# REPORTS

OF THE

# COUNCIL AND AUDITORS

OF THE

# ZOOLOGICAL SOCIETY

OF LONDON,

# FOR THE YEAR 1914.

PREPARED FOR THE ANNUAL GENERAL MEETING,

TO BE HELD ON

THURSDAY, APRIL 29TH, 1915.

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# REPORT OF THE COUNCIL

for the year ending 31st December, 1914.

# ANNUAL GENERAL MEETING.

1. The Eighty-sixth Annual General Meeting of the Society will be held on Thursday, April 29th, 1915, at 4 p.m. at the Offices of the Society, in the Gardens, Regent's Park, N.W.

# PROCEDURE AT THE ANNUAL GENERAL MEETING.

# (By-Laws, Chapter VII., Sections 1 and 2, as amended August 18th, 1904.)

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.

3. SECT. II. The course of procedure 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.  ${}_{\rm A}2$

# THE SOCIETY AND THE WAR.

4. At the end of July, 1914, the Society was extremely prosperous, and all indications pointed towards the year being a "record." The number of Fellows was increasing, the success of the new Mappin Terraces, and the general improvements in the gardens, were attracting large crowds of visitors, and the strong financial position of the Society had made it possible for the Council to prepare for the immediate carrying out of important new plans. When the war came, the Council reviewed the whole position and decided that it would be wise for the present to postpone all new works and to limit expenditure, so far as possible, to what might be necessary for adequate maintenance. Accordingly, no progress has been made with carrying out the new garden plans described in the Report for 1913, except that young trees have been planted along the lines of some of the new walks. The plans for the new restaurant had been approved by the Council and by H.M.'s Commissioners of Woods and Forests and of Works, and were ready to go to contractors for estimates, but no further action has been taken. Similarly the construction of an aquarium under the Mappin Terraces has been postponed, and, in the meantime, the columns supporting the upper terraces will be A second tunnel under the outer masked by creepers. circle and a new heating system for the Reptile House and Sanatorium were to have been begun in August, but the orders were cancelled. It was with deep regret that the Council decided on the temporary abandonment of these important works, but they believe that the future prosperity of the Society will be better assured by conserving its finances at present.

5. The ordinary expenditure of the Society was carefully revised, and arrangements were made by which it is expected that our activities in every department will be continued efficiently, if on a reduced scale.

6. The Council was of the opinion that members of the staff who were of suitable age and health should be encouraged to join the army for the duration of the war. It was agreed that in such cases the places of the men should be kept open, and that with respect to married men the War Office allowance to the wives and families should be made up to full pay, and with respect to unmarried men, two-thirds of the full pay should be reserved for them. It has been found possible to work with a reduced staff during winter, but temporary additional assistance is being provided for spring and summer.

# 7. List of the Society's Men who have enlisted in the Army.

S. Alden, Junior Keeper. G. R. Doubleday, Office. A. A. Dermott, House. C. Green, Gardener. A. Staniford, Gardener. L. W. Prickett, Works. Z. Rodwell, Works. R. W. Ball, Works. G. Baker, Helper. C. Bailey, Helper. R. P. Barr, Helper. W. Bodman, Helper. H. W. Brown, Helper. H. Budd, Helper. C. Dare, Helper. G. Graves, Helper. R. Hutley, Helper. R. Jones, Works.

- D. Lambden, Helper.
- R. Loades, Helper.
- H. Munro, Senior Keeper.
- G. P. Patterson, Helper.
- E. A. Pinder, Helper.
- C. Phillips, Helper.
- T. Raggett, Helper.
- E. Reed, Works.
- C. Rodwell, Junior Keeper.
- P. Russell, Helper.
- T. E. Sceales, Helper.
- E. Tanner, Junior Keeper.
- \*W. A. Stevens, Butcher.
- A. Whybrow, Helper.
- G. Williams, Helper.
- A. Woolley, Helper.
- P. H. Perry, Helper.

A. T. Watson, Pathologist's Attendant.

\* Has had to return on account of health.

8. It was also resolved to make special arrangements for admission to the Gardens during the war. (See paragraph, p. 40.)

# STATE OF THE ROLL OF MEMBERS.

# Fellows.

9. The number of Fellows and Fellows Elect on the 1st of January, 1914, was 4,733. During the year 305 Fellows were elected or re-admitted, and 238 died or otherwise ceased to be Fellows, the net addition to the roll for the year being 67; the total number on the roll on January 1st, 1915, reached 4,800, the largest in the history of the Society.

Even in the figures for 1914, the effect of the war on the Roll of Fellows is apparent, both in the smaller number of new Fellows and the larger number of resignations. Unfortunately, more resignations had to be accepted in the beginning of the current year, and it is to be feared that of the many Fellows on active service, some will fall in defence of their King and country. Nor can we hope for as many new candidates for the Fellowship as in normal times. In November, December and January, 1913-14, there were 157 candidates for the Fellowship; in the same period of 1914-15 only 61. In December and January, 1913-14, there were 63 resignations; in the same period of 1914-15 there were 143, of which, however, 15 were subsequently withdrawn.

It is to be hoped that every Fellow who has the opportunity will assist the Society by obtaining new Fellows. The Council has considered a suggestion that the payment of the usual admission fee might be waived during the war, or be paid by annual instalments. It was thought imprudent to alter the conditions of admission at present; but individual consideration will be given to the case of any candidate for the Fellowship on whose behalf special circumstances may be urged.

10. Until 1906, the amounts paid by Fellows as composition for their annual subscriptions were treated as income, but in that year the Council raised the amount of the life composition from £30 to £45, and decided to invest the sums received. The annexed table sets forth the state of the Roll of Fellows in 1905 (the last year before the new system was adopted) and in 1913 and 1914.

Manual Manua Manual Manual Manua	1905.	1913.	1914.
Compounders at £20	2	_	
" " £30	1,013	853	829
" … " £45	-	110	134
Compositions remitted	43	42	42
Paying annually	2,434	3,528	3,612
Dormant	139	155	160
Admission-fees unpaid	71	45	23
Total	3,702	4,733	4,800

11. The Council desires to record sincere regret at the death of Albert C. L. G. Günther, M.A., M.D., Ph.D., F.R.S., late keeper of the Zoological Department in the British Museum. Dr. Günther had been a Fellow of the Society since 1862, and had taken an active interest in its affairs, having served almost continuously on the Council from 1868 to 1905, and having been elected a Vice-President in 1874. He was highly distinguished as a scientific zoologist, had a great love of living animals and a wide practical knowledge of their requirements, and his wisdom and judgment rendered him a most valuable member of the Council.

12. Comparative Statement of Elections, Deaths, Resignations and Removals during the past Ten Years, with the number of Fellows at the end of each Year.

	or ted.			D	ied.		ırs 1.	Ren	noved.	List.	pe,	of
10	Elected or Re-admitted.	12.02	Comp	ounde	ounders.	Subscribers.	Subscribers Resigned.	Subscribers.	Admission Fees Unpaid.	Dormant I	Ceased to Fellows	Number of Fellows, December 3
	EI Re-1	£20.	£30.	£45.	Fee re- mitted.	Subsc	Bu	Subsc	Admi Fe Unl	Dor	Ge	De
1905	309		35			71	44	5	4	5	164	3,702
1906	371	1	23			71	41	8	5	3	152	3,921
1907	295	***	28			72	55	5	12	4	176	4,040
1908	238		26	1	4	78	53	7	4	4 6	175	4,101 4,214
1909	288		33		3 2	67	55	5	6 12	10	198	4,214
1910	333		28		2	80	56	10	8	31	213	4,477
1911	341		27			77	53	17			228	4,588
1912	339		28	1	1	87	60	12	10	29	-219	4,733
1913	364	1	27	1	$\frac{1}{2}$	90	59	4	6	30 9	238	4,800
1914	305		24		2	76	106	10	11	9	238	4,000

# Honorary, Foreign and Corresponding Members.

13. The following gentlemen were elected to fill vacancies on the lists :--

Honorary Member-

Field Marshall The Earl Kitchener of Khartoum, K.P., G.C.B., G.C.S.I., G.C.M.G., Secretary of State for War.

Foreign Members-No vacancy.

Corresponding Members— Charles L. Barrett, Esq., of the Australian Ornithologists' Union, Melbourne, Victoria. Dr. Charles Chilton, Canterbury College, Christchurch, New Zealand.

Charles Price Conigrave, Esq., F.R.G.S., M.B.O.U., Department of Agriculture, Perth, Western Australia.

Dr. Enrico Festa, Zoological Museum, Royal University, Turin, Italy.

J. Harvey Johnston, Esq., M.A., B.Sc., Government Bureau of Microbiology, New South Wales.

Shangara Narayna Pillay, Esq., Trevandrum, Travancore, India.

Constantine G. Rickards, Esq., British Vice-Consul, Oaxaca, Mexico.

Dr. Henri Schouteden, Tervueren Museum, Brussels, Belgium.

# MEDALLISTS.

14. At the meeting of Council on February 20th, 1914, the silver medal of the Society was awarded to the following four gentlemen in acknowledgment of the many additions they had made to the Society's Collection :—

> Dr. R. E. Drake-Brockman, F.Z.S. Dr. H. G. F. Spurrell, F.Z.S. William K. Pomeroy, Esq., F.Z.S. Albert Pam, Esq., F.Z.S.

The medals were presented at the monthly general meeting of the Fellows on May 20th, 1914.

# SCIENTIFIC WORK OF THE SOCIETY.

15. According to the terms of the Charter, the Society exists not only for 'the introduction of new and curious subjects of the Animal Kingdom,' but for the advancement of Zoology and Animal Physiology. In addition to maintaining the Gardens for the education, study and pleasure of those interested in zoology, the Society takes a share in the advancement of knowledge in more direct modes. Details of the scientific meetings, publications and library and prosectorium follow, but special attention may be directed to certain points.

16. The hour of the scientific meetings was changed from 8.30 p.m. to 5.30 p.m., to meet the wishes of a large majority of those who have contributed papers, or who habitually attend. The change has led to an increased attendance.

17. Owing to the disturbance of international arrangements, the future of the International Catalogue of Scientific Literature is uncertain, and to secure the continuous appearance of the Zoological Record, the Council has undertaken to be responsible for the volume dealing with the literature of 1914, to appear in the course of the current year.

18. To prepare for the growth of the library, a large basement under the east wing of the new offices has been provided with windows, and has been floored and plastered. When the occasion arises it will be fitted as a book-store, but it was thought wise to prepare in advance in order that the room might dry out thoroughly.

# MAMMAL SURVEY OF INDIA.

19. In the Report for 1913, the Hon. Secretary of the Bombay Natural History Society stated the progress that had been made with the important work of collecting examples of the Indian mammalian fauna. In 1914 further progress was made in the Hazaribagh district of the province of Behar and Orissa, in Sikkim, and in Upper Chindwin and Homalin in Burma. Mr. Crump is still at work, but Mr. Shortridge, Captain Maemillan and Major Mayor have left for active service with the army.

THE PRESERVATION OF WILD ANIMALS IN AFRICA.

20. The opening of Africa to white men has been attended with a disastrous diminution of the unique and beautiful wild animals of that country. The destruction has been partly inevitable, partly due to reckless shooting by sportsmen, settlers, and natives in possession of European weapons. In recent years the Great Powers with African possessions have attempted to arrest this destruction, partly by forming game-reserves and partly by making stringent game-laws. Unfortunately, a scientific theory of the connection between wild animals and human sleeping sickness led to a demand for the relaxation of the game-laws and for the wholesale destruction of wild animals, in particular of the larger

herbivores. The argument in support of this demand may be summarised as follows:-Sleeping sickness is caused by the presence in the body of microscopic parasites known as trypanosomes, and the infection is carried by blood-sucking flies known as tsetse-flies which convey the parasites from an infected to a healthy body. Trypanosomes have been found in a considerable proportion of the bodies of wild game animals, although apparently their presence in these does no damage. It would seem to follow, therefore, that wild game forms a permanent reservoir of a disease very fatal to man, and that its existence could not be tolerated in any habitable parts of Africa. The danger to human life and the demand for the destruction of wild animals became the more threatening because sleeping sickness, which has devastated Uganda, had been more recently detected in British Nyasaland and Rhodesia in a form almost invariably fatal.

The Secretary of State for the Colonies appointed a committee of sixteen members to advise him on the parts played by tsetse-flies and wild animals with regard to diseases affecting man and domestic stock, and on subsidiary matters. The committee contained the following Fellows of this Society :- E. E. Austen; Sir John Rose Bradford, K.C.M.G., F.R.S.; E. N. Buxton; Sir M. D. Chalmers, K.C.B.; Sir E. G. Loder, Bart.; P. Chalmers Mitchell, D.Sc., LL.D., F.R.S.; and the Hon. Walter Rothschild, F.R.S. It met frequently, under the chairmanship of the Earl of Desart, and took evidence, verbal and written, from all possible sources. Its report and minutes of evidence have been published as Parliamentary Papers, but the conclusions of most interest to this Society may be mentioned briefly. In the Uganda type of sleeping sickness, the only form known to have assumed alarming epidemic proportions, man himself is the chief reservoir, and there is no reason to suppose that the destruction of wild game, even if complete, would destroy the disease. In the case of the type of the disease affecting human beings in Nyasaland and Rhodesia, the evidence as to wild animals being an important reservoir is not conclusive, and the actual cases of the disease among human beings are insignificant with regard to the whole population and appear to be getting fewer. Until direct

means of checking the fly have been discovered, it may be advisable to remove or destroy wild animals in the vicinity of centres of population and trade routes, but hasty and imperfectly considered action of a drastic character, such as the attempt to effect a general destruction of wild animals, is not justified by the evidence.

21. The Keeper of Zoology at the British Museum (Natural History), Dr. S. F. Harmer, F.R.S., has communicated the following information with respect to the South Georgia expedition, towards the expenses of which the Society made a small grant in 1913:—

"The notes made at South Georgia by the late Major G. E. H. Barrett-Hamilton on the whales examined by him during the two months from the middle of November, 1913, to the middle of January, 1914, have been placed in the hands of Mr. M. A. C. Hinton, who is preparing a report to the Colonial Office on the subject. It appears that a considerable amount of information was obtained, and it is hoped that the value of the Report will be ample justification for the despatch of the expedition. The material brought back included representative parts (baleen, flippers) of three species of large whales frequenting South Georgia, besides small miscellaneous collections from that island and from South Trinidad, which was visited on the outward voyage."

22. As stated in the Report for 1913, the National Trust for Places of Historic Interest or Natural Beauty acquired, by bequest of the late Mr. G. H. Verrall, some 240 acres of Wicken Fen, a remnant of the Fenland of East Anglia, and desired to maintain this area with its

animals and plants in an undisturbed condition. The Council promised to vote an annual grant of  $\pm 10$  a year, for five years, to assist in this object.

The National Trust has supplied the following information with respect to last year's work :---

"The Local Committee of Management at Wicken Fen has been able to appoint a permanent watcher and has instituted a system of "permits" by means of which some control over those visiting the property is secured; this arrangement has been attended with the most satisfactory results, and there has been no case reported in which the permission to visit the Fen has been abused. The Local Committee is pursuing its policy of clearing parts of the Fen of undergrowth which had been checking the growth of the food-plants of valuable insects, and the results are already beginning to manifest themselves satisfactorily; it is hoped to continue this work as funds allow."

23. In accordance with a Standing Order of Council, the British Museum (Natural History) has had the first refusal of all animals that have died in the Society's Collection, belonging to the Society and not required by it, and every selected specimen up to the value of  $\pounds 5$  has been presented.

A series of 80 named bird-skins, to form the nucleus of a collection to aid in the identification of birds received in the Gardens, has been presented by the Trustees of the Museum, and is being incorporated with the Society's own collection.

24. As in previous years, the Council has permitted the British Ornithologists' Union to use the Society's office as its address, and to hold its committee meetings in the Society's Offices.

25. The Avicultural Society and the Amateur Menagerie Club have also been allowed to hold their committee meetings in the Society's Offices.

26. The Secretary of the Society was appointed President of the South-Eastern Union of Scientific Societies and delivered his Presidential Address at the Bournemouth Congress on June 11th.

27. The Secretary of the Society was awarded a Silver Medal of the Royal Society of Arts, Manufactures and Commerce, for a paper on "Zoological Gardens" read

# during session 1913-14.

28. The scheme for the instruction of school teachers, arranged in 1910 by the Council in co-operation with the Education Committee of the London County Council, was continued in 1914, when Mr. F. Balfour-Browne, F.Z.S., gave the usual full course of lectures and demonstrations, for which 138 teachers entered. As most of the London teachers interested have now passed through the course, it has been decided to suspend the scheme for the present.

29. The Experimental Apiary and the Courses of Instruction in Bee-keeping, conducted by the British Bee-Keepers' Association, with the aid of a grant from the Development Commissioners, have been maintained in 1914. The Association paid the Society a small rental to cover expenses, and agreed to remove the bees if their presence proved injurious to visitors or to the animals. So far as the Society is concerned, the arrangement worked satisfactorily in 1914.

# SCIENTIFIC MEETINGS.

30. To the twelve meetings for scientific business held in the Society's Rooms in 1914, 101 communications were made. Of these, 69 were from Fellows and 3 from Foreign or Corresponding Members. The remaining 29 papers were from individuals not belonging to the Society, and were communicated by the Secretary or by other Fellows. The total number of communications in the year 1913 was 103.

These communications were submitted to the Committee of Publication, by which 55 were ordered to be printed in the *Proceedings* and 10 in the *Transactions*, such illustrations being in each case allowed as the Committee considered necessary for the purpose. Of the remaining communications, abstracts or extracts were considered to be sufficient for publication.

# PUBLICATIONS.

# Abstract.

31. Since January, 1904, the Society has published on the Tuesday following the date of each scientific meeting an *Abstract of the Proceedings*. It is issued with the *Proceedings* free of charge to all Fellows who subscribe to the Publications; but it may be obtained on the day of publication at the price of Sixpence, or, if desired, it will be sent post-free for the sum of Six shillings a year, payable in advance. The *Abstract* contains no scientific matter that will not be published afterwards in the *Proceedings*, and announces, when possible, the communications to be made at the next scientific meeting.

# Proceedings.

32. The *Proceedings* of the year are issued in two volumes, indexed separately, each of which contains two parts. The year's issue has consecutive pagination throughout, so that the complete reference to any memoir after 1905 is "P.Z.S., 19-, p."

The four parts of the *Proceedings* for 1914 were issued in the months of March, June, September, and December.

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

	Plates.	Pages.		Plates.	Pages.
1905 .	37	937	1910.	101	1033
1906 .	70	1034	1911 .	64	1213
1907 .	56	1121	1912.	97	913
1908.	.68	983	1913 .	113	1104
1909 .	86	952	1914.	75	1077

# Transactions.

33. Of the Society's quarto Transactions, eight Parts were published in 1914, viz. :--

# VOL. XX. PART 5. (March, 1914.)

An Annotated List of the Batrachians and Reptiles collected by the British Ornithologists' Union Expedition and the Wollaston Expedition in Dutch New Guinea. By G. A. Boulenger, F.R.S., F.Z.S. (Plates XXVII.-XXX.)

# VOL. XX. PART 6. (March, 1914.)

Report on the Freshwater Fishes collected by the British Ornithologists' Union Expedition and the Wollaston Expedition in Dutch New Guinea. By C. Tate Regan, M.A., F.Z.S. (Plate XXXI.)

# VOL. XX. PART 7. (May, 1914.)

Report on the Mollusca collected by the British Ornithologists' Union Expedition and the Wollaston Expedition in Dutch New Guinea. By Guy C. Robson. (Plates XXXII. and XXXIII. and Text-figures 5-11.)

# VOL. XX. PART 8. (May, 1914.)

Report on the River-Crabs (Potamonidæ) collected by the British Ornithologists' Union Expedition and the Wollaston Expedition in Dutch New Guinea. By W. T. Calman, D.Sc., F.Z.S. (Text-figures 12 and 13.)

# VOL. XX. PART 9. (May, 1914.)

Report on the Mammals collected by the British Ornithologists' Union Expedition and the Wollaston Expedition in Dutch New Guinea. By Oldfield Thomas, F.R.S., F.Z.S.

# VOL. XX. PART 10. (June, 1914.)

Report on the Arachnida and Myriopoda collected by the British Ornithologists' Union Expedition and the Wollaston Expedition in Dutch New Guinea. By Stanley Hirst, F.Z.S. (Text-figures 14-19.)

# VOL. XX. PART 11. (November, 1914.)

Report on the Rhynchota collected by the Wollaston Expedition in Dutch New-Guinea. By W. L. Distant. (Plate XXXIV.)

# VOL. XX. PART 12. (November, 1914.)

The Foraminifera of the Kerimba Archipelago (Portuguese East Africa).—Part I. By Edward Heron-Allen, F.L.S., F.Z.S., F.G.S., F.R.M.S., and Arthur Earland, F.R.M.S. (Plates XXXV.-XXXVII.)

# Acceleration of Publication.

34. Papers for the *Proceedings* and *Transactions* are now set up in type and the illustrations put in hand as soon as they have been accepted by the Committee of Publications. Beginning with P.Z.S. 1914 and Trans. Z.S. Vol. XXI., plates and text-figures are numbered separately for each paper to facilitate the make-up of the parts. By these changes it is hoped that publication of papers requiring few or simple illustrations will be accelerated. All the parts of the *Proceedings* for 1914 were published within the year.

# Zoological Record.

35. The 50th Volume of the 'Zoological Record' (which contains a List of Titles and Subject and Systematic Indexes of the work published by zoologists all over the world in 1913) is the eighth volume issued in association with the 'International Catalogue of Scientific Literature.' There was some delay in printing, due to the war, and the Editor, Dr. David Sharp, F.R.S., F.Z.S., was unable to issue the complete volume until February 17th, 1915. The divisions Protochordata, Vertebrata (general), Pisces, Reptilia and Batrachia, Mollusca, Arthropoda (general), and Crustacea, were issued in November, 1914; Porifera, Coelenterata, Brachiopoda and Bryozoa, Arachnida, Aves, and Mammalia in December, 1914, and the other divisions in January, 1915.

Fellows of the Society, learned Societies and Institutions, and members of the former Zoological Record Association, who subscribe through the Zoological Society, will receive the present and future volumes of 'Record' in the same binding and on the same terms as heretofore-that is to say, at a subscription price of 30s. per annum, the subscription being due on the first of July each year.

The complete volume consists of separately paged divisions. These may be obtained singly, in paper covers, stitched and lettered.

The following are the divisions and their net prices, viz. :

					s.	d.	
	Comprehensive Zoology		100		2	6	
	Protozoa		1100		2	0	
	Porifera or Spongida	1997	19	199	2	0	
	Cœlenterata		(117	1.1	2	0	
	Echinoderma	0.0		1215	3	6	
	Vermidea .	ce ler c	nl.	÷	3	õ	
	Brachiopoda and Bryozoa			i.	2	õ	
	Mollugeo				4	õ	
*	Arthropoda (General)	0.61	11.00	17	4	0	
		inine	min.		2	0	
	Crustacea				2	6	
	Trilobita, Arachnida, Myriopoda				3	6	
	Insecta.				12	0	
	Prochordata				1	6	
*	Vertebrata (General)				1	6	
	Pisces				2	6	
	Reptilia and Batrachia	102312			2	6	
	Aves				6	0	
	Mammalia	•	•		9	6	
	List of abbreviations of Journa	1.	•	•		0	
		is.	•	•	Z	0	
	List of New Genera				2	0	

\* The general Division, Arthropoda, is also bound with the Divisions Crustacea, Trilobita-Arachnida-Myriopoda and Insecta, and the general Division, Vertebrata, with the Divisions Pisces, Batrachia-Reptilia, Aves and Mammalia. Purchasers of any of these special Divisions will, therefore, also receive the general Divisions in question.

# Index Zoologicus.

In 1882 the Smithsonian Institution issued a Nomenclator Zoologicus, compiled by S. H. Scudder, as an index to the generic names used in Zoology to the close of the year 1879.

In 1902 this Society issued an Index Zoologicus, compiled by Mr. C. O. Waterhouse and edited by Dr. David Sharp, F.R.S., being an alphabetical list of names of genera and sub-genera proposed for use in Zoology as recorded in the 'Zoological Record,' 1880-1900, together with other names omitted from Scudder's 'Nomenclator.'

In 1912 the Society issued an *Index Zoologicus* No. II., prepared by Mr. Waterhouse and Dr. Sharp, covering the period 1901-1910, together with names omitted from the 'Nomenclator' and '*Index Zoologicus* No. I.'

Copies of these volumes, which are invaluable to systematic zoologists, may be obtained at the offices of the Society.

INDEX ZOOLOGICUS No. I. Bound in cloth, octavo, pp. 420. 1902.

To the Public: £1 net. To Fellows of the Zoological Society: 18/- net.

INDEX ZOOLOGICUS No. II. Bound in cloth, octavo, pp. 324. Nov., 1912. To the Public: 15/- net. To Fellows of the Zoological Society, and owners of sets of the 'Zoological Record' or the 'International Catalogue of Scientific Literature': 12/6 net.

36. List of Institutions, &c., on the Exchange List of the Society's Publications.

#### SOUTH AFRICA.

Government Library, Bloemfontein. South African Museum, Cape Town. Royal Society of South Africa, Cape Town. Government Museum, Durban.

# NORTH AMERICA.

State University of California, Berkeley. American Academy of Arts and Sciences, Boston. Boston Society of Natural History. Museum of Comparative Zoology, Cambridge. Field Museum of Natural History, Chicago. 'American Journal of Science,' New Haven. American Museum of Natural History, New York. New York Academy of Sciences. Academy of Natural Sciences, Philadelphia. American Philosophical Society, Philadelphia. American Entomological Society, Philadelphia. Carnegie Museum, Pittsburgh. Illinois State Laboratory of Natural History, Urbana. Smithsonian Institution, Washington. United States Fish Commission, Washington. United States Geological Survey, Washington. United States National Museum, Washington. United States Department of Agriculture, Washington. Station for Experimental Evolution at Long Island of the Carnegie Institute of Washington.

التلاف وال

#### SOUTH AMERICA.

Museo Nacional de Histor. Nat., Buenos Ayres. La Plata Museum. Goeldi Museum, Pará.

#### AUSTRALIA.

Royal Society of Victoria, Melbourne. Zoological and Acclimatization Society of Victoria, Melbourne. Linnean Society of New South Wales, Sydney. Royal Society of New South Wales, Sydney. Australian Museum, Sydney. Royal Society of Tasmania, Hobart.

#### AUSTRIA-HUNGARY.

Museum Nationale Hungaricum, Budapest. Kaiserliche Akademie der Wissenschaften, Wien. K. K. Zoologisch-Botanische Gesellschaft, Wien.

#### BELGIUM.

Académie Royale de Belgique, Bruxelles. Société Entomologique du Belgique, Bruxelles. Société Belge de Géologie, de Paléontologie et d'Hydrologie, Bruxelles.

Musée Royale d'Histoire Naturelle de Belgique, Bruxelles. Société Zoologique et Malacologique de Belgique, Bruxelles. Musée de Congo Belge, Tervueren.

#### CANADA.

McGill University Library, Montreal. Geological Survey, Ottawa. University of Toronto.

#### CHINA.

North China Branch, Royal Asiatic Society, Shanghai.

#### DENMARK.

Kongelige Danske Videnskabernes Selskab, Copenhagen. Musée Zoologique, Copenhagen.

FRANCE.

Laboratoire Arago, Banyuls-sur-Mer. Société Linnéenne de Normandie, Caen. Société Entomologique de France, Paris. Société Nationale d'Acclimatation de France, Paris. Musée National d'Histoire Naturelle, Paris. Société Zoologique de France, Paris.

#### GERMANY

Königliche Preussische Akademie der Wissenchaften, Berlin. Gesellschaft naturforschender Freunde, Berlin. Naturhistorischer Verein, Bonn. Senckenbergische naturforschende Gesellschaft, Frankfurt-am-Main. 'Zoologische Jahrbucher' (System. Abteil.), Giessen.

Kaiserliche leopoldinisch-carolinische Akademie der Naturforscher, Halle.

Naturforschende Gesellschaft, Halle.

Naturwissenschaftlicher Verein, Hamburg.

Medizinisch-naturwissenschaftliche Gesellschaft, Jena.

Königliche Bayerische Akademie der Wissenschaften, Munich.

Verein für vaterlandische Naturkunde in Württemberg, Stuttgart.

# GREAT BRITAIN AND IRELAND.

Philosophical Society, Cambridge. National Museum of Wales, Cardiff. Royal Dublin Society. Royal Irish Academy, Dublin. Royal Zoological Society of Ireland, Dublin. Royal Society of Edinburgh. Athenæum Club, London. British Museum of Natural History, London. Entomological Society of London. Geological Society of London. King's College, London. Linnean Society of London. Royal College of Physicians, London. Royal College of Surgeons, London. Royal Geographical Society, London. Royal Institution, London. Royal Society of London. University College, London. Literary and Philosophical Society, Manchester. Victoria University, Manchester. Natural History Society of Northumberland, Durham, and Newcastle-on-Type. Marine Biological Laboratory, Plymouth. Yorkshire Philosophical Society, York.

#### HOLLAND.

Koninklijk Akademie van Wetenschappen, Amsterdam. Koninklijk Zoologisch Genootschap, Amsterdam. Hollandsche Maatschappij der Wetenschappen, Haarlem.

Ryks Museum van Natuurlyke Historie, Leyden. Nederlandsche Entomologische Vereeniging, Rotterdam.

#### INDIA.

Bombay Natural History Society. Royal Asiatic Society of Bengal, Calcutta. Geological Survey of India, Calcutta. Indian Museum, Calcutta.

# ITALY.

Museo Civico di Storia Naturale, Genova. Sociétà Italiana di Scienze Naturali, Milano. Zoological Station, Naples. Reale Accademie dei Lincei, Roma. Reale Accademie della Scienze, Torino.

#### JAPAN.

Science College, Imperial University, Tokyo.

#### NEW ZEALAND.

New Zealand Institute, Wellington.

#### NORWAY.

Bergen Museum. Videnskabs Selskabet, Christiania.

#### RUSSIA.

Natural History Society, Dorpat. Imperial Society of Naturalists, Moscow. Entomological Society of Russia, Petrograd. Imperial Academy of Sciences, Petrograd. Society of Sciences of Finland, Helsingfors.

#### SPAIN.

Real Academia de Ciencias, Madrid.

#### SWEDEN.

Royal Academy of Sciences, Stockholm. Royal Academy of Sciences, Upsala.

#### SWITZERLAND.

'Revue Suisse de Zoologie,' Genéve. Société de Physique et d'Histoire Naturelle, Genéve. Société Vaudoise des Sciences Naturelles, Lausanne.

#### WEST INDIES.

Institute of Jamaica, Kingston.

# Garden Guide.

37. The 'Official Guide to the Society's Gardens,' written and revised annually by the Secretary, consists of 112 pages, with many illustrations, a Plan of the Gardens and a Railway and Street Map, is published by the Society at its offices and is sold there and in the Gardens at the price of sixpence in paper covers. Since 1903, 480,427 copies have been sold. A thirteenth edition is in preparation.

# Picture Postcards.

38. In 1914, 20,770 copies were sold of the series issued in 1913, and 97,411 of a series issued in 1914. The copyright of the Garden Guide and Postcards belongs to the Society, and the profits on the sale form a valuable part of our income.

# LIBRARY.

39. The Library, under the superintendence of Mr. H. G. J. Peavot, the Society's Librarian and Clerk of Publications, was maintained in good order throughout the year. Altogether 1,166 visits were paid by Fellows and persons introduced by them, and 1,204 volumes were borrowed under the usual regulations.

Mr. E. E. Riseley, Clerk in the Society's Library since 1904, has been appointed Librarian to the Linnæan Society, and carries to his new post the best wishes of the many Fellows who have valued his services here.

40. The following is a list of the Additions made to the Library during the past year :--

#### PRESENTED.

#### Donor.

# Donation.

ABRAHAMS, I. J.

BIBLIOGRAPHISCHES INSTITUT, LEIPZIG. CABRERA, ANGEL.

CORNETZ, V.

DANDO, W. P. FLETCHER, T. B.

FOSTER, A. H. GURNEY, J. H. The Zoological Gardens. A Handbook for Visitors. 2nd Edition. 1841.Brehm's Tierleben. Saugetiere, Bd. II.

Yebala y el bajo Lucus. Expedicion de Abril-Junio de 1913.

Fauna Iberica ; Mamiferos.

Les Explorations et les Voyages des Fourmis.

More Wild Animals and the Camera.

Some South Indian Insects and Other Animals of Importance, considered especially from an Economic Point of View.

The Birds of North Herts.

Ornithological Notes from Norfolk

1892-1913. MITCHELL, P. CHALMERS. Atlas del Cerebro de los Mamiferos de la Republica Argentina. By Chr. Jakob and C. Onelli. To the River Plate and Back. By W. J. Holland. Studies in Cancer and Allied Subjects. Vol. IV. Contributions to the Anatomy and Development of the Salivary Glands in the Mammalia. George Crocker Special Research Fund, Columbia University. THE GOVERNMENT OF Manual of the New Zealand Mollusca NEW ZEALAND. (Text only). By Henry Suter.

PORTER, E. A.

SHARP, DAVID.

SPENCER, W. T.

TEXEIRA DE MATTOS, Alexander.

WINGFIELD, A. H.

- Transactions of the Natural History Society of Hartford (Conn.). No. 1. 1836.
- Memoirs of Mammoth and various other Extraordinary and Stupendous Bones of Incognita, or Nondescript Animals. (Liverpool Museum). By Th. Ashe. 1806.
- Our Cats and all about Them. By Harrison Weir. New Edition, 1892.
- Annals of the Entomological Society of America. Vols. II.-V. (incomplete).
- Journal of Economic Entomology. Vols. I.-V. (incomplete).
- A set of Seven Coloured Views of the Zoological Gardens in 1835. By G. Scharf.
- A Picturesque Guide to the Regent's Park, with accurate descriptions of the Colosseum, the Diorama, and the Zoological Gardens. 1829.

The Life of the Fly. By J. H. Fabre. The Life of the Spider. By J. H. Fabre. (English translations by the Donor).

Original Drawing of an illustration from "Punch."

#### PURCHASED

- ABDERHALDEN (E.). Abwehrfermente des tierischen Organismus, etc. 8vo. Berlin, 1913.
- BAKER (E. C. STUART). Indian Pigeons and Doves. 8vo. London, 1913.

BATESON (WILLIAM). Problems of Genetics. 8vo. New Haven, 1913.

BATTYE (A. TREVOR-). Camping in Crete. 8vo. London, 1913.

BOULENGER (G. A. and C. L.). Animal Life by the Sea-shore. 8vo. London, 1914.

BRANDT (K.). Das Gehörn und die Entstehung monströser Formen. 8vo. Berlin, 1901.

BRINKMANN (A.). Bidrag til Kundskaben om Drøvtyggernes Hudkirtelorganer. 8vo. København, 1911.

CROSSLAND (C.). Desert and Water Gardens of the Red Sea. 8vo. Cambridge, 1913.

DUGMORE (A. RADCLYFFE). The Romance of the Newfoundland Caribou. 8vo. London, 1913.

ELLENBERGER (W.) and BAUM (H.). Lehrbuch der Topographischen Anatomie des Pferdes. 8vo. Berlin, 1914.
FANTHAM (H. B.) and PORTER (ANNIE). Some Minute Animal Parasites. 8vo. London, 1914. GREIL (A.). Tafeln zum Vergleiche der Entstehung der Wirbeltierembryonen. 4to. Jena, 1914.

GURNEY (J. H.). The Gannet. 8vo. London, 1913.

The last

- HAMPSON (SIR G. H.). British Museum Catalogue of the Lepidoptera Phalænæ; Supplement, Vol. 1. 8vo. London, 1914.
- HERTWIG (R.) and WETTSTEIN (R. v.). Abstammungslehre; Systematik; Paläontologie; Biogeographie. (Die Kultur der Gegenwart, Teil III. Abt. IV. 4). 8vo. Leipzig, 1914.
- HESS (C.). Die Entwicklung von Lichtsinn und Farbensinn in der Tierreihe. 8vo. Wiesbaden, 1914.
- HESSE (R.). and DOFLEIN (F.). Tierbau und Tierleben; Bd. II. Das Tier als Glied des Naturganzen. 8vo. Leipzig and Berlin, 1914.
- INTERNATIONAL CONGRESS OF ZOOLOGY, Proceedings of the Ninth. 8vo. Rennes, 1914.
- JOURNAL DE L'ANATOMIE ET PHYSIOLOGIE. Vols. XVI.-XXI. 8vo. Paris, 1880-1885.
- KELLER (C.). Studien über die Haustiere der Kaukasusländer. 4to. Zürich, 1913.
- KELLER (O.). Die Antike Tierwelt. Bd. I., II. 8vo. Leipzig, 1913.
- KRALL (K.). Denkende Tiere, Beiträge zur Tierseelenkunde auf Grund eigener Versuche. 8vo. Leipzig, 1912.

LEVICK (G. M.). Antarctic Penguins. 8vo. London, 1914.

- LIPSCHÜTZ (A.). Die Ernährung der Wassertiere durch die gelösten organischen Verbindungen der Gewässer. 8vo. Wiesbaden, 1913.
- LYDEKKER (R.). The Game Animals of Africa. 8vo. London, 1908.
- LYDEKKER (R.). and BURLACE (J. B.). Rowland Ward's Records of Big Game. Seventh Edition. 8vo. London, 1914.
- MAGNUS (W.). Die Entstehung der Pflanzengallen verursacht durch Hymenopteren. 8vo. Jena, 1914.

MATHEWS (G. M.). A List of the Birds of Australia. 8vo. London, 1913. MILLS (E. A.). In Beaver World. 8vo. London, 1913. MURRAY (SIR J.) and PULLAR (L.). Bathymetrical Survey of the Scottish Fresh Water Lochs. Report on the Scientific Results. Vol. I. 8vo. Edinburgh, 1910. NELSON (T. H.). The Birds of Yorkshire. 2 Vols. 8vo.

London, 1907.

NUSSBAUM (M.), KARSTEN (G.) and WEBER (M.). Lehrbuch der Biologie für Hochschulen. Zweite Auflage. 8vo. Leipzig and Berlin, 1914.

OSTERTAG (R. v.). Handbuch der Fleischbeschau für Tierärzte, Aerzte und Richter. 2 Vols. 8vo. Stuttgart, 1910-13.

- PLATE (L.). Selektionsprinzip und Probleme der Artbildung; ein Handbuch des Darwinismus. 8vo. Leipzig and Berlin, 1913.
- REICHENBACH (E. S. v.). Lehrbuch der Paläozoologie. 2 Vols. 8vo. Leipzig and Berlin, 1909-12.
- ROULE (L.). Traité Raisonné de la Pisciculture et des Pêches. 8vo. Paris, 1914.
- SCOTT (W. B.). A History of Land Mammals in the Western Hemisphere. 8vo. New York, 1913.
- SHELFORD (V. E.). Animal Communities in Temperate America as illustrated in the Chicago Region. A Study in Animal Ecology. 8vo. Chicago, 1913.

SIMROTH (H.). Die Pendulations-theorie. 8vo. Berlin, 1914.

STIGAND (C. H.). Hunting the Elephant in Africa. 8vo. London, 1913.

STEPHENSON (H. H.). Who's Who in Science. 8vo. London, 1913.

Wolff (M.). Der Kiefernspanner (Bupalus piniarius L.). 8vo. Berlin, 1913.

WOODWARD (B. B.). The Life of the Mollusca. 8vo. London, 1913.

41. Periodicals and Zoological Works in course of publication, of which parts were added to the Library for the first time in 1914 :—

Alluaud et Jeannel, Voyage en Afrique Orientale. Paris. Annals of the Durban Museum. Durban. Archiv für Zellforschung. Leipzig.

Australian Zoologist. Sydney.

Board of Agriculture and Fisheries : Fishery Investigations. London.

Brooklyn Museum Quarterly. Brooklyn, Bulletin of the Kansas University Geological Survey. Topeka. Catalogue des Invertébrés de la Suisse. Geneva. Collections of Yale University. New Haven.
Dahl (F.) Der Spinnentiere. Jena.
Ergebnisse der Deutschen Zentral Afrika Expedition, 1907-8.
Leipzig.

Faune des Indes Néerlandaises. Buitenzorg.
Jaarbericht Club van Nederlandsche Vogelkundigen. Deventer.
Journal of the Natural History Society of Siam. Bangkok.
Kafka (G.). Einführung in die Tierpsychologie. Leipzig.
Union of South Africa : Marine Biological Report. Cape Town.
Occasional Papers, Museum of Zoology, Michigan University.
Michigan.

South Australian Ornithologist. Adelaide. Zeitschrift für angewandte Entomologie. Berlin. Zoologie von Timor. Stuttgart.

42. Parts of publications have been received from the following Societies, Institutions and Editors, for which the Council desire herewith to return thanks :---

#### AFRICA.

Cape Town: Royal Society of S. Africa.

S. African Association for the Advancement of " " Science.

S. African Museum.

University of S. Africa.

Durban : Durban Museum.

Gîza : Zoological Gardens.

39

33

Grahamstown : Albany Museum.

Pretoria: S. African Ornithologists' Union.

Transvaal Museum. 33

#### NORTH AMERICA.

Berkeley: University of California. Boston: American Academy of Arts and Sciences. Boulder: University of Colorado. Brooklyn: Institute of Arts and Sciences. California : Leland Stanford Junior University. Cambridge, Mass.: Museum of Comparative Zoology, Harvard. Chicago: Field Museum of Natural History. Columbus: Entomological Society of America. Ohio State University. Concord : American Association of Economic Entomologists. Davenport : Davenport Academy of Sciences. Harrisburg : Pennsylvania Department of Agriculture. Massachusetts : Tuft's College. Mexico : Sociedad Científica "Antonio Alzate." Michigan : University of Michigan. New Haven : "American Journal of Science." Connecticut Academy of Arts and Sciences. 33 Yale University. New York: Agricultural Experimental Station. American Museum of Natural History. 33 "American Naturalist." 33 33

New York Academy of Sciences. 22 22

Zoological Society. Oberlin : Wilson Ornithological Club. Orono: Maine Agricultural Experimental Station. Ottawa: Canadian Department of Agriculture. Geological Survey of Canada. 33 Royal Society of Canada. Philadelphia : Academy of Natural Sciences. American Entomological Society. 33 American Philosophical Society. 33 Delaware Valley Ornithological Club. 33 University of Pennsylvania. Pittsburgh: Carnegie Museum. San Francisco: California Academy of Sciences.

- Topeka : Kansas University Geological Survey.
- Urbana: Illinois State Laboratory of Natural History.

Washington: Department of Commerce and Labor, Bureau of Fisheries.

Entomological Society.

- " Smithsonian Institution.
- " United States National Museum.
- " United States Geological Survey.
- " United States Department of Agriculture.
- " Academy of Sciences.

#### SOUTH AMERICA.

Buenos Aires : Jardín Zoológico.

" Museo Nacional de Historia Natural.

" " Sociedad Physis.

Demerara : Board of Agriculture, British Guiana.

: R. Agricultural and Commercial Society of British Guiana.

Pará : Museu Goeldi.

22

San José : "Boletin de Fomento."

Valparaiso : "Revista Chilena."

#### AUSTRALIA.

Adelaide : Royal Society of South Australia.

" South Australian Ornithological Association.

Brisbane : Queensland Museum.

Melbourne: Australian Ornithologists' Union.

National Museum.

Royal Society of Victoria.

Perth : Western Australian Museum and Art Gallery. Sydney : Australian Museum.

- " Department of Trade and Customs.
- " Linnean Society of New South Wales.
- " Naturalists' Society of New South Wales.
- " Royal Society of New South Wales.

,, Royal Zoological Society of New South Wales. Tasmania : Royal Society.

#### AUSTRIA-HUNGARY.

Budapest : Museum Nationale Hungaricum. ,, Königliche Ungarisch Ornithologische Centrale. Cracow : Académie des Sciences. Vienna : K. Akademie der Wissenschaften. ,, K.K. Zoologisch-Botanische Gesellschaft.

# BELGIUM.

Brussels : Académie Royale de Belgique. "Société R. Zoologique et Malacologique de Belgique. "Société Entomologique de Belgique.

BORNEO.

Sarawak : Sarawak Museum.

## CHINA.

# Shanghai : R. Asiatic Society, North China Branch.

#### CUBA.

Habana : Academia de Ciencias Médicas Físicas y Naturales.

#### DENMARK.

# Copenhagen: Conseil permanent international pour l'Exploration de la Mer.

- Kommissionen for Havundersøgelser. 33
- Musée Zoologique. 33
- Naturhistoriske Forening. 33
- Kongelige Danske Videnskabernes Selskab. 37

#### FINLAND.

# Helsingfors : Societas Scientiarum Fennica.

#### FRANCE.

Caen : Société Linnéenne de Normandie. Levallois-Perret : Association des Naturalistes.

Monaco : Institut Océanographique.

Paris : Musée National d'Histoire Naturelle.

- Société Entomologique de France. 22
- Société Nationale d'Acclimatation de France. 99
- Société Philomathique. 37
- Société Zoologique de France. 33

#### GERMANY.

Berlin : Königliche Preussische Akademie der Wissenschaften. Gesellschaft naturforschender Freunde.

Bonn: Naturhistorischer Verein der preussischen Rheinland und Westfalens.

Dresden : Zoologischer Garten.

- Halle: Kaiserliche leopoldinisch-carolinische Akademie der Naturforscher.
  - Naturforschende Gesellschaft.

Jena: Medizinisch-naturwissenschaftliche Gesellschaft.

"Zoologische Jahrbucher" (System. Abteil.)

Munich : Königliche Bayerische Akademie der Wissenschaften.

Münster: Westfälischer Provinzialverein für Wissenschaft und

# Kunst.

GREAT BRITAIN and IRELAND. Cambridge : Philosophical Society. Croydon : Natural History and Scientific Society. Dublin : Royal Dublin Society. Royal Irish Academy. Edinburgh: Fishery Board for Scotland. "Journal of Comparative Pathology and Thera-33 peutics." Royal Physical Society. 33 Royal Society. Liverpool: School of Tropical Medicine.

London : "The Athenæum."

- " The Avicultural Society.
- " Board of Agriculture and Fisheries.
- " British Association for the Advancement of Science.

" British Museum (Natural History).

" British Ornithologists' Club.

" British Ornithologists' Union.

" "The Country-Side."

" Entomological Society.

" "The Field."

,, The Foreign Bird Club.

" Geological Society.

" Geologists' Association.

" Linnean Society.

"Nature."

" Royal Agricultural Society.

" Royal Botanic Gardens, Kew.

" Royal Geographical Society.

" Royal Institution of Great Britain.

,, Royal Society.

" Royal Society for the Protection of Birds.

" Royal United Service Institution.

" Selborne Society.

" South London Entomological and Natural History Society.

Maidstone : Amateur Menagerie Club.

Manchester: Literary and Philosophical Society.

Newcastle : Dove Marine Laboratory.

Natural History Society of Northumberland, Durham and Newcastle-on-Tyne.

Norwich : Norfolk and Norwich Naturalists' Society.

Plymouth: Marine Biological Association.

Rochester : Naturalists' Club.

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St. Albans : Mera Publications.

St. Leonards : Hastings and East Sussex Natural History Society.

Watford : Natural History Society of Hertford.

York : Yorkshire Philosophical Society.

## HOLLAND.

Deventer : Club van Nederlandsche Vogelkundigen. Haarlem : Hollandsche Maatschappij der Wetenschappen. s'Gravenhage : Nederlandsche Entomologische Vereeniging.

# Leyden : Ryks Museum van Natuurlyke Historie.

JAVA.

Batavia : Java Zoölogisch en Biologisch. Buitenzorg : Institut Scientifique.

INDIA AND CEYLON.

Bombay: Bombay Natural History Society. Calcutta: Asiatic Society of Bengal. "Department of Agriculture of India. "Geological Survey of India. "Indian Museum. Colombo: Colombo Museum.

#### ITALY.

Florence : Biblioteca Nazionale Centrale. Milan : Sociétà Italiana di Scienze Naturali. Naples : Zoological Station. Rome : Reale Accademia dei Lincei. Turin : Reale Accademia della Scienze.

" Museo di Zoologia ed Anatomia Comparata.

#### JAPAN.

Tokyo: Imperial University. " Zoological Society.

Stanling States

#### MALAY STATES.

Kuala Lumpur : Federated Malay States Museum.

# NEW ZEALAND.

Christchurch : Canterbury Museum. Wellington : New Zealand Institute.

# NORWAY.

Bergen : Bergen Museum. Christiania : Videnskabs Selskabet.

PHILIPPINE ISLANDS. Manila : "Phillipine Journal of Science."

#### PORTUGAL.

Lisbon : Academia Real das Sciencias.

#### ROUMANIA.

Jassy : Université de Jassy.

### RUSSIA.

Dorpat : Naturforscher Gesellschaft. Moscow : Société Impériale des Naturalistes. Petrograd : Societas Entomologica Rossica. , L'Académie Impériale des Sciences. Tiflis : Kaukasisches Museum.

### SIAM.

Bangkok : Natural History Society of Siam.

## SPAIN.

Barcelona : Institucio Catalana d'Historia Natural. Madrid : Museo de Ciencias Naturales. " Real Academia de Ciencias.

# SWEDEN.

Stockholm : Kongliga Svenska Vetenskaps-Akademie.

# SWITZERLAND.

Geneva : "Revue Suisse de Zoologie." " Société de Physique et d'Histoire Naturelle. Lausanne : Société Vaudoise des Sciences Naturelles.

#### WEST INDIES.

Barbados: Agricultural Department for West Indies. Port of Spain: Department of Agriculture, Trinidad.

43. Donations, memoirs, and papers have also been received from :- W. I. Birge, Esq.; E. B. Branson, Esq.; The Zoological Gardens, Calcutta; N. A. Cobb, Esq.; S. G. Dixon, Esq.; Königlichen Sammlungen für Kunst und Wissenschaft in Dresden; The Durban Museum; Dr. D. G. Elliot; Capt. S. S. Flower; Dr. J. M. Fortescue-Brickdale; Herren R. Friedländer and Sohn; Prof. M. Fürbringer; Arthur Gibson, Esq.; H. S. Gladstone, Esq.; Dr. B. Gotschlich; E. E. Green, Esq.; J. H. Gurney, Esq.; Dr. C. G. Hewitt; James Hornell, Esq.; G. C. L. Howell, Esq.; The Imperial College of Science; Dr. B. Daydon Jackson; The Rev. F. C. R. Jourdain; D. F. Laurie, Esq.; The Longfellow Gardens, Minnehaha; Mrs. J. Longstaff; Prof. W. C. McIntosh; A. G. Mayer, Esq.; Prof. L. von Méhely; Dr. W. Mielch; J. A. Milne, Esq.; Dr. P. Chalmers Mitchell; Dr. E. Modigliani, A. J. North, Esq.; T. H. Parks, Esq.; Raymond Pearl, Esq.; Dr. C. E. Porter; J. J. Quelch, Esq.; H. E. Sauvage, Esq.; Charles Schuchert, Esq.; Dr. R. W. Shufeldt; Mons. M. G. de Southoff; E. H. Strickland, Esq.; The Provincial Museum, Victoria, B. C.; The Royal Zoological and Acclimatisation Society of Victoria; The National Museum of Wales; Prof. Max Weber; F. M. Webster, Esq.; The Zoological Society, Wellington, N. Z.; and C. W. Wilson, Esq.

# PROSECTORIAL DEPARTMENT.

44. The Prosector, Mr. F. E. Beddard, M.A., D.Sc.,

F.R.S., reports as follows :--

"In addition to purely routine matters my time during the past year has been, as in the last three years, devoted to the study of the Cestodes collected from animals that have died in the Gardens. I have, at present, in a good state of preservation for future investigation about 100 species; of these the majority are probably forms that have already been described, since they belong to wellknown genera. Concerning the new genera and species, as well as less known though already defined species, I have made during the last few years fifteen contributions to the scientific meetings of the Society which have been duly published in the 'Proceedings.' In 1914, were published the following, viz.:—

Contributions to the Anatomy and Systematic Arrangement of the Cestoidea.

(1) Further Observations upon the Genus Urocystidium, Beddard.

(2) On Two new Species belonging to the Genera Oochoristica and Linstowia with Remarks upon those Genera.

(3) On a New Species of *Rhabdometra* and on the Paruterine Organ of *Otiditaenia*.

(4) On a New Genus and Species of the Family Acoleidae.

"In these papers I have described four new species which include one new genus. Types of these have been, or will be, forwarded to the Museum of the Royal College of Surgeons. Duplicates are retained for the collection belonging to the Society which has now representatives of nearly all of the new forms which I have myself described as well as of a few others which I have identified as already known species."

45. The Society's Pathologist, Mr. H. G. Plimmer, F.R.S., reports as follows :--

"During the past year 1,590 animals have died, and detailed records have been kept of the pathological conditions. A paper dealing analytically with the causes of death, and with the blood-parasites found in the Gardens, was read at the Scientific Meeting on Feb. 9th, 1915. This memoir will be published in full in the Scientific Proceedings. (P Z.S., 1915, pp. 123-130.)

"During the year Mr. J. G. Turner has been working in the Laboratory on the pathology of the teeth, Miss Hett on the tonsils, and the records have been consulted and used by Dr. Ackerley. Material has been supplied to Dr. Gardiner, London University; to the Imperial Cancer Research Fund; and to Mr. Hirst, Natural History Museum.

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"The parasites found have been forwarded to the various people who have undertaken to work on them. "Pathological specimens have been sent to the Museum of the Royal College of Surgeons and to the Cancer Investigation Committee."

# THE GARDENS.

# NEW WORKS AND REPAIRS.

#### GENERAL.

46. The houses, fences, footpaths and so forth have been repaired where necessary and kept in good order, and a very large number of minor works have been carried out.

#### NORTH GARDEN.

47. PHEASANTRY. A number of temporary sheds and enclosures have been demolished and the pheasantry extended to within a short distance of the Lemur House. The new building is of brickwork with wire runs, and part of it is fitted with a heating-plant.

48. HEAD GARDENER'S HOUSE.—This has been cleaned and re-decorated internally.

#### MIDDLE GARDEN.

49. PUMPING STATION.—The water-level in this part of London having lowered considerably during recent years, it has been found necessary to make alterations in the Society's pumping plant, and to carry the pipes to a lower level. The work was not quite completed at the end of the year, but it is hoped that it will result in a more efficient water supply.

50. CAIRD INSECT HOUSE. — Glazed fronts have been fitted to all of the bays in this house.

51. GIRAFFE HOUSE.—Considerable alterations were made in this house by the substitution of a steel and concrete floor for the original wooden floor, the demolition of two small rooms at either end of the house, and the substitution of wide swing doors for the old narrow doors. The drainage was put into thorough order, and the floors of the dens relaid with hard bricks.

52. ZEBRA HOUSE. — A stable at the rear has been formed into a room for the keepers, and a doorway cut in the wall. The yards have been cleaned and laid with hard material.

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53. HIPPOPOTAMUS POND.—The roots of a large tree having penetrated the brickwork of the pond and caused leakage, the side of the pond has been rebuilt in concrete, and the heavy fence separating this enclosure from the Giraffe paddock has been refixed and strengthened. 54. GARAGE.—A garage was built in the yard at the west end of the middle garden for the Society's Motor Vans.

55. OLD DEER YARD.— The deer which formerly occupied this yard having been removed to the South Garden, a high wire fence was erected and a paddock formed for birds.

56. KANGAROO PADDOCK.—A new wire fence with iron supports was erected round this paddock.

57. WIDENING OF PATHWAY OVER TUNNEL.—This pathway, which was inconveniently narrow, has been widened by bridging over the end of the tunnel with a lattice girder and forming a floor of steel joists and concrete.

58. SHELTER. — The unsightly wall-cages and fence near the Society's Offices have been demolished and a glazed shelter erected.

59. PATHWAY OF TUNNEL.—This and the approach on the north side have been laid with tar-macadam.

### SOUTH GARDEN.

60. RESTAURANT AND FELLOWS' PAVILION.—These have been cleaned and painted.

61. LAVATORY. — Better lavatory accommodation for both ladies and gentlemen has been provided near the restaurant.

62. PAVILION POND.—The sides of this pond have been considerably raised to provide deeper water for the Elephant Seals, and a pathway has been formed at the back.

63. KEEPER'S LODGE. — This has been thoroughly cleaned, painted and distempered throughout.

64. STORES.—The wooden floors have been replaced with concrete and partitions removed to give more space and light. A more efficient water supply has been installed.

Sec. 19623

65. KITES' AVIARY.— This has been repaired and painted throughout.

66. OSTRICH HOUSE PADDOCKS.—The fences have been repaired, and that facing the Sea Lion Pond has been set back in line with the Apes' House.

67. REPTILE HOUSE.—All the large cases have been painted and enamelled. A row of new indoor cages for small tropical Reptiles, designed with a view to efficient

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lighting and warming, and furnished with rockwork and miniature ponds, has been erected along the south side of the House.

68. ENCLOSURE FOR REPTILES.—An outdoor enclosure for hardy reptiles with rockwork and a sunk ditch has been formed near the Reptile House.

69. GOOSE PADDOCKS.—The paddocks near the Lion House have been entirely re-wired.

70. FOXES' & JACKALS' CAGES.—The ironwork of these has been cleaned and painted.

71. MAPPIN TERMACES.—These were completed and opened to the visitors in June. They have proved a great [1]3 attraction, and the condition of the animals placed in them has improved to a remarkable extent.

72. GARDENING DEPARTMENT. — Under the capable superintendence of Mr. John Young, the Society's Head Gardener, the floral decoration of the Gardens has maintained its high character.

REPORT BY THE SECRETARY ON THE REFRESHMENT DEPARTMENT.

Adopted by Council on Nov. 18, 1914.

# 1.—Finance.

73. The Council on September 17th, 1913, adopted the recommendation of the Finance Committee that the financial year of the Refreshment Department should end with the September quarter. The first annual statement, therefore, covered only the nine months ending September 28th, 1913. This Report covers a year, from September 29th, 1913, to September 28th, 1914. On the recommendation of the Finance Committee, the Council in the course of 1914, reapproved the period and method of auditing the Accounts of the Refreshment Department. The accounts, therefore, of the department have again been audited in detail by Messrs. Edward Moore and Sons, of 3, Crosby Square, and they have confirmed the figures in this summary, and, so far as concerns them, agree with the recommendations I make.

The gross profit for the twelve months, after feeding staff, amounted to  $\pm 10,969$  7s. 1d. The working expenses for the same period amounted to  $\pm 5,281$  13s. 2d., leaving a trading profit of  $\pm 5,687$  13s. 11d. The takings from the lavatories amounted to  $\pounds 623$  11s.; as the expenses of management are borne by the Refreshment Department, I propose to divide the takings and credit three-fifths to the department and two-fifths to the Society.

The sum of  $\pm 374$  2s. 6d. has, therefore, to be added to the profits, making the sum of  $\pm 6,061$  16s. 5d.

FIRST CHARGES ON PROFITS :--Profit ... ... ... £6,061 16 5 ... ... ... Replacement of fittings and utensils and running repairs £810 11 0 Less £300 reserved from 1913 for replacement of breakages ... 510 11 0 ... ... .... Depreciation of plant and fixtures to be held as a reserve ... 300 0 0 ... ... Replacement of breakages ... 300 0 0 ... Rent to Society 1,000 0 0 ... ... ... ... Salary to manager ... 400 0 0 ... ... .... 2,510 11 0 Leaving ... £3,551 5 5 ... SECOND CHARGES :---License duties, monopoly value and rates 575 17 11 Leaving for division ... ... 2,975 7 6 ... ... 10 per cent. of £2,975 7s. 6d. to manager ... 297 10 9 ... Profit to Society £2,677 16 9

74. Of this amount the sum of £730 0s. 9d. has been expended on new fixtures, plant and implements, which remain the property of the Society and have been brought up to their values by replacements charged to the expenses account of the Refreshment Department. A net total sum of £384 18s. 4d. has been expended by the Society's Works Department on the Refreshment Department, and should be repaid to it. This leaves a net profit of £1,562 17s. 8d. In normal circumstances I should have recommended that this should be added to the £1,000 from the same source, which we invested last year to form the nucleus of a Refreshment Room Rebuilding Fund, but in consideration of the uncertain financial prospects of the Society for the year 1915, I think that it would be unwise to ear-mark it at present.

75. At the end of the June quarter the Refreshment Department was very prosperous, and there was every indication that the results of 1914 would far surpass those B2 of 1913. Unfortunately, as August and September are the two best months of the year, the sudden diminution in the numbers of visitors which followed the outbreak of war seriously reduced both receipts and profits. The total result is shewn in the following comparative table :---

RECEIVED BY THE SOCIETY FROM THE	REFRESHMENT DEPARTMENT-
	1913 1914
	(nine month.). (twelve months).
Share of Lavatory Receipts	£ 228 15 9 £ 249 8 6
Rent	1,000 0 0 1,000 0 0
New fixtures and plant acquired	1,392 2 2 730 0 9
Profit	1.000 0 0 1,562 17 8
Depreciation Fund	300 0 0 300 0 0
	£3,920 17 11 £3,842 6 11
Less Net Expenditure by Works Department	140 16 3 —
· · · · · · · · · · · · · · · · · · ·	£3,780 1 8 £3,842 6 11

# 2.—General.

76. Minor improvements have been made which have facilitated the service, and in other respects the standard of the catering has been raised. The new pavilion at the Mappin Terraces was equipped for higher class catering, and pending the rearrangements which may be expected when new refreshment rooms are built, it is reserved for Fellows on Sundays, and on weekdays is used only for serving 1s. 6d. teas to Fellows and the public. This arrangement has been financially satisfactory and has added to the convenience of visitors.

Since August, troops have been drilling in Regent's Park, and hot and cold mid-day meals have been provided for them at the Society's refreshment rooms. The men have been allowed free admission to the Gardens for this

purpose, and the charge for each meal has been reduced as nearly as possible to cost price.

I recommend that the existing arrangement with Mr. Ridley, the manager of the department, be continued for another year.

I have again pleasure in acknowledging the assistance given me by Mr. E. G. Boulenger in the supervision of the catering.

> P. CHALMERS MITCHELL, Secretary.

## STAFF AT THE GARDENS.

77. The following Table shows the staff as it existed at December 31st, 1914; it includes those now serving with the Army, as their places are being kept open :—

Superintendent and Curator of Mammals. Inspector of Works and Curator of Birds. Curator of Reptiles. Curator of the Caird Insect House.

Prosector.

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Pathologist.

Assistant Superintendent.

10 Head Keepers of the following Sections.

Large Carnivora.

Small Mammals.

Ungulates in South Garden. Elephants and Rhinoceroses. Equine Animals.

Giraffes and Hippopotamuses.

16 Senior Keepers.

14 Junior Keepers.

1 Assistant Curator.

38 Helpers.

1 Stableman.

1 Storekeeper.

1 Assistant Storekeeper.

1 Engine-driver.

2 Butchers.

1 Chauffeur.

1 Clerk of the Works.

Apes and Monkeys. Water-Fowl. Ostriches, Cranes, and Game-birds. Parrots and Birds of Prey.

1 Dungman.

2 Stokers.

2 Night-Watchmen.

3 Gate-keepers.

1 Time-keeper.

1 Housekeeper.

## Works.

2 Wireworkers.

- 3 Carpenters.1 Bricklayer.1 Smith.
- 1 Networker. 6 Painters. 9 Labourers. *Gardens*.

1 Head Gardener.14 Garden Labourers.1 Propagator.14 Boy.3 Assistant Propagators.1 Boy.Prosectorium.

1 Assistant. 2 Boys.

### VISITORS.

78. The total number of visitors to the Gardens, during the past year, was 1,055,208, a decrease of 102,766 on the total for 1913. At the end of July, 1914, the increase on the number of visitors in the corresponding period was 60,000. In August, 1914, however, there were 76,302 fewer visitors than in August, 1913.

#### CLASSIFIED LIST OF VISITORS.

	19.	13. 1914	i. Compa	arison.
Fellows and Companions (Signature		048 49,8		
Do. Saturday orders	5,	046 5,5	and the second se	497
	35,	397 $33,2$		and the second s
	139,	253 107,6	71 Dec.	31,582
	21,	309 25,4	39 Inc.	4,130
	21,	889 28,6	86 Inc.	6,797
		676 15,2	90 Inc.	3,614
		336 5,1	15 Dec.	7,221
	and the second se	060 1,3	00 Inc.	240
		829 1,6	27 Dec.	202
D 1 diabate (Complimentary)		710 1,7		_11 ( H.S. 1)
Hed Herees (company of		311 3	CONTRACTOR AND	56
ATUSUS DICACUS		107 13,3	a top and the second	
FIAULIBIULI DICINOUS (non-1)		,10, -0,0	1000	1.00
Single tickets sold in office at ordina	1	165 1,2	224 Inc	59
01100	010		State of the second state	72,222
I dvine thoreers at		,229 247,0	. Dec.	
Do. do. Mondays and oth	ler	205 205	57 Tno	98 751
days at 6d. ea	ch 366	,806 395,6		28,751
Do. do. Children at 6d. ea	ch 87	630 61,3		26,250
Staff		CARGO MANTA	374 Dec.	
		,101 40,9		
Police	10	Constant of the second s	567 Dec.	
Railway tickets	4	1 16 C 16	504 Dec.	
London Teachers Association	5	,552 5,1	196 Dec.	356
Soldiers and sailors, families of		— 2,	145 Inc.	2,145

1,157,974 1,055,208Net Dec.102,766

# NUMBER OF VISITORS ON BANK HOLIDAYS.

79. The total number of visitors admitted upon the three principal Bank Holidays in 1914 amounted to 133,030, an increase of 9,473 as compared with the corresponding holidays of the previous year.

1914. 1913. \*55,921 (Fine) 41,579 (Fine) Easter Monday ... 49,492 (Fine) 48,636 (Fine) Whit-Monday ... 28,473 (Fine) 32,486 (Fine) First Monday in August

\* This exceeds by 6,429 the greatest number previously admitted on any one day.

	Year. 1898	Number.	Year. Number. 1873 713 046
	$\frac{1828}{1829}$	 98,605	1873 713,046
	1829	 189,913	1874 706,907
	1831	 223,420 262,193	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
	$   1832 \\   1833 $	 206,652	1877 781,377
		 211,343	1878 706,713
	1834	 208,583	1879 643,000
	1835	 210,068	1880 675,979
	1836	 263,372	1881 648,694
	1837	 173,778	$ (d) 1882 \dots 849,776 $
	1838	 179,197	1883 743,485
	1839	 158,432	1884 745,460
	1840	 141,009	1885 659,896
	1841	 132,616	1886 639,674
	1842	 107,459	1887 562,898
	1843	 98,280	1888 608,402
	1844	 101,527	1889 644,579
	1845	 99,615	1890 640,987
	1846	 100,045	1891 598,730
	1847	 93,546	1892 605,718
	1848	 143,630	1893 662,649
	1849	 168,895	1894 625,538
	1850	 360,402	1895 665,326
(a)		 667,243	1896 665,004
	1852	 305,203	1897 717,755
	1853	 409,076	1898 710,948
	1854	 407,676	1899 696,707
	1855	 315,002	1900 697,178
	1856	 344,184	1901 725,685
	1857	 339,217	1902 694,496
	1858	 351,580	1903 657,208
	1859	 364,356	1904 706,074
	1860	 394,906	1905 715,480
1-1	1861	 381,837	$(e) 1906 \dots 896,423$
(b)	1862	 682,205	1907 863,953
	1863	 468,700	1908 861,586
	1864	 507,169	1909 797,058
	1865	 525,176	1910 897,461
	1866	 527,349	1911 892,622
	1867	 556,214	1912 1,012,898
	1868	 573,186	1913 1,157,974
	1869	 572,848	(f) 1914 1,055,208
	1870	 573,004	(c) Exhibition of H.M. King Edward's
	1871	 595,917	Indian Collection. (d) Departure of Elephant 'Jumbo.'
	1872	 648,088	(e) Exhibition of H.M. King George's Indian Collection.
	reat Exi	hibition.	(f) Opening of the Mappin Terraces and outbreak of Great War.

Number of Visitors to the Gardens, 1828-1914.

## TEMPORARY ARRANGEMENTS FOR ADMISSION TO THE GARDENS.

80. The Council has made the following arrangements, to hold good during the War, or until further notice.

(1) The families of Soldiers and Sailors on Active Service will be admitted free, by the Time-keepers' gate, on production of the identity certificate in the case of the Regular and Territorial Forces, and of the allotment certificate in the case of Naval Ratings.

(2) Wounded Soldiers or Sailors will be admitted free on Sundays, on application at the Office.

(3) Saturdays as well as Mondays will be Sixpenny days.

(4) Tickets for British and Colonial Troops or Sailors, and for Belgian Refugees may be purchased at the Office, at the rate of 3d. each for Mondays and Saturdays, and 6d. each for other Week-days.

## EXCURSION AND SCHOOL TICKETS.

81. The reduced prices now in operation for the admission of Excursion and School parties are as follows :---

#### ADULTS.

CHILDREN UNDER 12 YEARS.

Contraction of the second

25 to 50 @ 10d. each. 51 to 100 @ 9d. each. 101 to 250 @ 8d. each. 251 to 500 @ 7d. each. 501 and upwards @ 6d. each. 50 to 100 @ 5d. each. 101 to 250 @ 4d. each. 251 and upwards @ 3d. each.

If the date fixed for the proposed visit to the Gardens should be found, through unforeseen circumstances, unsuitable, the tickets, upon being returned to the Office, may be endorsed for another day during the year of issue. Special packets of School Excursion Tickets for the admission of 25 School Children (under 14 years of age) and one Teacher, may also be obtained for any fixed date (except Sunday) at the Society's Offices, at the reduced price of eleven shillings per packet.

Combined Admission and Tea Tickets can be obtained for 25 persons and upwards at the rate of 1/6 each for adults, and 1/- for children, except on Mondays and Saturdays. CHEAP ORDERS for the admission of any number from 25 upwards of the children of Council or Grant-aided Schools to the Society's Gardens may be had undated, for any day between the hours of 9.0 a.m. and 1.0 p.m. except Saturdays, Sundays and Mondays. The charge for an order to admit 25 Children with one or two Teachers is 3s., for an order for 50 Children with 2 Teachers 5s., and additional admissions may be obtained at the rate of Children 1d. each, Teachers 5d. each.

All applications for Tickets must be made to the Secretary at the Offices of the Society. Payment for admission at the reduced prices cannot be accepted at the turnstiles.

#### MENAGERIE.

## Provisions.

82. The expenditure on provisions was considerably less in 1914 than in 1913, and would have shewn a much greater reduction had not the war disturbed contracts and altered prices. An arrangement made with the War Office with regard to horses that had to be slaughtered has been most useful to us, as it has given us a supply of horseflesh of very good quality at a low cost. Since August the supply has occasionally exceeded our normal requirements, and we have resold some and used a good deal to replace goatflesh, fowls' heads, dog-biscuit, etc.

On the outbreak of the war, we were able to make good terms with the grain merchant and secure ourselves until September 30th. Since then we have taken advantage of the extraordinary fluctuations in prices, enlarging our orders when prices were low. By arrangement with the Park Officials we were able, by means of our motor vans, to get great quantities of cut grass from the parks in and near London, thus making a substantial saving in dry fodder and green food. We have also reduced rations and have been able to use very large quantities of acorns which were sent to us in most cases at the cost of freight. We have had to lay in a stock of canary and millet seed, as a scarcity in these necessary commodities is expected. Our worst experience was with fish. Early in August the contractor was unable to deliver, and we had to buy from day to day at prices ranging from 41d. to 7d. per lb. (our normal price being  $1\frac{1}{2}d$ . per lb.). The Inspector of

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the Fishmongers Company at Billingsgate then came to our aid and allowed us to take away from the market quantities of fish good for immediate consumption but not fit to distribute through the retail trade. 'This source of supply kept us going until the middle of September, but failed when the cold weather came. We have now been able to arrange for a regular supply from Grimsby.

83. The following table gives the chief items of expenditure paid in 1913 and 1914 :—

add to think the	sig hide so	oppendia		19	13.		19	14.	
				£	8.	d.	£	8.	d.
Hay				694	16	6	544		2
Clover				501	2	5	342		3
Green-food an	d Chaff			220	11	5	155	15	9
Oats		"		446	11	9	348	9	6
Bran				59	17	6	46	9	3
Maize				56	2	9	66	15	6
Grain and See	12. 11			341	14	0	351	3	2
Fish (Sea)				444	3	7	497	12	0
" (Freshwa				131	6	0	141	4	7
Horses				783	11	6	722	7	7
		house		99	12	2	53	14	9
		1000 000		60	5	11	64	8	5
Fowls' Heads		in has		92	5	6	57	11	6
3.6.11				149	2	0	111	18	2
Milk Fruit				474	10	1	431	7	8
A REAL PROPERTY AND A REAL				192		4	197	5	6
Vegetables Bread				133			123	17	11
			•••	209		0	195	12.5	4
				140	11	11	145		1
00		Dinda	····	1 million and the second	17	8	88		
Food for Insec	livorous	s birus,	19.25	285			223		9
Vermin				1	10		55		6
Miscellaneous					10				-
raid of fund				£5657	13	5	£4966	12	11
build ged the	- Lagle (IX	17/20-430	1991	-		1			-

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84. Comparative return giving the Dry Fodder, Straw and Food-stuffs consumed in the Society's Gardens during the years 1913 and 1914:—

the second se	and the second	and the second
Description.	Quantity, 1913.	Quantity, 1914.
Hay	169 Loads	169 <u>3</u> Loads.
Clover	1011 Loads	89 Loads.
Straw	1855 Loads	153 Loads.
Chaff	27 Ťons	251 Tons.
Tares	11,572 Bundles	4,327 Bundles.
Oats	3901 Quarters	$327\frac{1}{4}$ Quarters.
Bran	191 Quarters	170 Quarters.
Wheat	57 Quarters	48 Quarters.
Barley	$22\frac{3}{4}$ Quarters	381 Quarters.
Maize	41 Quarters	47 Quarters.
Dari	31 Quarters	$5\frac{3}{4}$ Quarters.
Beans	12 Quarters	4 Quarters,
Rice	2 Tons, 4 cwt	2 Tons, 16 cwts.
Canary	16 <sup>1</sup> / <sub>2</sub> Quarters	16 <sup>1</sup> / <sub>2</sub> Quarters.
Hemp	12 Quarters	131 Quarters.
Millet	7 <sup>1</sup> / <sub>4</sub> Quarters	7 <sup>3</sup> Quarters.
Millet Spray	21 Bunches	6 Bunches.
Maw	22 lbs	nil.
Herrings	$20,313\frac{1}{2}$ lbs	1 07 704
Whiting	49,030 lbs	67,764.
Shrimps	1,095 Pints	6681 Pints.
Horses	$316 = 159 \text{ tons} \dots$	382 = 191 tons.
Goats	145 = 688 stone	$84 = 401\frac{1}{4}$ stone.
Condensed Milk	4,896 Tins	3,504 Tins.
New "	9,8191 Pints	10,443 Pints.
Spanish Nuts	25 <sup>1</sup> / <sub>2</sub> Pecks	301 Pecks.
Monkey "	39 cwts	39 cwts.
Brazil "	261 lbs	260 lbs.
Bananas	120,793	116,397
Apples	338 Pecks	2391 Pecks
Grapes	2,834 <u>1</u> lbs	1,9311 lbs.
Oranges	14,273	13,673.
Lemons	404	240.
Dates	4,143½ lbs	3,6711 lbs.
Currants	288 lbs	320 lbs.
Figs	144 lbs	135 lbs.
Sultanas	288 lbs	288 lbs.
Lettuce	14,585	12,085.
and the second se		

19-19 ( 18-27

1	4		1		
1	1	1	2	5	

Spring Serling

Description.	Quantity, 1913.	Quantity, 1914.
Greens Cress Carrots Carrots Potatoes Onions Onions Mangel Biscuits Biscuits Biscuits,Ground Sugar Bread Bread Eggs Oil Cake Meat & Veget- able Extracts Fowls' Heads Chickens Rabbits Guinea Pigs Pigeons Pigeons Pigeons Mice Mice Ducks	$860\frac{1}{4}$ Bushels $1,196$ Bunches $6,696$ lbs. $985$ Bunches $16,240$ lbs. $16,240$ lbs. $16,240$ lbs. $106$ lbs. $106$ lbs. $106$ lbs. $106$ lbs. $106$ lbs. $82$ Bunches $6$ Tons, 8 cwts. $297$ cwts $40$ cwts. $40$ cwts. $471$ lbs. $6,995$ quarterns $34,860$ . $51\frac{1}{2}$ cwts $240$ ozs. $1,435$ $0$ $1,435$ $0$ $6,824$ $157$ $5,364$	1,038 Bushels. 493 Bunches. 5,926 lbs. 493 Bunches. 18,116 lbs. 128 lbs. 72 Bunches. 2 Tons, 16½ cwts. 250 cwts. 44¼ cwts. 417 lbs. 6,188 quarterns. 29,900. 51 cwts. 240 ozs. 26,070. 44. 839. 140. 339. 7,951. 18,527. 57. 5,799.
Starlings	0	172.

GENERAL CONDITION OF THE ANIMALS.

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85. The general health of the collection has been good, and there have been decreases in the deaths due to tubercle and other communicable diseases. The Garden Committee and the staff have received much assistance from Mr. Plimmer, the Society's Pathologist, from Professor G. H. Wooldridge, Hon. Consulting Veterinary Surgeon, and from Mr. B. Gorton, the Acting Veterinary Surgeon.

# 86. List of Animals bred in the Gardens in 1914.

ary-mail and the

## Mammalia.

Dec.	13.	
16		nursed by mother; still living.
May	17.	I ( The second of the second o
-	1	mother; still living.
Dec.	.4.	1 Arabian Baboon ( <i>Papio hamadryas</i> ), nursed by mother; still living.
March	6.	2 Hybrid Jungle and Domestic Cats (Felis
		chaus × Felis domesticus), reared by mother; 1 living.
April	6.	
P-III	0.	a few days after hirth : 2 marred : sold
March	22	a few days after birth; 2 reared; sold. 5 Indian Wolves (Canis nallines) 2 still beta
maion	~~.	5 Indian Wolves ( <i>Canis pallipes</i> ), 2 still-born; 3 reared; sold.
April	25	
mbin	20.	9 Prairie Wolves (Canis latrans), all died a
April	18	few days after birth. 3 Striped Hymnes (Hymne hymne) 1 died at
mpin	10.	3 Striped Hyænas (Hyæna hyæna), 1 died at
March	2.	birth; 2 died three days afterwards. 3 Badgers (Malas malas) 2 died, 1 align
Feb.		3 Badgers (Meles meles), 2 died; 1 alive.
		3 Pampas Gerbilles ( <i>Reithrodon typicus</i> ), all died a fortnight old.
Feb.	24.	6 Cairo Spiny Mice (Acomys cahirinus), all
Tana	00	alive.
June	28.	1 Long-tailed Porcupine (Hystrix longicauda), living.
July	1.	2 Beavers (Castor canadensis), living.
Aug.	3.	7 Coypus (Myocaster coypus), 3 born dead;
U		3 died within a few days; 1 still living.
June	3.	1 Onager & (Equus onager), living.
July	10.	1 Kiang & (Equus kiang), living.
Oct.	31	1 Mysore Zehn & (Bos indicus var) living

Dec. 29. 1 European Bison & (Bison bonasus), living. June 18. 1 Blesbok (Damaliscus albifrons), living. Sept. 28. 1 White-bearded Gnu (Connochætes albojubatus), living. 1 Indian Blackbuck (Antilope cervicapra), Dec. 14. living. Mar. 3. 1 Eland ? (Taurotragus oryx), living. April 1 Eland (Taurotragus oryx), living. 4. 2 Grecian Ibexes (Capra ægagrus), 1 dead, April 24. 1 living.

diment Section

June	2.	1 Caucasian Ibex & (Capra cylindricornis),
June	6	died, 6 months old. 1 Caucasian Ibex (Capra cylindricornis),
June	0.	living.
June	10.	2 Hybrid Caucasian and Himalayan Ibex (Capra cylindricornis $\times$ C. sibirica),
		living.
June	21.	2 Hybrid Caucasian Ibex (Capra cylindri- cornis × Capra sibirica), living.
March	9.	1 Mouflon ? (Ovis musimon), disposed of in
75 1	10	exchange.
March	18.	1 Mouflon & (Ovis musimon), died on day of birth.
March	20.	1 Mouflon & (Ovis musimon), disposed of in
		exchange.
April	3.	1 Mouflon (Ovis musimon), died, 2 days old.
May		1 Mouflon ? (Ovis musimon), living.
March		2 Barbary Sheep & ? (Ammotragus lervia), 1 disposed of in exchange; 1 still
		living
Aug.	12.	1 Kordofan Giraffe & (Giraffa camelopar- dalis), died of pneumonia, Dec. 29th.
June		1 Dybowski's Deer ? (Cervus hortulorum), living.
July	19.	1 Dybowski's Deer & (Cervus hortulorum), living.
May	9.	T D : 1 (D : C towardus) died 7
Manah	Q	1 Bennett's Wallaby (Macropus bennetti),
maren	5.	died of injuries, 6 months old.
Amil	5	1 Bennett's Wallaby (Macropus bennetti),
April	0.	died of injuries, 6 months old.
Feb.	19.	1 Red-bellied Wallaby (Macropus billardieri),

living.

# Feb. 27. 1 Red-bellied Wallaby (Macropus billardieri), living.

## Birds.

(All these were reared, except where otherwise stated.) June 21. 2 Red-bellied Thrushes (*Turdus rufiventris*). June 2 Green Cardinals (*Gubernatrix cristatella*). Aug. 2 Budgerigars (*Melopsittacus undulatus*).

May 8.	2	White Storks (Ciconia ciconia), died at 3 weeks old.
June 8.	1	Mandarin Duck (Æx galericulata).
June 30.		Carolina Duck (Lampronessa sponsa).
July 21.		Bernicle Goose (Branta leucopsis).
June 30.		Hybrid Snow Geese (Chen cærulescens ×
		c. nivalis).
May 19.	3 3	Egyptian Geese (Alopochen ægyptiacus).
May 19.		Upland Geese (Chloephaga magellanica).
June 30.		Yellow-billed Duck (Anas undulata).
June 30.		Wigeon (Mareca penelope).
Aug. 6.	1.4.4.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	Tufted Ducks (Fuligula fuligula).
June 8.		Red-crested Pochard (Netta rufina).
May to )		Common Teal (Nettium crecca), 4 reared.
June.		Eggs presented by Sir Richard Graham, Bt., F.Z.S.
July to	3 ]	Naked-eyed Pigeons (Columba gymnoph-
Åugust		thalma).
July.	- 1 (	Crested Pigeon (Ocyphaps lophotes).
July 14.	1 (	Green-winged Dove (Chalcophaps indica).
Sept. 17.	2	Diamond Doves (Geopelia cuneata), died on
		leaving nest.
July.	4	Madagascar Turtle - Doves (Homopelia
-		picturata).
July 26.	1 (	Crowned Pigeon (Goura coronata).
Sept. 1.	3	Chukar Partridges (Caccabis chukar).
Aug. 12.	7	Douglas Quails (Lophortyx douglasi).
Aug. 19.	2	Amherst's Pheasants (Chrysolophus am-
		herstiæ).
July 6.	4	Nepal Kaleege Pheasants (Gennæus leuco-
T 1 0		melanus), 1 died.
July 6.		Swinhoe's Pheasants (Gennæus swinhoii).
July 6.	5 ]	Elliot's Pheasants (Calophasis ellioti), 2 died.

Strong Station

- May. 6 Peacock Pheasants (Polyplectrum chinquis), 3 died.
- Aug. 19. 3 Hybrid Siamese and Bornean Fire-back Pheasants (Lophura diardi  $\times$  L. nobilis).
- July 6. 4 Red Jungle-fowl (Gallus gallus).
- July 6. 3 Hybrid Tragopans (*Ceriornis satyra*  $\times$  *C. temmincki*), died when about 3 months old.
- Aug. 19. 1 Horned Tragopan (Ceriornis satyra).
  Aug. 19. 4 Black-winged Peafowl (Pavo nigripennis).

July 6.	4 North American	Turkeys	(Meleagris
June 4.	<i>americana</i> ). 4 Greater Black-backed	d Gulls(Lar	us marinus).
June 4	1 Dominican Gull (La	rus dominico	anus).

May 8. 1 Black-footed Penguin (Spheniscus demersus).

#### Reptilia.

Feb. 26. 12 Madagascar Tree-Boas (Corallus madagascariensis).

## Additions to the Menagerie in 1914.

87. The number of Vertebrate Animals living in the Society's Menagerie at the end of 1914 was 3,291. The corresponding number on the 31st of December, 1913, was 3,973, as will be seen by the following Table :—

Barrow Barrow Collegender 1000	December 31.		
	1913.	1914.	
Mammals	788	733	
Birds	2,436	2,073	
Reptiles and Batrachians	575	371	
Fishes	174	114	
	3,973	3,291	

The total number of registered additions to the Menagerie in 1914 was 2,075, of which 1,166 were acquired by presentation, 311 by purchase, 193 were born in the Gardens, 290 were received on deposit, and 115 obtained in exchange.

The mode in which these figures compare with those of the previous ten years is shown in the following table :---

	Presented.	Purchased.	Born.	Deposited.	Received in Exchange.	Total.
1904	701	254	177	581	91	1804
1905	860	· 286	286	1097	202	2731
1906	1156	254	200	1019	139	2768
1907	929	202	187	737	227	2282
1908	1347	374	155	300	265	2441
1909	1015	323	131	361	166	1996
1910	1128	341	267	362	254	2352
1911	1269	812	382	611	417	3491
1912	1335	456	448	346	232	2817
1913	1308	527	305	249	193	2582
1914	1166	311	193	290	115	2075

88. In addition to examples of species new to the collection and of species bred in the Menagerie, lists of which appear elsewhere in this report, the following are the more noteworthy additions to the Menagerie during the year :--

#### Mammalia.

A pair of Park Cattle (Bos taurus), from Chillingham, presented by the Earl of Tankerville, F.Z.S., on January 28th.

A pair of Indian Wild Dogs (Cyon dukhunensis), from Nagpur, presented by Mrs. H. A. Crump on January 23rd.

2 Urial Sheep (Ovis vignei), from Jhelum, presented by Capt. T. H. Scott on February 5th.

1 Wild Boar (Sus scrofa), from Antioch, presented by the Officers of H.M.S. "Duke of Edinburgh" on February 25th.

1 Slender Dog (Canis gracilis), and 1 Salt-Desert Cavy (Dolichotis salinicola), from Cordova, presented by Wilfred A. Smithers, Esq., C.M.Z.S., on February 4th.

2 Grévy's Zebras (Equus grevyi)  $\Im$ , from Abyssinia, purchased on March 2nd.

1 Slow Loris (Nycticebus tardigradus) and 2 Finlayson's Squirrels (Sciurus finlaysoni), from Koh Si Chang, Siam, presented by Commander Robert E. Buske-Peel on February 27th.

3 Indian Antelopes (Antilope cervicapra), presented by H.M. THE KING on March 2nd.

2 Elephant-Seals (*Macrorhinus leoninus*)  $\delta$   $\varsigma$ , from the Antarctic Seas, presented by H.G. The Duke of Bedford, K.G., F.R.S., Pres. Z.S., on April 6th.

2 Indian Elephants (*Elephas maximus*) & &, from India, presented by "The Daily Mirror" on April 1st.

2 Tigers (*Felis tigris*)  $\delta$   $\mathfrak{P}$ , from Burma, presented by Major F. Bigg-Wither on April 27th.

1 Binturong (Arctictis binturong), from Malacca, pur-

diments licity

chased on April 6th.

2 Bonda's Squirrels (Sciurus saltuensis bondæ), 1 Collared Peccary (Tayassu tajaçu), and 2 White-browed Hares (Sylvilagus superciliaris), from Rio César, Colombia, presented by W. K. Pomeroy, Esq., F.Z.S., on April 29th.

2 Bladder-nosed Seals (Cystophora cristata) 3 %, from Greenland, purchased on May 18th.

1 Anoa (Anoa depressicornis) &, from Celebes, presented by Willoughby Smith, Esq., on June 4th.

1 Panolia Deer (Cervus eldi) &, from Rangoon, presented by H. L. Holman Hunt, Esq., on June 13th. 1 Vicuña (Lama vicugna)?, from Peru, presented by G. Noel Clarke, Esq., F.Z.S., on June 12th.

1 Lesser Kudu (Strepsiceros imberbis) 5, from Berbera, presented by Arnold Hodson, Esq., on July 28th.

1 Cape Ant-bear (Orycteropus capensis), from S. Africa, purchased on July 1st.

1 Grison (Grison furax), 2 Slender Dogs (Canis gracilis), and one Collared Peccary (Tayassu tajaçu), from Cordova, presented by Wilfred A. Smithers, Esq., C.M.Z.S., on August 19th.

1 Capybara (Hydrochærus hydrochærus), from S. America, and 1 Yak (Bos grunniens), from Tibet, presented by A. H. Wingfield, Esq., F.Z.S., on August 17th and 24th.

2 Elands (*Taurotragus oryx*), from S. Africa, presented by A. H. Wingfield, Esq., F.Z.S., on November 18th.

## Birds.

2 Blue-cheeked Amazon Parrots (*Chrysotis versicolor*), from St. Lucia, presented by Edward John Cameron, Esq., C.M.G., on March 2nd.

1 Pileated Heron (*Pilerodius pileatus*), 1 Prince Albert's Curassow (*Crax alberti*), and 1 Banded Tinamou (*Crypturus noctivagus*), from Rio César, Colombia, presented by W. K. Pomeroy, Esq., F.Z.S., on April 29th.

A Collection of Small Birds from Chili, including Chilian Starlings (*Curæus aterrimus*), Little Saffron Finches (*Sycalis minor*), and others, presented by George H. F. Duncan, Esq., F.Z.S., on April 20th.

4 Red-headed Bullfinches (*Pyrrhula erythrocephala*), from the Himalayas, and 2 Cotton-Teal (*Nettopus coromandelianus*), from India, presented by Alfred Ezra, Esq., F.Z.S., on May 15th.

2 Cuvier's Toucans (Ramphastos cuvieri), from the Upper Amazons, purchased on May 12th.

. 3 Maximilian's Parrots (*Pionus maximiliani*), from Brazil, and 2 Petz's Conures (*Conurus canicularis*), from Mexico, presented by the Marquess of Tavistock, F.Z.S., on May 28th and June 18th. Contraction (1963)

2 Open-bills (Anastomus oscitans), from India, purchased on May 20th.

2 Cotton Teal (Nettopus coromandelianus) from India, presented by Hubert D. Astley, Esq., F.Z.S., on June 29th. 1 Black-necked Stork (Xenorhynchus asiaticus), from India, purchased on July 28th.

A collection of Birds from New Guinea, the Aru Islands, etc., acquired by purchase on September 11th, containing

Greater Birds-of-Paradise (Paradisea apoda), a Lesser Bird-of-Paradise (P. minor), and King Birds-of-Paradise (Cicinnurus regius).

A Collection of Birds presented by the late Sir Walter Gilbey, Bart., F.Z.S., on October 12th, consisting of a Hunstein's Bird-of-Paradise (Diphyllodes hunsteini), from Southeast New Guinea, a Hildebrandt's Starling (Spreo hildebrandti), from East Africa, a Hunting Crow (Cissa chinensis), from India, and a number of other rare birds.

A Collection of Birds from Chili, presented by George H. F. Duncan, Esq., F.Z.S., on October 22nd, containing 10 Cayenne Lapwings (Belonopterus cayennensis), 2 Chilian Sea-Eagles (Geranoaëtus melanoleucus), 5 Gay's Finches (Phrygilus gayi), and others.

2 Red-crowned Fruit-Pigeons (Alectroenas pulcherrima), from the Seychelles, received in exchange on December 21st.

#### Reptilia.

1 Abingdon Island Tortoise (Testudo abingdonii), from Abingdon Island, purchased on January 12th.

1 Red Teguexin (Tupinambis rufescens), from Cordova, Argentina, presented by Wilfred A. Smithers, Esq., C.M.Z.S., on February 4th.

2 Black-collared Cobras (Naia nigricollis), and a Burrowing Viper (Atractaspis irregularis), from the Gold Coast, presented by Guy Aylmer, Esq., F.Z.S., on August 6th.

### List of the Species new to the Collection exhibited during the year 1914.

89. The following list gives the names of the specimens exhibited in 1914 which are referable to genera or species not included in the last (ninth) edition (1896) of the List of Animals, or in subsequent Annual Reports. It contains 8 Mammals, 31 Birds, 14 Reptiles, 1 Batrachian.

The figures placed before each name indicate its approximate position in the List of Animals.

## I.—MAMMALS.

165 a. Perodicticus ibeanus Thomas. Ibean Potto. Hab. Mt. Elgon, B. E. Africa. a. Deposited, March 2nd, 1914. 362 a. Rhinopoma microphyllum Geoffroy. Long-tailed Bat. Hab. India. a-f. Received in exchange. g-p. Deposited, May 12th, 1914.

Normal Lines

- 233 b. Helogale undulata Peters. Peters's Dwarf Mongoose.
  - Hab. Wangi, Tanaland, E. Africa.
  - a. Deposited, December 1st, 1914.
- 271 a. Canis gracilis Burmeister. Slender Dog. Hab. Dolores, Argentina.
  - a, b. & ? Presented by Wilfred A. Smithers, Esq., C.M.Z.S., August 19th, 1914.
- 457 a. Microtus sandayensis Millais. Sanday Island Vole.

Hab. Sanday Island, N. Orkneys.

- a. ? Presented by W. R. Ogilvie-Grant, Esq., F.Z.S., July 11th, 1914.
- 468 a. Coendu bicolor Tschudi. Peruvian Tree-Porcupine.

Hab. Peru.

- a. Deposited, June 16th, 1914.
- 566 a. Neotragus pygmæus Linn. Pigmy Antelope. Hab. Accra, Gold Coast.

a. ? Presented by E. B. Reece, Esq., February 4th, 1914.

592 a. Oryx gazella Linn. Gemsbok. Hab. Kalahari Desert, S. Africa. a-c. δδ γ Purchased, June 2nd, 1914.

#### II.—BIRDS.

16 c. Oreocichla lunulata Latham. Australian Ground Thrush.

Hab. New South Wales.

- a. Purchased, July 1st, 1914.
- 19 b. Petrophila cinclorhyncha Vigors. Blue-headed Rock-Thrush.

Hab. Himalayas.
a. Presented ) by Alfred Ezra, Esq., F.Z.S., July
b. Deposited ) 27th, 1914.
22 a. Petræca phænicea Gould. Flame-breasted Robin. Hab. New South Wales.
a. ? Presented by Alfred Ezra, Esq., F.Z.S., July 1st, 1914.
22 c. Petræca leggei Sharpe. Scarlet-breasted Robin. Hab. New South Wales.
a, b. Deposited, July 17th, 1914.

- 22 c. Ephthianura albifrons Jard. and Selby. Whitefronted Chat.
  - Hab. New South Wales.

11-26 18.27

- a. Purchased, July 1st, 1914.
- 30 a. Irena turcosa Walden. Fairy Bluebird. Hab. Java.
  - a. Purchased, September 11th, 1914.
- 45 a. Mimus gilvus Vieill. Graceful Mocking-bird. Hab. C. America.
  - a. Presented by Hubert D. Astley, Esq., F.Z.S., Feb. 3rd, 1914.
- 59 b. Cephalopyrus flammiceps Burton. Firecap. Hab. Himalayas.
  - a, b. Presented by Alfred Ezra, Esq., F.Z.S., June 14th, 1914.
- 62 c. Sitta frontalis Swains. Velvet-fronted Nuthatch. Hab. India.
  - a. Presented by Alfred Ezra, Esq., F.Z.S., June 12th, 1914.
- 116 b. Lalage tricolor Swains. White-shouldered Caterpillar-eater.

Hab. New South Wales.

- a, b. Presented by Alfred Ezra, Esq., F.Z.S., July 1st, 1914.
- 121 e. Cinnyris chalybeus Linn. Lesser Double-collared Sun-bird.

Hab. S. Africa.

121 f. Nectarinia famosa Linn. Malachite Sun-bird. Hab. S. Africa.

a-e, 23, 39. Deposited July 8th, 1914.

126 e. Ptilotis chrysotis Less. Golden-eared Honey-eater. Hab. New Guinea.

a. Presented by Alfred Ezra, Esq., F.Z.S., December

7th, 1914.

- 126 m. Tropidorhynchus corniculatus Latham. Friar-bird. Hab. New South Wales.
  - a. Purchased, July 1st, 1914.
- 129 b. Certhiola flaveola Linn. Banana Quit. Hab. W. Indies.
  - a, b. Deposited, July 8th, 1914.
- 145 a. Pyranga bidentata Swains. Tooth-billed Tanager. Hab. C. America.
  - a, b. Received in exchange, February 11th, 1914.

a-d. 3329 Deposited, July 8th, 1914.

- 335 c. Pyrrhula erythrocephala Vigors. Red-headed Bullfinch. Hab. Himalayas. a-d. Presented by Alfred Ezra, Esq., F.Z.S., May 15th, 1914. 379 d. Icterus pyrrhopterus Vieill. Brown-shouldered Hangnest. Hab. Brazil. a. Presented by T. W. Smith, Esq., January 20th, 1914. 393 d. Trupialis militaris Linn. Military Starling. Hab. Chili. a. Presented by Geo. H. F. Duncan, Esq., F.Z.S., April 20th, 1914. 399 a. Spreo hildebrandti Cab. Hildebrandt's Starling. Hab. East Africa. a, Q. Presented by the late Sir Walter Gilbey, Bt., F.Z.S., October 12th, 1914. 444 b. Macrocorax fuscicapillus Gray. Blue-eyed Raven. Hab. Aru Islands. a, b. Purchased, September 11th, 1914. 504 b. Pitta novæ-guineæ Müll. and Schl. New Guinea Pitta. Hab. Aru Islands. a. Purchased, September 11th, 1914. 585 a. Coua ruficeps Gray. Rufous-crowned Ground Cuckoo. Hab. Madagascar. a. Purchased, June 9th, 1914. 893 b. Gampsonyx swainsoni Vigors. Swainson's Hawk. Hab. S. America. a. Purchased, July 27th, 1914.
- 968 a. Cerchneis cinnamomina Swains. Cinnamomeous Kestrel.

Hab. Cordova, Argentina.
a, b. Presented by Wilfred A. Smithers, Esq., C.M.Z.S., February 4th, 1914.
1015 a. Pilerodius pileatus Bodd. Pileated Egret. Hab. Rio César, Colombia.
a. Presented by W. K. Pomeroy, Esq., F.Z.S., April 29th, 1914.
1051 b. Notophoyx flavirostris Sharpe. Pied Egret. Hab. S. W. New Guinea.
a, b. Purchased, September 11th, 1914. 1211 a. Osmotreron griseicauda Gray. Grey-tailed Fruit Pigeon.

Hab. Java.

- a, b. Presented by the Marquess of Tavistock, F.Z.S., September 18th, 1914.
- 1471 a. Megapodius duperreyi Less. and Garn. Duperrey's Megapode.

Hab. Aru Islands.

- a-c. Purchased, September 11th, 1914.
- 1551 a. Aramus giganteus Bp. Great Courlan. Hab. Cuba.
  - a. Purchased, July 4th, 1914.
- 1569 a. Phalaropus hyperboreus Linn. Red-necked Phalarope.
  - Hab. Arctic Regions, Iceland.
  - a, b. Presented by W. H. St. Quintin, Esq., F.Z.S., October 8th, 1914.

### III.—REPTILIA.

34 a. Nicoria nasuta Blgr. Sharp-nosed Terrapin. Hab. Columbia.

> a-c. Presented by Dr. H. G. F. Spurrell, F.Z.S., April 28th, 1914.

60 a. Testudo abingdonii Günth. Abingdon Island Tortoise.

Hab. Abingdon Island.

a. Purchased, January 12th, 1914.

122 c. Hoplodactylus pacificus Gray. New Zealand Gecko. Hab. New Zealand.

a-d. Deposited, August 6th, 1914.

- 159 a. Crotaphytus collaris Say. Collared Lizard. Hab. Western United States.
  - a. Purchased, July 4th, 1914.
- 183 a. Varanus giganteus Gray. Giant Monitor.

Hab. Australia.

a. Deposited, July 1st, 1914.

216 b. Egernia striolata Peters. Striolated Skink. Hab. Australia.

a, b. Purchased, July 4th, 1914.

226 e. Lygosoma moco Dum and Bibr. Moco Skink. Hab. New Zealand.

a-c. Deposited, August 6th, 1914.

226 f. Lygosoma tenue Gray. Slender Skink. Hab. Australia.

a. Deposited, August 6th, 1914.

- 281 e. Tropidonotus fuliginoides Günth. Smoky Snake. Hab. Sierra Leone.
  - a. Presented by Guy Aylmer, Esq., F.Z.S., August 6th, 1914.
- 318 a. Coluber lætus Baird and Gir. Southern Wolf Snake.

Hab. Southern N. America.

a. Deposited, June 29th, 1914.

318 c. Coluber arizonæ Kennicott. Arizona Snake. Hab. N. America.

a. Purchased, June 29th, 1914.

330 a. Xenodon merremii Wagl. Merrem's Xenodon. Hab. Cordova, Argentina. a. Presented by Wilfred A. Smithers, Esq., C.M.Z.S.,

April 28th, 1914.

- 416 a. Atractaspis irregularis Reinh. Burrowing Viper. Hab. Sierra Leone.
  - a. Presented by Guy Aylmer, Esq., F.Z.S., August 6th, 1914.
- 416 c. Lachesis neuwiedi Wagl. Neuwied's Viper. Hab. Cordova, Argentina.
  - a. Presented by Wilfred A. Smithers, Esq., C.M.Z.S., April 28th, 1914.

## IV.—BATRACHIA.

- 14 b. Rappia spec. incert. Tree Frog. Hab. Sierra Leone.
  - a-d. Presented by Guy Aylmer, Esq., F.Z.S., August 6th, 1914.

90. List of Donors and their Donations for the Year 1914.

## H.M. The King. 3 Indian Antelopes 399. His Grace The DUKE OF BEDFORD, K.G., F.R.S., (PRESIDENT). 2 Elephant Seals 39.

ALEXANDRA PALACE, The Trustees of. 1 Vervet Cercopitheque, 1 Patas Cercopitheque, 1 Sooty Mangabey, 1 Common Macaque, 2 Brown Lemurs, 1 Indian Civet, 1 Vulpine Opossum, 1 Sooty Opossum, 7 Greater Sulphur-crested Cockatoos, 1 Lesser Sulphurcrested Cockatoo, 2 Bare-eyed Cockatoos, 7 Roseate Cockatoos, 2 Slender-billed Cockatoos, 1 Cockatiel, 2 Red and Yellow Macaws, 1 Military Macaw, 2 Orange-winged Amazons, 6 Ring-necked Parrakeets, 1 Alexandrine Parrakeet, 1 Rosella Parrakeet, 1 Barnard's Parakeet, 2 Tawny Owls, 9 Barbary Turtle-Doves.

ALLAN, Mr. C. H. 1 Nilotic Terrapin.

ALLEN, Mr. Oswald, F.Z.S. 1 Smoky Woolly Monkey.

ALLENBY, Major-Gen. Edmund H. H. 2 Crimson-eared Waxbills, 2 Common Waxbills, 2 Orange-cheeked Waxbills, 2 Zebra Waxbills, 1 Red-bellied Waxbill, 1 Cinereous Waxbill, 3 Amaduvade Finches, 2 Cut-Throat Finches, 2 Chestnut-eared Finches, 2 Spottedsided Finches, 2 Yellow-rumped Seed-eaters, 2 Nonpareil Buntings, 2 Yellow-bellied Liothrix, 2 Orange Weaver-birds.

ANDERSON, Mr. Alex. 1 Western Slender-billed Cockatoo. ARNAUD, Mdlle. Yvonne. 1 Black Lemur 3.

- ASTLEY, Mr. Hubert D., F.Z.S. 1 Graceful Mockingbird, 1 Malachite Sunbird, 2 Petz's Conures, 2 Cotton Teal.
- ATKINSON, Mr. H. B. 1 Common Marmoset, 2 Corais Snakes.

ATKINSON, Miss F. M. 1 Common Macaque.

AUSTEN, Miss Winifred M. L., F.Z.S. 2 Little Owls, 1 Wild Duck.

AYLMER, Mr. Guy, F.Z.S. 1 Büttikofer's Cercopitheque,

1 Crowned Hawk-Eagle, 2 Black-collared Cobras,

1 Green Tree-Snake, 1 Emerald Tree-Snake, 1 Rufescent Snake, 1 Smoky Snake, 1 Common African Python, 1 Burrowing Viper, 1 Senegal Chameleon, 4 Tree Frogs.

BAILEY, Mr. James. 1 Greater Spotted Woodpecker. BAINBRIDGE, Mr. W. A. 1 Hey's Partridge.

BANFIELD, Mr. Arthur C., F.Z.S. 1 Spotted Salamander, 2 Common Toads, 2 Green Toads, 1 European Tree-Frog.

BANNISTER, Mr. G. H. 7 Common Vipers.
BANTING, Mr. Edgar. 1 Raven.
BARKER, Mrs. V. 1 Roloway's Cercopitheque.
BARNARD, Capt. Lawrence. 1 Petz's Conure.
BARROW, Miss N. See Wheatley.
BATTERS, Mr. W. P. 1 Confluent Rattlesnake.
BELCHER, Mr. T. Edward. 1 Common Viper.

BELL, Mrs. 1 Greater Sulphur-crested Cockatoo. BENNETT, The Rev. Edward H. 1 Badger. BEST, Mr. J. G. 2 Brown-headed Parrots. BIRD, Mr. Stephen. 1 Tantalus Cercopitheque. BIRKBECK, Miss Winifred M. 1 Common Chameleon. BIRT, Mr. Bradley. 1 Panda. BLACKWELL, Mr. Sidney F. 1 Vulpine Opossum. BODILLY, Mrs. 1 Peregrine Falcon. BODKIN, Mr. A. H., F.Z.S. 2 Common Waxbills, 1 Orange-cheeked Waxbill. BOND, Mr. F. W. 1 Common Dormouse. BOND, Mr. Owen. 1 Spotted Mongoose. BOUCHER, Mr. Eric. 1 Slow-worm, 1 Common Viper. BOYLE, Mr. William H. 1 Pinché Marmoset. BRIDGMAN, Mr. R. 1 Alexandrine Parrakeet. BRIGGS, Mr. C. H. 1 Nilotic Crocodile. BROCKMAN, Dr. R. E. Drake-, F.Z.S. 1 Grey Eagle Owl. BROWN, Mr. J. 1 Yellow-billed Amazon. BUCHAN-HEPBURN, Sir Archibald, Bt. 2 Cormorants. BURDETT, Sir Henry, K.C.B., K.C.V.O., F.Z.S. 1 Razorbill. BURKE, Mr. W. N. 1 Common Viper. BUSBRIDGE, Mr. W. H. 1 Eagle-Owl. BUXTON, Mr. P. A. 1 Indian Fruit Bat. BUXTON, Mrs. Victor. 1 Lobed Chameleon. CABORNE, Mrs. L. 1 Vulpine Opossum, 1 Cunningham's Skink. CALLARD, Mr. Tom V. 1 Alligator. CAMERON, Sir Charles, Bt., F.Z.S. 1 Peafowl 6. CAMERON, Mr. E. J., C.M.G. 2 Blue-cheeked Amazons. CAMPION, Miss Ethel. 1 Greater Sulphur-crested Cockatoo.

CARLTON-WHITE, Ltd. 2 Alligators.

CARTER, Mr. Edward J. 1 Black-necked Crowned-Crane. CAVENDISH, Mr. R. C. A. 2 Red-footed Ground-Squirrels.

CHURCH, Mr. George. 1 Blue and Yellow Macaw. CLARKE, Mrs. Alfred. 1 Grey Parrot. CLARKE, Mr. G. Noel, F.Z.S. 1 Vicuna <sup>9</sup>. CLARKE, Mr. John. 1 Kestrel. COLEMAN, Mrs. W. L. 2 Alexandrine Parrrkeets *55.* COLLIER, Miss Rose. 2 Slow-worms. COLQUHOUN, Lt. J., 1 Caracal *5.* COMPTON, Mrs. G. 1 Common Mynah. CONSTABLE, Mr. H. G., F.Z.S. 1 Badger. CONSTABLE, The Rev. W. J. 4 Little Owls. COOPER, Miss Gladys. 1 Indian Fruit Bat. CORBET, Sir Roland, Bart., F.Z.S. 2 Mealy Redpolls. COURTNEIDGE, Mr. Robert. 1 Blue and Yellow Macaw. COURTNEY, Mr. E. 1 White Moorhen. COVENTRY, Mrs. St. John. 1 Egyptian Jerboa. COWLEY, Mr. Martin. 1 Roseate Cockatoo. CRAIG, Mrs. Charles T. 1 Yellow-winged Sugar-bird,

2 Orange-cheeked Waxbills, 1 Crimson-eared Wax-

bill, 2 Common Fire-Finches, 2 Amaduvade Finches. CROSS, Mr. W. S., F.Z.S. 1 Terrific Rattlesnake. CROUCHER, Miss J. 1 Mozambique Cercopitheque. CRUMP, Mrs. H. A. 2 Indian Wild Dogs. CUMMING, Mr. Arthur. 1 Indian Python.

CUNNINGHAM, Executors of the late Miss F. 1 Goldfinch. CUNNINGHAM, Mr J. T., F.Z.S. 2 Common Quails, 1 Smith's Partridge Bronze-winged Pigeon.

CURA, Messrs. L. and Sons. 2 Algerian Tortoises, 4 Green

Toads, 4 Fire-bellied Toads, 6 European Tree-Frogs,

4 Brown Mud-Newts, 4 Crested Newts, 4 Spotted Salamanders.

DARBY, Mrs. S. A. 1 Algerian Tortoise.

DARLING, Mr. Stormonth. 1 Little Owl.

DAVIES, Lieut. R. B., R.N. 2 Dongolan Genets.

DAVIS, Master C. B. 3 Moorish Geckos, 3 Slow-worms, 2 Green Lizards, 2 Viperine Snakes.

DE GENS, Mr. J. L. 1 Magpie.

DEEDES, Miss M.—See Wheatley.

DENNIS, Mr. C. W. 1 Greater Sulphur-crested Cockatoo.

DEPIÈRE, Messieurs Lucien et Paul. 1 Common Marmoset.

DEWAR, Sir Thomas, F.Z.S. 2 Hairy-footed Jerboas.

DICKER, Mr. John Leckie. 1 Blue and Yellow Macaw. DOUBLEDAY, Mr. G. R. 2 Common Dormice. DOUGLAS, Mr. J. Bloomfield. 2 Algerian Tortoises. "DUKE OF EDINBURGH," The Officers of H.M.S. 1 Wild Boar.

DUNCAN, Mr. G. H. F., F.Z.S. 16 Diuca Finches, 14
Little Saffron Finches, 2 Pelzeln's Saffron Finches,
5 Black-chinned Siskins, 5 Gay's Finches, 6 Orchard
Finches, 1 Military Starling, 8 Chilian Starlings,
4 Pileated Song Sparrows, 2 Chilian Sea-Eagles,
1 Cinnamomeous Kestrel, 2 Brown Carrion-Hawks,

1 Garden's Night Heron, 24 Californian Quails, 13 Auriculated Doves, 10 Picui Doves, 1 Cayenne Rail, 10 Cayenne Lapwings.

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DUNCOMBE, Miss Peirse. 2 Greater Sulphur-crested Cockatoos.

DUNDAS, Miss F. 1 Egyptian Jerboa.

DUNN, Mrs. James. 1 Roseate Cockatoo.

DUTT, Master Eric Edward. 1 Grey Mongoose.

DYOTT, Mr. R. A. 1 Egyptian Jerboa, 1 Red and Yellow Macaw, 1 White-winged Dove, 1 Barbary Turtle Dove.

EARL, Mr. Frederick. 2 Long-eared Owls.

EDWARDS, Mrs. E. Hawley. 1 Palm Squirrel. EDWARDS, Mr. H. Wynne. 2 Diuca Finches.

EDWARDS, Mr. Stanley, F.Z.S. 5 Red Jungle Fowl, 2 3, 3 9.

ELWES, Mr. H. J., F.R.S., F.Z.S. 1 Mikado Pheasant, 3. Ewing, Capt. J. R. 1 Red and Blue Macaw.

EZRA, Mr. Alfred, F.Z.S. 7 Purple Sunbirds, 1 Velvetfronted Nuthatch, 2 Firecaps, 1 Blue-winged Siva, 4 Blue Wrens, 1 Flame-breasted Robin, 2 Black and White Fantails, 2 White-shouldered Caterpillareaters, 1 Blue-headed Rock Thrush, 1 Black-crested Bunting, 2 Pink-browed Rose-Finches, 2 Red-headed Bullfinches, 1 Golden-throated Barbet, 1 Lunulated Honey-eater, 3 White-cheeked Honey-eaters, 2 Spinycheeked Honey-eaters, 1 Spine-billed Honey-eater, 1 Golden-eared Honey-eater, 1 Yellow-tufted Honeyeater, 2 Cotton Teal, 3 Diamond Doves.

FALKOWICZ, Mr. Julius R., F.Z.S. 2 Common Foxes. FANE, Mrs. 1 Algerian Tortoise. FOLLIOTT, Mr. Walter F. 1 Tigrine Cat <sup>2</sup>.

FORBES, Miss Ethel M. 1 Ring-tailed Lemur. FOTHERGILL, Major Henry. 5 Knots. FOWLER, Mr. A. J. 2 Lesser Sulphur-crested Cockatoos. FOWLER, Mrs. 1 Larger Hill-Mynah. Foy, Mr. Andrew. 2 Yellow-rumped Seed-eaters, 2 Shining Weaver-birds. FRASER, Lt.-Col. R. H. 2 Budgerigars. FREEMAN, Mr. Roydon J. 6 Rainbow Trout. FREWER, Mr. J. F. 1 Mona Cercopitheque. FROST, Mr. C. E. C. 8 Long-nosed Crocodiles.

FROST, Mr. W. J. C. 2 Long-tailed Tits, 1 Yellow Wagtail, 4 Pied Wagtails, 1 Spotted Flycatcher, 1 Shining

Black Whydah, 1 Greater Spotted Woodpecker.

GARLAND, Mrs. A. 2 Common Macaques.

GARLE, Mr. Henry Ernest, F.Z.S. 1 Ring-tailed Lemur 3.

GAZE, Mrs. Olive. 2 Budgerigars.

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GEE, Mr. C. B. 2 Common Marmosets.

GIBSON, Mr. Ernest, F.Z.S. 4 Ornamented Ceratophrys.

GILBEY, The late Sir Walter, Bart., F.Z.S. 1 Dorsal Squirrel, 1 Cuban Mocking-Thrush, 2 Orange-headed Ground Thrushes, 1 Shama, 1 Saturnine Mockingbird, 2 Yellow-bellied Liothrix, 2 Green Bulbuls, 1 Chinese Jay-Thrush, 1 White-bellied Drongo, 2 Scarlet Tanagers, 3 Gouldian Grass-Finches, 2 Longtailed Whydah-birds, 2 Crimson-eared Weaverbirds, 4 Taha Weaver-birds, 4 Madagascar Weaverbirds, 1 Red-billed Weaver-bird, 1 Rufous-necked Weaver-bird, 1 Red-headed Cardinal, 3 Red-crested Cardinals, 1 Brazilian Hangnest, 1 Golden Hangnest, 1 Yellow-headed Troupial, 1 Military Starling, 1 Green Glossy Starling, 1 Common Starling (albino), 1 Chinese Mynah, 1 Rose-coloured Pastor, 1 Javan Hill-Mynah, 1 Hunstein's Bird of Paradise, 1 Nutcracker, 1 Peruvian Jay, 1 Blue-crowned Jay, 2 Occipital Blue Pies, 1 Hunting Crow, 1 Whitebacked Piping-Crow, 1 Black-backed Piping-Crow, 1 Laughing Kingfisher, 1 Green-billed Toucan, 1 Yellow-fronted Barbet, 2 Lineated Barbets, 1 Indian Koel, 1 Swainson's Lorikeet, 1 Blossom-headed Parrakeet, 1 Black-tailed Parrakeet. 2 Red-winged Parrakeets, 1 Stanley Parrakeet, 1 Many-coloured Parrakeet, 1 Variegated Sheldrake, 2 Green-winged Doves, 2 Blood-breasted Pigeons, 3 Reeves's Pheasants, 2 Amherst's Pheasants, 1 Peacock Pheasant. GILLIAT, Major J. B., D.S.O., F.Z.S. 1 Alligator, 1 Nilotic Crocodile. GLENCONNER, Lady. 1 Greater Sulphur-crested Cockatoo. GLENNIE, The Rev. A. H. 3 Turtle Doves. GOOD, Mrs. T. H. 6 Common Squirrels. GOODALL, Mr. J. M., F.Z.S. 1 Cinnamomeous Kestrel. GORDON, Dr. Mervyn H. 1 Rhesus Macaque 9. GRAHAM, Sir Richard J., Bt., F.Z.S. 2 Weasels. GRAHAM, Mr. R. P. 4 Axolotls (white var.).

- GRICE, Mr. W. 1 Common Chameleon.
- GRIFFIN, Mr. A. W., 1 Serval.
- GRIFFITHS, Mr. H. R. 1 Kestrel.
- GÜNTHER, Mr. Robert T., F.Z.S. 2 Black-necked Grackles.

GWYER, Miss Cecil. 1 Otter 9.

HAGGIE, Mrs. R. Hood. 1 Angolan Vulture.

HANSON, Lady. 1 Mozambique Cercopitheque.

HARDY, Dr. J. L. P. 1 Grey Squirrel.

HAYFORD, Miss G. 2 Cut-throat Finches, 1 Nutmeg Finch, 1 Long-tailed Grass Finch, 2 Double-banded Finches.

HENDERSON, Mr. Stephen. 1 Mexican Snake.

HENDERSON, Mr. S. V. 2 Yellow-rumped Seed-eaters. HIGGINSON, Mr. H. W. 2 Axolotls, 3 Common Catfish,

2 Golden Orfe, 3 Golden Carp, 1 Rudd, 2 Roach,

1 Japanese Goldfish, 3 Sunfish.

HIVES, Miss Frances G. 1 Blotched Genet.

HOARE, Mr. W. Douro. 1 Lion Marmoset.

HOCKIN, Mr. E. W. 1 Royal Python.

HODSON, Mr. Arnold. 1 Lesser Kudu 8. HOGARTH, Mr. C. W. 1 Swainson's Lorikeet.

HOLLINS, Mr. Herbert F. 1 Common Macaque.

HOPKINS, Mr. F. G. 1 Lesser Black-backed Gull.

HORSBURGH, Major B. R., F.Z.S. 1 Field Vole, 2 Bank Voles, 1 Spanish Sparrow, 1 Ortolan.

HowITT, Mrs. G. 1 Hawk-headed Parrot.

HUEMANN, Mr. G. A. 3 Yellow-tufted Honey-eaters.

HUGHES, Mrs. Alice. 1 Red and Blue Macaw.

HUGHES, Miss Gladys. 1 Common Toad, 2 Fire-bellied Toads.

HUNT, Mr. H. L. Holman-. 1 Panolia Deer 8, 12 Verticillated Geckos.

HUNT, Mr. R. 1 Grey Parrot. HUSON, Mr. Edward L. 2 Leopard Cats 3 2. INFANTE, Mrs. 1 Kinkajou. INMAN, Mrs. Mary, F.Z.S. 4 Marbled Polychrus. JACOBS, Mr. W. T. 1 Black-headed Lemur. JARDINE, Capt. F. R. 1 Brown Bear. JOHNSON, Mrs. Phyllis. 1 Mozambique Cercopitheque. JOHNSTONE, Mrs. E. F. 1 Blue-and-yellow Macaw. JONES, Mr. B. N. H., F.Z.S. 2 Water Voles. KILNER, Mr. S. E. Hugo. 1 Sooty Mangabey. KINNFAR, Mrs. 2 Redpolls.

KNIGHT, Miss Ida. 1 Gouldian Grass-Finch. KÜHLIGER, Mrs. A. 1 Yellow-winged Parrakeet. LANG, Mrs. R. D. M. 2 Larger Hill-Mynahs. LENG, Mr. F. R. 2 Madagascar Weaver-birds. LENNOX, Mrs. Gordon. 1 Red-beaked Weaver-bird. LESLIE, Mrs. Walter. 2 Orange-flanked Parrakeets. LEYERS, Mr. M. 1 Serval. LILFORD, Lord, F.Z.S. 1 Vulturine Guinea-fowl. LISTER, Mr. Francis V. 2 Lesser Sulphur-crested Cockatoos. LODGE, Mr. Gilbert. 1 Blue-fronted Amazon. LONDESBOROUGH, The Countess of. 1 Yellow-backed Lory. LOVELL, Mrs. Haynes. 2 Maholi Galagos. LOVELL-KEAYS, Dr. L. F., F.Z.S. 1 Abyssinian Weaverbird. LUMLEY, Mr. Claude. 2 Mandarin Ducks. MACDERMOT, Miss E. 1 Egyptian Jerboa. MCEWEN, Mrs. K. 1 Greater Sulphur-crested Cockatoo. MACFARLANE, Mrs. Kate B. 2 Green Cardinals. MACKENZIE, Mrs. J. 1 Algerian Tortoise. McKAY, Mr. John. 2 Dwarf Chameleons. McGREGOR, Mr. J. M. 1 Greater Sulphur-crested Cockatoo. MAITLAND, Mrs. Crichton. 1 Cockatiel. MALDEN, Viscountess. 1 Egyptian Jerboa. MALLMANN, Mr. Otto. 2 Tawny Owls. MARTIN, Mr. Ernest. 1 Cut-throat Finch, 1 Common Waxbill, 1 Yellow-rumped Seed-eater, 1 Indian Silver-bill, 1 Amaduvade Finch, 1 Black-headed Finch, 1 Chestnut-eared Finch. MARTIN, Mr. Herbert. 1 Black-necked Crowned-Crane. MARTIN, Miss Viva. 1 White-nosed Coati.

MARTIN, Mrs. Wykeham. 1 Nightingale.

MASON, Mrs. Rupert. 11 Barbary Turtle-Doves. MASSY, Miss Geraldine. 1 Budgerigar. MATHER, Mr. W. 1 Common Waxbill. MATHIESON, Mr. Wilfrid, F.Z.S. 7 Common Vipers. MEDLICOTT, Mr. W. S. 1 Goshawk. MERFELD, Mr. T. G. 2 Nilotic Crocodiles. METZ, Mr. M. 1 Pike. MEULEN, Mrs. Aline Van der. 2 African Civets. MIDWOOD, Mrs. Eric. 1 Magpie. MILDMAY, Miss A. St. John. 1 Bonnet Macaque.

MINCHIN, Mr. Alfred C., C.M.Z.S. 2 Australian Sacred Ibises, 2 Straw-necked Ibises.

MITCHELL, Lt. K., R.N. 1 Grey Mongoose.

"MIRROR," "The Daily." 2 Indian Elephants & d.

MOSELEY, Mr. Basil. 2 Jackdaws.

MUNDY, Mrs. Miller-, F.Z.S. 2 Ring-tailed Lemurs.

MURRAY, Mr. James. 1 Cuckoo.

Myres, Mr. M. C. 1 Undulated Lizard, 2 Douglass's Horned Lizards.

NAPIER, Capt. M. 1 Tigrine Cat.

NAYLOR, Mr. H. S. 1 Tiger, 1 Caracal.

NEELD, Col. Sir Audley, Bt. C.B., M.V.O., F.Z.S. 2 Common Rheas.

NEWALL, Mr. William, F.Z.S. 1 Gold Pheasant 8.

NEWMAN, Miss Nellie E. 1 Blue and Yellow Macaw.

NEWMAN, Mr. Thomas H., F.Z.S. 1 Diamond Dove.

NICOLSON, Miss N. V. 1 Grey-breasted Parrakeet.

OAKES-JONES, Mr. H. 1 Racoon.

OGILVIE-GRANT, Mr. W. R., F.Z.S. 1 Sanday Island Vole, 4 Wigeon.

PALMER, Mr. Horace. 5 Chestnut-eared Finches, 1 Common Waxbill, 8 Cut-throat Finches.

PAM, Mr. Albert, F.Z.S. 1 Perch.

PAM, Mr. Hugo, C.M.Z.S. 1 Red-faced Spider-Monkey. PARKER, Mr. G. H. 1 Alexandrine Parrakeet.

PARKINSON, Mr. Edwin. 1 Blue-fronted Amazon.

PECK, Miss Annie. 1 Pennant's Parrakeet.

Pécriaux, Madame T. 1 Salvin's Amazon.

PEEL, Commander Robert E. Burke. 1 Slow Loris, 2 Finlayson's Squirrels, 3 Common Partridges.

PENNANT, Lady Edith Douglas. 2 Yellow-winged Sugarbirds.

PETTY, The Rev. Father J. J. C. 3 Azara's Opossums.
PILKINGTON, Lady Kathleen. 1 White-capped Redstart.
PIKE, Mr. Leonard G., F.Z.S. 1 Leadbeater's Cockatoo, 1 Red-collared Lorikeet, 1 Pied Mynah, 1 Germain's Peacock Pheasant <sup>3</sup>.
POMEROY, Mr. W. K., F.Z.S. 1 Collared Peccary, 1 Spotted Cavy, 2 Bang's Agoutis, 2 Bonda's Squirrels, 2 White-browed Hares, 1 Blue Tanagar, 1 Brazilian Hangnest, 1 Pileated Heron, 1 Prince Albert's Curassow, 1 Banded Tinamou. PORTER, Mrs. 1 Banded Parrakeet.

Pott, Mr. A. Vaughan. 1 Grey Mongoose.

POULETT, The Dowager Countess. 1 Grey Parrot, 2 Larger Hill-Mynahs.

POWELL, Mr. H. T. 1 Dongolan Genet 8.

POWERS, Mrs. L. D., M.D., F.Z.S. 2 Grey Squirrels.

PRING, Miss Nora G. 1 Common Chameleon.

QUICKE, Miss F. 1 Common Chameleon.

RAILING, Mrs. M. J. 1 Greater Sulphur-crested Cockatco.

RAWORTH, Mr. Alexander, F.Z.S. 3 Golden Orfe.

REED, Mr. P. W. 1 Grey Squirrel.

REECE, Mr. E. B. 1 Pigmy Antelope 9.

REID, Mr. R. 1 Cuban Amazon.

REVELL, Mr. W. Philip. 1 Bare-eyed Cockatoo.

RICKINSON, Mr. Lewis. 1 Squirrel Monkey 8.

ROBERTSON, Masters H. and A. 5 Common Toads, 4 Crested Newts.

ROBINSON, Mrs. J. 1 Ring-tailed Phalanger.

Robson, Miss Laura. 1 Brown Mynah.

ROOPER, Mrs. F. 1 European Pond-Tortoise.

ROPER, Mr. Richard. 1 Malayan Bear.

ROTHES, The Earl of, F.Z.S. 1 White-fronted Capuchin.

ROUTH, Mr. Cyril E. 1 Grey Mongoose.

RowAN, Mr. William. 1 Rock Bass.

SACRE, The Rev. A. T. 12 Barbary Turtle-Doves.

ST. QUINTIN, Mr. W. H., F.Z.S. 2 Water Shrews, 1 Common Shrew, 1 Heron, 1 Lesser White-fronted

Goose, 2 Red-necked Phalaropes.

SANDILANDS, Mrs. 1 Algerian Tortoise.

Scorr, Captain T. H. 2 Urial Sheep 9 9.

SEAGER, Mr. R. 2 Terrific Rattlesnakes.

SERJEANT, Mrs. C. T. 1 Palm Squirrel.

SIMEY, Miss P. 1 Bullfinch.

SIMPSON, Sir Benjamin, K.C.I.E., M.D., F.Z.S. 4 Larger Hill-Mynahs.
SIMPSON, Mr. Palgrave. 1 Malabar Squirrel.
SINCLAIR, Mrs. Louis. 1 Red and Yellow Macaw.
SLIGO, The Marquess of, F.Z.S. 1 Roebuck.
SLOPER, Mrs. Percy, F.Z.S. 2 Badgers 3 9.
SMITH, Miss B. F. 1 Budgerigar.
SMITH, Mr. C. Barnby. 1 Little Grebe.
SMITH, Master D. W. Seth-. 2 Long-tailed Wood-Mice.

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Sмітн, Mr. T. W. 4 Choughs, 2 Indian Mynahs, 1 Mexican Jay, 1 Melodious Jay-Thrush, 1 Virginian Cardinal, 1 Silky Cow-bird, 1 Brown-shouldered Hangnest.

SMITH, Mr. Willoughby. 1 Anoa 3.

SMITHERS, Mr. Wilfred A., C.M.Z.S. 3 Slender Dogs, 1 Grison, 2 Patagonian Cavies, 1 Salt Desert Cavy, 1 Collared Peccary, 7 Azara's Opossums, 1 Green Cardinal, 4 Sulphury Tyrants, 4 Silky Cow-birds, 1 Yellow-bellied Grosbeak, 3 Argentine Blackbirds, 2 Bronze-necked Doves, 1 Brazilian Carrion-Hawk, 2 Cinnamomeous Kestrels, 2 Red-backed Buzzards, 2 Black Vultures, 1 Crossed Viper, 1 Neuwied's Viper, 1 Merrem's Xenodon.

Southoff, Mons. Georges de, F.Z.S. 13 Viperine Snakes,

1 Tessellated Snake, 1 Garter Snake, 6 Brown Newts, 1 Spectacled Newt.

SPENS, Mrs. Nathaniel. 1 Gold Pheasant 3.

SPICER, Mr. E. F., F.Z.S. 1 Water Rail.

SPURRELL, Dr. H. G. F., F.Z.S. 1 Kinkajou, 3 Bloodstained Terrapins, 3 Sharp-nosed Terrapins, 1 Common Boa.

STANLEY, Mr. R. C. H. Sloane, F.Z.S. 1 Blue and Yellow Macaw.

STARK, Mr. W. Emery. 1 Rose-crested Cockatoo.

STICK, Mr. L. S. 1 Little Owl.

STIERBOCK, Mrs. D. 1 Alexandrine Parrakeet.

STONEHAM, Mr. L. 1 Pike.

STOUT, Mr. Steward. 8 Natterjack Toads.

STRAFFORD, Mrs. A. F. 3 Grey-headed Love-birds.

STRONG, Mr. W. H. 1 Tantalus Cercopitheque.

SUTTON, Mr. P. W. 1 Mongoose Lemur.

TALBOT, Commander E. T., R.N. (retired). 1 Javan Hill-Mynah.

TANKERVILLE, The Earl of, F.Z.S. 2 Chillingham Cattle 3 ?.

TAVISTOCK, The Marquess of, F.Z.S. 3 Greater Bird of Paradise, 3 King Bird of Paradise, 2 Red-sided Eclectus, 2 Maximilian's Parrots, 2 Cuban Conures, 2 Petz's Conures, 2 Sun Bitterns, 1 Emilian Fruit-Pigeon, 2 Pheasant-tailed Fruit-Pigeons, 2 Greytailed Fruit-Pigeons. TEBBUTT, Mr. G. N. 1 Barn Owl.

TEMPLE, Mr. W. R. H., F.Z.S. 3 Bank Voles.

TERRELL, Mrs. F. E. 2 Occipital Blue Pies, 1 Cockatiel,

2 Roseate Cockatoos, 1 Grey-breasted Parrakeet,

9 Ring-necked Parrakeets, 1 Shoveller Duck, 1

Common Teal, 2 Japanese Teal, 2 Mandarin Ducks. THOMAS, Mrs. L. W. 1 Mona Cercopitheque <sup>9</sup>. THOMASSET, Mr. Bernard C., F.Z.S. 1 Brush Bronze-

winged Pigeon.

THOMPSON, Mr. W. H. S. 1 Tawny Owl.

THORNE, Mrs. 1 Grey Parrot.

TINGLE, Mrs. M. 1 Common Marmoset.

TOWNEND, Mr. Harvey. 1 Virginian Eagle-Owl.

TOWNSHEND, Mrs. 1 Tawny Owl.

TREMEARNE, Major A. J. N. 1 Laughing Kingfisher.

TURVEY, Mr. Newton. 1 Common Viper.

TWEEDIE, Mrs. 1 Purple Sunbird.

VICARY, Mr. William. 1 Buzzard.

VINEY, Mrs. P. L. 1 Blue-fronted Amazon.

VYVYAN, Mrs. E. C. 7 Ring-necked Parrakeets.

WADE, Capt. A. G. 1 Indian Wolf ?.

WAGNER, Mrs. H. J. 5 Grey Squirrels.

- WAIT, Miss L. M. St. A., F.Z.S. 1 Crimson-faced Waxbill, 1 Sulphury Seed-eater, 1 Yellow-rumped Seed-eater, 1 Northern Mocking-bird, 1 Cape Bunting.
- WALDO, Mr. E. G. B. Meade-, F.Z.S. 1 Noctule Bat, 4 Jays.

WALLIS, Mr. James. 1 Bare-eyed Cockatoo.

WALTER, the late Mr. C. R., F.Z.S. 1 Lesueur's Terrapin,

1 Wrinkled Terrapin, 2 Horned Lizards, 4 Undulated Lizards, 1 Glass Snake, 2 Garter Snakes, 2 Natterjack Toads, 3 Fire-bellied Toads.

WARTON, Mr. W. S. 1 Hairy-footed Jerboa.

WAUCHOPE, Capt. C. J. 1 Blue-fronted Amazon.
WEBB, Mrs. 1 Tantalus Cercopitheque.
WELDON, Mr. J. 1 Pike.
WHEATLEY, K. H., BARROW, M., DEEDES, M., Misses. 1 Syrian Bear <sup>9</sup>.

WHITEWAY, Mrs. F. M., F.Z.S. 1 Blue-fronted Amazon.
WIGHT, Mr. Arthur. 2 Porto-Rico Pigeons.
WILKINSON, Mrs. A. R. 1 Palm Squirrel.
WINGFIELD, Mr. A. H., F.Z.S. 2 Elands 3 9, 1 Yak 3, 1 Capybara, 1 Shore Lark.

WITHER, Major F. Bigg-, I.A. 2 Tigers & P.
WORTHINGTON, Mrs. 1 Blue-fronted Amazon.
YALDREN, Mrs. 1 White-backed Piping-Crow.
YATES, Mr. L. T. 1 Kestrel.
YESIDE, Miss Olaore. 1 African Civet.
YOUNG, Mr. T. 1 Long-eared Owl.
YULE, Lady, F.Z.S. 2 Ruffed Lemurs, & P., 1 Black Lemur, P., 1 Ring-tailed Lemur, S.

## STATE OF THE FINANCES.

91. The Report of the Auditors of the Accounts for 1914 is issued to Fellows, bound at the end of this Report. In 1905, the Auditors, acting on the advice of Mr. W. B. Keen, F.Z.S., Chartered Accountant, the professional Auditor of the Society, issued their Report on the finances of 1904 in a new form, replacing the old statement of Assets and Liabilities by a formal Balance Sheet, and the old statement of Receipts and Payments within the year by a dissection of Income and Expenditure belonging to the year. The Auditors of the Accounts of the year 1906, after discussion of the principles involved, continued the new system, which has been followed since. As, however, some of the Fellows prefer a statement on the simple Receipts and Payments system, such information is given in the next paragraph.

92. The total sum actually received within the year was £47,944 8s. 4d. To this has to be added the balance brought forward from December 31st, 1913, amounting to £4,228 13s. 3d., giving £52,173 1s. 7d. From this there is to be deducted the sum of £1,080, invested to add to the Composition Account (being the fees of 24 new Compounders at £45. There was thus left the sum of £51,093 1s. 7d. available for the expenditure of the year. The ordinary payments for the year amounted to £39,260 7s. 9d., leaving a balance on the working of the Society for the year amounting to £11,832 13s. 10d. From this has to be deducted the sum of £3,000, the portion of the loan repaid to the Bankers, and £809 2s. interest on the loan, leaving £8,023 11s. 10d. available for extraordinary expenditure. Of that sum a total of £3,980 16s. 2d. was expended in connection with :-

		£	s.	d.	
Plant for Mappin Terrace Pavilion	 	730	0	9	
Plans for New Heating System	 	38	19	6	
Insect-house Lobby	 	151	16	4	
New Pheasantries	 	1.445	2	2	
Bridge over Tunnel (completion)	 	173	11	0	
Excavation of Office Basement	 	422	1	11	
Garden Planning	 	105	0	0	
Motor Service	 	914	4	6	
				-	

£3,980 16 2

There was thus left a surplus at the end of the year amounting to  $\pounds 4,042$  15s. 8d.

93. It will be noticed that the details of the above figures do not correspond exactly with the similar entries in the Auditors' report, as what is given here is a summary of the actual payments within the year, whilst the Auditors analyse the figures so as to make them refer to expenditure strictly belonging to the year.

94. Comparison of Balance Sheet 1913 and 1914.

Assets.	1913.		191	14.		0	Compar	ison.		
	£	s.	d.	£	8.	d.		£	g	d
Animals in the Menagerie			0	18,505			-			0
Plant and Fittings in Refreshment De-			v	10,000	0	0	1	201	11	0
partment	1,392	9	2	9 1 9 9	9	11		720	0	0
Freehold Premises, Hanover Square	30,000			2,122			+	730	0	9
Books in the Library	30,000			30,000				0.50		
Unsold Publications	23,230		9	23,480			+	250	7	3
"Zeological Decerd "	500	0	0	500			0.39	10000	-	
" "Zoological Record "	and the second se	0	0	500		0	1.5			
Debts due to the Society		4	8	712	6	3	+	295	1	7
Petrol Supply Society, 50 shares of £1 each				50	0	0	+	50	0	0
Rates and Insurance paid in advance	305	19	8	329	8	4	+	23	8	8
New Composition Fund (invested)	5,265	0	0	6,435	0	0	+	1,170	0	0
New Composition Fund (awaiting invest-									100	
ment)	90	0	0	-	100		12	90	0	0
Animal Insurance and Purchase Fund		1000		1					v	
(invested)	300	0	0	300	0	0	136			
Refreshment Room Rebuilding Fund (in-				000	v	0	150			
vested)	1,000	0	0	1 000	0	0	1.0	1		
Refreshment Room Depreciation Fund		0	0	1,000	0	0	1202		-	
(invested)	1.			000	0	0		000	1	
	10111000			300	0	0	+	300	0	0
Refreshment Room (Current Assets and			-	11						
Working Capital)	749		6	611			-	138	5	6
Cash at Bank (General Account)	4,228	13	3	4,042	15	8		185	17	7
", ", Animal Insurance	46	13	11	74	14	11	+	28	1	0
", ", Garden Improvement	196	2	1	141	9	8	-			5
., " Reserved Wages Fund				and the second se	19	4	+		19	4
", " Refreshment Rebuilding	Provide Phy			17. 12 X 197		1	1 Sec	The second	1000	-
Fund	1			38	3	4	+	38	3	4
Refreshment Depresietion				00		1	and a	00	0	x
Fund	and the second			5	16	9	1	5	16	0
	1.3.1.1.			0	10	9	+	0	16	9
	007 170	10	0	000 000		0	-	10.00	-	-
and a sub- and a sub- a sub-	£87,178 1	13	0	£89,206	5	2	+ 1	32,027	6	2

LIABILITIES.	191	3.		191	1914. Comp				rison.		
Sundry Creditors and Rent and Taxes Messrs. Drummond, Loan Account Subscriptions received in advance	24,000	4	d. 4 0 0	£ 1,753 21,000 262	17 0	6	-	£ 48 3,000 123	6	d. 10 0 10	
	£26,188	7	4	£23,016	5	8	-	3,172	1	8	

	1913.			191	Comparison.					
· · · · · · · · · · · · · · · · · · ·	£	s.	d.	£	s.	d.	13	£	s.	d.
BALANCE, being Excess of Assets over										
Liabilities-							1			
Composition Fund (not separately in- vested)	2,106	0	0	1,576	0	0	-	530	0	0
New Composition Fund (separately invested)	5,355	0	0	6,435	0	0	+	1,080	0	0
General Purposes	51,267	1		55,713						7
Garden Improvement Fund	165	18	0	135		8				
Animal Insurance and Purchase Fund	346	13	11	374	14	11	+	28		
Refreshment Rebuilding Fund Refreshment Room Depreciation Re-		0	0	1,038	3	4	+	38	3	4
serve Refreshment Room Current Assets	1.03	-		305	16	9	+	305	16	9
and Working Capital	749	18	6	611	13	0	-	138	5	6
	£60,990	11	8	£66,189	19	6	+	5,199	7	10
	22			I TRY AL			12.20			

95. The improvement in the balance of £5,199 7s. 10d. is the sum of the net increase in Assets *plus* the net decrease of Liabilities.

96. The item "Composition Fund (not separately invested)," which stood in 1905 at over £7,000, has now been written down to £1,576, and will soon disappear. Since 1905 all composition fees have been invested, and the New Composition Fund now stands at £6,435, and represents an asset that could be realised.

71

## 97. Comparison of Income, 1913 and 1914.

	1913.			191		Comparison.				
			100					24.4.2.2.2		-
	£	s.	d.	£	8.	d.	122	£	s.	d.
Admission Fees	1,545	0	0	1,380	0	0	-	165	0	0
Subscriptions (Fellowship)	10,737		0	11,195		0	+	458		0
Composition Fees (proportion of unin-										
vested Fund transferred in respect of	and the second									
the year)	574	0	0	530	0	0	-	44	0	0
Interest on Composition Fees invested	168	7	6	201	2	11	+	32	15	5
Sale of Animals, &c	562		1	364	15	0	-	197	7	1
Rent of Refreshment Rooms	1,000	0	0	1,000	0	0		200-	4	
Rent of Bath-chairs		0	0	11		0	ditto	171	-	
Rents-Hanover Square	1,200	0	0	1,200		0	100		-	
Rent-British Beekeepers' Association		15	0		14	0	-		1	0
Admission to Gardens	28,230	5	6	24,647	5	10	-	3,582		8
Riding Receipts	1,056	3	6	972	13	8	T	83	9	10
expenses, printing, &c	1,032		6	902		8	-	130	7	10
Rent of Lavatories	228		9	249		6	+	20	12	9
"Zoological Record " Sales Sale of Ivory Tickets, and Artists' and		8	0	87	11	6	-	41	16	6
Photographers' Permits		0	0		2	6	-	28	17	6
Miscellaneous Receipts Lectures, Grant from London County		1	7	5	17	3	+	1	15	8
Council, less expenses		19	4	12	6	0	-	17	13	4
Department	1,518	13	8	2,292	18	5	+	774	4	9
	£48,151	9	5	€45,141	5	3	£	3,010	4	2
	HIE JEN			A DIMONT			E16 23			

98. The reduction in income is one of the inevitable results of the war. The Council anticipates, and has prepared for, a more serious reduction in the current year. The receipts for 1914 up to the end of July were much above the average, both in respect to gate-money and Fellows' subscriptions, and a reduction in both must be regarded as certain in 1915. The estimates of expenditure have accordingly been reduced.

## 99. Comparison of Ordinary Expenditure, 1913 and 1914.

	1913.			1	Comparison.					
	£	e	. d.	£		d.	-	£	0	4
Rent, Rates, &c., Gardens	1,564			1,751				187		d.
Amount set aside for Insurance and Pur-	1,001			1,101		0	T	101	12	-
chase of Animals Fund	200	0	0		-		-	200	0	0
Charges under Licensing Act, 1904, and								200	0	· ·
Property Tax, Refreshment Depart-				131.08.19			HT.			
ment	59	7	7	69	14	1	+	10	6	6
Property Tax, Hanover Square	122				10	0	-	30		
Salaries, Gardens	7,464		4	7,987	1000	0	+	523		8
Do. Office	2,002		10	2,087		11	+	84		1
Pensions, Gardens	586		8	598	0	0	+	11	13	4
Do. Office	634	3	4	262	0	0	-	372	3	4
Provisions	5,601	9	5	4,924	15	10	-	676	13	7
Cost and Carriage of Animals	1,435	6	10	1.867	7	10	+	432	1	0
Menagerie Expenses	3,063	11	0	3,483	8	6	+	419	17	6
Prosectorium Expenses	851	6	8	839	7	4	-	11	19	4
Works (Ordinary)	4,736	11	5	5,628	15	3	+	892	3	10
Gardeners' Expenses	1.619	5	11	1,925	13	1	+	306	7	2
Advertisements	371	7	8	731	7	7	+	359	19	11
Band Expenses (Net)	86	16	0	152	18	4	+	66	2	4
House and Office Expenses, Gardens	253	14	10	288	4	0	+	34	9	2
Do. do. Principal Offices	1,437	16	4	1,160	18	0	-	276	18	4
Stationery and Printing (Miscellaneous)	509	7	1	474	12	4	_	34	14	9
Cost of Publications (Net)	995	16	10	715	14	1	_	280	2	9
Cost of "Zoological Record" (Net)	233	2	2	229	3	0	-	3	19	2
Library Expenses	531	10	0	449	4	9	-	82	5	3
Law Expenses and Fees	263	9	7	24	6	10	-	239	2	9
Cost of Medals		-		13	19	0	+	13	19	0
Scientific Grants, etc	220	0	0	425	0	0	+	205	0	0
TOTALS	£34,843	16	11	€36,183	10	3	+£1	,339	13	4

100. With one exception, the increases in expenditure were incurred before the war, when the Society was in a state of unexampled prosperity. The exception was a grant of £100 made to the Director of the Zoological Garden of Antwerp, a Corresponding Member of our Society, who has been of special assistance to us on many occasions. This is included under the heading "Scientific Grants." Under "Salaries" there are included an honorarium of £100 to the Curator of Insects, who had previously received no remuneration; an increase of £100 in the

salary of the Curator of Reptiles, and various automatic increases, on promotion, to clerks, keepers and helpers.

Some expensive purchases of animals were made early in the year, including  $\pm 356$  for two Grevy's Zebras,  $\pm 290$  for three Gemsbok, and  $\pm 250$  for Birds-of-Paradise.

Under the heading "Menagerie Expenses" are included the upkeep of the Society's motor vans and the purchase of many new garden-seats; and the increase under the heading "Gardeners' Expenses" was due to the purchase of plants, turf, and shrubs, and the laying out of ground near the Mappin Terraces.

From August onwards, extensive reductions were made in all directions, the effect of which will be apparent in the accounts for the current year. The Council accepted in principle the offer made by the Secretary and chief officers of the Society to take a temporary reduction in salary if this should be necessary for the maintenance of the Gardens, but so far there has been no reason to act on it.

### CONCLUSION.

101. The Council has taken all possible steps to meet the financial conditions which have arisen in connection with the war. Fortunately, the financial position of the Society is stronger than at any past time in its history, and by delaying new works and keeping down expenditure to what is reasonably necessary for adequate maintenance, all the Society's activities can be maintained on a reduced but efficient scale for several years without trenching on reserves. The Council trust, however, that Fellows will assist, particularly in respect to obtaining new candidates for the Fellowship.

In the course of the year the following meetings for the

business of the Society have been held :-

Council		 	17
Monthly Business Meetings		 	10
Scientific Meetings		 	12
Garden Committee		 	12
House and Library Com nit	tee	 	4
Publication Committee		 	15
Prosectorial Committee		 	10
Zoological Record Committee	e	 	2
Finance Committee		 	12

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

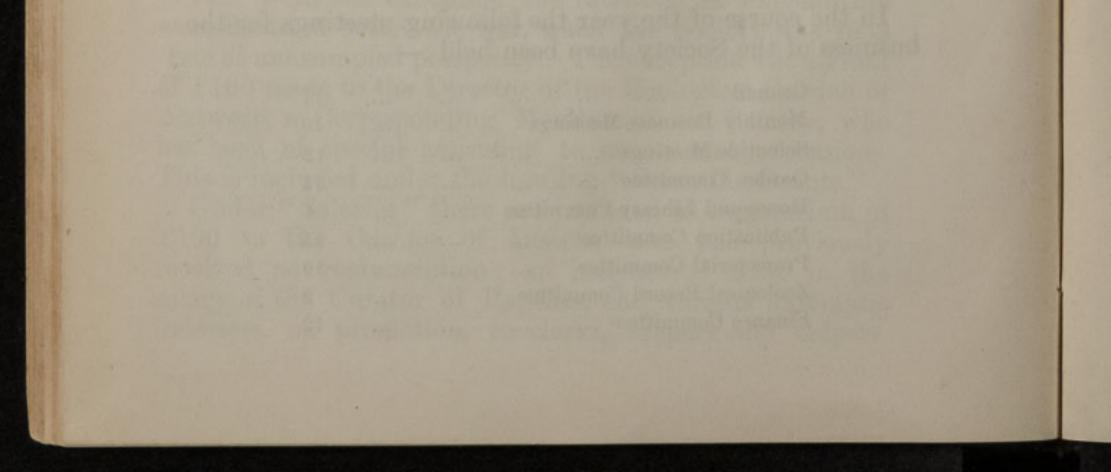
The Council has finally to ask you to thank those Fellows of the Society who have audited the Accounts for the past year.

Signed (for the Council),

P. CHALMERS MITCHELL,

Secretary.

Regent's Park, N.W., 17th March, 1915.



## REPORT

#### OF THE

## AUDITORS OF THE ACCOUNTS

### OF THE

## ZOOLOGICAL SOCIETY OF LONDON,

### APPOINTED, 20th JANUARY, 1915.

The Committee of Auditors of the Zoological Society of London (with the assistance of the Professional Auditor who has certified the whole of the Accounts in detail, except those of the Refreshment Department, which are separately audited), having examined the Books and Accounts for the year ended 31st December, 1914, submit to the Society an Abstract of the Accounts, together with a Statement of Assets and Liabilities at the close of the year.

It will be seen that the excess of Ordinary Income over Expenditure has been  $\pounds 8,957$  15s. 0d., while there has been an Extraordinary Expenditure of  $\pounds 4,059$  17s. 5d., including interest on the Loan from the Bankers for the New Buildings, which Loan has been reduced by  $\pounds 3,000$ and now stands at  $\pounds 21,000$ , for which the Bankers hold security.

The Old Composition Fund not separately invested has been reduced by the transfer of  $\pm 530$  to Income and Expenditure Account in accordance with the usual practice, while the New Composition Fund has been increased by Composition Fees received amounting to  $\pm 1,080$ . This Fund now stands at  $\pm 6,435$  and is separately invested, the income therefrom being carried to the Income and Expenditure Account.

The Investments in :---

£5,358 7s. 11d. India  $3\frac{1}{2}\%$  Stock, £1,443 19s. 1d. London County  $3\frac{1}{2}\%$  Stock, £399 15s. 10d. Consolidated  $2\frac{1}{2}\%$  Stock, £1,017 14s. 2d. West Australian 4% Stock, and £312 17s. 1d. New South Wales 4% Stock

which appear in the Balance Sheet at the cost price of  $\pm 8,035$ , were at the official minimum quotation of December 31st, 1914, of the value of  $\pm 7,439$  5s. 8d.

The Audit Committee have accepted the Balance Sheets and Accounts of the Refreshment Department as separately audited by Messrs. Edward Moore & Sons and have incorporated the results in the General Accounts.

It will be seen that the profit on the Refreshment Department for the year to September 28th was  $\pounds 2,677$  16s. 9d., which is after charging a sum of  $\pounds 1,000$  by way of rent to the Society and after taking credit for three-fifths of the receipts from the Cloak-Rooms and Lavatories (the remaining two-fifths being credited to the Society's General Account). From the profits there has been deducted  $\pounds 384$  18s. 4d. in respect of work carried out by the Society's Staff, leaving a balance of  $\pounds 2,292$  18s. 5d. brought to the credit of the Society's General Account, as against  $\pounds 1,518$  13s. 8d. for the nine months to September 30th, 1913.

## BALANCE SHEET,

100

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					_				
orrespon figure 1st Dec.,	5		LIABILITIES.						
£	8.	d.		£	8.	d.	£	8.	d.
the state of the second			To Sundry Creditors for Rent, Taxes, &c , Messrs. Drummond—				1,753		6
			Loan Account	24,000	0	0			
			Less Paid off during year	3,000		0			
24,000	0	0	0.				21,000	0	0
386	3	0	" Subscriptions received in advance				262	8	2
			BALANCE, BEING EXCESS OF ASSETS OVER LIABILITIES, VIZ. :						
			Composition Fund (not separately invested)-						
			Balance at January 1st, 1914 £2,106 0 0						
			Less Amount transferred						
			to Revenue 530 0 0						
2,106	0	0		1,576	0	0			
			New Composition Fund (separately invested)	-,					
			Balance at January 1st, 1914 £5,355 0 0						
			Add 24 Fees at £45 re-						
			ceived during year 1,080 0 0						
5,355	0	0	corrou uning your 1,000 0 0	6,435	0	0			
			General Purposes—	0,100		-			
			Balance at January 1st, 1914 51,267 1 3						
150.00			Add Excess of Income						
			over Ordinary Expen-						
			diture 8,957 15 0						
			60,224 16 3						
			Less Extraordinary Ex-						
			penditure 4,059 17 5						
			56,164 18 10						
			Less Decrease in value of						
			total stock of Animals 451 17 0						
1,267	1	3		55,713	1	10			
			Gardens Improvement Fund—						
			As at 1st January, 1914 165 18 0						
			Add Donation 25 0 0						
			Less Expenditure 55 8 4						
165	18	0		135	9	8			
			Animal Insurance and Purchase Fund-						
			As at 1st January, 1914 346 13 11						
			Add Interest and Premiums						
			received 28 1 0						
346	13	11		371	14	11			
			Refreshment Room Rebuilding Fund-	0.1	-				
			As at 1st January, 1914 1,000 0 0						
			Add Dividend on Investment 38 3 4						
1,000	0	0		1,038	3	4			
1000				1,000	0	T		1972	0

Refreshment Department-Depreciation Reserve as at 1st January, 1914... ... Add further Transfer paid over since end of year ... Interest on Investment ...

300 0 0

449 18 6

0

,178 19

Amount retained for Working Capital at 1st Jan., 1914 ... Less Reduction in Profit in Suspense, quarter to 3rd January, 1915, as compared with previous year ...

65,272 9 9 300 0 0 300 0 0 5 16 9 605 16 9 449 18 6 138 5 6 311 13 0 9 9 917 2 £89,206

# 31st DECEMBER, 1914.

Τ,

d. 6

02

	Companyanding								
	Corresponding								
	figures	ASSETS.							
	31st Dec., 1913.	ADDEID.							
	£ 8. d.								
	~ o. u.		£			đ	£		
	Contraction of the second	By Animals in the Menagerie at Regent's Park at	~	· · ·		u.,	£	8	
		21-t Door 1 the menagerie at Regent's Park at							
		31st December, 1913, estimated at	18,956	3 17		0			
		Less Decrease in value at 31st December,	,			0			
	18,956 17 0	1914	451	17	(	0			
				1.00			10 503		
	1,392 2 2	" Plant and Fittings in Refreshment Department					18,50	5 0	
		Freshold Desent if H					2,122	2 2	
	20.000 0.0	" Freehold Property at Hanover Square, as per							
	30,000 0 0	INVE FOIDDOG Shoot					00.000		
		Buildings and Enclosures at the G					30,000	) ()	
		" Buildings and Enclosures at the Gardens,							
		Regent's Park (not valued)							
		" Books in Library (including purchases in 1914,					•••		
	23,230 7 9								
		£250. 7s. 3d.)					23,480	15	
	500 0 0	", Unsold Publications as at 31st December 1908							
		" Stock of "Zoological Record" as at 31st					500	0	
	500 0 0	December 1012 Record as at 31st							
	000 0 0	December, 1913				-	500	0	
		" Petrol Users and Traders Supply Society, Ltd.,					000	0	
		50 Shares of fl each							
		50 Shares of £1 each					50	0	
		", Debts due to the Society (since received or con-					00		
		sidered good)-							
		Ront of Encel ald Deer ( TT (							
1		Rent of Freehold Property, Hanover Square	300	0	0				
		Rent for Bath Chairs	9	10	0				
		Animal Sales	24		0				
		Arrears of Fellowship Subscriptions,	34	0	0				
		Arrears of renowship Subscriptions,							
		£262, estimated to realise	75	0	0				
		Publication Sales							
		I C C T at T	141	11	10				
		L.C.C. Lecture Pees, proportion accrued							
	10.18		97	10	0				
		Telephone Deposit	37	10	0				
		Telephone Deposit	1	0	0				
		Diffish Dee Reepers Association	45	14	0				
		Sundry	H.F.		-				
	417 4 8		()	0	9				
		D / J J					712	6	
	305 19 8	" Rates and Insurance paid in advance							
		, Investments of New Composition Fund,					329	8	
		Plate 10 11 Thew Composition Fund,							
		£1,443. 19s. 1d., London County 31 per cent.							
		Stock	1 440	0	0				
		£5 358 70 11d India 21 + 64 1	1,440		0				
	5,265 0 0	£5,358. 7s. 11d. India $3\frac{1}{2}$ per cent. Stock	4,995	0	0				
	0,200 0 0					6	2 4 9 5	0	
		" Investment of Animal Insurance and Purchase				(	3,435	0	
		Fund £300 15 101 of							
	200 0 0	Fund, £399. 15s. 10d. $2\frac{1}{2}$ per cent.							
	300 0 0	Consolidated Stock					000	-	
		" Investment of Refreshment Room Rebuilding					300	0	
		Fund f1 017 14- of TV Robin Rebuilding							
	1.000	Fund £1,017. 14s. 2d. West Australian 4%							
	1,000 0 0	DLOCK					0.00		
		" Investment of Refreshment Department				1	,000	0	
		Depresention I de les de Department							
		Depreciation Fund, £312 178 1d Now							
		South Wales 4 % Stock							
		Refreshment Depart / G					300	0	

9	( "	Cash at Bank, Reserved Wages Account Cash at Bank, Refreshment Department Rebuilding Fund Account Cash at Bank, Refreshment Department Depreciation Fund Account	$     \begin{array}{r}       141 & 9 \\       56 & 19 \\       38 & 3 \\       5 & 16 \\     \end{array} $	
9	4 561 9 2 2	South Wales 4 % Stock Refreshment Department Current Assets net at 3rd January, 1915 Cash at Bank, General Account Cash at Bank, Animal Insurance and Purchase Fund Cash at Bank, Gardens Improvement Fund	$ \begin{array}{r} 300 & 0 \\ 611 & 13 \\ 4,042 & 15 \\ 74 & 14 \\ 141 & 0 \end{array} $	1

## INCOME AND EXPEN

FOR THE YEAR ENDED

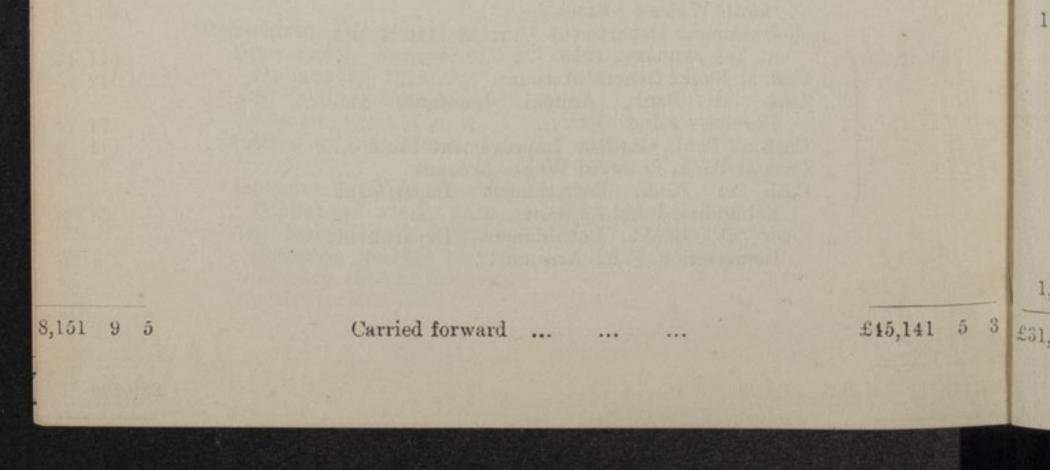
## ORDI

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									_	-
figuration for the second seco	res,		INCOME.							
£	8.	d.			£	8.	đ.	£	8.	đ.
1,545	0	0	Admission Fees (New Fellows)					1,380	0	0
0,737	0	0	(1) (1) (1) (1) (1)					11,195	0	0
			Proportion of uninvested Fund transferred	in						
			respect of the year-							
					48	0	0			
			241 Fellows at £2		482	0	0			
574	0	0		AND IN.		_		530	0	0
168	7	6	Interest on Composition Fees invested					201	2	11
562		1	Sala of Animala fro					364		0
1,000		0	Pant of Potnohmont Pooma					1,000	0	0
11	0	0	Pant of Both Chains					11	0	0
1,200	0	0	Dent Hanaman Samana					1,200	0	0
51	15	0	Pritich Dec Kooners' Association Pont					45		0
28,230		6	Administra to Condona					24,647		10
1,056		6	Diding Descripta					972		8
					1,282	1	6			
			T TI DIII		379	11	10			11.23
1,032	17	6	1 , 0,			The set of	-	902	9	8
228	15	9	Trustanian					249	8	6
129		0	Lavatories	•••				87	11	6
140	0		Sale of Transferable Ivory Tickets and Artists' and	nd				01	**	0
72	0	0						43	2	6
4	1	7	Mr. II D. C.						17	3
	12	•			07		~			0
					37		0			
00	10	4	Less Expenses		25	4	0	10	~	0
29	19	4	D. ford word Deventorent Devel		0 077	10	0	12	6	0
			T TO PART I A THE A SECOND	•••	2,677		9			1.1.1
1 519	12	8	Less Transferred to Works Account	•••	384	18	4	0.000	10	-
1,518	10	0				- 54		2,292	10	5



### V DITURE ACCOUNT.

31st December, 1914. D

### DI NARY.

	Correspond figures, 31st/Dec., 1	,	E	XPEI	NDIT!	URE.					
d.		d.					£	8.	d.	£	8.
0	1,564 0	) 5	Rent, Rates, Taxes and Insurance Amount set aside for Insurance	, Gard	ens					1,751	12
0	200 0	0 (	Animals' Fund		Purchas	e of					
			Charges under Licensing Act, 1	904, ar	nd Prop	perty					
	59 7 7,464 7	7	Tax, Refreshment Departme	nt						69	
1	2,002 9	4	Salaries, Staff and Keepers, Garde Do. Office	ens						7,987	16
0	586 6	5 8	Pensions, Gardens							2,087 598	0
11	634 3	4	Do. Office							262	-0
0	5,601  9  1,435  6	5 10	Provisions, including Storekeepe Cost and Carriage of Animals	er's W	ages					4,924	15 1
0	1,100 0		Menagerie Expenses :							. 1,867	71
0			Coke				706	11	0		
0			Straw				252	2	õ		
10			Water and Pumping				861		3		
8			Keepers' Uniforms New Cages, Fittings, &c.				287		5		
172			Sand, Sawdust, Turf, &c.				$170 \\ 145$	16 0	07		
8			Medical Attendance				12	1	9		
6			Labels and Drawings				- 99	3	4		
6			Sanatorium and Veterinary I New Garden Seats	and the second			75	4	3		
			Carts Repairs, Saddlery, &c.				$219 \\ 21$	10	5		
63			Upkeep of Motors				309		9		
			Cleaning Materials and Disin Refuse removal	ifectan	ts		156		4		
			Police Attendance		••••		55	$\begin{array}{c} 0\\ 6\end{array}$	0		
0	0.000 00		Sundries					14	9		
	3,063 11	. 0	Prospetonium Ennenges							3,483	8
5			Prosectorium Expenses :					0			
			Chemicals, Apparatus, &c.				775 64	9 4			
	851 6	8							_	839	7
			Maintenance of Buildings, Paths, Wages				0.057	0			
			Materials			`	2,957 2,671				
	4,736 11	. 5					-,011		_	5,628	15
	12		Gardener's Expenses :								
			Wages Seeds, Plants, Implements, &				1,536		1		
		11				••••	003	1		1,925	13
	371 7     86 16		Advertisements							731	
	00 10	0	Band Expenses (net cost) Fuel, Light, &c., at Superintende		ind Koo					152	18
	253 14	10	Offices and Houses at Garden	s		pers 				288	4
			House and Office Expenses, Centr	al Offic	ce :					200	*
			Wages of Housekeeper, Serva	nts and	Messen	gers	313		4		2
			Fuel, Light and Water Postage	•••			139     209	4	6 7		
			Rates, Taxes and Insurance				265	13	7		
			Repairs, Office Fittings and	Appliar	aces			3	2		1
	1,437 16	4	Sundries				153	12	10		
3							1000		-	1,160	18
0	£31,968 1	3	Carried forward							£33,759	0
-		-			Sec. Sugar						
									-		COLUMN ST

75

80	ACCOUNT	ORDI
Corresponding Figures 31st Dec., 1913.	INCOME.	
£ s. d. 48,151 9 5	Brought forward	£ s. á 45,141 5 3
48,151 9 5		£45,141 5 3
		EXTRA
1,517 13 5 6,375 7 5	Donation towards Expenses of Caird Insect House Balance, being Extraordinary Expenditure carried to Balance Sheet	£ s. d.  4,059 17 5
·		
£7,893 0 10		£4,059 17 5

116.27

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1 ... 1

## £1,900 London and South Western Railway

£71 9 9 71 11 4 Dividends

> We certify that we have examined the foregoing Accounts with the Books and We have also verified the Bankers' Balances and the Securities.

Zoological Society of London, Regent's Park, N.W., February 24th, 1915.

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	Correspo Figur 31st Dec.			EXPENDITURE.						
7	£	8.	d.		£	8.	d.	£	8.	1
	31,968	1	3	Brought forward				33,759		
	509	7	1	Stationery and Miscellaneous Printing				and the second	12	
				Cost of Publications	1,440	0	2	111	14	
	995	16	10	Less Subscriptions and Sales	724	6	1			
	000	10	10			-	-	715	14	
				Preparation of "Zoological Record" Less Contribution from Inter-	450	12	9			
				national Catalogue £150 0 0						
				Transfer from Davis Fund 71 9 9						
	233	2	2		221	9	9			
				Library Expenses : -			-	229	3	
				Salaries	315	17	6			
				Binding	101	12 Mar 10	10			
	531	10	0	New Fittings, &c	31	17	5			
		10	0	Cost of Wilson M. J. J.		_	_	449	4	1
	263	9	7	Cost of Silver Medals				13		
	220	0	ò	Scientific Grants	110	0	0	24	6	1
				Honorary Life Fellowship Fees paid to New	110	0	0			
1				Composition Fund	315	0	0			
	122	10	0				_	425	0	
	122	10	0	Property Tax—Hanover Square					10	
	13,307	12	6	Balance, being Excess of Income over Ordinary						
			_	Expenditure, carried to Balance Sheet				8,957	15	
	£48,151	9	5					£45 141	5	
			-					£45,141	5	
				ORDINARY.						
	Aller			ORDINARY.						
			1	Works at Gardens :				£	8.	1
				Insect House New Lobby				151	16	
			1	Widening Bridge over Tunnel				$151 \\ 173$	11	
	6,968	9	6	New Pheasantries				1,445	2	
				Heating System for Gardens					19	
			,	Garden Planning				105	0	
				Office Basement				422	1	1
	924	11		New Motor Service				914	4	
	UNI .		-	Interest on Loan at 4% less Income Tax	••••		••••	809	2	1
	£7,893	0	10					£4,059	17	-
				TRUST FUND.						

8

New 4 per cent. Preference Stock. £71 11 4 Payments to Editor of "Zoological Record"

Vouchers of the Society, and have found them to be in accordance therewith.

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PERCIVAL ETHERIDGE (Chairman), COL. F. B. BUNNY, CHAS. H. GITTENS, HUGH S. GLADSTONE, FREDERICK J. GOODCHILD, WILLIAM HUNTSMAN, JAMES F. OCHS.

Committee of Auditors.

D

£71 9

W. B. KEEN, Chartered Accountant.

