

1934

REPORTS

OF THE

COUNCIL AND AUDITORS

OF THE

ZOOLOGICAL SOCIETY

OF LONDON,

FOR THE YEAR 1933,

PREPARED FOR THE ANNUAL GENERAL MEETING

TO BE HELD ON

MONDAY, APRIL 30TH, 1934,

AT 4 P.M.

PRINTED BY
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LONDON, DUNSTABLE & WATFORD.

1934

1934.

MEETINGS FOR SCIENTIFIC BUSINESS,
At Half-past Five o'clock p.m. (5.30 p.m.)

TUESDAY, February	...	...	...	...	6 & 20
„ March	...	...	...	...	6 & 20
„ April	...	...	...	...	10 & 24
„ May	...	...	...	...	8 & 29
„ June	...	...	...	...	12
„ October	...	...	...	...	23
„ November	...	...	...	...	6 & 20

MEETINGS FOR GENERAL BUSINESS,
At Half-past Four o'clock p.m. (4.30 p.m.)

WEDNESDAY, January	...	...	...	...	17
„ February	...	...	...	...	21
„ March	...	...	...	...	21
„ April	...	...	...	...	18

MONDAY, April 30, at 4 p.m. (ANNIVERSARY MEETING).
(*Annual Report and Election of Council and Officers.*)

WEDNESDAY, May	...	...	...	...	16
„ June	...	...	...	...	20
„ July	...	...	...	...	18
„ August	...	...	...	...	15
* „ November	...	...	...	...	21
„ December	...	...	...	...	19

* By a mistake the date for the November Meeting was stated to be on November 15 in the circular issued with the tickets.

Fellows of the Society are invited to attend the above Meetings held at the Offices in the Zoological Gardens.

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REPORT OF THE COUNCIL

for the year ended 31st December, 1933.

ANNUAL GENERAL MEETING.

1. The Council has pleasure in presenting the hundred and fifth Annual Report to the General Meeting of the Society, to be held on Monday, April 30th, 1934, 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-law, 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. CENTENARY VOLUMES.—The following volumes, prepared for the Centenary, are now on sale at the Office at reduced prices :—

Centenary History of the Zoological Society of London.
With many Portraits. Written by the Secretary.
Price 10s. net.

List of the Animals, 1826-1927. Being a Classified List of all the Species of Vertebrated Animals living in the Society's Gardens from 1826 to 1927 inclusive, giving for each Species the Scientific Name, the various Synonyms or other Scientific Names that have been applied to it, popular, local and trade Names where known, the habitat, a reference to the original description and where possible to a figure and popular description.

Vol. I.—Mammals. By Major Stanley Smyth Flower, O.B.E., F.Z.S. Price 10s. net. Vol. II.—Birds. By George Carmichael Low, M.A., M.D., F.R.C.P., F.Z.S. Price 10s. net. Vol. III.—Reptiles, Amphibians and Fishes. By Major Stanley Smyth Flower, O.B.E., F.Z.S., Malcolm Arthur Smith, M.R.C.S., L.R.C.P., F.Z.S., and Edward George Boulenger, F.Z.S. Price 10s. net.

4. ROLL OF FELLOWS.—The number of Fellows and Fellows-Elect on January 1st, 1933, was 8,035, and on January 1st, 1934, was 7,920. In 1933, 444 Fellows were elected or re-admitted as compared with 381 in 1932.

The Council would remind Fellows that the present financial stress affects the Society as well as individuals. They hope that Fellows who have resigned recently will apply for restoration to the List as soon as possible and that existing Fellows will use efforts to obtain new members.

	1932.	1933.
Compounders at £30 (Elected before Dec., 1906)	336	320
Compounders at £45 (Elected after Nov., 1906)	399	398
Compositions remitted	12	11
Paying annually £3	6,957	6,877
Dormant (paying £1)	267	255
Do. subscriptions remitted	11	10
Admission Fees unpaid	53	49*
	8,035	7,920

* This entry relates almost entirely to Fellows elected at the December Meeting, 1933, who did not pay their dues until the following January.

5. FOREIGN MEMBERSHIP.—The following was elected a Foreign Member :—

General H.H. The Maharaja Sir Joodha Shumshere Jung Bahadur Rana, G.C.I.E., Prime Minister of Nepal, Singha Durbar, Kathmandu, Nepal.

6. CORRESPONDING MEMBERSHIP.—As described in the Annual Report for 1924 (Paragraph 5), the Society, on the initiation of Council, formed a new class of Corresponding Members, with the object of giving some of the privileges of the Society to professional Zoologists, especially those holding junior posts out of London, at the reduced subscription of £1 1s. a year and without entrance fee. Full particulars and proposal forms can be obtained from the Office.

The rules for Corresponding Members of the original class have not been altered. Candidates, who must not

be resident in Great Britain or Ireland, are selected by Council usually at the November Meeting, and are afterwards submitted to ballot. They are persons of British or Foreign nationality who are either Zoologists of distinction, or have done the Society special service or have otherwise assisted in promoting its objects.

7. NEW CORRESPONDING MEMBERS (*Division I., Residents Abroad*).—The following were elected to fill vacancies on the List:—

Dr. T. Wayland Vaughan, Director of the Scripps Institution of Oceanography, University of California, La Jolla, California, U.S.A.

Prof. T. Wingate Todd, F.R.C.S., Professor of Anatomy, Western Reserve University, Cleveland, Ohio, U.S.A.

Dr. Alfredo Ramalho, Aquario Vasco da Gama, Dàfundo, Portugal.

Prof. Dr. Gregoire Antipa, Director of the Natural History Museum, Bucharest, Roumania.

Col. Frederico J. Lundgren, c/o Companhia de Tecidos Paulista, Recife, Caixa Postal 138, Pernambuco, Brazil.

John Hewitt, Esq., Curator of the Albany Museum, Grahamstown, South Africa.

Dr. Armand Louis Jean Sunier, Director of the Royal Zoological Society, Amsterdam, Holland.

Prof. Edwin Grant Conklin, Princeton University, New Jersey, U.S.A.

Prof. Frank R. Lillie, University of Chicago, Chicago, Illinois, U.S.A.

8. NEW CORRESPONDING MEMBERS (*Division II., Professional Zoologists*).—The following were elected:—

Francis J. Griffin.

Eric T. C. Francis, B.Sc., Ph.D.

Clifford Horton-Smith, B.Sc., D.I.C.

Edmund L. Seyd, B.A.

9. LIST OF FELLOWS AND MEMBERS.—A revised edition will be published early in June, 1934. Any corrections should be sent to the Secretary before April 30th, 1934.

10. SCIENTIFIC GRANTS.—The Council made a donation of £10 to the National Trust towards the preservation of Wicken Fen, of £25 to the Society for the Preservation of the European Bison, of £2 to the British Correlating Committee for the Protection of Nature, and of £20 to the Institute of Ornithology, Oxford.

11. LOAN OF THE SOCIETY'S ROOMS.—The Society's Rooms have been lent to the Association of British Zoologists, the British Ornithologists' Union, the Avicultural Society, and the Society for the Preservation of the Fauna of the Empire, to which also office accommodation has been given.

12. THE FAUNA SOCIETY.—The Council commend the Society for the Preservation of the Fauna of the Empire, mentioned in the last paragraph, to the notice of Fellows. There are few parts of the world in which modern fire-arms, modern facilities for travel, the spread of civilization and the extension of agriculture are not reducing the numbers and even endangering the existence of wild animals. The objects of the Fauna Society are to collect information on, and to stimulate interest in, the preservation of wild animals, directly in the British Empire and by

co-operation with similar Societies in other countries. It pays special attention to the formation and maintenance of Reserves and Sanctuaries for Wild Animals. It maintains close touch with the departments of Dominion and Colonial Governments concerned with the conservation of wild life and has correspondents throughout the Empire. A record of its work will be found in its Journal. The Fauna Society has always recognised the vital need of international action for the protection of Nature, and has advocated the calling of a Conference to consider the amendment and extension of the Convention signed at the International Conference held in London in 1900. At the invitation of the Government of France a Conference on Nature Protection was held in Paris in 1931 and was attended amongst others by the Earl of Onslow, President of the Fauna Society and a Vice-President of the Zoological Society. Lord Onslow was the bearer of a message from the British Prime Minister conveying the sympathy of the British Government, and the Paris Conference passed a resolution in favour of a new International Conference being held in London.

Early in 1933 the British Government issued invitations to the Powers with Possessions in Africa to send Delegates to a Conference to be held in London. The invitations were accepted, and the Conference met in London in October under the Chairmanship of the Earl of Onslow. A new Convention was drafted and signed and now awaits formal ratification. It is hoped that its provisions, besides being effective in Africa, will serve as a model for similar Conventions relating to other parts of the world.

The full text of the Convention is printed in the Journal of the Fauna Society which is issued free to subscribers. The annual subscription to the Fauna Society is only ten shillings, and in view of the importance of its work the Council hope that Fellows of the Zoological Society will support it. Communications should be addressed to the Secretary of the Fauna Society, care of this Society.

13. MARINE BIOLOGICAL LABORATORY AT PLYMOUTH.—The use of the Society's Table in the Laboratory of the Marine Biological Association at Plymouth was granted to Miss L. Beanland for a fortnight in April and to Miss L. A. Morgan for the month of September, to carry out research.

14. SCIENTIFIC MEETINGS AND PUBLICATIONS.—The *Abstract* was issued as usual. The *Transactions*, suspended during the War, have been resumed, the Council having given the Publication Committee power to re-open them for memoirs deemed of unusual scientific value, and requiring *quarto* illustrations. Volume XXI, of which Part V was published in 1933, has been left open to be completed as suitable memoirs may be accepted.

Of the *Proceedings*, Part I, 1933, was issued on March 31st, 1933; Part II, on June 30th, 1933; Part III, on September 20th, 1933; and Part IV on December 28th, 1933.

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

		Plates		Pages
1924	...	68	...	1176
1925	...	51	...	1585
1926	...	65	...	1314
1927	...	59	...	1009
1928	...	54	...	1044
1929	...	47	...	770*
1930	...	90	...	1080
1931	...	142	...	1418
1932	...	105	...	1084
1933	...	89	...	1122

*The first volume in the new format with larger pages.

15. ZOOLOGICAL RECORD.—The complete Volume, No. 69, dealing principally with the literature of 1932, was published on October 23rd, 1933. It contains a Supplementary List of Abbreviations with Titles of Periodical Publications containing papers dealing with matters of Zoological importance. Of the Divisions, Amphibia and Reptilia, Porifera and Protochordata were published on May 23rd, Insecta on July 17th, Brachiopoda on August 4th, Mollusca on August 8th, General Zoology, Vermes, Crustacea, Pisces, Aves and Mammalia on August 26th, Protozoa on September 1st, Echinoderma on September 13th, Cœlenterata on October 10th, Arachnida and Myriapoda on October 11th, and the List of New Genera and of Abbreviations and Journals on September 16th.

Volume 70, dealing with the literature of 1933, is in active preparation.

16. ZOOLOGICAL RECORD : PRICES.—On account of the greatly increased cost of production it was found necessary to fix the price of the Annual Volumes, from Volume 58 onwards, at £3 (or Subscription price, paid in advance, £2 10s.). As it is recognised that many individual workers do not require the whole volume, it has been arranged to sell the separate Divisions, in paper covers, at the following prices :—

SEPARATE DIVISIONS.					s.	d.
Comprehensive Zoology	...	...	...	...	3	0
Protozoa	...	...	...	...	3	0
Porifera or Spongida	...	...	...	...	2	6
Cœlenterata	...	...	...	...	2	6
Echinoderma	...	...	...	...	4	0
Vermes	...	...	...	...	3	6
Brachiopoda and Bryozoa	...	...	...	...	2	6
Mollusca	...	...	...	...	5	0
Crustacea	...	...	...	...	3	0
Arachnida and Myriopoda	...	...	...	...	4	0

	<i>s.</i>	<i>d.</i>
*Insecta	15	0
Protochordata	2	0
Pisces	3	6
Amphibia and Reptilia	3	0
Aves	7	6
Mammalia	3	0
List of New Genera with Supplementary List of Abbreviations and Journals ...	2	6

* This Division is now published only by the Imperial Institute of Entomology, 41, Queen's Gate, S.W.7.

As the demand did not justify the additional cost, the experiment of sub-dividing the Division Insecta was dropped after Volume 67.

17. ZOOLOGICAL RECORD: FINANCE.—Beginning with Volume 59 (literature of 1922), the Society undertook to continue responsibility for the *Record* if its loss on each volume did not exceed the sum of £500. The assistance given by other Societies and Institutions is shewn on the Table printed on page 15.

It has been arranged to keep accounts of the *Record* from Vol. 59 in the form of a "Zoological Record Fund" made up to the 31st of December each year. To this are credited all receipts (subscriptions and sales of the current Volume and of other Volumes from 59 onwards) received within the year, including the Society's own contribution of £500. From it is deducted the cost of production. The Record Fund now shows a balance sufficient to cover the cost of an annual issue, thus providing "capital" for the undertaking. Societies, Institutions and individuals who wish the *Record* to be maintained are requested to give their support in the form of annual donations to the "Record Fund."

It will be seen that the position has improved, but the loss on each volume is still very heavy, much in excess of the contribution of £500 per annum made by this Society.

STATE OF "RECORD FUND" AT DECEMBER 31st, 1933.

	£	s.	d.	£	s.	d.
Balance from Vol. 68 (Annual Report, 1932, page 14)				2,286	15	4
Donations to Vol. 68 received in 1933 ...				289	14	9
Donations to Vol. 69 received in 1933 :—						
Zoological Society of London	500	0	0			
Linnean Society	15	0	0			
Royal Entomological Society	25	0	0			
American Ornithologists' Union	4	16	8			
				544	16	8
Donations to Vol. 70 received in 1933 :—						
Rathbun, Miss M. J.	2	0	0			
Schmidt, W. L.	2	0	0			
Shoemaker, C. R.	2	0	0			
				6	0	0
				£3,127	6	9
Cost of Vol. 69 (exclusive of Office Expenses) :—						
Letterpress	1,264	15	7			
Editor	200	0	0			
Recorders	350	0	0			
Searching, and Assistance to Recorders ...	215	1	6			
Distribution	29	4	10			
Slips for Recorders	3	2	6			
				2,062	4	5
Subscriptions to Vol. 69 to December 31st, 1933	756	0	0			
Sales of Vol. 69 to December 31st, 1933	250	7	11			
				1,006	7	11
Loss on Vol. 69				1,055	16	6
				£2,071	10	3
Add amount received in respect of Vols. 59-68 since last adjustment				246	7	11
Balance of Fund to Vol. 70				£2,317	18	2

The full list of Donations since the inception of the "Record Fund" to December 31st, 1933, is as follows:—

	Vols. 59/64.	Vol. 65.	Vol. 66.	Vol. 67.	Vol. 68.	Vol. 69.	Vol. 70.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Acad. Nat. Sci., Philadelphia	96 10 8	...	...	...	...	...	...
American Entomological Society, Philadelphia...	10 5 5	5 0 0	...	...	...	...	...
American Ornithologists' Union	57 9 4	10 4 7	10 5 7	15 0 4	15 0 4	4 16 8	...
Association of Economic Biologists	15 5 0	...	...	...	...	...	...
Barbour, Dr. T. (Mus. Comp. Zool., Camb., Mass.)	175 0 0	50 0 0	50 0 0	50 0 0	50 0 0	...	...
Blanchard, F. N.	...	...	8 0 0	...	...	...	...
British Association	285 0 0	50 0 0	50 0 0	50 0 0	50 0 0	...	...
British Museum of Nat. Hist.	1200 0 0	200 0 0	200 0 0	200 0 0	200 0 0	...	...
British Ornithologists' Club	67 10 0	11 5 0	22 10 0	...	10 10 0	...	...
British Ornithologists' Union	67 10 0	...	...	...	...	...	...
Brooklyn Entomological Society of New York	5 0 0	...	...	...	...	...	...
California Academy of Sciences	21 11 0	5 0 0	...	...	...	...	...
Challenger Society	31 10 0	3 3 0	3 3 0	3 3 0	...	...	...
Cockerell, Prof. T. D. A.	7 12 0	1 0 6	2 0 0	...	...	...	...
Conchological Society	6 6 0	2 2 0	2 2 0	...	...	...	...
Entomological Society of America, Indiana	16 0 0	5 2 7	5 2 10	...	...	...	...
Geological Society	30 0 0	15 0 0	15 0 0	...	...	...	...
Hawaiian Entomological Society	19 2 11	...	4 14 6	...	...	...	...
Henshaw, S. (Mus. Comp. Zool., Camb., Mass.)	27 8 11	...	...	...	...	...	...
Holland, The late Rev. W. J.	...	...	...	...	0 5 2	...	...
Hornbold, Dr. A. G.	19 18 0	5 0 0	5 0 0	...	...	...	...
Linnean Society	75 0 0	...	25 0 0	15 0 0	15 0 0	15 0 0	...
Linnean Society of New South Wales	60 0 0	...	...	...	...	...	...
Liverpool School of Tropical Medicine	21 0 0	...	5 5 0	...	...	...	...
McIntosh, The late Dr. W. C.	13 13 0	5 0 0	5 0 0	...	...	...	...
Malacological Society	8 3 0	...	...	...	...	...	...
Marine Biological Association, Plymouth	31 10 0	5 5 0	5 5 0	...	...	...	...
Michigan, University of	41 1 0	20 10 9	20 10 5	27 2 0	29 4 9	...	...
New York Academy of Science	...	...	...	27 17 11	...	...	...
New York Zoological Society	...	...	...	20 11 4	...	...	...
Quekett Microscopical Club	15 15 0	...	...	...	...	...	...
Rathbun, Miss M. J.	2 7 9	1 0 0	1 0 0	2 0 0	2 13 7	2 0 0	2 0 0
Royal Canadian Institute	10 16 1	...	5 2 6	...	...	...	...
Royal Entomological Society of London...	150 0 0	25 0 0	25 0 0	25 0 0	25 0 0	25 0 0	...
Royal Microscopical Society, Fellows of...	3 0 0	...	...	...	...	...	...
Royal Society	100 0 0	...	25 0 0	...	...	...	...
Royal Society of Trop. Med. and Hygiene	60 0 0	10 10 0	10 10 0	...	...	...	...
Schmitt, W. L.	3 12 6	1 0 0	1 0 0	2 0 0	2 13 6	2 0 0	2 0 0
Seaman's Hospital Society	40 0 0	...	...	...	...	...	...
Shoemaker, C. R.	1 17 4	1 0 0	1 0 0	2 0 0	2 13 7	2 0 0	2 0 0
Smithsonian Institution	...	20 9 0	20 0 0	...	31 1 0	...	...
South African Biological Society	10 7 6	...	...	...	...	...	...
Van Name, Dr. W. G.	5 3 1	5 2 1	...	...	...	...	...
Wellcome Bureau of Scientific Research	90 0 0	15 0 0	15 0 0	...	...	...	...
Zoological Society of London	3,000 0 0	500 0 0	500 0 0	500 0 0	500 0 0	500 0 0	...
	5,902 5 6	972 14 6	1,034 18 10	989 14 7	934 1 11	550 16 8	6 0 0

18. GARDEN GUIDE AND PICTURE POSTCARDS.—The thirtieth edition of the Garden Guide was issued in 1933, and in the course of the year, 54,288 copies were sold. Since 1904, when the Guide became the property of the Society, 1,625,929 copies have been sold. The thirty-first edition of the Guide, which will also cover the Aquarium, has been prepared for issue early in 1934. Of picture postcards 271,914 were sold in 1933.

Of a separate guide to Whipsnade, 51,318 were sold in 1933. A new edition is in preparation. In the year 68,603 picture postcards were sold at Whipsnade.

19. 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.
- 1919. California Academy of Sciences, San Francisco, U.S.A.
- 1920. The Straits Branch of the Royal Asiatic Society.
Naturhistorisches Staatsmuseum, Vienna.
- 1921. The Philippine Journal of Science, Manila.
- 1922. Musée Zoologique de l'Université et de la Ville, Strasbourg.
- 1923. L'Institut Océanographique, Monaco.
- 1924. The Science Society of China, Nanking.
Deutscher naturwissenschaftlich.-med. Verein für Böhmen.
Société des Sciences Naturelles du Maroc.
Société Neuchâteloise des Sciences Naturelles.
Royal Society of South Australia.

1925. L'Académie Polonaise des Sciences et des Lettres, Cracow, Poland.
 La Société des Naturalistes de Leningrad, Leningrad, Russia.
 Imperial College of Tropical Agriculture, Trinidad.
1926. No addition.
1927. No addition.
1928. Académie des Sciences de l'Ukraine, Kiew, U.S.S.R.
 Johns Hopkins Institute for Biological Research, Baltimore, U.S.A.
1929. No addition.
1930. No addition.
1931. No addition.
1932. No addition.
1933. Société Royale Entomologique d'Égypte.

19. LIBRARY.—The Visitors' Book was signed by 323 Fellows and persons introduced by them, and 1,076 volumes were borrowed under the regulations.

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

PRESENTED.

Donor.

Donation.

BLAND-SUTTON, SIR Men and Creatures in Uganda. By JOHN, BT., F.R.C.S. Sir John Bland-Sutton, Bt. 1933. V.P.Z.S.

- BRITISH MUSEUM,
TRUSTEES OF.
- Index Animalium, Sectio secunda.
Parts 27, 28, 29, 30, 31. 1931-32.
- Insects of Samoa. Pt. vi, fasc. 7;
Pt. vii, fasc. 4. 1931-32.
- Diptera of Patagonia and S. Chile.
Pt. 2, fasc. 5; Pt. 5, fasc. 3.
1931-32.
- Great Barrier Reef Expedition, 1928-
1929. Scientific Reports. Nos. 5
to 13. 1931-32.
- Monograph of Recent Cephalopoda.
Vol. II. 1932.
- Catalogue of the Pontian Carnivora
of Europe in the Dept. of Geology.
1931.
- The Cephalaspids of Great Britain.
1933.
- Instructions to Collectors. No. 12.
Worms. 1933.
- Guide to the Freshwater Fishes.
2nd edition. 1932.
- Economic Series. No. 14. Clothes
Moths and House Moths. 1932.
- CARPENTER, G. D. Mimicry. By G. D. H. Carpenter
H., M.D., M.B.E., and E. B. Ford. 1933.
F.Z.S.
- CAULLERY, PROF. La Science française depuis le xvii^e
MAURICE, C.M.Z.S. siècle. By Maurice Caullery.
1933.
- CORKILL, NORMAN Snakes and Snake Bite in Iraq. By
L., M.B., F.Z.S. N. L. Corkill. 1932.
- DARK, S. T. E., Is Nature Cruel? A partial answer
B.Sc., F.Z.S. to the question. By J. C. Hirst.
1926.

- DUNCAN, F. MARTIN, F.R.M.S., F.Z.S. Dust to Life. By B. P. Thom. 1932.
- The Joys of Bee-keeping. By M. G. Kennedy-Bell. 1932.
- The Visitation of Pallas's Sand-Grouse to Scotland in 1888. 1889.
- FLOWER, MAJOR S. S., O.B.E., F.Z.S. Memoire sur les anciennes branches du Nil (Mem. Inst. Egypt, IV). By Prince Omar Toussoun. 1922-23.
- The Vivarium. By G. C. Bateman. 1897.
- Bibliography of the Works of the late P. L. Sclater, F.R.S. By G. B. Goode. 1896.
- A Handbook of the Primates (Allen's Nat. Hist.). By H. O. Forbes. 1894.
- Chats on British Mammals. By J. J. Simpson. 1924.
- More Chats on British Mammals. By J. J. Simpson. 1925.
- Mammalia (From 9th edtn. Encyclo. Brit.). By Sir Wm. Flower. 1883.
- Fauna of British India—Mammalia. By W. T. Blandford. 1891.
- The History of Land Mammals in the Western Hemisphere. By W. B. Scott. 1913.
- The Deer of all Lands. By R. Lydekker. 1898.
- Les Batraciens. By G. A. Boulenger. 1910.
- Monograph of the Voles and Lemmings (Microtinae) living and extinct. By M. A. C. Hinton. 1926.

- GLOVER, R. V.,
F.Z.S. A Practical Manual of Lac Cultiva-
tion. By P. M. Glover. 1931.
- A Collection of papers by various
Authors on the Indian Lac Insect.
- HINGSTON, MAJOR
R. W. G., F.Z.S. Animal Colour and Adornment. By
R. W. G. Hingston. 1933.
- JANSE, A. J. T. The Moths of South Africa. Vol. I.
By A. J. T. Janse. 1932.
- JOHNSTON, EXORS.
OF THE LATE SIR
HARRY H.,
G.C.M.G., K.C.B.,
F.Z.S. Roosevelt Wild Life Bulletin. Vol.
I. 1923.
- Impressions of Great Naturalists.
By Henry Fairfield Osborn. 1924.
- The Natural History of Aquatic
Insects. By L. C. Miall. 1895.
- The Book of the Antelopes. 4 vols.
By P. L. Selater and Oldfield
Thomas. 1899-1900.
- Studies in the Art Anatomy of
Animals. By Ernest S. Thompson.
1896.
- JONES, SURGEON-
CAPT. K. K., R.N.,
F.Z.S. Birds and their young. By T. A.
Coward. 1923.
- MITCHELL, SIR PETER
CHALMERS, C.B.E.,
F.R.S., F.Z.S. Charles Darwin's Diary of the
Voyage of H.M.S. "Beagle."
Edited from the MS. By Nora
Barlow. 1933.
- MUNN, CAPT. P. W.,
F.Z.S. The Birds of the Balearic Islands.
By P. W. Munn. 1931.
- RAU, P. The Jungle Bees and Wasps of
Barrow Colorado Island. By P.
Rau. 1933.

- ROSE, WALTER Veld and Vlei : an account of South African Frogs, Toads, Lizards, Snakes, and Tortoises. By W. Rose. 1929.
- ROULE, PROF. LOUIS, Les Poissons et le Monde Vivant des F.M.Z.S. Eaux. Tome VI. By Louis Roule. 1933.
- SAUNDERS, J. H. D., Snakes. By F. W. Fitzsimons. F.Z.S. 1932.
- SMITH, D. SETH-, The Birds of Calcutta. 1st edtn. F.Z.S. By Frank Finn. 1901.
- WATKINS, MRS. E. The Shorter Oxford English Dic- K. (In Memory of tionary. 2 vols. 1933. her Son, John Pierce Watkins).

PURCHASED.

- BLUNT, D. E. Elephant. 1933.
- FUHRMAN, O. Les Tènia's des Oiseaux. 1932.
- MORGAN, T. H. The Scientific Basis of Evolution. 1932.
- NIELSON, E. The Biology of Spiders : with especial reference to the Danish Fauna. 2 vols. 1932.
- PHILBY, H. ST. J. B. The Empty Quarter : being a Description of the Great South Desert of Arabia known as Rub 'al Khali. 1933.
- TURCK, F. B. The Action of the Living Cell. 1933.
- WEBER, HERMANN. Lehrbuch der Entomologie. 1933.

20. CATALOGUE OF THE LIBRARY. The Librarian and his Assistant have compiled a new Card Catalogue of the Periodicals, British and Foreign, in the Library, which is now available.

21. PROSECTORIUM.—This Department continues to do great service to the Society, directly by inquiries into the causes of death of animals in the collection, and indirectly by increasing knowledge in Anatomy, Pathology and Parasitology. Anatomical and Pathological material has been distributed to many private workers and institutions.

22. PATHOLOGY.—Col. J. A. E. Hamerton reports :—
“ During the year the cause of death was investigated by *post mortem* examination in 930 cases, of which 205 were mammalian, 502 avian and 223 reptilian and amphibian.

“ The ‘ average strength ’ of the Society’s Collection—excluding Aquarium, Reptile and Insect Houses—for 1933 is estimated at 725 for mammals (inclusive of many tiny species, Mice, Gerbils, etc., whose natural tenure of life is short) and 1,479 for birds. On this estimate the ratio of deaths for the year is 28·2 per cent. among mammals and 33·2 per cent. for birds, as compared with a death rate of 32·7 per cent. mammals and 31·7 per cent. birds during the previous year.

“ The mortality is highest during the period of acclimatisation, that is—within 6 months of arrival. The total of deaths during this period is 33·6 per cent mammals and 32·0 per cent birds, whereas the deaths among acclimatised animals is only 18·7 per cent for mammals and 23·0 per cent for birds.

“ The death rate among mammals is the lowest recorded during the five years that statistics of the ratios of deaths have been kept. The death rate among birds was considerably below the average, until the onset of exceptionally cold and foggy weather during November and December when many of the oldest Avian inhabitants died, notably :—An Asiatic White Crane and a Cinereous Vulture, both of which had been over 32 years in the collection. Heavy losses among small tropical and sub-tropical birds that were housed in outdoor aviaries also occurred in this period.

"No epizootic disease spread in the collection. Infectious enteritis of cats, or 'Cat Distemper,' the scourge of captive felines, was kept well under control; only two sporadic cases occurring, one in a newly imported Leopard Cub, and another in a Jaguarondi Cat, that had been over a year in the Gardens.

"The commonest causes of death are:—

1. *Diseases of the Respiratory System*; 132, or 14.1 per cent.
2. *Diseases of the Digestive System*; 104 or 11.1 per cent.
3. *Injuries and Accidents*, 184 or 19.7 per cent.

"The deaths from diseases of the respiratory and digestive systems were at a low figure until the onset of unusually bad weather during the last two months of the year, when there was a sharp rise in the incidence of respiratory diseases among all classes of animals. The deaths from disorders of the digestive system increased during this period, also deaths by violence among birds became more numerous because of the depredations of rats, which always invade the Gardens in large numbers during frosty weather. The good condition and absence of respiratory diseases among the Gorillas and young Chimpanzees, of which the Society has a greater number than usual, is noteworthy in contrast to the losses and illness suffered among these species before they were housed under improved conditions.

"*Tuberculosis* caused the deaths of 8 mammals, 18 birds and 2 reptiles. The mortality from tuberculosis among mammals remains at a low figure, viz.: 3.9 per cent of the total deaths in this Class, but is slightly higher than last year owing to a small outbreak among Coatis, 3 of which were infected from one case. The primates throughout the collection continue free from this disease, except for two newly imported monkeys that died from tuberculosis whilst under observation in quarantine:

fortunately they never had access to the Monkey House. The incidence of tuberculosis among Bovidæ is lower than it has been for some years, only one case occurred. Two Crocodiles, one of which had been nearly 10 years in the menagerie, died from tuberculosis.

“ *Mycosis* caused the deaths of 18 birds and 12 reptiles. There is a considerable reduction in incidence of Avian mycosis. Several old inhabitants, including two large Eagles that had been over 11 years in the collection, died during the foggy weather from old chronic mycotic lesions affecting the lungs. A Great Northern Diver and a Gannet, that were blown inland and captured after heavy gales, died from mycosis within a month of arrival in the Gardens.

“ Of the reptilian cases of mycosis :—A Giant Tortoise of great age, a Terrapin and a Teguxin died from mycotic lesions in the lungs and abdominal viscera that were indistinguishable from lesions caused by a similar fungus in the internal organs of birds.

“ *Rickets and Allied Diseases of Bone.*—Of 21 mammals that died from rickets, including South American and Old World Monkeys, various Canidæ and Civets, seven were born in the Menagerie of stock that was inbred, 7 arrived in a rickety condition, and 7 apparently contracted the disease in the Menagerie.

“ Subjects of special pathological interest are dealt with in my Annual Report to be published as usual in the Scientific Proceedings. They may be mentioned briefly as follows :—

“ *Diseases of the Blood and Circulatory system* accounted for deaths in 11 mammals, 28 birds and 1 reptile. Two mammals, including 1 case of aortic aneurism, and 9 birds died of disease of the arteries, which, in most cases, was incidental to old age. Disease of the heart and pericardium caused the death of 4 mammals, 17 birds and 1 reptile.

“ *Diseases of the Urinary System.*—Five mammals, 28 birds and 2 reptiles died from kidney disease. In a number of cases the animals were aged, and senile degeneration of the renal tissue was the fatal lesion, as in the case of an Elephantine Tortoise that was mature on arrival in the Gardens 24 years ago. Two Humming Birds died from nephritis a few days after arrival, probably because of unsuitable feeding during passage overseas.

“ *Diseases of the Liver and Gall-bladder* caused the deaths of 3 mammals, 12 birds and 3 reptiles. Among 7 birds that died from fatty liver were 2 Humming Birds that died two days after arrival.

“ *New Growths*—caused the deaths of 2 birds only. In neither case was the tumour cancerous in nature.

“ *Animal Parasites.*—Death was attributed to infestation with internal parasites in 2 mammals, 22 birds and 23 reptiles. It is believed the parasites were acquired before arrival in all cases.

“ Material and specimens have been sent to workers specialising in various branches of Pathology and Parasitology at the undermentioned institutes, who in return have given valuable advice and assistance which I gratefully acknowledge :—

Royal College of Surgeons.

Royal College of Veterinary Surgeons.

London School of Hygiene and Tropical Medicine.

Bland-Sutton Institute of Pathology, Middlesex Hospital.

Pathological Department, St. Mary's Hospital.

National Institute of Medical Research, Hampstead.

Wellcome Bureau of Scientific Research.

The Field Laboratories, Cambridge.”

23. ANATOMICAL RESEARCH FELLOWSHIP.—On the advice of the Prosectorial Committee, the Council continued the appointment of Dr. Burgess Barnett, the Curator of Reptiles, to the Anatomical Research Fellowship for a second year, beginning January 1st, 1934.

24. ANATOMY.—Dr. Burgess Barnett, the Society's Anatomical Research Fellow, reports:—

I. “Anatomical material has been prepared and sent to many institutions and private workers, and the facilities of the department have been extended to British and foreign anatomists.

II. “Research has been carried out on the musculature of ophidian heads; autotomy and regeneration in reptiles; and the reproductive physiology of reptiles.

III. “Exhibitions have been made before the Scientific Meetings of the Zoological Society.

“The Annual Oration was delivered before the Reading Pathological Society, the subject being the ‘Mechanism and Treatment of Snake-Bite.’”

25. HELMINTHOLOGY.—Professor R. T. Leiper, F.R.S., reports:—“The animals dying in the Gardens during the past year, with the exception of rare specimens reserved by the Anatomist for morphological studies, have been examined for parasitic entozoa by the Society's Pathologist. The material collected has been provisionally identified and reported upon quarterly to the Prosectorial Committee. The identifications have been undertaken by a panel of parasitologists formed by the staff and associated workers of the Helminthological Department of the London School of Hygiene and Tropical Medicine. The material has, as far as possible, been utilised for the study of life-cycles where no intermediate host is required. The following have participated in the scheme:—Dr. B. G. Peters, Ph.D., Professor R. T. Leiper, F.R.S., Miss P. A. Clapham, B.Sc., and Dr. Scott Gladstone-Solomon, Ph.D.”

26. SANATORIUM.—This was refitted in 1922 as a quarantine station and a hospital for the treatment of sick animals. It is in charge of Dr. G. M. Vevers, the Superintendent of the Gardens, who receives valuable advice from Professor G. H. Wooldridge, F.R.C.V.S., F.Z.S., Honorary Consulting Veterinary Surgeon to the Society, from Lt.-Colonel Hamerton, the Society's Pathologist, and from the Curators.

After-treatment of animals which have undergone operations of various kinds has been in the hands of Mr. Hicks and the Sanatorium Staff, who are to be congratulated on their successes in many difficult cases.

Fellows and other visitors are not admitted to the Sanatorium or Sanatorium Yard, as many of the animals in them are under quarantine.

27. ISOLATION WARD.—The Isolation Ward, made in 1931 by bricking-off a portion of the North Mammal House, is used for cases of cat distemper and similar diseases apt to assume epidemic form. The ward is in charge of a specially qualified keeper, and other members of the Staff. Fellows, or visitors, are prohibited from entering it.

28. OPHTHALMOLOGY.—The work of this department has been continued by Miss Ida C. Mann, D.Sc., M.B., B.S., F.R.C.S., the Society's Honorary Consulting Ophthalmologist, and about a dozen cases have been treated, both at Regent's Park and at Whippsnade. At one time there were no less than four parrots in the Sanatorium with various forms of eye disease (blepharitis, orbital neoplasm, keratitis, cataract) and on this account endeavours were directed towards the question of a suitable anæsthetic for use on birds. Anæsthesia by inhalation is difficult and uncertain in birds on account of the anatomical peculiarities of their respiratory system, and it was therefore necessary to find an anæsthetic for

subcutaneous or intraperitoneal injection. Nembutal proved suitable for this purpose provided the dose was accurately graded to the body weight.

Later in the year at Whippsnade it became necessary to perform an operation on the lids of a Tibetan mastiff for congenital entropion. The first operation was performed under chloroform which the dog did not take well. The second was performed under local anæsthesia only, a preliminary sedative dose of Nembutal having been given by mouth. This was entirely successful and should prove a most useful and safe substitute for general anæsthesia.

Other patients included a kinkajou, a fennec fox and a Shetland foal.

29. VISITORS TO THE GARDENS.—The total number of visitors to the Gardens in 1933 was 1,557,791. The following Tables give comparative figures:—

Visitors to the Gardens.

1924 .	2,057,146	1929 .	2,047,090
1925 .	1,823,613	1930 .	2,101,438
1926 .	1,937,935	1931 .	1,816,052
1927 .	2,158,208	1932 .	1,552,535
1928 .	2,225,662	1933 .	1,557,791

Visitors on Bank Holidays.

		1932	1933
Easter Monday	... ..	53,893	60,453
Whit Monday	... ..	41,109	28,159
First Monday in August	... ..	31,667	21,925
Boxing Day	... ..	2,198	1,412

Visitors on Sundays and Week-days.

		1932	1933
Sundays	... ..	170,239	155,624
Week-days	... ..	1,382,296	1,402,167

30. 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, except on Thursdays from June 21st to September 13th, when they are open until 11 p.m. (see par. 31). The arrangements for admission are as follows :—

Fellows.—Every Fellow 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. Honorary, Foreign and Corresponding Members have personal admission only.

Fellows' Tickets.—Fellows, unless they choose the alternative stated below, receive each year 40 undated green cards, available on any Sunday or Week-day up to January 31 of the year following the year of issue, and also available for the Aquarium, and 20 white cards available on any Week-day up to January 31. For 20 green tickets they may receive a book of dated Sunday orders, each admitting two persons, valid only for the days printed on them, and for 20 white tickets, a similar book of Week-day orders, each valid only for the week printed on them. Expired tickets cannot be used or exchanged.

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.

Excursion Party Rates.—Excursion Tickets for parties of not less than 25 persons for any fixed date (except Sunday) may be obtained upon previous application, at the rates given below. 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. Payment for admission at the reduced prices cannot be accepted at the turnstiles.

All inquiries regarding reduced terms of admission should be made at the Office.

ADULTS.	CHILDREN UNDER 14 YEARS OF AGE.
25 to 100 @ 11d. each.	25 to 100 @ 5d. each.
101 to 200 @ 10d. each.	101 & upwards @ 4d. each.
201 to 300 @ 9d. each.	
301 & upwards @ 8d. each.	

Where parties consist of adults and children the total number of the party is taken to decide the rate for each class.

Elementary Schools.—*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 for 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. School orders admitting to the Aquarium on Tuesdays only between 9 a.m. and 11 a.m. are issued at the same price.

Biology Students.—Students of Zoology or Animal Physiology at Secondary or Collegiate Schools or University institutions may be admitted to the Gardens and the Aquarium at the rate of 6d. each on Tuesdays, Wednesdays,

Thursdays and Fridays, with their teacher, if the Society, through written application to the Secretary, is satisfied that visits are in connection with a serious course in Zoology or Animal Physiology.

Applications must be made at least a week in advance, addressed to the Secretary, Zoological Society of London, by the teacher of the students in question, giving full particulars of the specific purpose for which the visits are required in connection with the course, and if they are granted it will be understood that the visits are made only for the purpose in question.

31. THURSDAY AND SATURDAY EVENINGS.—The experiment of opening the Gardens on Thursday evenings, now tried for several years, appears to give pleasure to Fellows and the public; but the late opening on Saturdays tried in 1933 was much less successful and is not being repeated in 1934. It is impossible to state the exact numbers of visitors, as many who came during the day remained until evening. The total number booked in on the eight Thursday evenings from June 22nd to August 10th, 1933, inclusive, after the figures for the day had been taken as usual, was 17,626, of which 6,135 entered by Fellows' signatures or tickets, 10,817 were adults paying one shilling each, and 674 were children paying sixpence. The Gate money was £557 14s. and £102 9s. at the Aquarium. On the Saturday evenings the total number of visitors was 11,130 and the Gate money was £418 10s. and £55 16s. 6d. at the Aquarium.

This year the Thursday evenings are to extend from June 21st to September 13th, both inclusive, but the Saturday evenings are to be discontinued.

Dinners at 4s. 6d. only will be served in the Fellows' Restaurant during the season on the Thursday evenings on which the Gardens are open till 11.0 p.m. It would greatly assist the Catering Department if Fellows wishing to dine there on those nights would very kindly advise

the Management the day before, or on the same day before noon. The Management would also be glad to receive cancellations before 6.0 p.m. for tables reserved for the evening.

32. AQUARIUM.—The Aquarium maintained its popularity and was patronised by 17 per cent. of those that entered the Gardens, a percentage which is exactly the same as in 1931 and 1932. The Aquarium was opened on Thursday and Saturday evenings from mid-June to mid-August, the charges of admission being 1s. on Thursdays and 6d. on Saturdays.

Large collections were received from Madeira, Folkestone, Plymouth and Brighton, and the Society is again especially indebted to Mrs. E. B. Carter, F.Z.S., for organizing the capture of specimens from the first-named locality.

A number of sponges appeared in the course of the year in the extensive filters. Work on the biology of these sponges, which have not been previously described, was conducted in the laboratory of the Aquarium by Mr. Maurice Burton, M.Sc., F.Z.S., of the British Museum (Natural History).

The total number of visitors to the Aquarium was 263,438 as compared with 273,504 in 1932.

Visitors to the Aquarium.

	1932	1933
Sundays	37,307	41,725
Week-days	236,197	221,713
Easter Monday... ..	5,852	6,194
Whit Monday	4,622	2,384
August Bank Holiday ...	3,163	1,789
Boxing Day	362	277

33. AQUARIUM: RULES FOR ADMISSION.—Fellows retain their privilege of taking two visitors personally with them on Sundays, and if they desire to admit or to send others,

they may provide them with additional green tickets or purchase Aquarium tickets from the Office in advance for them. In consequence of the change in the Law, visitors already in the Gardens on Sundays are now permitted to enter the Aquarium by paying 1s. each for adults and 6d. each for children. In 1933 the receipts from this source amounted to £523 18s. 6d.

The rules for admission to the Aquarium are printed on the inside page of back cover.

34. AQUARIUM RESEARCH FELLOWSHIP.—This has been suspended for the present, but the Council is prepared to consider the claim of a candidate who would submit a suitable programme of work.

35. INSECT HOUSE.—During the year the various British and foreign insects, spiders, etc., exhibited, attracted considerable attention, the display of tropical silk-moths, scarab beetles, and leaf insects being especially appreciated. The outdoor butterfly cage and the observation hive were also popular. Several species bred with considerable success, and exhibitions of their immature stages were arranged. Four small decorative pools for aquatic insects were built and some cases with scenic backgrounds installed.

A feature during the coming summer will be an exhibition of insect pests of rose trees. It is proposed to place on view in their various seasons some of the major pests, and, in conjunction with them, the beneficial insects that prey upon them. Details regarding control by means of sprays, etc., will also be displayed.

36. A COLLECTION OF HUMMING BIRDS.—Hearing that a consignment of Humming Birds was likely to arrive in Europe from Brazil, it was decided to purchase twenty of these, and with this in view a compartment of the

Tropical House was specially arranged for their reception. Extra electric heating and lighting were installed; a fountain with a fine spray was erected and the compartment planted with tropical vegetation. The birds arrived in May, and thrived so well during the summer that, on the generous offer of Mr. Alfred Ezra to present a second collection, a larger compartment of the same house, formerly occupied by South American Monkeys, was converted into a second enclosure for these birds. This collection reached the Gardens in November, and was followed by a third collection kindly purchased for the Society in Brazil by Mrs. Wharton-Tigar. While a few of the weaker of the Humming Birds have died, the majority have done well and proved a very popular and attractive exhibit.

37. MEDICAL ATTENDANCE AT THE GARDENS.—With numbers of visitors to the Gardens, sometimes reaching 2,000,000, and with a numerous staff, illness and accidents requiring "first-aid" assistance inevitably take place. There is a well-equipped Red Cross Room attached to the Prosectorium to which cases are taken. On week-days from 10 until 5 and on Saturdays from 10 until 1, Lt.-Colonel A. E. Hamerton, the Pathologist, gives first-aid, and Dr. B. Barnett, the Anatomist, who also is a qualified medical man, also gives assistance. Dr. G. M. Vevers, the Superintendent, who also is a medical man, and Mr. C. H. Hicks, the Superintendent's Assistant, who is highly trained in first-aid, are never both away from the Gardens. The Prosectorium Assistant is also skilled in first-aid dressing.

The Council has arranged with the St. John Ambulance Brigade that members of their trained staff should attend at the Gardens on Bank Holidays and on Saturdays, Sundays and Mondays during the busy season. The Council pays a food allowance to the staff and makes a donation to the funds of the Brigade. This arrangement has been found to give a practical casualty service.

38. GARDENERS' DEPARTMENT.—The Head Gardener, Mr. W. Wall, and his staff have as usual maintained a brilliant display of flowers throughout the season. In addition to the usual work on the flower beds and shrubberies a large border for flowering shrubs and herbaceous plants has been made between the Main Gate and Eastern Aviary on the site of a derelict piece of ground which was formerly covered by unsightly evergreen shrubs and several old and decayed elm trees which had become dangerous. Wherever possible, evergreen shrubs are gradually being replaced by flowering shrubs throughout the Gardens.

39. WORKS DURING 1933.—In addition to over 3,000 minor works which come under the heading of repairs, the Society's Works Staff, under the supervision of Mr. W. Ball, Clerk of Works, have carried out the following more important works of maintenance.

Birds of Prey Aviaries.—These aviaries have been put in good repair and painted throughout. Large portions of the brickwork shelters at the back of the cages were entirely rebuilt owing to extensive settlements of the foundations. The corrugated iron roofs over the shelters have been renewed throughout and the whole of the upper part of the outside aviaries has been re-wired.

Reptile House.—A new water-supply has been laid on to the small cages in the eastern corridor of this house, to provide fine jets of water under pressure to each cage. A similar water supply has been laid on to one of the south dens.

Aquarium.—During the year extensive repairs to the exterior walls of the Aquarium were carried out. Over half has been completed. In addition, owing to settlements occurring under the Mappin Terraces, the steel trusses supporting the roof were reinforced by extra girders.

Lion House.—The work of re-laying the floors of the inside cages with teak blocks is gradually being carried out. Three have been completed and there remain eleven to be done. All the cages and sleeping dens were disinfected by flame, cleaned and painted in the early part of the year.

Tropical House.—During the spring one-third of the east side of this house was converted into a suitable cage for a collection of Humming Birds. Later in the year two other collections were received and the remaining two-thirds was converted in a similar manner. Thermostatic heating was installed and the birds separated from the visitors by plate glass windows.

Western Aviary.—The remaining portion of the Western Aviary was re-wired and put in sufficiently good repair to form a summer aviary.

Roads.—Road repairs were carried out in various parts of the Gardens wherever necessary.

Reptile House.—A solarium was constructed on the flat part of the roof of the Reptile House for the breeding of insects, especially those used as food for the smaller reptiles. It is also being used as overflow accommodation for small reptiles and amphibia from temperate countries.

Giraffe House.—The whole of the walls and ceiling of this house have been lined with asbestos sheeting held in place by fillets of wood. This became necessary owing to the disintegration of the old plaster walls and ceiling.

Propagating Department.—A large amount of repair work was done to the woodwork and glazing of the greenhouses and propagating frames on the North Bank of the Regent's Canal. In the case of one set of frames, the old wooden walls, which had rotted away in places, were re-built in re-inforced concrete.

Time-Recording Clock.—A time-recording clock has been installed at the Timekeepers' Gate so that every man on

the Menagerie, Works and Gardening Staffs automatically registers his own time on entering or leaving the Gardens.

Pheasantries.—The wire roof of the greater part of the outside aviaries of the Pheasantries and certain of the partitions have been re-wired.

Pelican Enclosure.—A new iron fence has been constructed round this enclosure. The shelter has been rebuilt and a concrete fish store made on hygienic lines.

Fellows' Lawn.—A new iron railing has been erected round the Fellows' Lawn.

Painting, cleaning and disinfection have been carried out at the following houses during the year :—

- Monkey House.
- Birds of Prey Aviaries.
- Lion House.
- Wolves' Dens.
- Giraffe House.
- Small Cats' House.
- Camel House.
- Diving Birds' House.
- Pheasantries.
- Antelope House.
- Sanatorium.
- Park Paddock Shelters.

The following have been washed down and painted :—

- All lavatories.
- The three entrance gates and turnstiles.
- Aquarium laboratory and staircase.
- Photographic kiosk.
- Keepers' Lodge.
- Bandstand.

Garden seats.

Fences and barriers in various parts of the Gardens.

Greenhouses and propagating frames.

Prosectorium and laboratories.

Pharmacy.

Refreshment Department, Main Tea Pavilion.

Mappin Terrace Tea Pavilion.

Public Tea Pavilion.

Restaurant, buffet and kitchens.

Electric bakery.

40. ELECTRICAL DEPARTMENT.—The Engineering Staff, under the supervision of Mr. H. P. Davolls, has further extended the electrification of the Gardens. In addition to this work and the routine lighting and heating of the houses and gardens, special electrical installations have been completed in the Gorilla House and Tropical House (Heating, lighting and air-conditioning), and electric ozone generators have been installed to deodorize and purify the air in the Small Cats' House.

41. EXTRAORDINARY WORKS, 1933.—As explained in the Report for 1932 (Par. 46, p. 39) the Council thought it to be prudent, in view of the general financial position of the country, to reduce expenditure where possible, but the acquisition of an unusually fine pair of young Gorillas in the autumn of 1932 made it urgent to build a new house suitable for large anthropoids. Accordingly the Gorilla House, described in last year's Report, was designed and was completed in time to be opened by the President after the Annual Meeting last year. The House has proved completely successful, and the novelty of its construction has attracted much attention from visitors and from technical experts.

The comfort of visitors in the large upper dining hall of the new Restaurant suffered from noisy reverberation. The Secretary obtained permission from the Council to

carry out a small scale experiment by lining the roof of the loggia at the Whipsnade Restaurant, where there was a similar acoustical defect, with sound-absorbing tiles prepared by the Celotex Company. This proved successful and it was decided to apply a similar treatment to the ceiling of the large restaurant in the London Gardens. The result has been a reduction of noise to a remarkable extent. The tiles, which are porous and are made from a vegetable material, have a pleasing decorative effect.

42. EXTRAORDINARY WORKS, 1934.—Although the financial position is still uncertain, the results of 1933 justified the Council in sanctioning the construction of a new Penguin Pond, an improvement that has been long desired. The plans have been prepared by Messrs. Tecton, the architects of the Gorilla House, in consultation with the Secretary, the Superintendent and the Curator of Birds. The most suitable area available was between the Lion House and the Wolves' Dens. The work of excavating was begun at the end of January, and it is hoped that the Pond and rockwork will be finished about Whitsuntide of this year.

43. BAND.—A Committee, appointed by Council, was given powers to select a Band and to arrange for performances on the same general lines during the season of 1934 as in 1933. In accordance with their decision, the Band of the 65th (8th London) Field Brigade, Royal Artillery, has been engaged and will play on Saturday and Sunday afternoons from May 26th, 1934, to August 26th, 1934, inclusive. On Thursday evenings from June 21st to September 13th, inclusive, when the Gardens are open late, the same Band will give performances.

44. REFRESHMENT DEPARTMENT. ACCOUNTS.—Messrs. W. B. Keen and Co., the Society's General Auditors, audited the Catering accounts for the year January 1st to December 31st, 1933, thus coinciding with the other accounts of the Society.

The gross profit for the year 1933 amounted to £33,456 0s. 5d., and the manufacturing and other working expenses for the same period, including feeding the staff, Manager's salary, rent to the Society, license duties, etc., amounted to £26,085 0s. 9d., leaving a trading profit of £7,370 19s. 8d. After adding the receipts from Lavatories, etc. (£1,246 13s. 7d.), and deducting the Manager's commission (£150), and the cost of additions, renewals and repairs, etc. (£1,117 16s. 11d.) there was a nett profit to the Society of £7,349 16s. 4d. This result is satisfactory, if it be remembered that the rent paid to the Society is now £4,000 instead of £1,000, the total number of visitors to the Gardens little larger than in 1932 and the financial conditions unchanged.

Out of the net profit, the sum of £1,203 13s. 6d. has been allotted to repay the Works' Department for work carried out at the Refreshment premises, and an honorarium of £100 has been paid to Mr. E. G. Boulenger for his supervision. The balance of £6,046 2s. 10d. has been passed to the General Account.

45. REFRESHMENT DEPARTMENT. MANAGEMENT.—Mr. Nicolas Melero was re-appointed Manager of the Department for a year from January 1st, 1933.

The Council are satisfied that Mr. Melero has carried out his duties with great efficiency, especially in view of the generally adverse conditions, and he has been re-appointed for 1934.

46. DE ARROYAVE TRUST FUND. The Capital of this Trust Fund is held by the Trustee of Charitable Funds (see Annual Report of the Council for 1931, page 45, par. 50). The income received by the Society during 1933 amounted to £3,184 8s. 5d, and on the last page of the Report of the Auditors at the end of this Report there is printed a statement of the purposes to which it was assigned by the Council.

WHIPSNADE.

47. WHIPSNADE ZOOLOGICAL PARK.—Until Autumn, there was a decrease in the number of visitors, due partly to the bad financial conditions in the Midlands which caused the cancelling of a number of excursion parties, and also partly to the excessive heat.

<i>Whipsnade Visitors.</i>				1932.	1933.
Sundays...	...	...	...	183,153	162,865
Week-days	...	...	...	321,496	270,564
Total				504,649	433,429
Easter-Monday	...	...	...	6,919	14,217
Whit-Monday	...	...	...	14,288	11,003
August Bank Holiday	...	...	...	8,811	6,242
Christmas Day	...	...	...	7	Closed
Boxing Day	...	...	...	225	75

48. WHIPSNADE PARK. RULES FOR ADMISSION.—*Fellows.* The regulations have been amended to make them similar to those in force at the London Gardens and are now as follows:—

Fellows or their wives have personal admission with two friends without payment during the hours that the Park is open to the public by signing their names in the Gate-book; Green tickets, Sunday Orders and Transferable Ivory tickets, valid at the Gardens, are also valid at Whipsnade, but not week-day white tickets or orders. Fellows may purchase from the Society's Office in Regent's Park tickets for Whipsnade at 5s. for 6.

The Public.—Visitors who are not Fellows of the Society are admitted on Sundays and Week-days at the price of one shilling each for adults and sixpence each for children under twelve, but children are admitted only when accompanied by adults who are responsible for their behaviour and safety.

Times of Admission.—The Park is open daily (except Christmas Day) throughout the year from 10 a.m. until

“lighting-up” time. A notice at the Gates states the time of closing each day.

Excursion Parties.—Special rates of admission to Whipsnade are given on the same terms as to the Gardens in London. (See p. 30 of this Report.)

49. WHIPSNADÉ PARK SEASON TICKETS.—Season Tickets may now be obtained at Whipsnade or in the Society’s London Office at the rate of one guinea for the year from January 1st to December 31st, each giving admission at any time when the Park is open to the public to one of two persons, members of the same family and designated by their signatures on the ticket, accompanied by one friend, the holder who presents the ticket to sign in the Gate-book. These Season Tickets were sanctioned in response to local requests, but so far there has been very little demand for them.

50. WHIPSNADÉ PARK. REGULATIONS AND BY-LAWS.—The Park is under two sets of regulations, our own By-Laws and By-Laws which have been approved by the Secretary of State for Home Affairs and have legal force. Of the former the most important is that the Society disclaims responsibility for any damage caused to visitors who go too close to the fences and barriers or who try to stroke or touch any of the animals. In the London Gardens we try to make such accidents impossible so far as this can be done by specific warning notices, close wiring, double barriers, and so forth. In the new Park the cost of providing such precautionary structures would be prohibitive because of the much larger size of the enclosures, and the natural appearance of the Park would be spoiled by them. Accordingly the following general warning has been placed at the Gates, and Fellows and other visitors are allowed admission only on the condition implied in the notice:—

Warning to Visitors.—Whipsnade Zoological Park is designed to supply the most natural possible conditions for keeping wild animals in captivity. In consequence,

all visitors are warned that the Society disclaims responsibility for any damage caused to visitors who go too close to any of the fences or barriers or who endeavour to touch or to feed any of the animals. Visitors are also warned that they are allowed to bring in children under twelve only on the condition that they make themselves personally responsible for the safety of the children.

Copies of the By-Laws are posted at the Gates. Any person offending against any of them is liable on summary conviction to a penalty not exceeding £5. Any officer or servant of the Society may after due warning exclude or remove from the Park any person whom such officer or servant has reasonable ground for believing to have infringed any of the By-Laws, or behaved in a riotous or disorderly manner or in a manner likely to cause a breach of the peace.

The co-operation of visitors is requested with regard to the observation of the By-Laws, and in particular to those forbidding the leaving of any litter, the teasing or molesting of the animals, or plucking or damaging wild flowers.

51. WHIPSNADDE PARK. *Cars*.—When the Park was opened it was possible to buy only three acres of ground suitable for making a Car Park, and this proved insufficient. The twelve additional acres purchased in 1931 were brought into service by considerable work in draining and preparing the ground. The Coaching section was increased to hold seventy-five coaches and two shelters for visitors waiting for buses were constructed, one capable of holding 500 and the other 300 visitors. A Kiosk for cheap teas and light refreshments for chauffeurs and other workers and a covered shed for visitors waiting for 'buses were also constructed and has proved a great convenience.

The fees for parking are one shilling each for private cars, sixpence each for motor cycles, and twopence each for "push" cycles. Petrol, oil, water and small motor accessories can be obtained in the Car Park, and minor repairs can be carried out by the staff mechanic.

Motor-cars, bicycles, horse carriages or similar means of transport are not allowed to enter the Park except on Mondays, not Bank Holidays, throughout the year, and daily, except Saturdays and Sundays, in November, December, January and February, when private cars are allowed to circulate in the Park from 10 a.m. until 2 p.m. at the charge of five shillings each car, in addition to the entrance fees of the visitors.

Motor-'buses carry visitors round Central Avenue from a starting place near the Whipsnade Gate to Terminus Circle near Ouseley Kiosk; the cost of tickets, which are valid all day, is sixpence for each adult and threepence for each child.

52. WHIPSNADÉ PARK. *Routes to.*—Since the new road from the main gate to Watling Street, between Markyate and Dunstable, was completed, there is excellent road access from the north through Dunstable and from London through St. Albans and Markyate. Regular 'bus services run from London, and from the railway stations at Luton.

53. WHIPSNADÉ PARK. *Catering.*—Under the direction of Mr. A. Schorno, Catering Manager since January 1st, 1932, the catering arrangements have been greatly improved, and the accommodation at the Central Restaurant and the Kiosks has been much extended.

A notice is placed inside the Whipsnade Gate giving the refreshment arrangements for each day.

There are six fully licensed Refreshment Stations inside the Park, the licensed hours being from noon until 3 p.m. and from 5 p.m. until 10 p.m. on week-days, and on Sundays from 1 p.m. until 3 p.m. and from 6 p.m. until 9 p.m.

At the *Central Restaurant at Hall Farm*, hot luncheons, dinners and teas at various prices are served.

At the *Fellows' Pavilion* on the edge of the Downs near the end of Duke's Avenue, luncheons and teas are served, and cold dinners can be served in the season if application

be made in advance. The use made of this Pavilion, which is on one of the most beautiful sites in the Park, has been disappointing. It has been decided for the present to allow Fellows to give admission to it to their friends on week-days by a dated card or letter.

At *Ouseley Kiosk* on the edge of the Downs, near Bison Hill, luncheons and teas are provided.

At *Triangle Kiosk*, which has been much improved in the winter of 1933-34, on the edge of the Downs near Triangle Wood, and at *Avenue Kiosk* at the end of Central Avenue, light meals, refreshments and teas are served.

Open-air spaces are provided at each Kiosk for visitors who wish to bring their own refreshments, but picnicking is not permitted in other parts of the Park, except in some specially marked areas.

Large parties can be catered for if arrangements are made in advance. Letters should be addressed to the Catering Manager, Whipsnade Park, Dunstable, Beds.

54. WHIPSNADE PARK CATERING DEPARTMENT.

Accounts.—The Catering Department Accounts for the year 1933 have been audited by Messrs. W. B. Keen & Co. The Gross Profit for the year amounted to £12,387 7s. 0d. and the manufacturing and other working expenses for the same period (including feeding and lodging the staff, Manager's salary, licence duties, etc.) amounted to £9,772 1s. 9d., leaving a trading profit of £2,615 5s. 3d. After adding the receipts from Lavatories, Commission on sale of Ices, etc. (£795 8s. 8d.) and deducting the Manager's Bonus (£50) and the cost of additions, renewals and repairs, etc. (£689), there was a nett profit to the Society of £2,671 13s. 11d.).

Out of the net profit the sum of £271 17s. 2d. has been allotted to the Works' Department towards the cost of work carried out at the Catering premises. The balance of £2,206 13s. 8d. has been passed to the General Account.

55. WHIPSNADÉ PARK. *Management and Staff.*—The Park is under the direct control of a Committee consisting of the President and Secretary of the Society, the Chairman of the Garden Committee and two other members of the Council. It meets at Whipnade monthly, and is also attended by the Superintendent of the London Gardens. The only alteration in the staff from the list given on page 48 of the Annual Report for 1932 is the addition of an assistant clerk, J. R. Coles.

56. THE BEDFORDSHIRE COUNTY POLICE have been of great assistance to the Society. Two constables are detailed for permanent duty at Whipnade and control the traffic outside our gates. At week-ends and on Bank holidays these numbers are considerably increased. It is by their co-operation that we are able to deal with the car traffic expeditiously.

The local Boy Scouts have supplied four Rovers to assist in the prevention of litter on Sundays.

57. WHIPSNADÉ PARK. *Accidents and First Aid.*—Although accidents directly due to the animals have been few, attention has been required on many occasions by visitors and by members of the staff. The Area Commandant of the Local Section of the St. John Ambulance Brigade has placed at our Ambulance Station every Sunday throughout the summer one non-commissioned Officer, two Privates and one Sister, and doubled these numbers on the Whitsun and August Bank Holidays.

58. WHIPSNADÉ PARK. *Development.*—No new land was purchased in 1933, and in consideration of general financial conditions, no large new works were carried out. But as it became clear during the summer that the Park was earning more than the cost of its maintenance, Council sanctioned the undertaking of some new installations of a simple character which have proved to be attractive to visitors. The absence of Apes and Monkeys

had always given rise to comment. In July a large caravan was fitted with electric heating and sleeping quarters and enclosed in a very large cage of interlinked wire netting. Two young chimpanzees were sent to it from London, and very quickly settled in their new quarters. When winter came it was intended to bring them back to London if the conditions seemed unfavourable. But the thermostatic control of their indoor temperature and the greater opportunities of getting sun and open air exercise seem to have suited the chimpanzees and it was not found necessary to bring them back.

A tall oak-tree in Wallaby Wood was surrounded at a distance of 45 feet from the trunk by a fence 15 feet high of wire mesh with an overhang inwards of sheet iron four feet wide. Shelters consisting of barrels with very small openings were placed on a platform surrounding the trunk and 25 Rhesus monkeys were put in the enclosure. The exhibition has been extremely attractive and the monkeys have kept in extremely good health all the winter. Unfortunately, however, they have killed the tree by stripping it of its leaves and eating all the young shoots, and it has been thought inadvisable to extend the experiment by enclosing a larger area with more trees. Two old apple trees on the lawn near the Farm Restaurant were provided with sleeping-boxes and enclosed by a wire fence 3 feet high with a small overhang inwards. In this a pair of Tree Kangaroos were placed during the summer months. When winter came they were taken back to London and replaced by a Raccoon. These animals did no harm to the trees.

59. WHIPSNADDE PARK. WORKS, 1933. *Cloisters*.—Six additional W.C.'s to the Womens' Lavatories at the Cloisters were built by Messrs. Watson of Dunstable.

The courtyard of the Cloisters and the terrace in front of Hall Farm Restaurant were treated with a dressing of bitumuls.

Triangle Kiosk.—The old Triangle Kiosk was pulled down and on the same site a larger kiosk built, capable of

seating at least 200 people. Hot water is supplied by two boilers, an oil burner boiler capable of giving 200 pints of water an hour and, as a reserve, an "Ideal" boiler.

Army Hut.—A third Army Hut for the housing of the summer staff of waitresses was erected. This hut is divided into cubicles and is supplied with electric light and hot and cold water.

Fellows' Pavilion.—An extension to the kitchen of the Fellows' Pavilion was added.

Wombat Enclosure.—The old fence was pulled down and a new interlinked wire fence erected in its place.

Western Waterbuck Enclosure.—The reserve paddock behind Lay Meadow was fenced in with "Bulwark" fencing, for the housing of a pair of Western Waterbuck, the gift of the President of the Society.

Fencing.—Owing to the ravages caused by foxes climbing over the boundary fence into the Park, it was deemed advisable to reverse the overhang of the boundary fence, *i.e.*, to turn the overhang outwards, and to fill with wire mesh the overhang of three strands of barbed wire. Three and three-quarter miles have been reversed. The site of a new horticultural garden, about three acres in extent, has been fenced in.

Roads, Paths, etc.—About 150 yards of first-class road leading to the Superintendent's House and Offices, and about 250 yards of second-class road along the north side of Hall Farm have been laid down. Paths around Flint Pit paddocks Nos. 1 and 2, and round the Bears' enclosure, the Duck Ponds, Woodchuck, and Porcupine enclosures have been relaid and enlarged. A broad ash path has been laid down from Ouseley area to the Bison shed. Maintenance of all the first and second class roads of the Park has necessitated these roads being tarred during the year.

Car Park.—Owing to the large number of coaches running to Whipsnade, the coach section of the Car Park has been increased. The section can comfortably hold 75 coaches, but even this is not large enough, and it will again have to be enlarged this year.

On the south side of the Car Park a large cycle shed, to accommodate 75 bicycles, has been built.

Engineering and Electrical Plant.—Mr. Corbett, who is in charge of the Electrical and Water systems, is also Chief Fire Prevention Officer. The large Frigidaire at Ouseley Kiosk was pulled down and refixed in the larder of Hall Farm Restaurant. The large electrical bread-oven in the Pastry Kitchen was moved to a new position and the supply leads re-wired. The piping attached to the Water Softener Plant has been covered with a rubber composition to prevent corrosion. 1,000 feet of galvanised water main was put in. An "Ideal" boiler, hot and cold water system, was supplied to Triangle Kiosk. Heating and lighting were supplied to the Chimpanzee Caravan, Elephant House, and Parrot House.

Water.—In order to save water, all taps used by the public were fitted with percussion cocks. These taps only emit water whilst being pressed down and as soon as the pressure is released they automatically shut off the supply. Water pumped for the year amounted to 3,260,660 gallons, a saving of 172,300 gallons of water as compared with the year 1932. The pumping plant ran for 2,508 $\frac{1}{4}$ hours, a saving of 132 $\frac{1}{2}$ hours electrical energy.

Fire.—The fire squad turned out to deal with a fire in the Whipsnade-Studham Lane. The hedge was alight and the fire was approaching our boundary; with the help of local people, it was overcome in about two hours.

60. WHIPSNADDE PARK. *Gardening.*—Much planting of trees and shrubs about the estate has been carried out. An herbaceous garden near the Home Ponds was planted.

General work in staking, weeding, care of the climbers and lawns, removal of dead branches, and renewal of the soil in the different borders has been carried out. 2,000 Wallflowers were reared and sent to the London Gardens. 3,000 Shrub cuttings were reared in the nursery. The President has again given a large number of young trees.

61. WHIPSNADDE PARK. NEW WORKS, 1934.—The Council felt justified in sanctioning a limited expenditure on New Works to be carried out this year.

Tiger Dell.—The concrete-lined Tiger Pit with its hygienic floor and adequate dens for sleeping and rearing young animals has proved extremely efficient and it is doubtful if anywhere in the world there is a more satisfactory installation for tigers in captivity. A female tiger has raised a very fine litter of three in it. It is to be hoped that sometime a Pit for a breeding pair of lions will be constructed on similar lines.

On the other hand, the Tiger Pit has not the same scenic attractions as the Lion Pit, and the Council decided to construct a second enclosure for tigers. The work was begun early this year and it is hoped that the new "Tiger Dell" will be in occupation about Whitsuntide. Two old chalk-pits overgrown with trees and grass are being surrounded by a very high fence and provided with a pond and sleeping-dens.

European Bison Paddock.—The President of the Society has very generously offered to present some young European Bison Bulls. Holly Frindle Paddock, now occupied by Emus, is being fenced to contain them.

White Red Deer.—A large Paddock behind Cut Thro't Wood, on the hitherto unoccupied part of the estate, is to be fenced for the occupation of the very fine herd of White Red Deer, now loose on the undeveloped fields.

Sewage Works.—The Sewage purifying plant, installed in 1932, has proved completely efficient and the lagoon which receives the effluent is an attractive feature with

growing plants. Water fowl of various species have settled on it. The overflow is completely innocuous, and instead of its being allowed to soak away, a second lagoon, lower down the valley, has been formed to receive it. Much planting has been done round the filter beds and paths suitable for visitors are being constructed.

Triangle Kiosk.—In order to make this very beautiful Kiosk more comfortable for the public when there are strong winds from the west, a glass-and-metal wind-screen is being fitted along the outer edge of the open-air terrace.

62. WHIPSNADDE PARK. *Agriculture.*—We were unable to conserve any hay during the year owing to the heat and drought, and in consequence our fodder bill for hay will be considerably up for the year 1934. Roots were not a success, but some success was met with in the growing of about nine acres of thousand-headed kale, nine lorry loads of which were supplied to the London Gardens and the remainder fed to stock at Whipnade. About one acre was put down to potatoes.

The whole of the undeveloped portion of the Estate, and Dagnall and Spicer's enclosures, have been limed with agricultural lime. This is done to keep down helminthic infection and to encourage the growth of clover.

Sheep.—Our flock of cheviot wethers, kept for grazing purposes, has been reduced to 50; they are about $3\frac{1}{2}$ years old.

Our breeding flock of Border Leicester ewes has been increased to 37 by 12 of our own breeding. 25 Cheviot wethers and 15 lambs have been killed for the Catering Department.

Vermin.—A special effort was made by the staff during rat week, the total bag amounting to 261. The total number of rats destroyed during the year was 1,040; and 13 grey squirrels were killed.

Rabbits.—1,952 rabbits have been killed, of which 1,250 were supplied to the London Gardens.

63. WHIPSNADE PARK. *Menagerie*.—The general health of the animals has been good. The summer, owing to the heat and lack of green grass, was an arid one for animals generally. The severe cold spell experienced in early December was also a trying time.

The same species as were on exhibit for 1932 were on view in 1933. Additions included:—Brindled Gnu; Sika Deer; Western Waterbuck; Sambar Deer; Tree Kangaroos; Angora Foal; Raccoon; Chimpanzees; Rhesus Monkeys; Virginian Deer; Crocodile; and Pelican.

The chief gifts of animals were:—

3 Afrikander Cattle, presented by H.M. the King; Western Waterbuck and Sika Deer by the President; a Chillingham Heifer, by the Earl of Tankerville; a Chapman Zebra Stallion by A. Ezra, Esq., Vice-President; Virginian Deer, by the Province of Ontario, Canada. 50 Flamingoes, were lent on deposit by Messrs. Chapman.

The births of most interest included:—Chapman's Zebra filly foal; three Tiger cubs; Mongolian Wild Horse; two Yak calves; three Common Rheas (White Variety); Sarus Crane; four Canadian Beavers; four Brush Turkeys; ten Spur-wing geese; nine Wolf Cubs.

Our chief losses were:—four Alligators; two Nylghaie; four Canadian Beavers; two Axis Deer; Tiger; Bison; Sloth Bear; and a Sarus Crane and Ostrich.

64. CHILLINGHAM WILD WHITE CATTLE.—As described in the Report for 1931, p. 58, paragraph 65, the Council, in view of the grave danger threatening the existence of the unique herd of English White Park Cattle at Chillingham Castle, Northumberland, agreed to contribute the sum of £100 a year for seven years towards their support. Three Trustees, Sir Peter Chalmers Mitchell, *Chairman*, the late Viscount Grey of Fallodon and Mr. Hugh S. Gladstone, with the approval of Council, took a lease from the Earl of Tankerville of the Park and Cattle for a period of seven years at £500 per annum of which £250 was the rental value and £250 towards the cost of maintenance.

After the death of Viscount Grey of Fallodon, the surviving Trustees, on whom falls the duty, subject to the approval of Council, of appointing a successor, took into consideration the fact that some local residents had asked to be associated in the management of the Park. The Trustees were of the opinion that a local successor to Lord Grey would be extremely suitable, but that there should be some local financial support. Accordingly they wrote to the spokesman of those who had put forward the local claim, saying that if there were an assurance of definite local financial support, they would be most ready to ask the Council to approve of the appointment of a successor to Lord Grey as a Trustee of some suitable local resident. So far there has been no reply.

The herd and the arrangements made by the Trustees, with the approval of Council, were fully described in the Annual Report for 1932 (pp. 55 and 56). The need for preservation remains and it is hoped that individual Fellows of this Society will contribute towards the cost. During 1933, in addition to the Society's contribution of £100, subscriptions and donations amounted to £93 2s. 6d. Subscriptions carried forward from 1932 amounted to £47 17s. 0d., and the balance of the £500, amounting to £259 0s. 6d. was defrayed from the income of the De Arroyave Trust Fund.

(Since the Society's accounts were printed, certified accounts with vouchers for 1933 have been received from the Trustees showing a balance of £99 15s. 1d. to be carried forward to the cost of maintenance during the current year).

65. MENAGERIE.—The Society is as usual much indebted to Fellows, Corresponding Members, Private Donors, and to Institutions, Societies and Shipping Companies for their most kind help in maintaining the collection of animals by gifts and by assistance in transport. Specially to be mentioned in respect of 1933 are Mr. Alfred Ezra, F.Z.S., Mr. Eric C. Johnson, C.M.Z.S., The Hon. Anthony Chaplin,

F.Z.S., Mr. G. C. Upstone, C.M.Z.S., Mr. Stanley Woodward, C.M.Z.S., Mr. J. J. Morris, C.M.Z.S., Captain P. Jeffs, C.M.Z.S., Mr. A. St. Alban Smith, F.Z.S., the Bombay Natural History Society, the Zoological Gardens of Calcutta, Messrs. Alfred Holt & Co., Messrs. Henderson & Co., the Ellerman Line, the P. & O. Steamship Co., the Union-Castle Steamship Co., Messrs. Elders & Fyffes, and the British India Steam Navigation Co., through Messrs. Gray, Dawes & Co., and Messrs. Mackinnon, Mackenzie & Co.

66. COMMISSARIAT.—In the following table are given the quantities of the principal kinds of food, etc., consumed in the Gardens in 1933 :—

Class.	Description.	Number or Quantity.
Fodder, etc...	Hay	147 tons.
"	Clover	129 tons.
"	Straw	91 tons.
"	Tares	24,641 bundles.
"	Peat-Moss Litter ..	45 bales.
Grain, etc.	Oats	448 qtrs.
"	Bran	159 qtrs.
"	Wheat	61½ qtrs.
"	Wheat-Mixture ..	27½ qtrs.
"	Barley Meal ..	15 cwts.
"	Maize	30½ qtrs.
"	Locust Beans ..	77 cwts.
"	Rice	64 cwts.
"	Canary Seed ..	25 qtrs.
"	Hemp Seed ..	10½ qtrs.
"	Millet	5½ qtrs.
"	Millet Spray ..	51 bunches.
"	Sunflower-seed ..	19¼ qtrs.
Fish	Plaice	2 tons, 1½ cwts.
"	Herrings and Whiting	42 tons, 4 cwts.
"	Shrimps	1,095 pints.
Flesh ..	Horse-flesh	223 tons.
Milk ..	Condensed—Sweetened	6,336 lbs.
" ..	" Unsweetened	2,592 lbs. & 408 gals.
Nuts	Spanish	176½ qtrs.
" ..	Monkey	157 cwts.
" ..	Brazil	104 lbs.
" ..	Mixed	208 lbs.

Class.	Description.	Number or Quantity.
Fruit and Vegetables	Bananas	195,764.
"	Apples	9 tons, 9½ cwts.
"	Grapes	3 tons, 1¼ cwts.
"	Oranges	15,447.
"	Dates	14 cwts.
"	Currants	11¼ cwts.
"	Sultanas	52 lbs.
"	Lettuce	21,975.
"	Greens	1,945¾ bushels.
"	Carrots	5 tons, 1½ cwts. and 861 bunches.
"	Potatoes	28 tons 17¾ cwts.
"	Onions	9 cwts.
"	Mangolds	23½ tons.
"	Beetroot	8 tons.
"	Celery	802 heads.
"	Cucumbers	96.
Miscellaneous	Biscuits	19 tons, 8 cwts.
"	Biscuit Meal	10 tons, 16 cwts.
"	Honey	170 lbs.
"	Bread	6 tons, 2½ cwts.
"	Eggs	22,500.
"	Sugar	570 lbs.
"	Ant-eggs	440 lbs.
"	Mealworms	686 lbs.
"	Dried Flies	436 lbs.
"	Egg Yolk	122 lbs.
"	Golden Syrup	257 lbs.
"	"Marmite"	Many jars.

67. NUMBERS OF THE COLLECTION.

Animals in the London Gardens on December 31st, 1933.

Animals of all kinds (except Fish and Invertebrates) on January 1st, 1933	3,884
Animals of all kinds (except Fish and Invertebrates) received in 1933 by presentation, exchange, deposit, purchase or birth	2,081
	<u>5,965</u>
Animals of all kinds (except Fish and Invertebrates) dead, sold, sent in exchange, or returned to depositors in 1933	2,206
Animals of all kinds (except Fish and Invertebrates) in the Gardens on December 31st, 1933	<u>3,759</u>

Additions to the Collection, 1931-33.

	Presentation.	Purchase.	Deposit.	Exchange.	Birth.	TOTAL.
1931 ...	718	837	294	92	278	2,219
1932 ...	960	587	182	118	311	2,158
1933 ...	929	569	123	209	251	2,081

Animals at Whipsnade on December 31st, 1933.

Mammals	...	...	...	...	637
Birds	...	...	...	...	289

[In the case of the Chinese Water Deer and the Muntjac, loose in the Park and breeding freely, the numbers are only an estimate.]

68. BRED IN THE LONDON MENAGERIE. 1933.

Mammals.

January	1 Grévy's Zebra ♂ (<i>Equus grevyi</i>), reared.
„	1 Scimitar-horned Oryx ♂ (<i>Oryx algazel</i>), reared.
„	1 Reedbuck ♀ (<i>Redunca arundinacea</i>), died when 3 days old.
February	4 Fat Sand Rats (<i>Psammomys obesus</i>), 3 reared.
„	4 Fat-tailed Gerbils (<i>Pachyuromys duprasi</i>), 2 reared.
March	2 Dingoes ♂♂ (<i>Canis familiaris</i>), reared.
„	3 Barbary Wild Sheep ♂♂♀ (<i>Ammotragus lervia</i>), reared.
„	1 Hog Deer (<i>Hyelaphus porcinus</i>), reared.
„	1 Hog Deer (<i>Hyelaphus porcinus</i>), died when a week old.
„	1 Black Wallaby ♂ (<i>Macropus ualabatus</i>), reared.
„	1 Brown Lemur ♂ (<i>Lemur fulvus</i>), reared.
„	1 Reedbuck ♀ (<i>Redunca arundinacea</i>), reared.

- April 1 Barbary Wild Sheep ♀ (*Ammotragus lervia*), reared.
- ” 2 Salt Desert Cavies (*Dolichotis salinicola*), 1 reared.
- ” 4 Shaw's Jirds (*Meriones shawii*), reared.
- ” 1 Hog Deer ♂ (*Hyelaphus porcinus*), reared.
- ” 1 Hartmann's Mountain Zebra ♀ (*Equus zebra hartmanni*), reared.
- ” 1 Brown Lemur ♂ (*Lemur fulvus*), reared.
- ” 3 Prairie Wolves ♂♀♀ (*Canis latrans*), died when young.
- ” 1 Babirusa ♀ (*Babirussa babyrussa*), reared.
- ” 1 Marica Gazelle ♀ (*Gazella marica*), reared.
- ” 1 Mouflon ♂ (*Ovis musimon*), reared.
- ” 4 Fat-tailed Gerbils (*Pachyuromys duprasi*), 3 reared.
- ” 2 Persian Gazelles ♂♂ (*Gazella subgutturosa*), reared.
- May 2 Fat Sand Rats (*Psammomys obesus*), reared.
- ” 3 Indian Wolves (*Canis pallipes*), died when young.
- ” 1 African Crested Porcupine (*Hystrix cristata*), reared.
- ” 2 Grecian Wild Goats ♀♀ (*Capra hircus*), reared.
- ” 2 Mouflon ♂♀ (*Ovis musimon*), reared.
- ” 1 Pudu Deer (*Pudu puda*), died when 5 months old.
- ” 2 Hybrid Punjab × Cyprian Wild Sheep (*Ovis vignei* × *O. ophion*), reared.
- ” 2 Shaw's Jirds (*Meriones shawii*), reared.
- ” 8 Common Wolves ♂♂♂♂♀♀♀ (*Canis lupus*), 7 reared.
- ” 1 Persian Gazelle ♂ (*Gazella subgutturosa*), reared.

- June 1 Hybrid Himalayan Ibex & Goat ♀ (*Capra sibirica* × *C. hircus*), reared.
- „ 1 Brazilian Tapir ♂ (*Tapirus terrestris*), reared.
- „ 1 Caucasian Wild Goat ♀ (*Capra caucasica*), died when 3 days old.
- „ 1 Hangul Deer ♂ (*Cervus hanglu*), reared.
- „ 1 Californian Sea Lion ♂ (*Zalophus californianus*), reared.
- „ 2 Salt Desert Cavies (*Dolichotis salinicola*), reared.
- „ 1 Hangul Deer ♀ (*Cervus hanglu*), reared.
- „ 1 Caucasian Wild Goat ♂ (*Capra caucasica*), died when 3 months old.
- „ 1 Thar ♂ (*Hemitragus jemlahicus*), reared.
- July 1 Bushbuck (*Tragelaphus sylvaticus*), died when 2 months old.
- „ 1 Red Wallaroo ♀ (*Macropus robustus rubens*), reared.
- „ 1 Llama ♂ (*Lama glama*), reared.
- „ 1 Nylghaie ♀ (*Boselaphus tragocamelus*), reared.
- August 1 Hog Deer (*Hyelaphus porcinus*), died when 1 day old.
- September 1 African Crested Porcupine (*Hystrix cristata*), reared.
- October 1 Moholi Bush Baby ♂ (*Galago moholi*), reared.
- „ 5 Fat-tailed Gerbils (*Pachyuromys duprasi*), reared.
- „ 2 Sumichrast's Night Mice (*Nyctomys sumichrasti*), reared.
- November 1 Reedbuck ♀ (*Redunca arundinacea*), reared.
- „ 1 American Bison ♀ (*Bison bison*), reared.

- November 1 Barbary Wild Sheep ♀ (*Ammotragus lervia*),
living.
- „ 1 White-crowned Mangabey ♀ (*Cercocebus torquatus*), living.
- „ 4 Fat Sand Rats (*Psammomys obesus*), reared.
- „ 2 Nylghaie ♂♀ (*Boselaphus tragocamelus*), living.
- December 2 Hog Deer ♂♀ (*Hyelaphus porcinus*), 1 living.
- „ 1 Brown Capuchin Monkey (*Cebus fatuellus*),
living.
- „ 1 Scimitar-horned Oryx ♂ (*Oryx algazel*), living.

Birds.

- During 1933. { 35 Budgerigars (Green) } (*Melopsittacus un-*
 { 16 Budgerigars (White var.) } *dulatus*), all
 { 8 Budgerigars (Blue var.) } reared.
- May 3 Great Black-backed Gulls (*Larus marinus*),
reared.
- „ 1 Wonga Wonga Pigeon (*Leucosarcia melano-*
leuca), reared.
- June 3 Yellow-billed Ducks (*Anas undulata*), reared.
- „ 4 Carolina Ducks (*Aix sponsa*), reared.
- „ 2 Hybrid Masked & Fischer's Lovebirds (*Agapornis personata* × *A. fischeri*), reared.
- „ 5 Ross's Snow Geese (*Chen rossi*), 4 reared.
- „ 2 Carolina Ducks (*Aix sponsa*), reared.
- „ 1 Wonga Wonga Pigeon (*Leucosarcia melano-*
leuca), reared.
- July 4 Red-rumped Parrakeets (*Psephotus hæmato-*
notus), reared.
- „ 3 Mandarin Ducks (*Aix galericulata*), reared.
- „ 3 Hybrid Common × Burmese Peafowl (*Pavo*
cristatus × *P. muticus*), reared.

- July 1 Masked Lovebird (Blue var.) (*Agapornis personata*), reared.
- „ 2 Cockatiels (*Leptolophus hollandicus*), reared.
- „ 1 Hybrid Imperial × Black-breasted Kalij (*Gennæus imperialis* × *G. horsfieldii*), reared.
- „ 1 Swinhoe's Pheasant (*Gennæus swinhoii*), reared.
- „ 3 Silver Pheasants (*Gennæus nycthemerus*), reared.
- „ 3 Bel's Pheasants (*Gennæus beli*), reared.
- „ 1 Barnard's × Red-rumped Parrakeet (*Barnardius barnardi* × *Psephotus hæmatonotus*), reared.
- „ 1 Elliot's Pheasant (*Calophasis ellioti*), reared.
- August 4 Carolina Ducks (*Aix sponsa*), reared.
- „ 3 Hybrid Fischer's × Nyasaland Lovebirds (*Agapornis fischeri* × *A. lilianæ*), reared.
- „ 2 Bronze-winged Pigeons (*Phaps chalcoptera*), reared.
- „ 2 Galapagan Doves (*Nesopelia galapagoensis*), reared.
- „ 1 Wonga Wonga Pigeon (*Leucosarcia melanoleuca*), reared.
- September 5 Fischer's Lovebirds (*Agapornis fischeri*), reared.
- „ 5 Hybrid Masked & Fischer's Lovebirds (*Agapornis personata* × *A. fischeri*), reared.
- „ 2 Bel's Silver Pheasants (*Gennæus beli*), reared.
- „ 6 Maned Geese (*Chenonetta jubata*), reared.
- October 1 Bronze-winged Pigeon (*Phaps chalcoptera*), reared.
- „ 1 Swainson's Lorikeet (*Trichoglossus moluccanus*), reared.

November 1 Black-footed Penguin (*Spheniscus demersus*),
reared.

December 1 Black-footed Penguin (*Spheniscus demersus*),
living.

Reptiles.

November 12 Cooke's Tree Boas (*Boa enydris*), six living.

69. BRED AT WHIPNADE. 1933.

Mammals.

- During 1933. { 20 Spanish Sheep (*Ovis aries* var.), reared.
 { 28 Park Sheep (*Ovis aries*).
- February 6 Tibetan Mastiffs ♂♀♀♀♀♀ (*Canis familiaris*),
 2 reared.
- " 3 Dingos ♀♀♀ (*Canis familiaris dingo*), reared.
- March 6 Dingos, 3♂, 3♀ (*Canis familiaris dingo*), 3
 reared.
- April 4 Soay Sheep (*Ovis aries* var.), died when young.
- " 3 Mouflon (*Ovis musimon*), reared.
- " 1 Chartley calf (*Bos taurus*), reared.
- " 1 Shetland Pony ♀ (*Equus caballus*), reared.
- " 1 Highland calf ♂ (*Bos taurus*), reared.
- May 2 Highland calves (*Bos taurus*), reared.
- " 10 Hybrid Common × Timber Wolves (*Canis*
 lupus × *C. l. occidentalis*), 9 reared.
- " 1 Yak ♀ (*Poephagus grunniens*), reared.
- " 1 Barbary Wild Sheep (*Ammotragus lervia*),
 died when 6 months old.
- " 1 Mouflon (*Ovis musimon*), reared.
- June 2 Sika Deer ♀♀ (*Cervus sika*), 1 reared, 1 died
 when 2 months old.

- June 3 Red Deer ♂♀♀ (*Cervus elaphus*), reared.
 „ & July 4 Red Deer (white var.) (*Cervus elaphus*),
 reared.
 „ 1 Great Grey Kangaroo (*Macropus giganteus*),
 reared.
 „ 2 Highland calves (*Bos taurus*), reared.
 „ 2 Shetland Ponies (*Equus caballus*), reared.
 „ 1 Swamp Deer (*Rucervus duvaucelii*), reared.
 „ 3 Canadian Beavers (*Castor canadensis*), died
 young.
 „ 3 Tiger cubs ♂♂♀ (*Felis tigris*), reared.
 July 1 Shetland Pony ♂ (*Equus caballus*), reared.
 „ 1 Chartley calf ♂ (*Bos taurus*), reared.
 July & August } 9 Fallow Deer (*Dama dama*), reared.
 July & August } 2 Spotted Deer (*Axis axis*), reared.
 August 1 Yak ♂ (*Poephagus grunniens*), reared.
 „ 1 Mongolian Wild Horse ♂ (*Equus caballus*
przewalskii), died when 4 months old.
 September 1 Afrikander calf ♀ (*Bos taurus*), reared.
 „ 1 Chapman's Zebra ♀ (*Equus burchellii chap-*
manni), reared.
 November 1 Llama ♂ (*Lama glama*), reared.

Birds.

- May 15 Upland Geese (*Chloephaga magellanica*),
 reared, from eggs presented by the President.
 June 1 Sarus Crane (*Megalornis antigone*), killed when
 6 months old.
 July 10 Spurwing Geese (*Plectropterus gambensis*),
 7 reared.

- July 4 Carolina Duck (*Aix sponsa*), reared.
 ,, 3 Common Rheas (white var.) (*Rhea rothschildi*),
 reared.

70. LIST OF SPECIES NEW TO THE COLLECTION IN 1933.
 (The figures placed before each name indicate its
 approximate position in the New Vertebrate List.)

I.—MAMMALS.

- 172b. *Erinaceus hindei* Thomas. Hinde's Hedgehog.
Hab. East Africa.
a. Presented by Sub.-Lieut. R. A. D. Cambridge,
 R.N., July 14th, 1933.
- 582a. *Lophiomys ibeanus* Thomas. Crested Bush Rat.
Hab. Aberdare Mountains, Kenya.
a-d. Purchased May 26th, 1933.
- 700a. *Cephalophus natalensis robertsi* Rothschild.
 Robert's Duiker.
Hab. Portuguese East Africa.
a. Presented by Capt. H. L. Scholefield, March
 30th, 1933.
- 921a. *Phalanger gymnotis* Peters & Doria. Cave
 Phalanger.
Hab. Kobroor, Aru Island.
a. Purchased November 16th, 1933

II.—BIRDS.

- 182a. *Diatropura progne delamerei* (Shelley). Delamere's
 Giant Whydah.
Hab. Aberdare Mountains, Kenya.
a. Deposited May 25th, 1933.
- 192a. *Pyromelana capensis xanthomelas* Rupp.
 Abyssinian Black & Yellow Bishop.
Hab. Aberdare Mountains, Kenya.
a. Deposited May 25th, 1933.

- 199a. *Cryptospiza reichenowi ocularis* (Sharpe). Crimson-winged Weaver.
Hab. Usambara Mountains, N.E. Tanganyika.
a-b. Presented by R. E. Moreau, Esq., C.M.Z.S., May 26th, 1933.
- 211a. *Amadina fasciata alexanderi* Neum. Abyssinian Cut-throat Finch.
Hab. Kenya.
a-b. Presented by G. W. Ferrand, Esq., July 7th, 1933.
- 223b. *Munia spectabilis* Scl. White-chested Mannakin.
Hab. New Britain.
a-b. Presented by F. W. Shaw Mayer, Esq., F.Z.S., July 3rd, 1933.
- 223c. *Munia melaena* Scl. Chocolate-backed Mannakin.
Hab. New Britain.
a-b. Presented by F. W. Shaw Mayer, Esq., F.Z.S., July 3rd, 1933.
- 223d. *Munia tristissima* Wall. Sombre Mannakin.
Hab. New Guinea.
a-b. Presented by F. W. Shaw Mayer, Esq., F.Z.S., July 23rd, 1933.
- 245a. *Erythrura trichroa goodfellowi* Ogilvie Grant. Goodfellow's Three-coloured Parrot Finch.
Hab. Kratke Mountains, British New Guinea.
a-d. Purchased June 30th, 1933.
- 247a. *Estrilda astrild minor* (Cab.). Lesser St. Helena Waxbill.
Hab. Usambara Mountains, N.E. Tanganyika.
a. Presented by R. E. Moreau, Esq., C.M.Z.S., May 26th, 1933.
- 253a. *Estrilda atricapilla kandti* Reichw. Black-headed Waxbill.
Hab. Aberdare Mountains, Kenya.
a. Deposited May 25th, 1933.

- 257a. *Granatina ianthinogaster roosvelti* Mearns. Purple Grenadier Waxbill.
Hab. Aberdare Mountains, Kenya.
a. Deposited May 25th, 1933.
- 280a. *Ploceus reichenowi* (Fisch). Reichenow's Weaver.
Hab. Aberdare Mountains, Kenya.
a. Deposited May 25th, 1933.
- 325a. *Tangara cucullata* (Swains). Chestnut-capped Tanager.
Hab. St. Vincent, West Indies.
a-b. Presented by Miss H. G. Cropper, October 2nd, 1933.
- 449a. *Passer iagoensis rufocinctus* Finsch. & Reich. Kenya Rufous Sparrow.
Hab. Aberdare Mountains, Kenya.
a. Deposited May 25th, 1933.
- 464a. *Serinus flavivertex* (Blanf.). Yellow-crowned Canary.
Hab. Aberdare Mountains, Kenya.
a. Deposited May 25th, 1933.
- 547a. *Nemosia pileata* (Bodd.). Hooded Tanager.
Hab. Brazil.
a. Received in exchange November 30th, 1933.
- 616b. *Nectarinia famosa œneignularis* Sharpe. Kenya Malachite Sunbird.
Hab. Aberdare Mountains, Kenya.
a. Deposited May 25th, 1933.
- 616c. *Nectarinia tacazzé* (Stanley). Tacazzé Sunbird.
Hab. Aberdare Mountains, Kenya.
a. Presented by the Hon. Anthony Chaplin, F.Z.S., May 29th, 1933.
- 617b. *Drepanorhynchus reichenowi* (Fischer). Golden-winged Sunbird.
Hab. Aberdare Mountains, Kenya.
a. Presented by the Hon. Anthony Chaplin, F.Z.S., May 29th, 1933.

- 618b. *Aethopyga nipalensis horsfieldii* (Blyth). Blyth's
Yellow-backed Sunbird.
Hab. Himalayas.
a. Deposited April 28th, 1933.
- 620a. *Cyrtostomus frenatus* (S. Mull.). Yellow-breasted
Sunbird.
Hab. Northern Australasia.
a. Deposited July 4th, 1933.
- 620b. *Hermotimia corinna* Salv. Duke of York's
Sunbird.
Hab. Bismarck Archipelago.
a-b. Deposited July 4th, 1933.
- 621a. *Cinnyris venustus falkensteini* (Fisch. & Reich.).
Falkenstein's Sunbird.
Hab. Aberdare Mountains, Kenya.
a. Deposited May 25th, 1933.
- 624b. *Cinnyris mediocris* Shelley. Kenya Double-
collared Sunbird.
Hab. Aberdare Mountains, Kenya.
a. Deposited May 25th, 1933.
- 624c. *Cinnyris venustus* (Shaw). Yellow-bellied Sun-
bird.
Hab. West Africa.
a. Deposited December 29th, 1933.
- 625a. *Chalcomitra senegalensis lamperti* (Reich.). Kenya
Highlands Scarlet-breasted Sunbird.
Hab. Aberdare Mountains, Kenya.
a. Deposited May 25th, 1933.
- 633b. *Zosterops capensis* Sundev. Cape White-Eye.
Hab. South Africa.
a-d. Presented by F. Hopkins, Esq., December
24th, 1933.
- 638a. *Zosterops kikuyuensis* Sharpe. Kenya White-Eye.
Hab. Aberdare Mountains, Kenya.
a. Deposited May 25th, 1933.

- 705a. *Turdinulus brevicaudatus* Blyth. Short-tailed
Wren Babbler.
Hab. India.
a-b. Presented by W. J. C. Frost, Esq., June
14th, 1933.
- 710c. *Geokichla gurneyi keniensis* Mearns. Orange
Thrush.
Hab. Aberdare Mountains, Kenya.
a. Deposited May 25th, 1933.
- 751a. *Phoenicurus frontalis* Vigors. Blue-fronted Red-
start.
Hab. Himalayas.
a-b. Deposited June 22nd, 1933.
- 762b. *Pogonocichla stellata guttifer* (Reich. & Neum.).
White-starred Bush Robin.
Hab. Aberdare Mountains, Kenya.
a. Deposited May 25th, 1933.
- 828a. *Yuhina gularis* Hodgs. Black-chinned Yuhina.
Hab. E. Himalayas.
a-b. Presented by W. J. C. Frost, Esq.,
December 29th, 1933.
- 855a. *Arizelocichla tephrolaema kikuyuensis* (Sharpe).
Kikuyu Grey-throated Bulbul.
Hab. Aberdare Mountains, Kenya.
a. Deposited May 25th, 1933.
- 859a. *Pericrocotus peregrinus* (Linn.). Red-breasted
Minivet.
Hab. India.
a. Deposited June 14th, 1933.
- 859b. *Pericrocotus speciosus* (Lath.). Large Minivet.
Hab. Himalayas.
a. Deposited June 14th, 1933.
- 861a. *Dioptrornis fischeri* Reich. White-eyed Fly-
catcher.
Hab. Aberdare Mountains, Kenya.
a. Deposited May 25th, 1933.

- 863b. *Cyornis superciliaris* (Jordan). White-browed
Blue Flycatcher.
Hab. Himalayas.
a. Presented by the Hon. Anthony Chaplin,
F.Z.S., April 18th, 1933.
- 863c. *Cyornis melanoleuca* (Hodgs.). Little Pied Fly-
catcher.
Hab. Himalayas.
a. Deposited April 18th, 1933.
- 868e. *Siphia strophciata* Hodgs. Orange-gorgeted Fly-
catcher.
Hab. Himalayas.
a. Deposited June 14th, 1933.
- 927a. *Buccanodon olivaceum* (Shelley). Olive Barbet.
Hab. Usambara Mountains, N.E. Tanganyika.
a. Presented by R. E. Moreau, Esq., C.M.Z.S.,
May 26th, 1933.
- 969a. *Turacus hartlaubi* (Fisch. & Reich.). Hartlaub's
Touracou.
Hab. Aberdare Mountains, Kenya.
a. Deposited May 25th, 1933.
- 982a. *Phaetornis superciliosus* (Linn.). Guiana Hermit
Humming Bird.
Hab. Guiana.
a. Presented by Mrs. Wharton-Tigar, F.Z.S.,
November 19th, 1933.
- 986a. *Eupetomena macroura* (Gmel.). Swallow-tail
Humming Bird.
Hab. Brazil.
a-c. Purchased May 24th, 1933.
- 986b. *Hylocharis cyanea* (Vieillot). White-throated
Sapphire Humming Bird.
Hab. Brazil.
a-d. Purchased May 24th, 1933.
- 986c. *Chlorostilbon aureoventris pucherani* (Bourc. &
Muls.). Pucheran's Emerald Humming Bird.
Hab. Brazil.
a-d. Purchased May 24th, 1933.

- 986d. *Florisuga mellivora* (Linn.). Jacobin Humming Bird.
Hab. Brazil.
a-b. Presented by Alfred Ezra, Esq., O.B.E., F.Z.S., November 11th, 1933.
- 987a. *Glaucis hirsuta* (Gm.). Hairy Hermit Humming Bird.
Hab. Brazil.
a. Purchased May 24th, 1933.
- 988a. *Heliomaster squamosus* (Temm.). Stripe-breasted Star-throat Humming Bird.
Hab. Brazil.
a-e. Purchased November 19th, 1933.
- 989c. *Agyrtrina fimbriata nigricauda* (Elliott). Black-tailed Emerald Humming Bird.
Hab. Brazil.
a-e. Purchased May 24th, 1933.
- 994a. *Anthracothorix violicauda* (Bodd.). Black-throated Mango Humming Bird.
Hab. Brazil.
a-b. Presented by Alfred Ezra, Esq., O.B.E., F.Z.S., November 11th, 1933.
- 1022a. *Phoeniculus bollei jacksoni* Sharpe. White-headed Wood Hoopoe.
Hab. Aberdare Mountains, Kenya.
a. Deposited May 25th, 1933.
- 1085b. *Charmosyna stellae* A. B. Meyer. Stella Lory.
Hab. Kratke Mountains, British New Guinea.
a-b. Purchased June 30th, 1933.
- 1194b. *Poicephalus gubielmi massaicus* (Fisch. & Reich.). Masai Red-headed Parrot.
Hab. Aberdare Mountains, Kenya.
a. Presented by C. S. Webb, Esq., May 25th, 1933.
- 1371a. *Glaucidium nanum* (King). Dwarf Owl.
Hab. Terra del Fuego.
a-b. Presented by P. W. Reynolds, Esq., C.M.Z.S., May 23rd, 1933.

- 1616a. *Anas zonorhyncha* (Swinh.). Japanese Spot-billed Duck.
Hab. Japan.
a-b. Presented by G. H. Gurney, Esq., F.Z.S., October 30th, 1933.
- 1818a. *Stephanibyx melanopterus* (Cretzschm.). Black-winged Plover.
Hab. Aberdare Mountains, Kenya.
a-b. Purchased May 26th, 1933.
- 2052a. *Streptopelia lugens* (Rupp.). Pink-breasted Dove.
Hab. Aberdare Mountains, Kenya.
a. Deposited May 25th, 1933.

III.—REPTILES.

- 167a. *Gymnodactylus triedrus* Gunther. Yellow-spotted Gecko.
Hab. Ceylon.
a. Presented by W. W. A. Phillips, Esq., F.Z.S., May 1st, 1933.
- 167b. *Gymnodactylus frenatus* Gunther. Sinhalese Giant Gecko.
Hab. Ceylon.
a-c. Presented by W. W. A. Phillips, Esq., F.Z.S., May 1st, 1933.
- 184a. *Hemidactylus depressus* Gray. Flat-tailed Gecko.
Hab. Malaya.
a. Presented by A. St. Alban Smith, Esq., F.Z.S., July 27th, 1933.
- 185b. *Naultinus elegans* Gray. Brilliant Gecko.
Hab. New Zealand.
a-b. Presented by A. Fallar, Esq., June 20th, 1933.
- 186a. *Hoplodactylus duvaucelii* Gray. New Zealand Giant Gecko.
Hab. New Zealand.
a. Presented by A. N. Other, Esq., June 20th, 1933.

- 198a. *Phelsuma cepedianum* Gray. Jewel Gecko.
Hab. Round Island.
a. Presented by Capt. W. H. Ingrams, F.Z.S.,
 July 3rd, 1933.
- 210a. *Corythophanes cristatus* Merrem. Abbess Lizard.
Hab. Guatemala to Costa Rica.
a. Presented by A. J. White, Esq., August 29th,
 1933.
- 271c. *Amphibolurus cristatus* Gray. Racehorse Lizard.
Hab. Australia.
a-c. Presented by D. M. Stuart, Esq., June 17th,
 1933.
- 331c. *Lygosoma telfairii* Gray. Round Island Skink.
Hab. Round Island.
a-d. Presented by Capt. W. H. Ingrams, F.Z.S.,
 July 3rd, 1933.
- 344a. *Scelotes bojeri* Desjard. Green-throated Skink.
Hab. Mauritius.
a. Presented by Capt. W. H. Ingrams, F.Z.S.,
 July 3rd, 1933.
- 486a. *Natrix trianguligerus* Boie. Malayan Grass
 Snake.
Hab. Burma, Malaya.
a-b. Presented by A. St. Alban Smith, Esq.,
 F.Z.S., August 21st, 1933.
- 489b. *Macropisthodon flaviceps* Dum. & Bib. Common
 Big-toothed Snake.
Hab. Malaya.
a. Presented by A. St. Alban Smith, Esq.,
 F.Z.S., July 27th, 1933.
- 511a. *Drymobius bifossatus* Raddi. Rope Snake.
Hab. Brazil.
a-i. Presented by Dr. A. Amaral, November
 11th, 1933.
- 554b. *Ahaetulla caudolineata* Gray. Gunther's Bronze-
 backed Snake.
Hab. Ceylon.
a. Presented by W. W. A. Phillips, Esq., F.Z.S.,
 May 1st, 1933.

- 595c. *Oligodon templetoni* Gunther. Templeton's Kukri Snake.
Hab. Ceylon.
a-b. Presented by W. W. A. Phillips, Esq., F.Z.S., August 23rd, 1933.
- 610b. *Enhydris punctatus* Gray. Speckled Water Snake.
Hab. Malay Peninsula.
a. Presented by A. St. Alban Smith, Esq., F.Z.S., September 23rd, 1933.
- 623a. *Boiga fuscus* Gray. Coppery Tree Snake.
Hab. Queensland, Australia.
a. Purchased July 7th, 1933.
- 690b. *Micrurus surinamensis* Cuvier. Red-headed Coral Snake.
Hab. North Brazil.
a. Presented by H. E. Rogers, Esq., F.Z.S., May 29th, 1933.
- 716a. *Agkistrodon hypnale* Merrem. Merrem's Hump-nosed Viper.
Hab. Ceylon.
a-f. Presented by W. W. A. Phillips, Esq., F.Z.S., July 7th, 1933.

IV.—AMPHIBIANS.

- 46a. *Bombina orientalis* Boulenger. Eastern Bell Toad.
Hab. Korea.
a. Presented by R. Symons, Esq., July 26th, 1933.
- 67a. *Bufo molitor* Tschudi. Tschudi's Toad.
Hab. Brazil.
a. Presented by J. J. Morris, Esq., C.M.Z.S., September 29th, 1933.
- 72a. *Pseudophryne albifrons* Dum. & Bib. Sealing Wax Toad.
Hab. Australia.
a-i. Purchased March 9th, 1933.

- 98d. *Hyla faber* Wied. Blacksmith Tree Frog.
Hab. Brazil.
a. Presented by Messrs. H. Freedman, Ltd.,
 November 18th, 1933.
- 142c. *Rana limnocharis* Wiegman. Common Malayan
 Frog.
Hab. Malaya.
a-e. Presented by A. St. Alban Smith, Esq.,
 F.Z.S., July 27th, 1933.

V.—FISHES.

- 201a. *Pomacentrus cyanomus* Bleek. Eastern
 Demoiselle Fish.
Hab. Seas of S.E. Asia.
a-f. Purchased March 9th, 1933.
- 206a. *Lutianus johnii* de Lacepède John's Demoiselle
 Fish.
Hab. Seas of S.E. Asia.
a. Purchased March 9th, 1933.
- 215a. *Toxotes jaculator* Cuv. & Val. Archer Fish.
Hab. Freshwater of S.E. Asia.
a. Purchased April 10th, 1933.
- 220a. *Mugil troschelii* Bleeker. Eastern Mullet.
Hab. Seas of S.E. Asia.
a-c. Purchased March 9th, 1933.
- 223a. *Ophicephalus marulius* Hamilton. Blotched
 Snake-headed Fish.
Hab. Freshwaters of Tropical Africa.
a. Presented by Sir Donald Kingdon, June 24th,
 1933.

71. LIST OF DONORS.

I.—TO LONDON GARDENS.

- ABELL, A. F., 1 Water Chevrotain.
 ADAMSON, Mrs. M., 1 St. Helena Seed-Eater.
 AGRICULTURE & FISHERIES, Ministry of, 3 Musquash.

- ALEXANDER, Sir Claud, Bt., 1 Circassian Donkey.
- AMARAL, Dr. A., 9 Rope Snakes, 11 Schott's Snakes,
11 Fer-de-Lance, 6 Cainana Rat Snakes, 4 Merrem's
False Vipers, 10 Natterer's Snakes.
- BALLS, Mrs. Chamberlain-, 1 Blue-fronted Parrot.
- BARNDEN, A., 1 Budgerigar.
- BARNES, Mrs. Kenneth, 1 Common Guillemot.
- BARNETT, Miss Joan Burgess, 17 Amphibious Snails.
- BARTER, Mrs., 1 Rufous-necked Weaver.
- BECKETT, The Rev. M. T., O.B.E., 1 European Squirrel.
- BEEUWKES, Dr., 1 West African Wood Owl.
- BELL, Miss Dorothy, 1 Small-lobed Chameleon.
- BENNETT, A. G., C.M.Z.S., 2 Maccaroni Penguins.
- BENNETT, BRYSON & Co., LTD., G. W., 1 Green Turtle.
- BERKELEY, R. G., 1 Reeves's Pheasant.
- BERRY, Mrs., 1 Grey Parrot.
- BING, B. E., 1 Mandrill.
- BIRD, R. W., 1 Green Turtle.
- BISSHOPP, Mrs., 1 Greek Tortoise.
- BLAIR, W. N., F.Z.S., 24 Medicinal Leeches.
- BLIAULT, Councillor E. C. A., 1 Spotted Salamander.
- BOSCAWEN, Lieut.-Col. M. T., 1 Arabian Oryx.
- BOUCHER, E. G., 1 Sumichrast's Night Mouse.
- BOURSOT, J., 1 Dahl's Whip Snake.
- BOWDEN, John, 1 Caracal Lynx.
- BOWLES, J., 1 Bearded Lizard.
- BRADFIELD, Mrs., 1 Blue-fronted Parrot.
- BRADMAN, A. B., 1 Grass Snake.
- BREDIN, H. E. N., 2 Stoats.
- BRODRICK, Mrs., 1 Eyed Lizard.
- BROWN, Mrs. Waugh-, 2 Greek Tortoises.

- BROWNING, H. E. G., Goldfish.
- BRUNNER, A. Fraser-, F.Z.S., 1 Ring-tailed Coati.
- BUDD, Mrs., 1 Budgerigar.
- BURNET, Mrs., 2 Orange Weaver Birds.
- BURR, A. E., 100 larvæ of Peacock Butterfly, 12 larvæ of Orange-tip Butterfly, 20 Edible Snails, 48 larvæ of Drinker Moth.
- BURTON, Mrs., 2 Budgerigars (Yellow var.).
- BUTLER, Mrs. Geanne H., 2 White-nosed Coatis.
- BUXTON, Major Ivor, 2 Eland Antelopes.
- CAMBRIDGE, R. A. D., R.N., 1 Hinde's Hedgehog.
- CANNON, Mrs. Reginald, 1 Small-lobed Chameleon.
- CANTI, J. A., 2 Grass Snakes.
- CANTLAY, Miss M. L. M., 2 Indian Mouse Deer.
- CANVIN, Lewis P., 3 Sao Thomé Bronze-naped Pigeons.
- CAPON, W. J., 1 Fer-de-Lance.
- CARSTAIRS, Miss N. B., 1 Black-footed Penguin.
- CHAPLIN, The Hon. Anthony, F.Z.S., 1 Golden-winged Sunbird, 1 Tacazzé Sunbird, 1 Himalayan Pigmy Falcon, 1 Little Pied Flycatcher, 2 Fighting Fish.
- CHAPMAN, A. T. C., 1 Oregon Rattlesnake.
- CHEESMAN, Miss L. E., F.Z.S., 8 Spined Stick Insects.
- CLARKE, W. J., F.Z.S., 2 Moorish Geckos, 1 European Pond Tortoise, 2 Common Fire Finches.
- COCKING, Miss Eva, 1 Blue-fronted Parrot.
- COLLIER, The Hon. Mrs. E. C. F., 4 Red-beaked Weaver Birds.
- COLLIN, H. A., 1 Spot-billed Toucanet.
- COOK, D. C., 2 Black Scorpions.
- COPESTAKE, Mrs. Daisy, 1 Superb Glossy Starling.
- COWAN, D. S., 1 Drill, 1 Allen's Bush Baby, 1 African Long-nosed Crocodile, 1 Black Terrapin, 1 Lord Derby's Terrapin, 3 Schweigger's Hinged Tortoises, 2 Nile Monitors, 1 Home's Hinged Tortoise.

- CRAGGS, G. Somerville, F.Z.S., 3 Pygmy Chameleons.
- CROPPER, Miss H. G., 2 Chestnut-capped Tanagers, 1 Pennsylvanian Buzzard.
- CROWTHER, W. C., M.A., F.Z.S., 4 Eyed Lizards, 1 European Pong Tortoise, 1 Caspian Terrapin.
- CULLEN, Pat, 1 Coot.
- CURRY, Mrs., 2 Orange-cheeked Waxbills.
- CUST, Miss A., 1 Marmoset.
- DAVENPORT, Major C., R.A.V.C., 1 Chinkara.
- DEWAR, J. A., F.Z.S., 1 Black Swan.
- DIAMOND, Matthew, 1 Blue Rock Thrush.
- DONGWORTH, Miss W. C., 2 Orange-cheeked Waxbills.
- DORLING, Major L. H., R.A., 1 Chinkara.
- DRISKELL, Mrs., 1 Yellow-headed Parrot.
- DUNBAR, Lieut.-Comdr. R. E. C., R.N., 1 Crab-eating Monkey.
- EARLY, Mrs. J. H., 1 European Red Squirrel.
- EDWARDS, Mrs. M. E., 1 Greater Sulphur-crested Cockatoo, 1 Ring-necked Parrakeet.
- ELEY, Mrs., 1 Alexandrine Parrakeet.
- ELLIS, Clifford, 4 Scarab Beetles, 2 Lanceolate Grasshoppers, 1 Crested Mantis.
- ELLIS, Mrs. E. R. Stanley, 1 Jaguar Cub.
- EZRA, Alfred, O.B.E., F.Z.S., 2 Jacobin Humming Birds, 11 Ruby-crested Humming Birds, 3 Blue-chinned Humming Birds, 2 Black-throated Mango Humming Birds, 4 White-throated Sapphire Humming Birds, 3 Lesson's Emerald Humming Birds, 3 Swallow-tail Humming Birds, 2 Capybaras, 10 Blackbuck, 1 Tiger, 1 Cocteau's Gecko, 1 Nylghaie.
- FAHN, K. S., F.Z.S., 6 Fox cubs, Tench.
- FAIRFAX, The Hon. Peregrine, 4 Chipmunk.
- FALLAR, A., 2 Brilliant Geckos.

- FERRAND, G. W., 2 Abyssinian Cut-throat Finches, 2 African Palm Doves.
- FINCH, Dr. E. A., Fighting Fish.
- FISHER, Dr. R. A., F.R.S., 3 Jungle Fowl.
- FLEGG, A., 2 Barn Owls.
- FLEURET, Mrs. K., 2 Red-faced Lovebirds.
- FOGARTY, A., 1 Ocelot.
- FORREST, J., 1 European Pond Tortoise.
- FRASER, J. F. D., 1 Northern Viper.
- FREEDMAN, H., Ltd., 1 Blacksmith Tree Frog.
- FROST, W. J. C., 1 Green Iora, 2 Short-tailed Wren Babblers, 2 Black Bulbuls, 2 White-throated Ground Thrushes, 2 Black-chinned Yuhinas.
- GARLICK, J., 1 Ring-tailed Lemur.
- GEMMELL, Mrs., 1 Blue-fronted Parrot.
- GIBBINGS, Capt. W. H., 1 Cooke's Tree Boa, 2 Iguanas.
- GIBSON, J. W., 2 Nubian Ibex.
- GILMOUR, Mrs., 1 Budgerigar (Cobalt var.).
- GLIKSTEN, N., 1 Bosc's Monitor.
- GOODMAN, Lieut.-Comdr. J. M., R.N., 1 Brown-throated Conure.
- GORDON, W. J., 1 Radiated Tortoise.
- GRAHAM, E. W., 1 Carrion Crow.
- GRAHAM, Mrs., 1 Ring-tailed Lemur.
- GRANT, Miss K., 1 Ring-necked Parrakeet.
- GRANVILLE, Mrs., 6 Budgerigars.
- GREEN, Miss R., 1 Petz's Conure.
- GREEN, R. A., 1 Crested Newt.
- GREENFIELD, A., 1 Green Lizard.
- GREENWOOD, Robert, 1 Chameleon.
- GURNEY, G. H., F.Z.S., 2 Japanese Spot-billed Ducks.

- HAINES, E., 1 Rubber Boa.
- HALLPIKE, W. E., 2 Nilotic Crocodiles.
- HARGREAVES, Mrs., 1 Pekin Robin, 2 Black-headed Mannakins.
- HARKER, Mrs. T. H., 1 Shaw's Jird.
- HARRISON, Miss Beatrice, 1 Mona Monkey.
- HARRISON, Capt., 1 Hawk-billed Turtle.
- HASERICK, A. A., F.Z.S., 2 Finlayson's Squirrels.
- HASTINGS, J. I., Lobster.
- HAY, A. K. Petrie, 5 Bahama Ducks, 2 Black-billed Tree Ducks.
- HAYES, C., 1 Green Singing Finch.
- HAYNES, Mrs. D. A., 1 Greater Sulphur-crested Cockatoo.
- HENDERSON, Turner, F.Z.S., 2 Moholi Bush Babies.
- HIBBERT, Mrs. H., 1 Common Waxbill.
- HOLMES, Mrs. Frank, 2 Indian Wolves.
- HOOKE, H., 2 Smooth Snakes.
- HOPKINS, Capt. C. Scott-, F.Z.S., 2 Merlins.
- HOPKINS, F., 4 Cape White-Eyes, 1 Great Titmouse, 2 Cut-throat Finches, 1 Tree Creeper.
- HOPKINS, Mrs. Truda, 1 Common Asiatic Toad.
- HORNIMAN, Mrs., 1 Red-crested Cardinal.
- HOWARD, Mrs., 1 European Pond Tortoise.
- HOWELL, Miss, 1 Blue-fronted Parrot.
- HUGHES, A. C. R., 1 European Badger.
- HURCOMB, Mrs., 1 Blue-fronted Parrot.
- HYATT, M. Portal, F.R.G.S., F.Z.S., 1 Reed Bunting, 2 Snow Buntings.
- IMPERIAL INSTITUTE OF ENTOMOLOGY, Several hundred young Desert Locusts.
- INGRAMS, Capt. W. H., F.Z.S., 1 Green-throated Skink, 1 Jewel Gecko, 4 Round Island Skinks, 1 Gecko (sp. inc.), 1 Skink (sp. inc.).
- IRLE, H. G., 1 Green Lizard.

- IZZARD, G. A., 1 Dormouse.
- JACKSON, Dr. Douglas, 1 European Pond Tortoise.
- JEFFS, Capt. P., M.C., C.M.Z.S., 8 Land Crabs, 24 Green Singing Finches, 34 Common Waxbills, 15 Common Fire Finches, 16 Crimson-eared Waxbills, 4 Lavender Finches, 8 Combassous, 11 Orange Weaver Birds, 1 Black-headed Weaver Bird, 4 Crimson-winged Waxbills, 4 Rock Sparrows, 7 Red-beaked Weaver Birds, 4 Paradise Whydah Birds.
- JENKIN, R. T., 1 Four-horned Antelope.
- JOHNSON, Eric C., C.M.Z.S., 2 Harnessed Antelopes, 1 Wart Hog, 2 Crested Porcupines, 1 Giant Rat, 1 Pale Fox, 2 Goliath Herons, 1 Black-necked Crowned Crane, 7 African Pythons, 3 African Civet Cats.
- JONES, G. E., 1 Patas Monkey.
- JONES, J. W. Bertram, F.Z.S., 1 Hybrid Burmese & Black-winged Peafowl.
- JONES, T. W. Hugh, C.M.Z.S., 1 Iguana.
- JONES, W. A., 1 Occipital Blue Pie.
- KEEVIL, F., 2 Common Peafowl.
- KELL, Mrs., 1 Ring-necked Parrakeet.
- KEMPSTER, G. H., 1 Little Owl, 1 Barn Owl, 2 Ravens.
- KERR, D. F., 1 Blue-tongue Lizard.
- KINGDON, Sir Donald, 2 Black Kites, 2 Angolan Vultures, 1 Blotched Snake-headed Fish.
- KISS, Master James, 1 European Hedgehog.
- KNOBEL, Miss E. M., F.Z.S., 1 Nepal Hill Myna.
- KNOWLES, Mrs., 1 Greek Tortoise.
- LATHAM, T. F., 5 Sumichrast's Night Mice.
- LAUNDERS, Miss A. M., 1 Black-headed Mannakin.
- LAZARAS, J., 1 Roseate Cockatoo.
- LEARMOUTH, Mrs., 2 Orange Weaver Birds.
- LESLIE, Mrs. Shane, 1 Short-eared Owl.

- LE TOUZEL, Mrs., 2 Red-crested Cardinals.
- LINKLATER, Capt., 1 Red-faced Weaver Bird, 2 Red-shouldered Weaver Birds, 1 Peter's Spotted Fire Finch, 1 St. Helena Waxbill, 1 Alario Finch, 2 Chestnut-backed Mannakins.
- LLOYD, Oliver C., 1 European Tree Frog.
- LONGBOTTOM, Jack, F.Z.S., 2 Leopard cubs.
- LOVEDAY, Mrs., 1 British Bullfinch.
- LOWNDES, A. G., M.A., C.M.Z.S., 24 Fairy Shrimps.
- LUCAS, Mrs., 1 Jackdaw.
- LUNDGREN, Col. J. F., C.M.Z.S., 1 Cascabel Rattlesnake, 1 Puma.
- MCCANN, C. F. G., 1 Quaker Parrakeet.
- MCCULLOCH, Dr. W. E., F.Z.S., 1 Cheetah, 1 Egyptian Cobra, 1 African Beauty Snake, 1 Boomslang.
- MACDONALD, W., 2 Bearded Lizards.
- MALCOLM, R. S. W., 1 Cheetah.
- MALLINSON, R. S., 1 Two-spotted Palm Civet.
- MALONE, Mrs., 2 Greek Tortoises.
- MARSH, F. A., 1 Diced Water Snake.
- MASON, M. H., 1 Grey Eagle Owl.
- MAYER, F. W. Shaw, F.Z.S., 2 Sombre Mannakins, 2 White-chested Mannakins, 2 Chocolate-backed Mannakins.
- MELLERSH, Mrs., 1 Ring-necked Parrakeet.
- MELLOR, John, 1 Baltimore Oriole, 4 Snowbirds, 1 Mealy Redpoll, 1 White-crowned Song Sparrow, 1 Merlin.
- MERRIMAN, Mrs. J. L., F.Z.S., 1 Wild Boar.
- MERRIMAN, R. Owen, 4 Stink-pot Mud Terrapins, 1 Ribbon Snake, 3 De Kay's Snakes, 2 Garter Snakes, 2 Painted Terrapins.
- METROPOLITAN POLICE, Commissioner of, 1 Pallas's Glass Snake.

- MILLER, A., 2 Black-necked Cobras.
- MINCHIN, R. R., 1 Bourke's Grass Parrakeet.
- MITCHENER, Mrs. F., 1 Pygmy Chameleon.
- MOIR, J. C., 1 Leadbeater's Cockatoo.
- MONTAGUE, W. E., 1 Greater Sulphur-crested Cockatoo,
2 Northern Vipers.
- MONTGOMERY, M., F.Z.S., 1 Dormouse.
- MOORE, J., 1 Grey Mongoose.
- MOREAU, R. E., C.M.Z.S., 2 Crimson-winged Weavers,
1 Olive Barbet, 1 Lesser St. Helena Waxbill.
- MORGAN, Mrs. A. C., F.Z.S., 1 Moco Cavy.
- MORRIS, J. J., C.M.Z.S., 1 Cope's Terrapin, 1 St. Hilaire
Terrapin, 3 Stehlin's Lizards, 1 Tschudi's Toad, 1
Iguana, 5 Gallot's Lizards, 1 Delalande's Gecko,
1 Spectacled Cayman, 1 Spix's Tree Frog, 2 Common
Boas, 3 Cross-backed Toads, 2 Giant Toads, 2 Ridged
Escuerzos, 2 Hairy Armadilloes, 5 Great Teguxins,
1 Chameleon.
- MORTON, Miss M., 1 Squirrel Monkey.
- MOYNE, The Rt. Hon. Lord, P.C., D.S.O., F.Z.S., 2
Geoffroy's Marmosets, 1 Harnessed Antelope, 7 Desert
Locusts.
- MURRAY, Lady, 1 Indian Shama.
- MUTCH, Mrs. M., 1 Nilotic Crocodile, 1 Black Cayman.
- NASH, M. A., 2 Brown Mynas.
- NEWNHAM, Col. A., 2 Nests of Pine Processionary Cater-
pillars.
- NIND, Mrs., 1 Spanish Wall Lizard.
- NUNNELEY, Miss A., 1 Well's Dove.
- OLIVER, Miss Ruth, 1 Mississippi Alligator.
- OOM, Lieut. K. E., R.A.N., 1 American Black Bear.
- OTHER, A. N., 1 Tuatera Lizard, 1 Viviparous Gecko.

- PARKER, Mrs. Harry, 2 Common Waxbills, 2 Indian Silver Bills, 2 Cut-throat Finches.
- PARKER, Miss, 1 Delalande's Gecko.
- PARKER, Windsor D., F.Z.S., 2 Royal Starlings, 2 Superb Glossy Starlings, 1 Green Glossy Starling, 5 Purple-headed Glossy Starlings, 2 Pagoda Starlings.
- PARRY, H. V., 1 American Hawk-Owl.
- PATRICK, Mrs. R. W., 1 Spanish Sparrow.
- PAULL, G. A., 1 European Badger.
- PEART, Miss S. M., 1 Gambian Tree Squirrel.
- PEELE, Capt. J. J., 1 Duiker.
- PERCY, Lieut. D. Heber-, R.N., 1 Rhesus Monkey.
- PESTELL, A., 12 Stag Beetles.
- PETERS, Mrs., 1 Silvery Gibbon.
- PETRIE-HAY, A. K., Green Turtle.
- PHILLIPS, W. W. A., F.Z.S., 1 Yellow-spotted Gecko, 3 Sinhalese Giant Geckos, 1 Phillip's Thistle-tailed Earth Snake, 3 Gunther's Bronze-backed Snakes, 3 Templeton's Kukri Snakes, 6 Long-nosed Tree Snakes, 1 Bengal Monitor, 1 Indian Cobra, 2 Buff-striped Keelbacks, 11 Merrem's Hump-nosed Vipers, 5 Ceylon Pit Vipers, 1 Tail-lined Tree Snake.
- PHIPPS, J. H., 1 Serval.
- PIDGEON, A., 1 Roseate Cockatoo.
- PITT, Miss Frances, 1 Northern Viper (Black var.).
- PORTER, Sydney, F.Z.S., 1 New Zealand Hawk.
- POTTER, Miss E., 1 European Pond Tortoise.
- PROCTER, Mrs. Dod, 1 Crested Newt.
- PURKIS, G. F., 1 Great Northern Diver.
- PURVES, Mrs., A Batch of eggs of the Ceylon Leaf Insect.
- RASHLEIGH, E. S., F.Z.S., 1 Common European Toad.
- REED, Mrs. E., 5 European Tree Frogs, 2 Fire-bellied Toads.

- REID, J., 2 Greater Sulphur-crested Cockatoos.
- REVENTLOW, Countess, 1 Grey-headed Lovebird.
- REYNOLDS, Mrs., 1 Shaw's Jird.
- REYNOLDS, P. W., C.M.Z.S., 2 Dwarf Owls.
- RICE, Mrs., 1 Budgerigar.
- RICHARDSON, Miss G. N. C., 1 Roseate Cockatoo.
- RICKARDS, Squadron-Leader A. R. M., R.A.F., 1 Ratel.
- RIGBY, The Misses Joan & Barbara, 1 Painted Terrapin.
- ROGERS, H. E., F.Z.S., 1 Cooke's Tree Frog, 1 Red-headed Coral Snake, 2 Spectacled Cayman, 2 Blue-tongued Skinks, 2 Cunningham's Skinks, 3 Greater Skinks.
- ROSE, H. G., F.Z.S., 1 Dormouse, 3 Long-tailed Field Mice.
- RUMSEY, Mrs., 2 Green Lizards.
- RUSSELL, Mrs., 2 Greek Tortoises.
- SALTER, T. E., 1 Dormouse.
- SANDERSON, I. T., F.Z.S., 1 Allen's Bush Baby.
- SCHOLEFIELD, Commander H. L., 2 Pin-tailed Whydah Birds, 2 Robert's Duikers, 2 Emerald Spotted Wood Doves.
- SELBORNE, The Rt. Hon. The Earl of, K.G., P.C. (Hon. Member), 1 Gannet.
- SHANNON, D., Green Turtle.
- SINCLAIR, Sir Ronald, Bt., 1 Green Lizard.
- SMITH, A. St. Alban, F.Z.S., 2 Blood Pythons, 1 Black & Gold Tree Snake, 3 Red-marked Burrowing Snakes, 4 Orange-striped Snakes, 1 Tail-lined Tree Snake, 2 Indian Cobras, 2 Speckled Water Snakes, 2 Geckos, 3 Painted Tree Snakes, 1 Peron's House Gecko, 4 Bridled House Geckos, 2 Hamadryads, 2 Common Big-toothed Snakes, 1 Flat-tailed Gecko, 5 Common Malayan Frogs, 1 Common Malayan Tree Frog, 1 Dog-faced Snake, 7 Emerald Tree Snakes, 2 Black & Gold Tree Snakes, 1 Reticulated Python, 1 Eight-lined Snake, 1 Sealing Wax Snake, 1 Frog, 2 Malayan Grass Snakes.

- SMITH, S. H., 1 Common Carp, 1 Common Tench.
- SMITHERS, Mrs. F., 1 Greek Tortoise.
- SNELSON, Mrs. A. J., 2 Pileated Herons.
- SPEER, W., 1 Slender-billed Cockatoo.
- SPILLER, R., 1 Giant Toad.
- STEADMAN, Commander W. R., 5 Young Green Turtles.
- STEPHENS, F. W., 1 Greek Tortoise.
- STEVENS, T., 1 North American Catfish.
- STEWART, Mrs. M., 1 Ring-tailed Coati.
- STOCKTON, C. B., 1 Cheetah.
- STUART, A. J., 1 Brazilian Tortoise.
- STUART, D. M., 1 Stump-tailed Skink, 2 Cunningham's
Skinks, 1 Northern Blue-tongued Skink, 3 Moloch
Lizards, 3 Racehorse Lizards.
- SUCKLING, Mrs., 1 Crab-eating Monkey.
- SYMONS, R., 1 Eastern Bell Toad.
- TAMPIN, W. H., 1 Greek Tortoise.
- TAYLOR, W., 1 White-nosed Monkey, 3 Grey Parrots.
- THORESBY, Miss E. C., 2 Wild Rabbits.
- THOW, Mrs., 1 Crimson Finch, 2 Zebra Finches, 1 Masked
Grass Finch.
- TIGAR, Mrs. Wharton-, F.Z.S., 1 Black-necked Stilt,
1 Brazilian Tree Porcupine, 1 Hairy Armadillo,
2 Brown Capuchin Monkeys, 1 Guiana Hermit Hum-
ming Bird.
- TILBY, A., 1 Small-lobed Chameleon.
- TOLMAN, Mrs., 1 Levillant's Parrot.
- TOMLINSON, Mrs., 1 Male Stick Insect.
- TRIEFUS, P., 1 Brown Capuchin Monkey.
- "TUSCAN STAR," THE CAPTAIN OF THE S.S., 1 American
Ringed Snake.
- TWEEDMOUTH, The Lady, 1 Fischer's Lovebird.

- UNDERHILL, A. J., 1 Bosman's Potto.
- UPSTONE, G. C., C.M.Z.S., 2 Home's Hinged Tortoises,
1 Nile Crocodile, 1 Rufescent Snake, 1 Margouillat
Lizard, 1 Bay Duiker, 1 Mona Monkey, 1 Patas Monkey,
1 Green Monkey, 1 Black Rail, 1 Half-collared Turtle-
Dove, 6 Tambourine Doves, 4 Delalande's Green
Pigeons, 2 Orange-cheeked Waxbills, 2 Bronze-
winged Mannakins.
- VEITCH, William, 1 Blue-fronted Parrot.
- VENUS, H. W., 1 Ring-necked Parrakeet.
- VON OMPHEDA, The Baroness F., 1 Pekin Robin.
- WAITE, J. Faulkner, 1 Carrion Crow.
- WALKER, Mrs. E. A., F.Z.S., 6 Shaw's Jirds.
- WALKER, Miss N. L., 1 Sooty Mangabey.
- WALTON'S BANANA STORE, 1 Cenchoa Snake.
- WAPPET, R. P., 1 Grey Mongoose.
- WATHEN, Mrs. G. A., 3 Weasels.
- WATSON, Dr. W. H., M.C., 1 Royal Antelope.
- WELLS, H. W., 1 Tataupa Tinamou.
- WEST, C. T., 2 Squirrel Monkeys.
- WHEATLEY, R. E. P., 2 Persian Spotted Mongooses.
- WHITAKER, W. I., 2 Passerine Parrotlets.
- WHITE, A., 2 Fer-de-Lance, 1 Collared Peccary.
- WHITE, A. J., 2 White-mouthed Mud Terrapins, 1 Pike-
head Snake, 1 Giant Toad, 1 Banded Basilisk, 1
Abbess Lizard.
- WHITLEY, H., F.Z.S., 4 Patagonian Cavies.
- WILCOX, Miss C., 1 Greek Tortoise.
- WILLMOTT, Dr. L. A., 4 Golden Tortoise Beetles.
- WILMHOLT, Master R. J., 2 European Pond Tortoises,
2 Green Lizards, 1 Shaw's Jird, 1 Slowworm.
- WILMOT, Mrs., 1 Roseate Cockatoo.

- WILSON, Andrew, F.Z.S., 1 Hallowell's Green Mamba.
 WILSON, Mrs., 1 Reeves Terrapin.
 WILSON, The Executors of the late Col. P. N., 1 Sambar.
 WINFIELD, R., 1 Small-lobed Chameleon.
 WOODWARD, Stanley F., C.M.Z.S., 2 Puff Adders, 1 African
 Lined Snake, 1 Meleager Snake.
 WORKS, H.M. Office of, 1 Greater Flamingo.
 YOUNG, D. W. Thorpe-, 1 Sumichrast's Night Mouse.
 YULE, Lady, F.Z.S., 1 Laughing Kingfisher.
 ZAIR, Dr. A. H., 1 Iguana.
 ZOOLOGICAL SOCIETY, New York, King Crabs.

II.—To WHIPSNADDE PARK.

- H.M. THE KING, 1 Afrikander Bull, 2 Afrikander Cows.
 BEDFORD, H. G. The Duke of, K.G., F.R.S., 3 Rheas,
 7 Sika Deer, 2 Western Waterbuck.
 DUNN, Mrs. E. M., 1 Roseate Cockatoo.
 EZRA, Alfred, O.B.E., F.Z.S., 1 Chapman's Zebra, 1 Goat,
 1 Donkey.
 EZRA, Sir David, 12 Demoiselle Cranes.
 FARQUHARSON, W., 1 Rhesus Monkey.
 FLETCHER, Capt. F. H., F.Z.S., 1 Rhesus Monkey.
 FULLER, Mrs. R. L., 1 White Pelican.
 GLYN, F. M., 2 Ravens.
 HOLLAND, W. Roper-Lumley-, C.M.Z.S., 1 Angora Goat.
 HOLLAND, Mrs. W. Roper-Lumley-, 1 Angora Goat.
 HOLLINS, Mrs. S. A., 1 Tortoise.
 HOPE, Lady Estella, 1 Shetland Pony.
 MILLER, E. Eustace, F.Z.S., 6 Cereopsis Geese.
 ONTARIO, PROVINCE OF, 3 Virginian Deer.
 PIPE, Miss, 1 Blue-fronted Parrot.
 TANKERVILLE, The Earl of, F.Z.S., 1 Chillingham Cow.

72. STATE OF THE FINANCES.—The Report of the Auditors of the Accounts for 1933 is issued to Fellows, bound with this Report.

73. ASSETS 1932 AND 1933.—At the end of the year the total Assets of the Society amounted to £203,619 19s. 6d., an increase of £11,717 15s. 11d. on the corresponding figure for 1932. The Assets do not include the de Arroyave Fund.

74. PENSIONS FUND.—The Pensions Fund, instituted in 1926, increased in 1933 by £1,517 7s. 2d., being the amounts of the composition fees of 11 compounders who had died in the course of the year, £22 7s. 2d., the profits from the sale of matches, and a grant of £1,000 from the general funds of the Society. It now amounts to £5,074 0s. 4d.

75. LIABILITIES 1932 AND 1933. — The liabilities amounted to £47,324 12s. 6d., a decrease of £1,164 4s. 8d. on the corresponding figures for 1932.

76. BALANCE 1932 and 1933.—The balance, a surplus of assets over liabilities, amounted to £156,295 7s. 6d., an increase of £12,882 0s. 7d. on the corresponding figure for 1932, representing the sum of the increase in assets (paragraph 73) and decrease in liabilities (paragraph 75).

77. INCOME 1932 AND 1933.—There was a total decrease of income, amounting to £912 19s. 5d., representing the difference between the increase in income in London, amounting to £2,894 17s. 6d., and the decrease in income from Whipnade, amounting to £3,807 16s. 11d.

78. EXPENDITURE 1932 AND 1933.—There was a total decrease of £9,822 8s. 9d., representing the difference between a decrease of expenditure at Whipnade of £11,469 1s. 11d., and an increase in London of £1,646 13s. 2d.

79. DE ARROYAVE FUND.—The Capital of this is shewn separately, as it is a Trust Fund and not part of the assets of the Society (see pp. 102, 103).

80. 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.

81. 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.

Zoological Society,

Regent's Park,

London, N.W.8.

March 21st, 1934.

REPORT OF THE COMMITTEE OF AUDITORS OF THE ACCOUNTS

OF THE

ZOOLOGICAL SOCIETY

OF LONDON,

APPOINTED 17th JANUARY, 1934.

To

22nd February, 1934.

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

In accordance with Chapter X of the By-laws, we have examined the Accounts of the Society for the year ended 31st December, 1933, 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 £203,619 19s. 6d., and the Liabilities to £47,324 12s. 0d. The General State of the Funds of the Society therefore showed a surplus of Assets over Liabilities amounting to £156,295 7s. 6d., subject to the estimated values of some of the Assets. The Cash in the Bankers' hands and at the Office amounted to £19,909 16s. 4d.

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 accounts include the result of the working of the Catering Departments in London and Whippsnade for the year. 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) J. E. SAUNDERS (*Chairman*).

R. V. GLOVER.

FRED A. JORDAN.

H. A. JUDGE.

SYDNEY A. KEMP.

W. H. SAWYER.

HARRY WILMOT.

Corresponding
Figures,
31st Dec., 1932.

LIABILITIES.

£ s. d.			£ s. d.			£ s. d.		
			To Sundry Creditors for Provisions, Materials and General Expenses					
			4,818 11 1 General Account			5,991 13 8		
			1,887 11 2 Catering Departments			1,481 7 2		
6,706	2	3				7,473 0 10		
516	8	11	,, Subscriptions, etc., received in advance			484 12 8		
			,, Reserve for Cost of "Zoological Record," being special donations towards Vols. 59 and onwards:—					
			Balance at 1st January, 1933			2,286 15 4		
			Add Donations received during year			340 11 5		
						2,627 6 9		
			Deduct Amount transferred to Income and Expenditure Account during year			309 8 7		
2,286	15	4				2,317 18 2		
			,, Drummond's Branch, Royal Bank of Scotland, Regent's Park Catering Department Building Loan—					
			Balance at 1st January, 1933			35,375 0 0		
			Deduct amount repaid during year			3,400 0 0		
35,375	0	0				31,975 0 0		
			,, Pensions Fund—					
			Balance at 1st January, 1933			3,556 13 2		
			Add Further transfer to 31st December, 1933, of Fees of deceased Compounders			495 0 0		
			Profit on Sale of Book Matches			22 7 2		
			Transfer from Income and Expenditure Account			1,000 0 0		
3,556	13	2				5,074 0 4		
47	17	0	,, Chillingham Cattle Fund, Trustees of—					
			Balance as per Account					
						47,324 12 0		
48,488	16	8						
			,, Balance being Excess of Assets over Liabilities—					
			Composition Funds—					
			Balance at 1st January, 1933 18,405 0 0					
			Add 10 Fees at £45 received during year			450 0 0		
						18,855 0 0		
			Deduct Fees transferred to Pensions Fund			495 0 0		
18,405	0	0				18,360 0 0		
			Animals Purchase and Insurance Fund—					
			Balance at 1st January, 1933 3,309 3 1					
			Add Interest received from Investments			158 2 8		
			Transfer from Income and Expenditure Account 200 0 0					
3,309	3	1				3,667 5 9		
			Carried forward			£22,027 5 9 £47,324 12 0		
£70,202	19	9				£147,324 12 0		

ASSETS.

Corresponding
Figures,
31st Dec., 1932.

£	s.	d.		£	s.	d.	£	s.	d.
			By Freehold Property Whipsnade Park—						
			Cost of Land and Buildings, Enclosures, etc., including Redemption of Land Tax and Tithes at 1st January, 1933	78,932	18	6			
			Add Redemption of Land Tax and Tithes (including Legal Costs) during the year ...	216	1	4			
				<u>79,148</u>	<u>19</u>	<u>10</u>			
			Deduct Amount borrowed from Composition Funds (see page 93)	13,844	4	4			
65,088	14	2					<u>65,304</u>	<u>15</u>	<u>6</u>
			„ Plant, Fittings and Furniture—						
			In Buildings and Enclosures at Regent's Park and Whipsnade Park (not valued) ...	—					
			In Catering Departments	3,122	2	11			
3,122	2	11					<u>*3,122</u>	<u>2</u>	<u>11</u>
			„ Animals belonging to the Society:—						
			Regent's Park—						
			Balance at 1st January, 1933	36,250	0	0			
			Less Net Decrease at 31st December, 1933	245	15	0			
				<u>36,004</u>	<u>5</u>	<u>0</u>			
			Whipsnade Park—						
			Balance at 1st January, 1933 8,464 12 6						
			Add Net Increase at 31st December, 1933	1,004	12	6			
				<u>9,469</u>	<u>5</u>	<u>0</u>			
44,714	12	6					<u>*45,473</u>	<u>10</u>	<u>0</u>
28,480	15	0	„ Books in Library				<u>*28,480</u>	<u>15</u>	<u>0</u>
			„ Stocks in hand—						
			General Account—						
600	0	0	Publications	*600	0	0			
500	0	0	“ Zoological Record ”	*500	0	0			
387	0	7	Electrical Sundries (at cost)	*376	0	1			
248	19	2	Official Guides, Regent's Park (at cost) ...	132	6	0			
127	11	3	Do. Whipsnade Park (at cost) ...	194	16	3			
237	10	8	Picture Post Cards, Regent's Park (at cost)	154	13	0			
68	12	6	Do. Whipsnade Park (at cost)	21	17	0			
25	14	3	Photographic Films, etc. (at cost)	6	8	6			
29	19	5	Book Matches (at cost)	18	19	2			
77	17	2	Petrol, Oil, etc., Whipsnade Car Park (at cost)	63	15	10			
2,033	14	4	Catering Departments—Provisions, etc. (at cost)	*2,084	13	5			
							<u>4,153</u>	<u>9</u>	<u>3</u>
			„ Debts due to the Society (since received or considered good)—						
			General Account—						
			Arrears of Fellowship Subscriptions						
200	0	0	£779 7s. 0d., estimated to realise ...	200	0	0			
			Arrears of Admission Fees (Fellows)						
200	0	0	£245, estimated to realise	200	0	0			
198	0	0	Arrears of Subscriptions to “ Zoological Record ”	282	7	6			
1	5	0	Arrears of Subscriptions to Publications ...	18	0				
			“ Zoological Records ” Sales £225 7s. 11d.						
137	7	10	estimated to realise... ..	191	15	7			
159	7	0	Publication Sales	156	6	5			
326	14	2	Garden Sales	296	19	0			
9	10	0	Income Tax Recoverable	28	10	0			
341	19	7	Miscellaneous	198	8	3			
78	12	0	Catering Department—Miscellaneous	152	8	11			
							<u>1,707</u>	<u>13</u>	<u>8</u>
147,395	19	6	Carried forward				<u>£148,242</u>	<u>6</u>	<u>4</u>

* As per valuations by Society's Officials.

Corresponding
Figures,
31st Dec., 1932.

ASSETS.

Corresponding Figures, 31st Dec., 1932.				ASSETS.					
s. d.	£	s. d.		£	s. d.	£	s. d.	£	s. d.
12	147,395	19	6	Brought forward	...	148,242	6	4	
				By Rates, Insurances, etc., paid in advance—					
				790 19 9 General Account	...	783	8	8	
				346 0 1 Catering Departments	...	283	13	9	
	1,136	19	10					1,067	2
	150	13	6	„ “Zoological Record” Compilation Fees, etc., paid in respect of Vol. 70, not yet published				168	16
				„ Investment of Pensions Fund (at cost)—					
				£5,351 4s. 2d. Conversion 3½ per cent. Stock	...	4,048	4	3	
				£4 6s. 10d. Consolidated 2½ per cent. Stock	...	3	8	11	
	3,553	4	3					4,051	13
				„ Investment of Composition Funds (at cost)—					
				Whipsnade Park (Part Purchase Price)	...	13,844	4	4	
				£254 14s. 9d. London County 3½ per cent. Stock	...	254	0	10	
				£5,328 14s. 0d. Conversion 3½ per cent. Stock	...	3,991	14	10	
				£179 10s. 2d. Consolidated 2½ per cent. Stock	...	135	0	0	
	18,315	0	0					18,225	0
				„ Investment of Animals Purchase and Insurance Fund (at cost)—					
				£6,068 17s. 10d. Consolidated 2½ per cent. Stock	...			3,290	0
	3,290	0	0						
				„ Investment of Aquarium Reserve Fund (at cost)—					
				£8,056 2s. 6d. Conversion 3½ per cent. Stock	...			6,409	17
	6,409	17	5						
				„ Investment of Regent’s Park Catering Depart- ment Plant and Renewals Fund (at cost)—					
				£2,505 8s. 2d. Conversion 3½ per cent. Stock	...	1,955	7	4	
				£406 0s. 10d. Consolidated 2½ per cent. Stock	...	300	0	0	
	1,955	7	4					2,255	7
				„ Cash at Bank—					
				General Accounts—Deposit Account	...	8,500	0	0	
				Catering Departments—Current Account	...	2,403	16	5	
				Do. —Deposit Account	...	7,000	0	0	
				Do. Plant and Renewals Fund	...	300	0	0	
				Composition Fund	...	135	0	0	
				Animals Purchase and Insurance Fund	...	377	5	9	
				Aquarium Reserve Fund	...	1,030	0	0	
				Pension Fund	...	1,022	7	2	
						20,768	9	4	
				Less General Accounts—Current Account Overdrawn	...	2,078	6	9	
						18,690	2	7	
				„ Cash Floats—					
				General Account	...	680	0	0	
				Catering Departments	...	247	14	1	
						927	14	11	
				„ Cash in Office—					
				General Account	...	184	17	9	
				Catering Departments	...	107	1	1	
						291	18	10	
	9,695	1	9					19,909	16
19	191,902	3	7					£203,619	19

NOTE.—At Minimum Stock Exchange quotations at 2nd January, 1934, the Securities held were valued at £26,776 16 10 showing an appreciation of £6,389 3 1 on original cost.

Corresponding
Figures,
31st Dec., 1932.

INCOME.

£	s.	d.		£	s.	d.	£	s.	d.
			REGENT'S PARK.						
1,485	0	0	Admission Fees (Fellows)				1,735	0	0
21,381	2	6	Subscriptions (Fellows and Professional Zoologists)				21,209	16	6
322	2	6	Interest on Investments				343	8	9
47,852	12	6	Admissions to Gardens... ..				47,531	17	0
			Admissions to Aquarium	8,818	13	1			
			Interest on Aquarium Reserve Fund Investment ...	281	19	3			
9,444	12	6					9,100	12	4
2,291	12	4	Riding Receipts				2,640	13	5
100	9	3	Automatic Feeding Machines—Receipts				546	16	4
65	4	11	Bath Chairs, Hire of				72	2	4
241	14	1	Animals, etc., Sale of				263	10	4
2,457	3	7	Official Guides, Sale of				2,654	4	2
687	12	4	Picture Post Cards, Sale of				991	13	8
391	14	0	Photographic Films, Cameras, etc., Sale of ...				366	1	8
50	0	0	Transferable Ivory Tickets, Sale of				20	0	0
23	5	0	Photographers and Artists Permits, Sale of ...				25	15	0
144	12	0	Cinematograph Film Permits, Sale of				—		
3	9	2	Gramophone Record Royalties				2	4	6
			“Zoological Record,” Sale of—						
			Vols. 1-58... ..			116	17	1	
			,, 59-68... ..	242	7	11			
			,, 69	250	7	11			
				492	15	10			
			“Zoological Record,” Subscriptions to—						
			Vols. 59-68... ..	4	0	0			
			,, 69	756	0	0	760	0	0
							1,252	15	10
1,211	16	1					1,369	12	11
429	3	6	Publications, Subscriptions to				382	0	0
354	5	2	Publications, Sale of				339	16	2
			Catering Department, Regent's Park—						
			Profit for the year... ..	7,349	16	4			
			Rent of Department	4,000	0	0			
			,, Lavatories	809	9	8			
				12,159	6	0			
			Less Cost of Repairs, Alterations, etc., carried out by Works Dept., etc.—						
			Department	1,303	13	6			
			Lavatories	210	11	8			
				1,514	5	2			
8,413	0	0					10,645	0	10
2	4	0	Miscellaneous Receipts				7	7	0
£97,352	15	5	Carried forward				£100,247	12	10

PENDITURE ACCOUNT.

ENDED 31ST DECEMBER, 1933.

Corresponding Figures, 31st Dec., 1932.		EXPENDITURE.																
s.	d.	£	s.	d.	REGENT'S PARK.					£	s.	d.	£	s.	d.			
0	0	2,073	5	9	Rents, Rates and Insurances, Gardens								2,040	8	2			
16	6	22,589	17	8	Salaries—Staff and Keepers, Gardens					22,358	1	0						
8	9	6,845	10	0	Do. Office					6,881	12	0						
17	0				2,013	6	8	Pensions, Gardens					2,346	17	6			
								<i>Deduct</i> Interest on Pensions Fund										
12	4				153	16	1	Investment					164	3	3			
13	5																	
16	4				1,859	10	7						2,182	14	3			
2	4							<i>Add</i> Contribution to Pensions Fund					1,000	0	0			
10	4	1,859	10	7									3,182	14	3			
4	2	11,304	8	6	Provisions, including Storekeeper's Wages								10,960	8	0			
13	8				Animals, Cost and Carriage of					1,819	6	4						
1	8				<i>Add</i> Contribution to Purchase and Insurance of													
0	0				Animals Fund					200	0	0						
15	0	2,738	15	0									2,019	6	4			
4	6	8,399	4	3	Menagerie Maintenance:—Fuel, Water, Uniforms, Clean- ing Materials, Electricity, Gas and Other Expenses								8,113	13	6			
					Aquarium Maintenance—													
		1,220	0	8	Exhibits, Cost and Carriage of					981	3	8						
		3,206	5	6	Salaries and Wages					3,409	16	2						
		2,562	11	2	Other Expenses					3,227	1	0						
		6,988	17	4						7,618	0	10						
		90	0	0	<i>Less</i> Legacy from the late Miss Isabell Wallace													
		6,898	17	4						7,618	0	10						
12	11				<i>Add</i> Contribution to Aquarium													
0	0				Reserve Fund					1,000	0	0						
16	2	6,898	17	4									8,618	0	10			
					Prosectorium Expenses—													
		1,687	10	3	Salaries					1,497	19	8						
		200	2	4	Chemical Apparatus, etc.					112	13	2						
		1,887	12	7									1,610	12	10			
					Works Department:—Upkeep of Buildings, Paths, etc.—													
		6,664	1	5	Wages					5,547	2	6						
		5,502	4	10	Materials and Sundries					5,237	11	6						
		12,166	6	3									10,784	14	0			
					Gardeners' Expenses—													
		3,695	1	7	Wages					3,445	3	1						
		811	13	5	Seeds, Plants, Implements, etc.					828	19	5						
		4,506	15	0									4,274	2	6			
0	10				Fuel, Light, etc., at Resident Curator's and Keepers'													
7	0	442	18	9	Houses and Offices								399	12	4			
					House and Office Expenses, Central Offices—													
					Wages of Housekeeper, Servants and													
		612	18	2	Messengers					614	3	11						
		21	10	10	Uniforms					24	8	3						
		146	7	2	Fuel and Light					245	9	11						
		199	15	10	Telephone Rental and Calls					191	5	5						
		528	15	3	Postages, Parcels, etc.					515	11	11						
		65	13	9	Refreshments at Scientific Meetings					55	0	8						
		262	13	3	Rates and Insurance					261	17	3						
12	11	81,713	1	8	£1,837	14	3	Carried forward					£1,907	17	4	£81,243	5	9

Corresponding
Figures,
31st Dec., 1932.

INCOME.

REGENT'S PARK.

£ s. d.
97,352 15 5

Brought forward

£ s. d. £ s. d.
100,247 12 11

£97,352 15 5

Total Income Regent's Park (see page 12) ...

£100,247 12 11

EXPENDITURE.

Corresponding
Figures,
31st Dec., 1932.

		£	s.	d.	REGENT'S PARK.					£	s.	d.	£	s.	d.				
81,713	1	8	1,837	14	3	Brought forward ...					1,907	17	4	81,243	5	9			
		House and Office Expenses, Central Offices— <i>contd.</i>																	
		9	5	2	Books of Reference ...					12	18	0							
		180	7	10	Repairs, Office Fittings and Appliances					110	12	2							
		—	International Fauna Conference Expenses					21	13	2									
		102	18	10	Sundries ...					134	0	1							
		2,130	6	1						2,187	0	9							
		Less Transfer from De Arroyave Trust Fund <i>re</i> International Fauna Conference Expenses ...					21	13	2										
2,130	6	1											2,165	7	7				
17	3	4	Cinematograph Expenses ...										9	17	11				
		Library Expenses :—																	
		851	0	0	Salaries ...					933	0	0							
		853	18	0	Books and Binding, etc. ...					759	2	2							
		1,704	18	0						1,692	2	2							
		Less Donation from Mrs. E. K. Watkins					3	3	0										
1,704	18	0											1,688	19	2				
802	2	8	Band Expenses ...										691	4	4				
537	8	6	Advertisements ...										560	0	6				
1,420	15	8	Stationery and Miscellaneous Printing										1,220	1	6				
		Official Guides :—																	
		1,259	0	11	Printing, etc. ...					1,150	13	8							
		189	17	7	Less Income from Advertisements ...					144	5	2							
1,069	3	4											1,006	8	6				
		Picture Post Cards :—																	
		108	13	9	Printing, etc. ...					173	10	8							
		15	13	0	Repairs to Machines ...					12	17	0							
124	6	9											186	7	8				
		"Zoological Record"—																	
		2,096	12	2	Preparation and Printing of Vol. 69					2,062	4	5							
		Deduct—																	
		Transfer from																	
		76	0	0	Davis Fund					76	0	0							
		Transfer from																	
		Donations																	
		408	17	6	Reserve A/c					309	8	7							
		Transfer De																	
		Arroyave																	
		Trust Fund					424	0	0										
		484	17	6						809	8	7							
1,611	14	8											1,252	15	10				
		2,209	13	11	Publications, Cost of ...					2,292	17	2							
		Less Transfer from De Arroyave Trust Fund					100	0	0										
2,209	13	11											2,192	17	2				
284	17	10	Photographic Films, Cameras, etc., Cost of ...										255	19	0				
68	13	6	Law Expenses and Compensation ...										1	16	6				
		82	0	0	Scientific Grants and Composition														
		Fees Paid by Society ...					77	0	0										
		37	0	0	Less Transfer from De Arroyave Trust Fund					77	0	0							
45	0	0																	
		Medal, Cost of Design and Cutting Dies, Joan Procter																	
		Memorial Medal ...										90	15	0					
1,827	17	3	Interest on Regent's Park Catering Department Loan										1,591	17	5				
5	3	7	Miscellaneous Payments ...										7	9	4				
		Expenditure on Special Works :—																	
		1,002	1	9	New Gorilla House (Balance) ...					3,055	18	6							
		1,000	0	0	Less Transfer from De Arroyave Trust Fund														
2	1	9											3,055	18	6				
12	1	£95,574	8	6	Total Expenditure Regent's Park (see page 101)										£97,221	1	8		

Corresponding
Figures,
31st Dec., 1932.

INCOME.

£		s.		d.		WHIPSDADE PARK.						£		s.		d.		
Admission to Park—																		
22,081		0		1		Visitors	18,784	14	10				
199		15		0		Cars	161	15	0				
22,280		15		1								18,946		9				
Car Park Receipts—																		
3,976		9		0		Admissions	3,372	10	4				
1,253		5		7		Petrol, Oil, etc., Sale of	1,165	14	11				
5,229		14		7								4,538		5				
828		19		9		Omnibus Receipts	...	...	...	...	...	829		11			
739		15		4		Riding Receipts...	...	...	...	...	...	734		7			
80		14		3		Bath Chairs, Hire of	...	...	...	...	...	73		4			
10		4		0		Field Glasses, Hire of	...	...	...	...	...	8		14			
444		4		1		Animals, etc., Sale of	...	...	...	...	...	126		7		5,66	
1,570		1		9		Official Guides, Sale of	...	...	...	...	...	1,259		11			
309		12		6		Picture Post Cards, Sale of	...	...	...	...	...	191		15			
2		6		6		Photographers' and Artists' Permits, Sale of	...	...	...	...	...	1		5			
12		0		0		Cinematograph Film Permits, Sale of	...	...	...	...	...	36		0		1,074	
Cottages—																		
52		0		0		Rents	...	...	...	...	...	53		0		0	
Subsidy under Housing (Financial Provisions) Act, 1924																		
44		0		0		...	...	...	...	...	...	44		0		0	
96		0		0								97		0				
Catering Department, Whipssnade Park—																		
1,723		12		7		Profit for the year	...	...	...	...	...	2,671		13		11	
Less Proportion of Cost of Repairs, Alterations, etc., carried out by Works Dept.																		
275		2		11		...	...	...	...	...	...	271		17		2	
1,448		9		8								2,399		16				
7		0		0		Miscellaneous Receipts	...	...	...	...	...			15			
£33,051		0		6		Carried forward						£29,243		3		33,228		

Corres
Fig
31st De£
73
26,4
1,84
2,70

1,71

829 11

734 7

73 4

8 14

126 7

1,259 11

191 15

1 5

36 0

1,074

408

382

125

97 0

1,165

2,399 16

15

533

67

106

22,959

10,269

£33,228

Corresponding
Figures,
31st Dec., 1932.

EXPENDITURE.

WHIPSNADE PARK.

s.	£	s.	d.		£	s.	d.	£	s.	d.
	739	2	0	Rent, Rates and Insurances				867	4	7
	20	1	3	Income Tax (Schedule A, Cottages, etc.)				40	18	9
	6,415	16	10	Salaries, Staff and Keepers				6,372	5	4
9	1,846	8	5	Provisions, including Cultivation of Land, etc.				2,001	2	8
	2,700	7	6	Animals, Cost and Carriage of				312	7	6
				Menagerie Maintenance:—Fuel, Water, Uniforms, Cleaning Materials, Electricity, Gas and Other Expenses				1,509	6	4
5	1,711	5	11	Works Department:—Upkeep of Buildings, Paths, etc.—						
11				3,100 18 4 Wages	3,468	13	0			
7				2,560 15 3 Materials and Sundries	2,428	4	0			
4	5,661	13	7					5,896	17	0
14				Gardeners' Expenses—						
7				811 10 2 Wages	866	11	0			
11				262 12 1 Seeds, Plants, Implements, etc.	71	19	6			
15	1,074	2	3					938	10	6
5				Office, Bothy and Cottages—						
0	408	8	8	Fuel, Light, Wages, etc.				326	15	7
	382	12	6	Advertisements				415	11	0
	125	16	5	Stationery and Miscellaneous Printing				32	14	11
0				Car Park—						
	1,066	6	7	Petrol, Oil, etc., Cost of	1,043	12	7			
	98	17	4	Hire Purchase Instalments on Pumps	98	9	5			
	1,165	3	11					1,142	2	0
				Official Guides—						
	664	16	9	Printing, etc.	530	9	0			
	131	8	10	Less Income from Advertisements	116	2	0			
16	533	7	11					414	7	0
15	67	8	9	Picture Post Cards:—Printing, etc.				46	15	6
		8	6	Field Glasses, Purchase and Maintenance of				—		
	106	13	5	Law Expenses and Compensation				—		
		9	0	Miscellaneous Payments				—		
	22,959	6	10	Total Maintenance				20,316	18	8
				Whipsnade Park Development—						
				Improvement and Extension of County Roads—						
				Moiety of Loan Charges payable by the Bedfordshire County Council	961	10	0			
				Deduct Transfer from De Arroyave Trust Fund	961	10	0			
				Alterations to Pump and Engineer's Fees, etc....	273	3	5			
				Catering Department—						
				Additions and Alterations to, and Equipment of, Hall Farm Premises and Kiosks, etc.	1,245	10	3			
				Monopoly Value—Purchase of Capital Value (£3,500)—1st Instalment	875	0	0			
				Monopoly Value and Renewal of Licence— Legal Costs	247	14	1			
					2,641	7	9			
				Deduct Transfer from De Arroyave Trust Fund	1,198	12	0			
	10,269	9	6					1,442	15	9
3	33,228	16	4	Carried forward				£21,759	14	5

Corresponding
Figures,
31st Dec., 1932.

INCOME.

£	s.	d.		£	s.	d.	£	s.	d.
			WHIPSNADE PARK.						
33,051	0	6	Brought forward	...	...	...	29,243	3	7
<hr/>							<hr/>		
33,051	0	6	Total Income, Whipsnade Park	...	...	...	29,243	3	7
97,352	15	5	Total Income, Regent's Park (see page 96)	100,247	12	11
<hr/>							<hr/>		
130,403	15	11					129,490	16	6
<hr/>							<hr/>		
£130,403	15	11					£129,490	16	6
<hr/>							<hr/>		

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EXPENDITURE.

Corresponding Figures, 31st Dec., 1932.						
£	s.	d.		£	s.	d.
			WHIPSNADE PARK.			
33,228	16	4	Brought forward	21,759	14	5
<hr/>				<hr/>		
33,228	16	4	Total Expenditure, Whipnade Park... ..	21,759	14	5
95,574	8	6	Total Expenditure, Regent's Park (see page 97) ...	97,221	1	8
<hr/>				<hr/>		
128,803	4	10		118,980	16	1
1,600	11	1	Balance being Excess of Income over Expenditure for year carried to Balance Sheet	10,510	0	5
<hr/>				<hr/>		
£130,403	15	11		£129,490	16	6
<hr/>				<hr/>		

Corresponding
Figures,
31st Dec., 1932.

INCOME.

DE ARROYAVE TRUST

Trustees—The Official Trustees of the Society

£126,435 0 5 Consolidated

£	s.	d.		£	s.	d.	£	s.	d.
3,144	5	6	Interest on Investment (per Official Trustees of Charitable Funds)	3,160	17	4			
555	2	11	Income Tax Recovered (less expenses)	23	11	1			
							3,184	8	5

£3,699 8 5

£3,184 8 5

CHILLINGHAM CA

Trustees—Sir Peter Chalmers Mitchell, C.B.E.

—			Balance brought forward from 1932				47	17	0
447	17	0	Subscriptions and Donations	93	2	6			
100	0	0	Contribution by the Society transferred from the De Arroyave Trust Fund... ..	359	0	6			
							452	3	0

£547 17 0

£500 0 0

DAVISTON TRUST

£1,520 Southern Railway Co. 5

76	0	0	Interest on Investment				76	0	0
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£76 0 0

£76 0 0

We hereby certify that we have audited the Books, Accounts and Vouchers of the Society and that the above Balance Sheet and accompanying Income and Expenditure Statement truly set forth the position as shown by the books of the Society. We have verified the explanations we have required.

23, Queen Victoria Street, London, E.C.4.
22nd February, 1934.

Corresponding
Figures,
31st Dec., 1932.

EXPENDITURE.

TRUST FUND.

Trustees of Charitable Funds.

Invested in $2\frac{1}{2}$ per cent. Stock.

£	s.	d.		£	s.	d.	£	s.	d.
3	3	0	Upkeep of the De Arroyave Grave at Highgate ...	3	3	0			
3	0	0	Expenses <i>re</i> Inspection of Tomb at Westbury ...	3	0	0			
3	3	0	Cost of Inscription on Tomb and Repairs to Mausoleum at Westbury ...	16	4	9			
—	—	—	Cost of Cleaning and Glazing Portrait ...	20	5	0			
46	13	8	Law Costs, etc. ...	—	—	—			
									42 12 9
1,722	2	7	Balance of Income appropriated to—						
			Whipsnade Park Development Account ...	1,198	12	0			
784	6	2	Improvement and Extension of Bedfordshire County Roads—Moiety of Loan Charges ...	961	10	0			
100	0	0	Chillingham Cattle Fund—Contribution ...	359	0	6			
37	0	0	Scientific Grants ...	77	0	0			
1,000	0	0	Regent's Park Special Works—Gorilla House ...	—	—	—			
—	—	—	Publications—Cost of Transactions ...	100	0	0			
—	—	—	“Zoological Record”—Cost of Vol. 69 ...	424	0	0			
—	—	—	International Fauna Conference Expenses ...	21	13	2			
									3,141 15 8
8 5	£3,699	8 5							£3,184 8 5

AMCATTLE FUND.

Trustees: J. B. E., F.R.S., and H. S. Gladstone, Esq.

17 0	250	0	0	Rent of Park ...	250	0	0		
	250	0	0	Contribution towards cost of Maintenance ...	250	0	0		
	47	17	0	Balance carried forward ...					500 0 0
0 0	547	17	0						£500 0 0

TRUST FUND.

Invested in Railway Co. 5% Preference Stock.

0 0	76	0	0	Applied towards Fees of Editor of “Zoological Record” ...					76 0 0
0 0	£76	0	0						£76 0 0

The Trustees of the Society for the year ended 31st December, 1933, and have found them to be in order and that the accounts have been drawn up in strict conformity therewith and that they fully and completely verified the Investments and the Cash Balances and have received all the information and

W. B. KEEN & CO.,
Chartered Accountants.





