8 Common Peafowls, 4 Black-winged Peafowls.
- CHALKER, Mrs. W. F. 2 Plantain Squirrels.
- CHALMERS, Mr. George, C.M.Z.S. 2 Ocelots, 1 Hensel's Cat, 2 Chilian Skunks, 2 Crab-eating Dogs.
- CHAPMAN, Mr. G. B., F.Z.S. 4 Lavender Finches, 4 Common Fire Finches, 1 White-throated Finch, 1 Field Saffron Finch, 4 Gouldian Grass Finches, 2 Masked Grass Finches, 2 Long-tailed Grass Finches, 4 Chestnut-eared Waxbills, 1 Black-backed Tanager, 1 Scarlet Tanager, 1 Palm Tanager, 1 Great Saltator, 1 Colombian Red-rumped Hangnest, 1 Sulphury Tyrant, 2 Rainbow Buntings, 1 White Canary, 6 Indian Starlings, 4 Red-billed Hornbills, 1 Meyer's Parrot, 1 White-bellied Caique, 1 Black-cheeked Falcon, 1 Rusty Buzzard, 1 Cocoi Heron, 1 Coqui Francolin, 1 Little Guan, 1 Radiated Tortoise.
- CHAPMAN, Mr. P. L. A. 1 Ring-tailed Coati.
- CHAPNISS, Mr. A. B. 1 Fallow Deer.
- CHEESMAN, Capt. R. E., I.A., C.M.Z.S. *See* Cox, Maj.-Gen. Sir Percy.
- CHETWYND, Mrs. Henry. 1 Ring-necked Parrakeet.
- CHICHESTER, Dr. Edward. 1 European Pond-Tortoise.
- CLARKE, Mr. S. A. 2 Gold Pheasants.
- CLEMENTS, Mr. M. C. F. 1 Common Boa.
- COATES, Mr. Charles E. 1 Greater Sulphur-crested Cockatoo.
- COCKS, The Rev. H. Somers. 1 Common Badger.
- COE, Miss. 3 Pekin Robins, 1 Crimson-eared Waxbill.
- COLEMAN, Mr. T. G. 2 Yellow-fronted Barbets, 2 Red-vented Bulbuls.
- CONNELL, Mr. Charles, F.Z.S. 1 Jackdaw.
- CORNELL, Mr. F. C. H. 2 Grey Monitors.
- COTTON, Mr. W. B., I.C.S., F.Z.S. 1 Indian Python.
- COUPLAND, Mr. Bernard C. 16 Roach, 3 Perch.
- COX, Mrs. Garth. 1 Spanish Terrapin.
- COX, Mrs. G. M. 1 Missel Thrush.
- COX, Maj.-Gen. Sir Percy, G.C.M.G., K.C.S.I., G.C.I.E., I.A., F.Z.S., and Capt. R. E. CHEESMAN, C.M.Z.S. 1 Syrian Ostrich.

- COX, Maj.-Gen. Sir Percy, G.C.M.G., K.C.S.I., G.C.I.E.,  
I.A., F.Z.S. 1 Indian Wolf.
- CRAFTER, Mr. T. W. 1 Kusimanse.
- CRAMER-ROBERTS, Mrs. 1 Brown Capuchin.
- CROUCH, Mr. Kenneth. 2 Pekin Robins, 2 Java Sparrows,  
2 Budgerigars.
- CROWTHER, Mr. W. C. 3 Pennsylvanian Terrapins.
- CURREY, Mrs. Katherine. 1 Half-collared Turtle-Dove.
- CURTIS, Mr. B. 1 Grey Parrot.
- DARK, Mr. S. T. E., F.Z.S. 2 Natterjack Toads.
- DAVIES, Mrs. Jasper G. S. 1 Tawny Owl.
- DAWSON, Messrs. & Co., Executors of the late Hon. Mrs.  
Arthur Henniker. 1 Slender-billed Cockatoo, 1  
Common Jay.
- DAYE, Miss. 1 European Pond-Tortoise.
- DE GEBERT, Dr. 1 Delalande's Gecko.
- DELACOUR, M. Jean, F.Z.S. 3 Shining Weaver-birds,  
1 Common Fire Finch, 1 Cutthroat Finch, 2 Black-  
backed Geese, 2 Javan Tree-Ducks.
- DE VON, Messrs. & Co. 1 Indian Mynah, 1 Rose-coloured  
Pastor, 1 Chestnut-bellied Rock-Thrush.
- DIXEY, Master Toby. 1 Pileated Jay.
- DOXAT, Miss C. J. 2 Ravens.
- DRAKE, Mr. H. G. Tyrwhitt, F.Z.S. 1 Moorish Gecko.
- DROWER, Mrs. Edward. 1 Spotted Mongoose.
- DUER, Mrs. M. K. 1 Common Macaque.
- DUNCAN, Mr. F. Martin, F.Z.S. Collection of Elvers.
- DUNSFORD, The Viscount. 2 Brown Capuchins, 1 Banded  
Coati.
- EASTERN TELEGRAPH Co., Ltd. 24 Green Turtles.
- EDGAR, Mrs. E. 1 Tantalus Cercopitheque.
- ELLIOTT, Mr. W. J. 1 Alexandrine Parrakeet.
- ELLIOTT, Miss M. P. 1 Blue-fronted Amazon.
- ELLIS, Mr. F. R. 1 Serval.
- EVANS, Master Terence G. 1 Red-headed Cardinal,  
1 Red-crested Cardinal.
- EXSHAW, Mr. William, F.R.G.S., F.Z.S. 1 Wild Cat.
- EZRA, Mr. Alfred, O.B.E., F.Z.S. 1 Tickell's Ouzel,  
1 Abyssinian Barbet, 2 Superb Glossy Starlings,  
1 Racket-tailed Drongo, 23 Grey-headed Porphyrios.
- FALKNER, Mr. Guy R., F.Z.S. 1 Common Fox.

- FEAVER, Mr. J. S. 1 Pekin Robin.
- FERRER, Mr. F. 9 Pleurodele Newts.
- FITZMAURICE, Mr. S. 1 Guinea-Pig, 1 Algerian Tortoise.
- FLOWERS, Mrs. G. 1 Raven.
- FLYNN, Mr. A. A. L., C.M.Z.S. 2 Indian Eryx, 1 Leith's Snake, 1 Indian Sand-Snake, 1 Spot-bellied Snake, 1 Hodgson's Snake, 12 Carpet Vipers.
- FOUNTAIN, Mrs. 1 Algerian Tortoise.
- FOWLER, Mr. H. C. 1 Greenfinch.
- FRERE, Mr. N. G. 1 West African Buffalo.
- FROST, Mr. W. J. C. 1 Flat-tailed Gecko.
- GALLAGHER, Miss Violet. 1 Rose-crested Cockatoo.
- GALLOWAY, Mr. Percy F. M. 1 Badger.
- GARDINER, Mr. M. A. 1 Malbrouck Cercopitheque.
- GARNETT, Mrs. 2 Budgerigars.
- GENNA, Mr. William J. 1 Bullfinch.
- GIBB, Sir Alexander, G.B.E., C.B., F.Z.S. 1 Golden Eagle.
- GIBBARD, Messrs. & Co. 1 Rat-tailed Opossum.
- GIL, Mr. Julian. 2 Red-bellied Thrushes, 1 Orange-headed Ground Thrush, 1 Streaked Laughing Thrush, 1 Rufous-chinned Laughing Thrush, 1 Slaty-headed Scimitar Babbler, 1 Black-headed Sibia, 2 Northern Mocking-birds, 1 Brazilian Hangnest, 1 Shama, 1 Pekin Robin, 1 Red-eared Bulbul, 1 Brown-eared Bulbul, 1 Black-crested Bulbul.
- GILES, Mr. Arthur. 1 Arabian Baboon.
- GLADSTONE, Mr. Hugh S., M.A., F.Z.S. 1 Red Grouse.
- GODSALL, Mr. T. 1 Blue and Yellow Macaw.
- GOODFELLOW, Mr. Walter, F.Z.S. 1 Black Howler, 1 Brazilian Tree-Porcupine, 1 Spectacled Owl, 1 Black Tanager, 1 Silver Tanager, 1 Brazilian Blue Grosbeak.
- GRAHAM, Sir Richard J., Bt., F.Z.S. 24 Common Teal.
- GRANGER, Mr. Ernest J. 1 Common Seal.
- GRANT, Mr. 1 Algerian Tortoise.
- GREGSON, Mrs. F. Kathleen. 1 Black-throated Hangnest.
- GRIMSON, Master S. J. 1 Rhesus Macaque.

- GUIENARÁES, M. F. de Santa Cruz. 2 Bronze-winged Mannikins.
- GUPWEE, Mr. A. J. 1 White-thighed Guereza.
- HALFORD, Lt.-Col. E. S., F.Z.S. 1 Common Peafowl.
- HALL, Mr. G. M. 1 Blue-fronted Amazon.
- HALL, Miss Marguerite Radclyffe F.Z.S. 2 Maholi Galagos.
- HAMILTON, Mr. F. G. 1 Long-tailed Duck.
- HAMLEY, Mr. Louis F. 1 Jaguar.
- HANCOCK, Mrs. Mortimer. 1 Cheetah.
- HANLEY, Miss. 1 Senegal Parrot.
- HARDING, Mrs. Walter. 1 Green Cercopitheque.
- HARDS, Mr. G. 2 Wild Rabbits.
- HARDY, Mr. H. Ronald. 1 Ringhals Snake.
- HARPER, Mr. E. W., F.Z.S. 1 Lesser Niltava.
- HARVEY, Mr. M. W. 1 Black-footed Penguin.
- HARVEY, Mr. W. J. 1 Ring-necked Parrakeet.
- HASLAM, Mrs. R. Heywood. 1 Alligator.
- HAY, Dr. Malcolm B., F.Z.S. 1 Emerald Tree Snake.
- HELGAR, Mr. Percivale. 1 Fossa.
- HENNESSY, Mrs. P. 1 Roseate Cockatoo.
- HEYSHAM, Mr. R. K., F.Z.S. 1 Grey Flying-Squirrel.
- HILLS, Miss. 1 Burnett's Cercopitheque.
- HILPERN, Mr. W. T. H. 1 Grant's Zebra.
- HINDLE, Prof. Edward, F.Z.S. 3 Shaw's Gerbilles, 3 Fat-tailed Desert Mice, 5 Egyptian Eryx, 6 Clifford's Snakes, 2 Flowered Snakes, 2 Moila Snakes, 1 Hissing Sand-Snake, 1 Schokari Sand-Snake, 3 Horned Cerastes, 3 Cerastes Vipers.
- HIRD, Mrs. Rachael L. 1 Goldfinch, 2 Pekin Robins.
- HOARE, Mrs. W. Douro. 1 Blue-fronted Amazon.
- HONEYSETTE, Mr. John. 1 Rhesus Macaque.
- HOPKINSON, Dr. E., C.M.G., D.S.O., F.Z.S. 1 Gambian Mongoose, 2 Broad-tailed Babblers, 2 Goliath Herons, 2 Common Fire Finches.
- HOPKINSON, Miss. 10 Crimson-eared Waxbills, 3 Common Waxbills, 7 Orange-cheeked Waxbills.
- HULL SHIPS' STORES LTD. 1 Iceland Falcon.

- HUNT, Mrs. Alfred. 1 Red-crested Cardinal, 1 Quaker Parrakeet.
- HUNTER, Dr. Richard H., F.Z.S. 1. Kinkajou.
- HUSSEY, Mr. Robert E. 1 Greater Sulphur-crested Cockatoo.
- HUTCHINGS, Mrs. B. 1 Lesser White-nosed Cercopitheque.
- INGRAMS, The Rev. W. S. 1 Mozambique Cercopitheque.
- IZARD, Mrs. T. A. 1 Grooved Tortoise.
- JACKSON, Mrs. C. 1 Mona Cercopitheque.
- JACKSON, Mr. P. H. 1 Black Lemur.
- JAFFE, Master Peter. 1 European Tree-Frog.
- JEFFREY, Mr. I. 1 Common Macaque.
- JONES, Mrs. Percy. 2 Budgerigars, 1 Greenfinch.
- KATSINA, The Emir of. 1 African Porcupine.
- KEW, The Royal Gardens. 10 Japanese Goldfish, 1 Collection of "Millions Fish."
- KLEES, Mr. H. 1 Vulpine Opossum.
- LACALLIER, Madame Valentine, F.Z.S. 1 Blue Budgerigar.
- LAILEY, Mr. W. H. 2 Common Foxes.
- LAMBERT, Miss Beatrice. 1 Mealy Amazon.
- LANCUM, Mr. F. Howard, F.Z.S. 1 Coot.
- LERSAW, Mrs. T. 1 Patas Ceccopitheque.
- LESTER, Mr. H. 1 Common Marmoset.
- LINDSAY, Mr. H. W. Ford. 1 Common Macaque.
- LITTLE, Miss. 1 Common Fire Finch, 2 Orange-cheeked Waxbills, 2 Golden-breasted Waxbills, 2 Crimson-eared Waxbills.
- LÖDER, Mr. Reginald B., F.Z.S. 4 Common Skinks.
- LONGHI, Mr. C. 1 Common Macaque.
- LOVERIDGE, Mr. Arthur, C.M.Z.S. 1 Ashy Jackal, 2 Bosc's Lizards, 2 Sundervall's Lizards, 1 Varied Bush Snake.
- LOWE, Mr. E. E., B.Sc. 1 Badger.
- LYNCH, Mr. Henry J., F.Z.S. 1 Hairy Tree-Porcupine.  
1 Brazilian Tortoise, 1 South-American Rat-Snake.  
5 Saw-marked Snakes, 6 Fer-de-Lance.

- LYNES, Admiral Hubert, C.B., C.M.G., R.N., F.Z.S.  
1 Viperine Snake, var. *aurolineatus*.
- LYSAGHT, Mr. Gerald S. 1 Green Cercopitheque.
- MACLEAN, Capt. Lachlan, O.B.E. 1 Guillemot.
- MCCARTHY, Mr. Walter A. 1 Rose-crested Cockatoo.
- McKELVIE, Mr. J. 1 Abyssinian Duiker.
- McLAREN, Mrs. 1 Alexandrine Parrakeet.
- MALCOLM, Mrs. G. H. 3 Fat-tailed Desert Mice.
- MANSELL, Miss L. 1 Lesser Sulphur-crested Cockatoo.
- MARDON, Mr. A. S. G., F.Z.S. 2 Budgerigars.
- MARSHALL, Mr. Kenneth D. 2 Mandarin Ducks,  
2 Japanese Teal.
- MARTIN, Mrs. L. J. 1 Bonnet Macaque, 1 Grey  
Mongoose.
- MARTYN, Mr. Gerald. 1 Ring-tailed Coati.
- MACDONALD, Mr. Robert. 1 Puma.
- MANGIN, Capt. P. H. 1 Serval.
- MASKINO, Mr. Yoskio. 2 Pekin Robins.
- MASLEN, Mrs. William. 1 Greater Sulphur-crested  
Cockatoo.
- MAYER, Mr. W. S. 1 Larger Skink.
- MEADE, the late Mrs., through Mrs. U. S. Stanton-Pegge.  
1 Black-gorgeted Jay-Thrush, 1 Violet Tanager, 1  
Superb Tanager, 1 Blue-shouldered Tanager, 1 Scarlet  
Tanager, 1 Orange-cheeked Waxbill, 1 Golden-  
breasted Waxbill, 1 Crimson-eared Waxbill, 1 Common  
Waxbill, 1 Blue-breasted Waxbill, 1 Avadavat, 1  
Orange Weaver-bird, 1 Red-beaked Weaver-bird,  
1 Shining Weaver-bird, 1 Black-headed Weaver-  
bird, 1 Long-tailed Grass-Finch, 2 Java Sparrows,  
1 Red-crested Cardinal, 1 Long-tailed Glossy Starling,  
1 Roseate Cockatoo, 3 Budgerigars, 1 Red-winged  
Parrakeet, 2 Ring-necked Parakeets, 2 Red-faced  
Love-birds, 1 Blue and Yellow Macaw, 1 Golden-  
crowned Conure.
- MUNTHE, Mrs. 1 Algerian Tortoise.
- MICHLIG, Mrs. 1 Common Fox.
- MILNE, Mr. Gerald B. 1 Otter.
- MILNER, Mrs. A. E. 1 King Parrakeet.

- MIN, Dr. Saw Po. 2 Burmese Elephants.
- MINTZMAN, Dr. David. 1 Rhesus Macaque.
- MITCHELL, The Executor of the late Mr. A. G. D.  
1 Sooty Mangabey.
- MOIA, Mrs John. 1 Lobed Chameleon.
- MONTAGU, The Hon Ivor G. S., F.Z.S. 1 Common  
Wolf, 7 Proteus.
- MONTEFIORE, Mrs. Sebag. 2 Cockatiels.
- MORCOM, Col. R. 1 Ring-tailed Lemur.
- MOORE, Major. 1 Griffon Vulture.
- MORTON, Mrs. R. 2 Delalande's Fruit-Pigeons.
- MOYNIHAM, Mrs. E. 1 Common Toad.
- MULLARD, Mr. J. A. 1 Kestrel.
- MULRONEY, Miss Ivy. 1 Red-vented Bulbul.
- MURCHISON, Mr. K. 1 Spotted Cavy.
- MURRAY, Capt. H. W., F.Z.S. 1 Algerian Tortoise,  
2 Blue-headed Buntings.
- MYERS, Mr. M. S., F.Z.S. 1 Blue-fronted Amazon.
- NASH, Mrs. Sarah E. 1 Greater Sulphur-crested Cockatoo.
- NEWBURY, Mrs. E. G. 1 Greater Sulphur-crested  
Cockatoo.
- NICHOLSON, Capt. Cyril H. 2 Kestrels.
- NORMAN, The Rt. Hon. Sir Henry, Bt., M.P. 1 Man-  
churian Crossoptilon.
- NORTHEY, Maj.-Gen. Sir Edward, K.C.M.G., C.B., F.Z.S.  
2 Lions, 2 Cheetahs.
- OLDREY, Mr. A. 1 Alexandrine Parrakeet.
- OLLIS, Mr. Leslie C. J., L.S.B.A. 1 Common Marmoset.
- OMAN, Mr. J. 4 Red-faced Love Birds.
- OSBORN, Mr. H. B. 1 Undulated Hornbill.
- OTTER, Mrs. P. M. 1 Barbary Sheep.
- PAGE, Mr. R. P., F.Z.S. 2 Brown Capuchins.
- PARNIS, Mr. A. 1 Common Boa.
- PATERSON, Major T. S., 19th Lancers. 1 Indian Wild  
Dog.
- PATTERSON, Miss M. 1 Yellow-fronted Amazon.
- PEEL, Mr. William. 1 Buzzard.



- PELTENBURG, Handel-Maatschappij Leo, through L. Fyn  
 van Draat. 2 Brown Bears.  
 PERFECT, Capt. P. W. A. F. F. 1 Two-spotted Palm-  
 Civet.  
 PETERS, Mr. A. V. 2 European Pond Tortoises.  
 PHILLIPS, Mr. Mandeville B. 1 Jay.  
 PLEASANCE, Mr. A. E. 1 Alexandrine Parrakeet.  
 PLUMMER, Mr. Thomas Taprell. 1 Common Fox.  
 POLE, Mrs. 1 Common Marmoset.  
 POLYCHRONIADIS, Miss Eugenia. 1 Mona Cercopitheque.  
 PONTIFEX, Miss Catherine E. 2 Orange-cheeked Wax-  
 bills, 2 Golden-breasted Waxbills, 2 African Silver-  
 bills, 2 Avadavats.  
 PORTER, Mr. J. W. 1 Dufresne's Waxbill, 1 Virginian  
 Cardinal.  
 PORTER, Mr. Sidney. 2 Snowy Egrets.  
 PORTEUS, Col. J. J., C.M.G., F.Z.S. 2 Coypus.  
 POWER, Lt.-Col., R.E., 1st The Buffs. 1 White-tailed  
 Sea-Eagle.  
 PRICE, Mr. O. T. 2 Badgers.  
 PROCTOR, Dr. G. Bridgeford. 1 Pennant's Parrakeet.  
 PRYSE, Sir Lewes T. L., Bt. 3 Polecats.  
 QUEENBOROUGH, The Lord, F.Z.S. 1 Sable Antelope.  
 QUEENSBERRY, The Marchioness of. 1 Tuberculated  
 Iguana.  
 RADFORD, Miss M. 1 Lesser White-nosed Cercopitheque.  
 READING, Miss E. S. 1 Orange-cheeked Waxbill.  
 REEVE, Miss Eleanor. 1 Common Badger.  
 REYNOLD, Mrs. L. 1 Blue-fronted Amazon.  
 RICE, Capt. G. 1 Vervet Cercopitheque.  
 RICKETTS, Major F. R. R. 1 Grey Mongoose.  
 RICKETTS, Mr. W. E. 5 Hairy-footed Jerboas.  
 RODWELL, Miss P. 1 Red Squirrel.  
 ROGERS, Mr. H. E. 2 Blue-winged Parrakeets, 2 Double-  
 banded Sand-Grouse, 1 Horseshoe Snake, 1 Egyptian  
 Cobra.  
 ROLLO, Mrs. W. 1 Greater Sulphur-crested Cockatoo.

- ROSKELL, Mr. R. N., F.Z.S. 2 Pileated Guans, 1 American Darter.
- ROTHSCHILD, Mr. James A. de. 3 Axis Deer.
- RUCK, Mr. George G. 1 Gannet.
- RUSSELL, Mr. J. H. Harold, F.Z.S. 2 Little Owls.
- RUSSELL, Mr. Roy. 1 Common Marmoset.
- SALTER, Mrs. 2 Greater-spotted Woodpeckers.
- SANGER, Mrs. Irene C. 1 Budgerigar.
- SATGE, Mrs. de. 2 Budgerigars.
- SCANES, Mr. E. 1 Hedgehog.
- SCHWEITZER, Mr. Carl. 2 Green Cercopitheques.
- SEACOMBE, Mr. W. E. 1 Green Cercopitheque.
- SEALE, Mrs. M. C. 1 Pigmy Marmoset.
- SEYMOUR, Mrs. C. 1 Raccoon.
- SHAKESPEARE, Mr. William. 2 Porose Crocodiles, 70 Climbing Anabas, 33 Saccobranchs, 4 Spotted Snake-headed Fish, 3 Striated Snake-headed Fish.
- SHARP, Mrs. Hamilton. 1 Ring-necked Parrakeet.
- SHARPLES, Mr. J. 1 Peregrine Falcon.
- SHATTOCK, Mr. J. R. A collection of Tropical Fish.
- SHEDDEN, Capt. Le Hunt. 1 Weeper Capuchin.
- SHEPHERD, Dr. Thos. Scott. 2 Alligators.
- SHERRIFF, Mr. Albert, F.Z.S. 4 Common Squirrels.
- SINDERSON, Dr. 1 Wild Boar, 2 Kurdistan Chukar Partridges.
- SINGAPORE, The Natural History Society of. 1 Tail-lined Tree-Snake, 1 Iridescent Snake.
- SMALLEY, Mr. P. 1 Leopard Cat.
- SMITH, Mr. E. 1 Marbled Tree-Frog.
- SMITH, Mrs. H. 1 Green Cercopitheque.
- SMITH, Mr. Patrick Aubrey. 1 Feline Douroucoulis, 1 Squirrel Monkey.
- SMITH, Mr. W. J. 3 Black Rats.
- SPINK, Mr. E. M. 1 Diana Cercopitheque.
- STACEY, Mrs. 1 Common Hedgehog.
- STAUNTON, Mrs. Harvey. 2 Cutthroat Finches.
- STEPHENS, Mr. J. R. C. 1 Demidoff's Galago, 1 Crowned Duiker, 4 Green Singing Finches.

- STERN, Miss Margerie. 1 Weeper Capuchin.
- STOKES, Capt. H. S., F.Z.S. 3 Indian White-eyes, 1 White-crested Jay-Thrush, 1 White-eared Conure.
- STOTT, Miss E. M. 1 Budgerigar.
- STRATON, Mr. H. G. 1 House Sparrow (albino).
- STUBBS, H. E., Sir Reginald Edward, K.C.M.G., F.Z.S. 1 Rayed Snake, 1 Indo-Chinese Snake, 1 Indian Rat-Snake, 2 Indian Cobras, 1 Gigantic Salamander.
- STOREY, Mr. A. H. 1 Greater Sulphur-crested Cockatoo.
- STURGESS, Mr. J. J. 1 Red-faced Spider-Monkey.
- SUMMERSON, Mr. T. H. 1 Carrion Crow (albino).
- SWINLEY, Lieut. C. S. B., R.N. 2 Black-headed Caiques.
- TAIT, Mr. W. C., F.Z.S. 2 Little Bitterns.
- TANTON, Mrs. A. 1 Mozambique Cercopitheque.
- TATHAM, Mr. C. Aubrey, F.Z.S. 2 Kestrels.
- TAVISTOCK, The Marquess of, F.Z.S. 3 Sombre Phalangers, 2 Short-headed Phalangers, 2 Sooty Opossums, 1 Vulpine Opossum, 2 Short-nosed Bandicoots, 2 Rufus Rat-Kangaroos, 2 Regent Birds, 2 Australian Cat-Birds, 2 Satin Bower-birds, 3 Swift Parrakeets, 2 Pied Grallinas, 3 Brush Turkeys.
- TAYLOR, Mr. John. 1 White and Brown Snake.
- THORN, Mr. Alfred. 2 Budgerigars.
- THORPE, Miss Mamie. 3 European Pond Tortoises.
- TOLLWORTHY, Miss Grace M. 1 White-throated Capuchin.
- TOMS, Miss Evelyn. 1 Humboldt's Woolly Monkey.
- TOUT, Mrs. 1 Red-handed Marmoset.
- TUCKER, Miss A. S. 1 Mozambique Cercopitheque.
- UPSTONE, Mr. G. C. 1 Guinea Baboon, 2 Bosman's Pottos, 2 White-spotted Squirrels, 1 Two-spotted Palm-Civet, 4 Tambourine Pigeons, 3 Half-collared Turtle-Doves.
- VENTIRIS, Mr. D. A. 1 Patas Cercopitheque.
- VICKERS, Mr. James Oswald Noel, F.Z.S. 1 Common Dormouse.
- WAIT, Miss L. M. St. A., F.Z.S. 1 Green Singing Finch, 1 Angolan Singing Finch, 1 St. Helena Seed-eater.
- WALDEN, Miss Beatrice. 1 Garden Dormouse.

- WALKER, Mrs. H. E. Cornewell. 1 Rhesus Macaque.
- WALLACE, Dr. Frank Gore, M.A. 1 Jackdaw.
- WARD, The Hon. Mrs. 1 Greater Sulphur-crested  
Cockatoo.
- WARD, Capt. Reginald. 2 Hybrid Bauer's and Pale-  
headed Parrakeets.
- WARING, The Lord, F.Z.S. 1 Green-billed Toucan.
- WATERHOUSE, Sir Herbert F., Bt. 1 Red Squirrel,  
1 Greater Sulphur-crested Cockatoo.
- WEBB, Mrs. R. A. C. 1 Bonnet Macaque.
- WEBSTER, Mrs. Blanche, F.Z.S. 4 Budgerigars.
- WESTON, Mr. W. J. 1 Kestrel.
- WESTON, Mrs. 1 White-backed Piping-Crow.
- WHEATCROFT, Mrs. A. 1 Slender-billed Cockatoo.
- WHEELER, Miss B. 2 Algerian Tortoises.
- WIGMORE, Mrs. H. M. 1 Roseate Cockatoo.
- WILD, Mr. J. L. 1 Peafowl.
- WILKIN, Mr. Arthur P., F.Z.S. 1 Hedgehog.
- WILLIAMS, Mr. T. 3 Double-spurred Francolins.
- WILMORE, Miss. 1 Pekin Robin.
- WILSON, Commander Alec T. 2 Black Kites.
- WILSON, Major W. C. F. 2 Purple Herons, 1 Goliath  
Heron.
- WINGFIELD, Mr. A. H., F.Z.S. 1 Crowned Lemur,  
1 Llama.
- WOODLAND, Miss. 1 Rose-crested Cockatoo.
- WOODS, Mr. Arthur R. T. 1 Puma, 1 Giant Toad.
- WOOLCOCK, Mr. J. U. 1 Common Dormouse.
- WOOLSEY, Mr. F. A. 1 Rhesus Macaque.
- WORTHINGTON, Master D. W., and Miss H. O. 1 Javan  
Mynah.
- WRIGHT, Commander Francis E. 1 Ring-tailed Coati.
- WRIGHT, Dr. Ernest J. 1 Drill, 1 Anubis Baboon.
- WRIGHT, Mr. G. H. 1 Common Macaque.
- WRIGHT, Mr. Noah. 1 Common Macaque.
- YOUNG, Mrs. M. 1 Green Cercopitheque.

## ACCOUNTS.

40. STATE OF THE FINANCES.—The Report of the Auditors of the Accounts for 1923 is issued to Fellows, bound with this report.

41. ASSETS 1922 AND 1923.—The Total Assets of the Society amounted to £91,599 6s. 9d., a decrease of £24,783 3s. 5d. on the corresponding figures for 1922. This is the net result of various changes, including the sale of No. 3 Hanover Square, towards the cost of the Aquarium. The full effect of that undertaking will appear in the Report for 1924.

42. LIABILITIES 1922 AND 1923.—The cash liabilities amounted to £8,036 4s. 2d., an increase of £2,239 8s. 4d. on the corresponding figures for 1922, due to the greater amount of work actually in progress at the end of the year.

43. BALANCE 1922 AND 1923.—The balance, a surplus of assets over liabilities, amounted to £83,563 2s. 7d., a decrease of £27,022 11s. 9d. on the corresponding figure for 1922, and representing the sum of the decrease in assets (paragraph 41) and increase in liabilities (paragraph 42).

44. INCOME 1922 AND 1923.—There was a net increase in income of about £8,000 due largely to gate-money.

45. EXPENDITURE 1922 AND 1923.—There was an increase of about £6,000 in expenditure, as the larger income of the Society made it possible to proceed with improvements.

46. GENERAL STATE OF THE FINANCES.—The finances of the Society are in a satisfactory condition which would be more apparent if credit could be taken for the large outlay on improvements and additions to the buildings in the Gardens.

47. The Council wishes to acknowledge the assistance received during the past year from the members of the Committee of Publication, upon whom devolved, in accordance with the By-laws, the arrangement and supervision of the Society's Scientific Publications.

The Council has finally to ask you to thank those Fellows of the Society who have audited the Accounts for the past year.

Signed (for the Council),

P. CHALMERS MITCHELL,

*Secretary.*

Zoological Society,

London, N.W. 8,

March 19th, 1924.

REPORT OF THE COMMITTEE OF AUDITORS OF THE ACCOUNTS

OF THE

ZOOLOGICAL SOCIETY

OF LONDON,

APPOINTED 16th JANUARY, 1924.

To

The Zoological Society of London,  
Regent's Park, N.W.8.

28th February, 1924.

In accordance with Chapter X of the By-laws, we have examined the Accounts of the Society for the year ended 31st December, 1923, as presented to us by Messrs. W. B. Keen & Co., the Chartered Accountants appointed to assist us in our duties. We report to the Society that at that date the Total Assets amounted to £91,599 6s. 9d., and the Liabilities to £8,036 4s. 2d. The General State of the Funds of the Society therefore showed a surplus of Assets over Liabilities amounting to £83,563 2s. 7d., subject to the estimated values of some of the Assets. The Cash in the Bankers' hands and at the Office amounted to £12,878 17s. 1d.

For the further information of the Fellows of the Society a Balance Sheet and Income and Expenditure Account for the year are annexed hereto. These have been audited and are certified by Messrs. W. B. Keen & Co. The result of the working of the Refreshment Department for the year ended 29th September, 1923, is incorporated in the Statements, the Accounts of that Department having been separately audited and certified by Messrs. Edward Moore & Sons, Chartered Accountants. We have examined the Statements of Account and in our opinion the Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Funds of the Society (subject to the estimated values of some of the Assets) according to the best of our information and the explanations given to us and as shewn by the Books of the Society.

(Signed) FRED W. CLARK (*Chairman*).

M. B. DA COSTA ANDRADE.

F. J. AYRE.

F. B. BUNNY (COL.).

J. GARRATT.

A. A. HASERICK.

## BALANCE SHEET, 31st DECEMBER, 1923.

Corresponding figures 31st Dec., 1922.		LIABILITIES.		Corresponding figures 31st Dec., 1923.	
£	s. d.	£	s. d.	£	s. d.
4,964	15 2	To Sundry Creditors for Rent, Taxes, Printing, &c.	7,177	2 6	
832	0 8	Subscriptions &c., received in advance ... ..	657	2 1	
...		„ Reserve for Cost of Zool. Record being special donations towards Vol. 59 ... ..	201	19 6	
		„ Balance, being Excess of Assets over Liabilities, viz. :—			
		Composition Funds—			
		Balance at 1st January, 1923	£11,383	4 3	
		Add 20 Fees @ £45 received during year ...	900	0 0	
		1 Fee @ £30 received during year .. ..	30	0 0	
11,383	4 3		12,313	4 3	
		„ Animal Insurance and Purchase Fund—			
		Balance at 1st January, 1923 ... ..	£1,200	0 5	
		Add Interest received ... ..	37	15 0	
1,200	0 5		1,237	15 5	
		„ Refreshment Dept—Plant and Renewals Fund—			
		Balance at 1st January, 1923	3,000	0 0	
		Add further Transfer from Profit for 52 weeks to 29th Sept., 1923, to be paid over	300	0 0	
			3,300	0 0	
		Amount retained for Working Capital ... ..	300	0 0	
3,300	0 0		3,600	0 0	
		„ Depreciation of Investments Reserve Fund—			
		As at 1st January, 1923 ... ..	2,868	19 7*	
2,868	19 7				
		„ Centenary Celebration Fund—			
		Amount set aside during year ... ..	200	0 0	
£24,549	0 1	Carried forward ... ..	£20,219	19 3	£8,036 4

\*NOTE.—At Minimum Stock Exchange Quotations at 31st December, 1923, the Securities held were valued at £17,751 ls. 5d., shewing a Depreciation on original cost of £1,406 2s. 5d.

Corresponding figures 31st Dec., 1922.		ASSETS.		Corresponding figures 31st Dec., 1923.	
£	s. d.	£	s. d.	£	s. d.
		By Animals belonging to the Society as at 31st December, 1922 ... ..	20,768	0 0	
		Add Net Increase at 31st December, 1923 ... ..	4,895	0 0	
20,768	0 0		25,663	0 0*	
		„ Plant and Fittings in Refreshment Department	2,122	2 11*	
		„ Freehold Property at Hanover Square as per last Balance Sheet ... ..	23,000	0 0	
		Less Proceeds of Sale during year ... ..	23,000	0 0	
		„ Fittings and Furniture in Buildings and Enclosures at the Gardens, Regent's Park (not valued) ... ..			
		„ Books in Library ... ..	28,480	15 0*	
		„ Unsold Publications ... ..	500	0 0*	
		„ Stock of "Zoological Record" ... ..	500	0 0*	
		„ Stock of Official Guides (at cost) ... ..	250	0 0	
		„ Petrol Users and Traders Supply, Ltd., 50 Shares of £1 each (not valued) ... ..	50	0 0	
		„ Debts due to the Society (since received or considered good)—			
		Arrears of Fellowship Subscriptions, £379, estimated to realise ... ..	90	0 0	
		Arrears of Fellowship Admission Fees, £360, estimated to realise... ..	320	0 0	
		Publication Sales ... ..	116	10 6	
		"Zoological Record" Sales ... ..	162	19 9	
		Miscellaneous ... ..	234	16 9	
1,808	4 8		924	7 0	
£77,479	2 7	Carried forward ... ..	£58,390	4 11	

\* As per Valuations by Society's Officials.



Corresponding  
figures,  
31st Dec., 1922.

## LIABILITIES.

£ s. d.		£ s. d.	£ s. d.
24,549 0 1	Brought forward ... ..	20,219 19 3	8,036 4 2
<b>To Balance, being Excess of Assets over Liabilities—continued.</b>			
„ General Purposes—			
	Balance at 1st January, 1923	£91,833 10 1	
<i>Add—</i>			
	Excess of Income over Expenditure during year... ..	12,137 19 0	
	Increase in value of Animals, &c., in Menagerie and Aquarium	4,895 0 0	
	<hr/>	108,866 9 1	
<i>Deduct</i> Expenditure on Aquarium construction to 31st December, 1923			
	£45,473 5 9		
	Cost of Petrol Shares written off during year	£50 0 0	
	<hr/>	45,523 5 9	
91,833 10 1		63,343 3 4	83,563 2 7
<hr/>			
£116,382 10 2		£91,599 6 9	£116,382 10 2

Corresponding  
figures,  
31st Dec., 1922.

## ASSETS.

£ s. d.		£ s. d.	£ s. d.
77,479 2 7	Brought forward ... ..	58,390 4 11	
541 13 7	By Rates and Insurance paid in advance ... ..	533 10 8	
	„ Compilation Fees, &c. paid in respect of “Zoological Record” not yet published ... ..	96 19 9	
	Less—Amount received from Davis Trust Fund ... ..	57 9 6	
176 12 5		<hr/>	39 10 3
	„ Investment of Composition Funds at Cost, £1443 19s. 1d. London County 3½ per cent. Stock ... ..	1,440 0 0	
	£5,615 13s. 4d. India 3½ per cent. Stock ... ..	5,205 0 0	
11,338 4 3	£7,593 14s. 4d. 3½ per cent. Conversion Stock... ..	5,443 4 3	
		<hr/>	12,088 4 3
1,000 0 0	„ Investment of Animal Insurance and Purchase Fund, at Cost, £1,610 16s. 8d.—2½ per cent. Consolidated Stock ... ..		1,000 0 0
	„ Investments on Account of Refreshment Department Plant and Renewals Fund, at Cost, £754 11s. 10d. 3½ per cent. Conversion Stock	600 0 0	
	£300 5½ per cent. Exchequer Bonds, 1925 ... ..	300 0 0	
	£312 17s. 1d. 4 per cent. New South Wales Stock ... ..	300 0 0	
2,400 0 0	£1,970 19s. 8d. 5 per cent. War Stock 1929-47	1,800 0 0	
		<hr/>	3,000 0 0
	„ Investments on Account of Depreciation of Investments Fund, at Cost, £3,029 17s. 8d. 3½ per cent. Conversion Stock ... ..	2,140 19 11	
	£756 15s. 0d. 5 per cent. National War Bonds, 1927 ... ..	727 19 8	
2,868 19 7		<hr/>	2,868 19 7
	„ Investment of Centenary Celebration Fund, at Cost, £199 6s. 6d. 5 per cent. War Stock, 1929-47 ... ..		200 0 0
	„ Refreshment Department Current Assets at 31st December, 1923—		
	To be Invested ... ..	300 0 0	
	Retained for Working Capital ... ..	300 0 0	
600 0 0		<hr/>	600 0 0
3,553 4 6	„ Cash at Bank, General Account ... ..	1,665 19 0	
15,514 12 4	„ „ „ „ Deposit Account ... ..	10,550 0 0	
300 0 0	„ „ „ „ Refreshment Department, Plant and Renewals Fund ... ..		
	„ „ „ „ Animal Insurance and Purchase Fund ... ..	237 15 5	
200 0 5	„ „ „ „ Composition Funds ... ..	225 0 0	
45 0 0	„ „ „ „ Office ... ..	200 2 8	
365 0 6		<hr/>	12,878 17 1
<hr/>			
£116,382 10 2		£91,599 6 9	£116,382 10 2

**INCOME AND EXPEN**

FOR THE YEAR ENDED

Corresponding figures, 31st Dec., 1922.

			<i>INCOME.</i>					
£	s.	d.	£	s.	d.	£	s.	d.
1,940	0	0	Admission Fees (New Fellows) ... ..	2,205	0	0		
13,079	0	0	Subscriptions (Fellows) ... ..	13,792	0	0		
1,115	16	5	Dividends and Interest received ... ..	1,021	12	10		
208	13	10	Income Tax deducted from Dividends recovered ... ..	112	12	2		
1,000	0	0	Rent of Refreshment Rooms ... ..	1,000	0	0		
1,200	0	0	Rent of Hanover Square Premises to Jan. 31st 1923	121	13	0		
11	0	0	Rent of Bath Chairs ... ..	11	0	0		
45,025	7	8	Admissions to Gardens... ..	51,106	4	6		
2,325	5	0	Riding Receipts... ..	2,868	3	7		
737	11	7	Sale of Animals, &c. ... ..	362	19	8		
			Sale of Official Guides and Picture Postcards ... ..	3,995	11	0		
			£ s. d.					
			Deduct Expenses re Printing, etc. 1,311 1 9					
			Less Stock-in-hand, estimated ... 200 0 0					
			1,111 1 9					
2,113	4	0		2,884	9	3		
			Sale of "Zoological Records"—					
			Current Vols. Nos. 57 and 58 ... ..	328	17	0		
			Previous Volumes... ..	351	10	9		
1,138	10	5		680	7	9		
			Sale of Transferable Ivory Tickets and Photographers' Permits ... ..	146	13	10		
549	11	6	Lavatories Receipts ... ..	531	8	7		
30	19	0	Lectures and Demonstrations ... ..					
			Refreshment Department Profit to September 29th, 1923 ... ..	10,550	0	0		
8,800	0	0	Miscellaneous Receipts... ..					
4	5	6						
£79,386	7	5	Carried forward .. ..	£87,394	5	9		

**DITURE ACCOUNT.**

31ST DECEMBER, 1923.

Corresponding figures, 31st Dec., 1922.

			<i>EXPENDITURE.</i>					
£	s.	d.	£	s.	d.	£	s.	d.
3,109	17	3	Rent, Rates, Taxes and Insurance, Gardens ... ..	2,964	3	8		
1,263	4	6	Income Tax (Schedule D) ... ..	1,263	17	8		
269	17	11	Do. Refreshment Department (Schedule A) ... ..	259	11	4		
16,180	0	0	Salaries, Staff and Keepers, Gardens ... ..	16,615	6	6		
3,711	9	8	Do. Office ... ..	3,629	18	0		
1,045	19	4	Pensions, Gardens ... ..	1,483	18	0		
342	0	0	Do. Office ... ..	410	0	0		
10,411	4	6	Provisions, including Storekeeper's Wages ... ..	10,656	5	1		
2,868	13	8	Cost and Carriage of New Animals &c. ... ..	4,057	15	2		
			Menagerie Expenses:—					
			£ s. d.					
1,245	12	11	Fuel ... ..	1,824	9	2		
201	14	8	Straw ... ..	223	3	6		
1,383	7	0	Water ... ..	1,447	2	4		
384	2	0	Keepers' Uniforms ... ..	532	14	1		
252	9	6	Tools, Implements, Fittings, &c. ... ..	271	6	8		
121	3	0	Labels and Drawings ... ..	97	8	5		
169	17	2	Sand, Sawdust, Turf, &c. ... ..	208	18	0		
52	17	5	Medical Attendance ... ..	52	6	6		
19	2	2	Sanatorium and Veterinary Expenses ... ..	129	13	3		
60	6	3	Cart repairs, Saddlery, &c. ... ..	160	3	7		
589	19	0	Net Cost of Upkeep of Motors ... ..	329	19	6		
231	3	8	Cleaning Materials and Disinfectants ... ..	319	6	11		
50	16	0	Refuse removal ... ..	38	12	6		
64	12	0	Police Attendance ... ..	61	16	0		
74	12	0	{ Gas ... ..	19	19	6		
			{ Repairs to Ventilating Engine ... ..					
34	14	6	Garden Seats ... ..	34	1	6		
58	11	0	Sundries ... ..	70	16	4		
4,995	0	3		5,821	17	9		
			Aquarium Expenses:—					
			Salaries and Wages ... ..	247	12	7		
			Fuel and Lighting ... ..	251	12	6		
			Tools, Fittings, etc. ... ..	37	17	0		
			537	2	1			
			Prosectorium Expenses:—					
			Salaries ... ..	919	12	5		
			Chemicals, Apparatus, &c. ... ..	210	7	5		
978	14	11		1,129	19	10		
			Maintenance of Buildings, Paths, &c. Gardens:—					
			Wages ... ..	5,878	6	1		
			Materials, &c. ... ..	5,016	3	1		
8,699	19	7		10,894	9	2		
£53,876	1	7	Carried forward ... ..	£59,724	4	3		

Corresponding  
Figures,  
31st Dec. 1922.

INCOME.

£ s. d.				£ s. d.			
79,386	7	5	Brought forward	...	87,394	5	1
<p><i>(Faint, illegible text describing various income items)</i></p>							
£79,386		7		5		Carried forward	
						£87,394	
						5	

Corresponding  
Figures,  
31st Dec., 1922.

EXPENDITURE.

£ s. d.				£ s. d.		£ s. d.	
53,876	1	7	Brought forward	...	59,724	4	3
<p><b>Gardeners' Expenses:—</b></p>							
				Wages		3,017 4 10	
3,576	8	8	Seeds, Plants, Implements, &c.	451 16 5			
				Advertisements		3,469 1 3	
329	18	0	Band Expenses	279 4 0		524 10 6	
529	11	3	Fuel, Light, etc., at Resident Curator's and Keepers' Offices and Houses at Gardens	483 5 5			
<p><b>House and Office Expenses, Central Office:—</b></p>							
				Wages of Housekeeper, Servants and Messengers		545 6 4	
				Uniforms		19 7 6	
				Fuel, Light and Water		133 15 7	
				Telephone		97 11 2	
				Postages, Parcels, etc.		400 9 1	
				Refreshments at Scientific Meetings, etc.		41 6 4	
				Rates, Taxes and Insurance		339 14 2	
				Books of Reference		11 9 6	
				Repairs, Office Fittings and Appliances		137 7 2	
				Sundries		31 9 5	
1,782	7	3	Stationery and Miscellaneous Printing	1,757 16 3			
1,010	19	1	Preparation and Printing of "Zoological Record"	1,462 14 2		1,138 8 9	
				Deduct Transfer from Davis Fund		54 3 0	
				Less Subscriptions received		1,408 11 2	
						510 10 8	
				Cost of Publications		898 0 6	
				Less Subscriptions and Sales		2,098 7 2	
						704 2 10	
						1,394 4 4	
<p><b>Library Expenses:—</b></p>							
				Salaries		473 2 6	
				Books and Binding, &c.		654 13 9	
1,300	12	5	Cinematograph Expenses	1,127 16 3			
				Law Expenses		193 17 7	
				Scientific Grants		311 1 6	
						290 0 0	
£65,948		8		5		Carried forward	
						£71,591	
						10	
						7	

