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# BRITISH MUSEUM.

1916.

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*Ordered, by The House of Commons, to be Printed,  
2 May 1916.*

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LONDON :

PRINTED UNDER THE AUTHORITY OF HIS MAJESTY'S  
STATIONERY OFFICE

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the United States of America and other Foreign Countries of  
T. FISHER UNWIN, LTD., LONDON, W.C.

1916.





BRITISH MUSEUM.

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RETURN to an Order of the Honourable The House of Commons,  
dated 16 February, 1916; *for*,

COPY "of Account of the INCOME and EXPENDITURE of  
the BRITISH MUSEUM (SPECIAL TRUST FUNDS) for  
the Year ending the 31st day of March 1916; and,  
RETURN of the Number of PERSONS admitted to visit  
the MUSEUM and the BRITISH MUSEUM (NATURAL  
HISTORY) in each Year from 1910 to 1915, both Years  
inclusive; together with a STATEMENT of the PROGRESS  
made in the ARRANGEMENT and DESCRIPTION of the  
COLLECTIONS, and an ACCOUNT of OBJECTS added to  
them in the Year 1915."

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Treasury Chambers, }  
2 May 1916 }

E. S. MONTAGU.

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*(Mr. Lewis Harcourt.)*

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*Ordered, by The House of Commons, to be Printed,  
2 May 1916.*

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T. FISHER UNWIN, LONDON, W.C.

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## I.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the

	CASH.			STOCK, 2½% Consols.		
	£.	s.	d.	£.	s.	d.
To BALANCES on the 1st April 1915 - - -	217	14	1	13,659	3	2
- DIVIDENDS received on 13,659 <i>l.</i> 3 <i>s.</i> 2 <i>d.</i> Stock in 2½ per Cent. Consols, bequeathed by the Earl of Bridgewater, viz.:						
On the 5th April 1915 - £. 85 7 4						
" 5th July 1915 - - 85 7 4						
" 5th October 1915 - - 85 7 4						
" 5th January 1916 - - 85 7 4						
			341 9 4			
- RENT OF A REAL ESTATE, Whitchurch, bequeathed by the Earl of Bridgewater (less charges) - - - - -			23 13 8			
	£.582	17	1	13,659	3	2

## II.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the

	CASH.			STOCK, 2½% Consols.		
	£.	s.	d.	£.	s.	d.
To BALANCES on the 1st April 1915 - - -	84	13	0	2,879	10	7
- DIVIDENDS received on 2,879 <i>l.</i> 10 <i>s.</i> 7 <i>d.</i> Stock in 2½ per Cent. Consols, bequeathed by Lord Farnborough, viz.:						
On the 5th April 1915 - £. 17 19 11						
" 5th July 1915 - - 17 19 11						
" 5th October 1915 - - 17 19 11						
" 5th January, 1916 - - 17 19 11						
			71 19 8			
	£.156	12	8	2,879	10	7

## III.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the

	CASH.			STOCK, 2½% Consols.		
	£.	s.	d.	£.	s.	d.
To BALANCES on the 1st April 1915 - - -	16	11	1	5,744	-	8
- DIVIDENDS received on 5,744 <i>l.</i> - 8 <i>d.</i> Stock in 2½ per Cent. Consols, bequeathed by Dr. George Swiney for Lectures on Geology, viz.:						
On the 5th April 1915 - £. 35 18 -						
" 5th July 1915 - - 35 18 -						
" 5th October 1915 - - 35 18 -						
" 5th January 1916 - - 35 18 -						
			143 12 -			
	£.160	3	1	5,744	-	8

## BRIDGEWATER FUND, from the 1st April 1915 to the 31st March 1916.

	CASH.			STOCK, 2½% Consols.		
	£.	s.	d.	£.	s.	d.
BY One Year's SALARY of the Egerton Librarian -	175	-	-			

- BALANCES ON THE 31ST MARCH 1916, carried to Account for 1916-1917 - - -	407	17	1	13,659	3	2
	<u>£. 582 17 1</u>			<u>13,659 3 2</u>		

## FARNBOROUGH FUND, from the 1st April 1915 to the 31st March 1916.

	CASH.			STOCK, 2½% Consols.		
	£.	s.	d.	£.	s.	d.
BY AMOUNT expended in purchase of Manuscripts -	52	10	-			

- BALANCES ON THE 31ST MARCH 1916, carried to Account for 1916-1917 - - -	104	2	8	2,879	10	7
	<u>£. 156 12 8</u>			<u>2,879 10 7</u>		

## SWINEY FUND, from the 1st April 1915 to the 31st March 1916.

	CASH.			STOCK, 2½% Consols.		
	£.	s.	d.	£.	s.	d.
BY AMOUNT paid to Dr. J. D. Falconer, for Lectures on Geology in 1915 - - - - -	140	-	-			

- BALANCES ON THE 31ST MARCH 1916, carried to Account for 1916-1917 - - -	20	3	1	5,744	-	8
	<u>£. 160 3 1</u>			<u>5,744 - 8</u>		



the BIRCH FUND from the 1st April 1915 to the 31st March 1916.

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
BY LEGACY paid to the three Under Librarians of the British Museum, whose offices existed in 1766, viz., the Keepers of the Departments of Printed Books, Manuscripts, and Natural History - - - - -	14 2 8	
- BALANCE ON THE 31ST MARCH 1916, carried to Account for 1916-1917 - - - - -	—	565 3 9
	£. 14 2 8	565 3 9

of the late MR. CHARLES DRURY EDWARD FORTNUM from the the 31st March 1916.

	CASH.
	£. s. d.
BY AMOUNT transferred to H.M. Paymaster-General in aid of the Parliamentary Vote, 1915-1916 - - - - -	875 - -
- BALANCE ON THE 31ST MARCH 1916, carried to Account for 1916-1917 - - - - -	1,840 - -
	£. 2,715 - -

CARCHEMISH EXCAVATIONS FUND from the the 31st March 1916.

	CASH.
	£. s. d.
BY AMOUNT expended on Excavations - - - - -	*400 - -
- BALANCE on the 31st March 1916, carried to Account for 1916-1917	88 14 1
	£. 488 14 1

\* Including 200l. advance not yet accounted for by the Explorer.

*Frederic G. Kenyon,*  
Director and Principal Librarian.

VII.—NUMBER of PERSONS ADMITTED to VISIT the BRITISH MUSEUM and the BRITISH MUSEUM (NATURAL HISTORY).

A.—PERSONS ADMITTED TO VIEW THE GENERAL COLLECTIONS IN THE BRITISH MUSEUM in each Year from 1910 to 1915, both Years inclusive.

	1910		1911		1912		1913		1914		1915	
	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.
January	48,368	4,122	55,442	2,663	54,607	3,045	61,198	3,886	71,239	4,162	60,764	4,224
February	46,081	3,479	44,315	3,424	49,586	3,128	48,745	3,005	62,365	4,163	52,415	3,779
March	59,783	5,325	58,111	6,633	*13,341	*2,292	70,292	6,655	61,580	7,915	57,858	5,435
April	59,623	6,095	64,215	7,993	57,077	4,542	70,361	7,045	73,629	5,010	71,772	5,314
May	48,271	6,309	47,400	5,273	54,467	4,202	67,464	4,753	72,249	8,277	54,556	4,859
June	55,362	5,856	52,277	6,847	51,891	7,030	61,330	5,715	65,742	5,646	49,615	3,341
July	68,956	11,481	61,311	6,156	62,503	5,487	90,497	6,171	78,741	6,002	58,825	4,011
August	81,401	6,813	70,068	5,142	101,300	7,343	107,901	8,239	57,020	5,225	64,374	5,545
September	52,249	7,466	54,726	4,793	79,456	8,039	102,107	5,192	49,091	4,431	49,759	4,076
October	52,543	6,559	55,374	7,113	63,496	4,812	83,091	5,865	60,376	4,775	55,005	5,126
November	48,228	3,593	52,588	3,982	54,593	3,898	61,502	4,350	48,899	3,992	49,569	3,844
December	49,239	2,635	43,959	3,766	54,777	3,960	59,440	2,686	60,861	3,127	55,488	3,537
Total Number of Persons admitted to view the General Collections.	670,104	69,733	659,786	63,785	697,094	57,778	884,028	63,062	751,792	62,725	680,000	53,091
	739,837		723,571		754,872		947,090		814,517		733,091	

\* The Museum was closed from March 5 to 24 inclusive.



## NUMBER OF VISITS OF STUDENTS TO PARTICULAR DEPARTMENTS.

	1910.	1911.	1912.	1913.	1914.	1915.
To the Reading Room - - - - -	219,274	223,404	236,643	243,659	224,560	178,410
" Newspaper Room - - - - -	19,200	19,212	18,450	17,938	16,704	12,650
" Map Room - - - - -	443	584	502	439	400	380
" Department of Manuscripts - - - - -	11,256	11,731	12,142	12,090	10,277	7,781
" Department of Oriental Printed Books and Manuscripts.	2,218	2,617	2,446	3,254	2,968	2,705
" Print Room - - - - -	9,343	9,649	9,833	*7,064	*5,406	5,781
" Egyptian and Assyrian Department - - - - -	3,020	3,110	3,451	3,860	3,000	1,700
" Greek and Roman Department - - - - -	418	609	755	†1,744	†1,566	1,201
" Galleries of Sculpture - - - - -	1,843	2,301	1,879	1,945	2,138	1,798
" British and Mediæval Department - - - - -	3,665	3,260	3,646	3,827	2,873	1,488
" Coin and Medal Room - - - - -	4,228	4,050	4,044	3,565	3,321	2,150
Total - - - - -	274,908	280,527	293,791	299,385	273,213	216,044

\* The Students' Room of the Department of Prints and Drawings was closed for removal of the fittings to the new wing from 6th September 1913 to 7th May 1914.

† Including visits for archeological inquiry.

The British Museum, Bloomsbury (including the Departments of Printed Books and Maps, Manuscripts, Oriental Printed Books and Manuscripts, Prints and Drawings, Egyptian and Assyrian Antiquities, Greek and Roman Antiquities, British and Mediæval Antiquities and Ethnography, and Coins and Medals) is normally open to the public free daily (except on Good Friday and Christmas Day and days of Public Fast or Thanksgiving) as follows :—

On WEEKDAYS from 10 a.m. to 6 p.m.

After 4 p.m. in January, February, November, December, and after 5 p.m. in March, September, October, only certain of the galleries remain open, viz. :—

On MONDAYS, WEDNESDAYS, and FRIDAYS.	{	Exhibitions of Manuscripts, Printed Books, Prints and Drawings, Porcelain, Glass and Majolica ; Prehistoric, British, Anglo-Saxon, Mediæval and Ethnographical Collections.
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On TUESDAYS, THURSDAYS, and SATURDAYS.	{	Egyptian, Assyrian, Greek and Roman Galleries ; Gold Ornament Room, American, Prehistoric, British, Anglo-Saxon Collections, and the Waddesdon Bequest Room.
---	---	--

On SUNDAY AFTERNOONS :—

From 2 to 4	p.m. in	January, February, November,	December.
,, 2 ,, 5	,, ,,	October.	
,, 2 ,, 5.30	,, ,,	March, September.	
,, 2 ,, 6	,, ,,	April, May, June, July, August.	

Persons applying for the purposes of research and reference are admitted to the Reading Room under certain regulations every weekday, except the days specified below, from 9 a.m. until 7 p.m. The Newspaper Room is open, under similar regulations, from 10 a.m. until 5 p.m.

The Reading Room, Newspaper Room, and Students' Rooms in the Library and Department of Manuscripts are closed on Sundays, Good Friday, Christmas Day, and the first four weekdays in March and September.

Other Students' Rooms are closed on Sundays, Good Friday, and Christmas Day, and occasionally for cleaning.

Students are admitted generally to the several Departments on weekdays, from 10 till 4 or 5 o'clock; and to the Sculpture Galleries from 9 o'clock to the hour of closing.

At present, however, the provision for keeping the galleries open having been suspended by His Majesty's Government in the interests of economy, the Exhibition Galleries are wholly closed to the public. The Reading Room is open to Students from 9 a.m. to 5 p.m., the Newspaper Room and Manuscript Students' Room from 10 a.m. to 5 p.m., on every weekday except Good Friday, Christmas Day, and the first four weekdays in March and September.

British Museum, }  
1 April 1916. }

*Frederic G. Kenyon,*  
Director and Principal Librarian.

---

B.—PERSONS ADMITTED TO VIEW THE COLLECTIONS IN THE BRITISH MUSEUM (NATURAL HISTORY), CROMWELL ROAD, in each YEAR from 1910 to 1915, inclusive.

	1910.		1911.		1912.		1913.		1914.		1915.	
	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.
January	34,759	3,561	34,294	2,836	31,122	3,115	30,789	2,923	30,067	3,233	29,458	3,177
February	29,426	4,063	26,541	4,537	26,931	3,904	25,439	3,529	27,762	4,404	25,599	3,759
March	49,982	6,044	32,140	5,514	*22,719	*4,558	54,532	5,674	31,344	5,863	29,933	4,266
April	37,069	5,567	40,147	5,956	48,102	3,665	34,400	5,032	41,188	3,688	42,600	4,386
May	31,634	5,371	28,669	4,880	34,473	3,641	39,844	4,130	28,847	5,874	32,483	4,655
June	35,308	4,133	35,803	6,068	30,504	5,310	32,135	4,368	39,074	4,009	27,666	3,340
July	42,507	7,292	31,080	4,514	31,967	3,570	36,993	5,099	31,790	4,317	33,687	3,791
August	52,668	5,629	39,177	3,528	59,729	6,170	51,478	6,372	29,860	3,589	46,712	6,068
September	36,376	5,225	26,981	4,594	34,451	6,170	33,949	4,611	26,368	3,033	27,972	3,886
October	33,737	5,558	30,052	5,871	31,244	4,158	32,185	4,298	31,351	3,271	30,358	4,678
November	36,549	2,855	28,150	3,458	25,453	3,236	27,820	4,487	27,130	3,402	27,523	3,241
December	37,789	2,460	27,957	2,937	28,153	3,246	33,455	2,778	29,173	2,277	31,181	3,168
Total Number of Persons admitted to view the Natural History Collections (including students)	457,804	57,758	380,991	54,693	404,848	50,765	433,019	53,301	373,954	46,960	385,172	48,409
	515,562		435,684		455,613		486,320		420,914		433,551	

NUMBER OF VISITS TO PARTICULAR DEPARTMENTS for the purpose of STUDY.

	1910.		1911.		1912.		1913.		1914.		1915.	
	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.
Zoology (including Art Students)	12,443	12,175	12,564	9,962	9,235	8,020	4,837	4,284	3,354	2,531	510	510
Entomology	4,996	6,038	5,974	5,613	4,962	4,962	717	3,164	3,226	17,641		
Geology	850	682	1,415	641	717	510						
Mineralogy†	3,009	3,084	3,962	3,455								
Botany	21,298	21,979	23,915	24,528	22,362	17,641						
Total	43,596	43,596	43,596	43,596	43,596	43,596	43,596	43,596	43,596	43,596	43,596	43,596

\* The Museum was closed from March 5 to 10 inclusive.

† Study series directly accessible to the public, and so labelled as to render reference to the staff almost unnecessary, have been arranged in this Department.

The Exhibition Galleries of the British Museum (Natural History), Cromwell Road, South Kensington, including the Departments of Zoology, Entomology, Geology and Palæontology, Mineralogy, and Botany, are open to the public (with certain restrictions due to the need for economy) free, daily, except Good Friday and Christmas Day, and days of Public Fast or Thanksgiving.

The regulations at present in force are as under :—

The GALLERIES are open to the PUBLIC, free, as follows :—

WEEK-DAYS.

*Daily*.—Central Hall (Special Exhibits), North Hall (Domesticated Animals, &c.), Bird Gallery, Upper and Lower Mammal Galleries, Shell Gallery, and Botanical Gallery.

On *Mondays, Wednesdays, and Fridays*.—Fossil Mammal Gallery, Fossil Reptile Gallery, and Mineral Gallery. (Eastern side.)

On *Tuesdays, Thursdays, and Saturdays*.—Coral Gallery, Starfish Gallery, Reptile Gallery, Insect Gallery, Fish Gallery, and Whale Room. (Western side.)

SUNDAYS.

Central Hall, North Hall, Bird Gallery, Mammal Galleries (including Whale Room), Fossil Mammal Gallery, Fossil Reptile Gallery, and Mineral Gallery.

The Hours of Admission are :—

On WEEK-DAYS, throughout the year from 10 a.m., in

January	...	...	...	...	...	to 4	p.m.
February 1 to 14	...	...	...	...	...	„ 4.30	„
„ 15 to end	...	...	...	...	...	„ 5	„
March	...	...	...	...	...	„ 5.30	„
April to August (inclusive)	...	...	...	...	...	„ 6	„
September	...	...	...	...	...	„ 5.30	„
October	...	...	...	...	...	„ 5	„
November and December	...	...	...	...	...	„ 4	„

On SUNDAYS, in

January	...	...	...	from 2	to 4	p.m.
February 1 to 14	...	...	...	„ 2	„ 4.30	„
„ 15 to end	...	...	...	„ 2	„ 5	„
March	...	...	...	„ 2	„ 5.30	„
April	...	...	...	„ 2	„ 6	„
May to August (inclusive)	...	...	...	„ 2.30	„ 7	„
September	...	...	...	„ 2	„ 5.30	„
October	...	...	...	„ 2	„ 5	„
November and December	...	...	...	„ 2	„ 4	„

Persons are admitted to study in these Departments every weekday from 10 till 4 o'clock.

British Museum (Natural History),  
26 February 1916.

L. Fletcher,  
Director of the Natural  
History Departments.

## VIII. GENERAL PROGRESS AT THE MUSEUM, BLOOMSBURY.

The first complete year of war naturally shows a reduction in the number of visitors to the Museum as compared with the exceptionally high figures of 1913 and the first seven months of 1914. The absence of Continental and American visitors and of holiday tourists in general was bound to make itself evident in these returns. On the other hand, the use of the Museum by our own people has been more than fully maintained. The total number of visits for the year 1915 was 733,091 (680,000 on week-days and 53,091 on Sundays), which is a figure slightly in advance of the total for 1911, and slightly below those for 1910 and 1912, all of which were years in which London enjoyed a normal influx of foreign visitors and holiday tourists.

A marked feature in the use of the Museum was the number of soldiers who visited the galleries, including many from the Overseas Dominions.

The visits of students to particular departments showed more reduction than the visits of the general public to the exhibition galleries. The visitors to the Reading Room numbered 178,410 as compared with 224,560, to the Newspaper Room 12,650 as compared with 16,704, to the other departments 24,984 as compared with 31,949. After deducting these figures from the general totals, it will be found that the visits to the public exhibition galleries were greatly in excess of those in any of the seven years preceding 1913.

The lectures of the Official Guides were well attended throughout the year. Some special lectures were given to Belgian refugees.

In continuation of the measures taken in the first months of the war, a considerable number of the more valuable objects in the collections were removed to places of greater safety. Among these were the statues from the pediments of the Parthenon and certain other sculptures of special value; while the metopes and frieze of the Parthenon, and the greater part of the Assyrian bas-reliefs, have received special protection *in situ*. In some cases casts and reproductions were substituted for originals in the public galleries.

The transference of the collections to King Edward the Seventh's Galleries, and the re-arrangement of the rooms in the older parts of the Museum, have been very greatly delayed by the necessity for economies in labour and the difficulty of obtaining materials. Nevertheless some progress has been made in the re-arrangement of the Department of British and Mediæval Antiquities, as described below.

A corridor connecting the north-east staircase of the old building (near the King's Library) with the Ground Floor Gallery of the new building has been completed, and will be available when the latter Gallery is opened to the public.

The only publications have been works which were in hand before the outbreak of war, and which it was more economical to complete and issue than to suspend.

Reductions of staff have continued throughout the year, and no man has been held back from volunteering for military duty unless his services were essential for the maintenance of the work of the Museum. At the end of the year 99 members of the staff at Bloomsbury and 52 at the Natural History Museum had gone on military service, 38 at Bloomsbury and 12 at the Natural History Museum had been attested under the Derby scheme, and 20 at Bloomsbury and 13 at the Natural History Museum had been rejected as medically unfit.

The suspension of the purchase-grant (with the exception of a sum devoted to the purchase of foreign books and periodicals for the Library) has greatly affected the accessions, though the full falling off will not be visible until the next year, since the suspension did not come into effect until April, 1915, and several outstanding purchases were completed by means of the reserve accumulated in times of peace. The number of separate objects incorporated in the collections of the several Departments during the year 1915 is as follows :—

Printed Books :

Books and Pamphlets	-	-	-	-	-	26,351
Serials and Parts of Volumes	-	-	-	-	-	61,538
Maps and Atlases	-	-	-	-	-	1,942
Music	-	-	-	-	-	10,720
Newspapers (single numbers)	-	-	-	-	-	278,924
Miscellaneous	-	-	-	-	-	5,431
Manuscripts and Seals	-	-	-	-	-	2,650
Oriental Printed Books and Manuscripts	-	-	-	-	-	2,041
Prints and Drawings	-	-	-	-	-	3,819
"    "    (Oriental)	-	-	-	-	-	1,138
Egyptian and Assyrian Antiquities	-	-	-	-	-	88
Greek and Roman Antiquities	-	-	-	-	-	66
British and Mediæval Antiquities	-	-	-	-	-	1,322
Coins and Medals	-	-	-	-	-	3,655
Total	-	-	-	-	-	<u>399,685</u>

The principal acquisitions will be found indicated in the Departmental reports which follow, though these reports are given on a less extensive scale than usual, in the interests of economy. Special recognition is due to the friends of the Museum whose liberality has, in several instances, enabled the Trustees to take advantage of opportunities which otherwise would have been missed through the suspension of the purchase grant. Five collections of considerable importance have been acquired in the course of the year, namely the Sale bequest of water colour drawings (notable for its fine examples of David Cox, but very comprehensive in other directions also); a selection from the Ransom collection of British and other antiquities, in which the most conspicuous single object is the remarkable 12th cent. bronze bowl, engraved with scenes from the life of St. Thomas; the Whitcombe Greene collection of

Renaissance plaquettes; the Evans collection of English coins; and the Prideaux collection of Oriental coins. Of single objects, special attention may be called to the autograph MSS. of several poems by A. C. Swinburne; to a Dürer drawing of peculiar importance; to two early German woodcuts from the Leigh Sotheby collection; to the clay cylinders of Sennacherib and Esarhaddon; to the royal guitar of Uganda, formerly presented by Sir F. Lugard to Mr. Joseph Chamberlain; and to a number of rare coins.

The Parliamentary grant for the issue of reproductions of works of art to Art Schools and similar institutions has been suspended for the period of the war.

The following are the publications issued by the Departments at Bloomsbury during the year:—

Bronze Reliefs from the Gates of Shalmaneser, king of Assyria, B. C. 860-825. Edited by L. W. King, M.A., Litt. D. With 80 plates. 4to. 1*l.* 15*s.*

Select Bronzes, Greek, Roman, and Etruscan, in the Departments of Antiquities. 73 plates. With a commentary by H. B. Walters, M.A., F.S.A. 4to. 1*l.* 15*s.*

Catalogue of the Engraved Gems of the Post-Classical Periods in the Department of British and Mediæval Antiquities and Ethnography in the British Museum. By O. M. Dalton, M.A. 4to. 1*l.* 5*s.*

Select Italian Medals of the Renaissance in the British Museum. Illustrated on 50 plates. Portfolio. 8*s.* 6*d.*

List of Catalogues of English Book Sales, 1676-1900, now in the British Museum. 8vo. 12*s.* 6*d.*

The Codex Alexandrinus (Royal MS. 1 D v-viii) in reduced photographic facsimile. Old Testament. Part I. Genesis-Ruth. 4to. Portfolio. 1*l.* 15*s.*

Schools of Illumination. Reproductions from Manuscripts in the British Museum. Part II. English: 12th and 13th centt. 15 plates. Folio. 17*s.* 6*d.*

Miscellaneous Coptic Texts in the Dialect of Upper Egypt. (Coptic Texts. Vol. V.). Edited, with English Translations, by E. A. Wallis Budge, M.A., Litt. D. With 40 plates and 20 illustrations in the text. 8vo. 2*l.*

Catalogue of the Hebrew and Samaritan MSS. in the British Museum. By G. Margoliouth, M.A. Part III. Sections VIII, IX. Miscellaneous MSS.; Charters. 4to. 1*l.* 17*s.* 6*d.*

Set of 10 plates illustrating Part III. of the Catalogue of Hebrew and Samaritan MSS. 4to. 8*s.*

Catalogue of the Hebrew and Samaritan MSS. in the British Museum. By G. Margoliouth, M.A. Part III., complete (Sections I-IX, and 10 plates). 4to. 5*l.*

Supplementary Catalogue of Marathi and Gujarati Books in the British Museum. By J. F. Blumhardt, M.A. 4to. 1*l.* 12*s.* 6*d.*

Catalogue of Drawings by Dutch and Flemish Artists preserved in the Department of Prints and Drawings, British Museum. Vol. I. Drawings by Rembrandt and his School. 8vo. 12*s.*



IX.—PROGRESS made in the ARRANGEMENT AND DESCRIPTION OF THE COLLECTIONS, AND ACCOUNT OF OBJECTS ADDED TO THEM in the Year 1915 (Bloomsbury).

DEPARTMENT OF PRINTED BOOKS.

I. *Arrangement.*—The works added to the collection during the past year have, as far as possible, been placed on the shelves of the Library according to the system of classification adopted in the Museum.

The press-marks, indicating their respective localities, have been marked on the inside and affixed to the back of each volume.

The total number of these press-marks amounts to 65,731; in addition to which 57,971 press-marks have been altered, on books and in the catalogues, in consequence of changes and re-arrangements carried out in the Library; 23,259 labels have been affixed to books and volumes of newspapers, and 84,898 obliterated labels have been renewed.

The number of stamps impressed upon articles received is 398,237.

3,864 presses of books and newspapers have been dusted in the course of the year.

II. *Catalogues.*—*Cataloguing.*—42,663 titles have been written for the General Catalogue and for the Catalogues of Maps and Music.

*Printing.*—29,176 titles and index-slips for the General Catalogue, 2,495 for the Map Catalogue, and 2,330 for the Music Catalogue, have been printed during the year.

*Incorporation.*—*General Catalogue.*—29,092 title-slips and index-slips have been incorporated into each of the three copies of this Catalogue. This has rendered it necessary, in order to maintain as far as possible the alphabetical arrangement, to re-arrange 45,627 title-slips and index-slips in each copy and to add to each copy 621 new leaves.

The system of fortnightly incorporation of accessions was carried out regularly until March, after which date it was replaced by a system of monthly incorporation.

*Map Catalogue.*—3,011 titles have been written for this Catalogue, and 2,489 title-slips have been incorporated into each of three copies of it. This has rendered it necessary to re-arrange 1,766 title-slips in each copy and to add to each copy 16 new leaves.

*Music Catalogue.*—11,737 titles have been written for this Catalogue, and 4,021 title-slips have been incorporated into each of two copies of it. This has rendered it necessary to re-arrange 4,109 title-slips in each copy and to add to each copy 97 new leaves.

*Shelf Catalogue.*—For this Catalogue, in which the title-slips, mounted on cards, are arranged in order of press-marks, 24,625 have been so mounted and 55,121 have been incorporated in their proper order.

*Catalogue of Books printed in the XVth Century.*—Progress was made early in the year with Part IV. of this Catalogue, and the section dealing with Subiaco and Rome was passed through the press. Work on the Catalogue was then discontinued.

III. *Binding.*—The number of volumes and sets of pamphlets sent to be bound in the course of the year was 19,344, including 5,087 volumes of newspapers. In consequence of the frequent adoption of the plan of binding two or more volumes in one, the number of volumes returned was 11,724. In addition, 735 volumes have been repaired in the binders' shops.

Besides this, the following binding work has been done in the Library itself:—4,006 volumes have been repaired, 9,089 cleaned and polished, and 4,597 volumes of reports, parts of periodicals, &c., have been bound in a light style of binding.

The following maps, &c., have also been bound or mounted during the year:—68 volumes of the 6-inch and 25-inch Ordnance Survey have been bound; in addition, 176 parts of the 1-inch Ordnance Survey and 400 general maps have been mounted on linen in 1,203 sheets, and 350 maps have been mounted on cards in 421 sheets.

46,882 numbers of Colonial Newspapers have been made up into 1,221 parcels, and 1,278 parcels have been tied up and labelled.

37 volumes of the General Catalogue have been broken up and re-bound in 39 volumes. 370 columns have been re-laid, owing to the accumulation of titles under certain headings. 21 volumes of the Music Catalogue have been re-bound in 22 new volumes.

IV. *Reading Room Service.*—The number of volumes replaced in the General Library after use in the Reading Room was 581,319; in the King's Library, 17,927; in the Grenville Library, 1,991; in the Map Room 4,625; in the presses in which books are kept from day to day for the use of readers, 635,112; and in the Oriental Department, 2,359; making a total of 1,243,333 volumes supplied to readers during the year, exclusive of those to which the readers have personal access on the shelves of the Reading Room.

The number of readers during the year was 178,410, giving an average of 588 daily, the room having been open 303 days.

*Newspaper Room.*—The number of readers during the year was 12,650, giving a daily average of 42, the room having been open on 303 days. The number of volumes replaced after use was 43,541, giving a daily average of 144, not reckoning volumes taken from the shelves of the Newspaper Room by the readers themselves. In addition, 1,389 country newspapers were brought up to the Library from the Repository at Hendon for the use of readers.

*Map Room.*—380 students were admitted to the Map Room.

*Photography.*—There were 262 applications for leave to photograph from books in the Library, and 712 volumes were supplied for this purpose.

V. *Accessions.*—*General Library.*—26,351 complete volumes and pamphlets have been added to the General Library during the year. Of these, 4,914 were presented; 14,319 received by Copyright; 377 by Colonial Copyright; 830 by International Exchange; and 5,911 acquired by purchase.

61,538 parts or volumes of serial publications and of works in progress have been added to the General Library. Of these, 3,172 were presented; 41,180 received by Copyright; 391 by Colonial Copyright; 1,024 by International Exchange; and 15,771 acquired by purchase.

*Maps.*—84 atlases, 98 parts of atlases, and 1,760 maps in 6,921 sheets have been added to the collection during the year. Of these, 27 atlases, 62 parts of atlases, and 1,107 maps were presented; 34 atlases and 612 maps received by Copyright; 15 atlases and 26 maps by Colonial Copyright; and 8 atlases, 36 parts of atlases and 15 maps acquired by purchase.

*Music.*—10,720 musical publications have been added to the collection during the year. Of these, 2 books were presented; 9,273 books and pieces and 1,046 parts were received by Copyright; 351 pieces by Colonial Copyright; and 15 books and 33 parts acquired by purchase.

*Newspapers.*—The number of newspapers published in the United Kingdom, received under the provisions of the Copyright Act during the year, was 3,215, comprising 216,516 single numbers. Fifteen sets, comprising 2,555 single numbers, were received by Colonial Copyright; 371 sets, comprising 43,319 single numbers, of colonial and foreign newspapers have been presented; and 92 sets, comprising nine volumes and 16,534 single numbers, of current colonial and foreign newspapers have been purchased.

*Miscellaneous.*—5,431 articles not included in the foregoing paragraphs have been received in the Department. These consist of Parliamentary Papers, single sheets, and other miscellaneous items.

The total number of articles enumerated above as having been received in the Department during the year, exclusive of newspapers, is 105,982.

#### *Donations.*

The following is a list of the more important donations received during the year :—

Περὶ Χαριλαοῦ Τρικουπη. 9 vols. Presented by P. Ralli, Esq.  
Acta Capitulorum Generalium. Vol. I. 1318–1593. Edidit  
F. G. Wessels. Presented by the Rev. B. Zimmerman.

Illustrated Catalogue of the Pictures in the Collection of P. A. B. Widener. *Presented by P. A. B. Widener, Esq.*

Original Drawings by the Old Masters. The Collection formed by J. G. Cogswell, 1786-1871. 1915. *Presented by M. L. Schiff, Esq.*

The Barbizon School of Painters, by David Croal Thomson, 1890. *Presented by D. C. Thomson, Esq.*

The Royal Commission on the Losses and Services of American Loyalists, 1783-1785. Edited by H. E. Egerton, 1915. *Presented by Mrs. Whitelaw Reid.*

The Wedderburn Book, 1296-1896, by Alexander Wedderburn. Vols. 1, 2. *Presented by A. Wedderburn, Esq.*

L'Astronomie Nautique au Portugal, par Joaquim Bensaude. *Presented by J. Bensaude, Esq.*

Early Statutes of St. John's College, Cambridge. Edited by J. E. B. Mayor, 1859. *Presented by the Master of St. John's College, Cambridge.*

Records of the town of Plymouth, Mass. Vols. 1-3. 1636-1783. *Presented by the Pilgrim Society, Plymouth, Mass.*

Private Correspondence of Lord Byron. A proof of part of a suppressed edition. *Presented by Mrs. Shaw.*

Catalogue of the Paintings, &c., belonging to the Honourable Society of the Inner Temple, 1915. *Presented by the Treasurer and Masters of the Bench, Inner Temple.*

Noticias históricas y genealógicas de los Estados de Montijo y Teba, 1915. *Presented by the Duque de Berwick y de Alba.*

*G. F. Barwick.*

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## DEPARTMENT OF MANUSCRIPTS.

1. *Catalogue of Additions.*—Egerton MSS. 2890, 2891, acquired in 1911, and 2899, acquired in 1912, have been described and indexed.

The following MSS. acquired in 1913 have been described and indexed: Additional 38662–38664, 38683, 38686, 38687, 38725, 38732, 38782–38788, 38790, 38791, and Egerton 2902–2904, 2906, 2907.

Of those acquired in 1914, Additional 38808, 38838, 38840, 38865–38890, 38892–38895, 38898–38930, 39165, 39167, 39168, and of those acquired in 1915, Additional 39169–39177, 39179, 39184, 39212, 39214 have been described and indexed.

The descriptions of Additional MSS. acquired in 1913 have been printed.

2. *Catalogue of Greek Papyri.*—For Vol. V. of the Catalogue, 1769–1911 (catalogue numbers) have been finally revised for press, sheets E–Kk have been printed off, and pp. 1–248 have been indexed.

3. *Catalogue of the Royal and King's MSS.*—Sheets 3 A–3 E of Vol. II. have been revised, completing the volume (to end of Royal Appendix). For Vol. III., descriptions of King's MSS. 1–147, 161–172 have been revised and 1–145 sent to press; sheet B is in print. The index to the Royal MSS. has been sorted into order.

4. *Catalogue of Irish MSS.*—The following MSS. have been described:—Royal 6 B. III.; Additional 18748; Egerton 113, 117, 122, 124, 130, 134, 141, 166, 168, 187, 195, 213, 214, 2899. The revision of the section Miscellaneous has been completed, and that of the sections Poetry, Tales, and Theology nearly so.

5. *Catalogue of Charters.*—Additional Charters 57357–57418, acquired in 1912, have been described and indexed.

6. *Binding.*—167 Additional and Egerton MSS. newly acquired and 90 MSS. of the old collections have been bound, repaired, or lettered, together with 146 pieces of Papyri and 87 Books of Reference, volumes of Facsimiles, and Catalogues. 6 Charters have been repaired.

7. *Verification.*—The entire collection of MSS. has been verified by comparison with the Shelf-Lists.

8. *Reproductions.*—Part II. (English, 12th and 13th cent.) of the Schools of Illumination has been completed and issued.

Part I. (Genesis–Ruth) of the reduced facsimile of the Codex Alexandrinus has been completed and issued.

The introduction by Sir George Warner to the facsimiles from the Lindisfarne Gospels is in preparation.

9. *Stamping, folioing, and placing.*—67 Additional MSS., 1 Egerton MS., and 145 Books of Reference have been stamped. The total of impressions made was 3,842.

170 MSS. have been folioed, with a total of 32,268 folios. 696 sheets have been numbered.

125 newly acquired MSS. and 336 Papyri have been placed. All have been press-marked and entered in Hand- and Shelf-Lists.

437 Charters and Rolls have been placed and have been entered in the Hand-Lists. Numbers have been written on 829 newly acquired Charters. 29 Seals and Casts have been provided with boxes, placed, and entered in Hand- and Drawer-Lists.

10. *Books of Reference.*—119 volumes and parts have been received, catalogued, and placed.

15 volumes and parts of Facsimiles were added to the series now deposited in the Department and available for the use of Readers.

11. *Consultation of MSS.*—23,332 MSS. and 2,001 Charters and Seals have been consulted in the Students' Room, and 69 MSS. in the Reading Room. The number of Students was 7,781.

Magna Charta was exhibited to 10,361 visitors.

12. *MSS. photographed.*—376 MSS. (including Papyri, Charters, and Seals) were allowed to be photographed, with a total of 3,073 photographs taken, of which 3 were for official purposes.

13. *Acquisitions.*—The number of Manuscripts and Documents, &c., acquired during the year has been :—

Additional MSS.	-	-	-	-	-	-	-	87
Charters and Rolls	-	-	-	-	-	-	-	2,541
Detached Seals and Casts	-	-	-	-	-	-	-	22

A few of the most important accessions by gift or purchase are as follows :—

The Wodehouse Papers (calendared by the Historical MSS. Commission in 1892), a collection valuable for the history of Norfolk and Suffolk and of the families of Buttes, Bacon, and Wodehouse. 30 volumes, 5 rolls, and 1,333 charters. *Presented by Mrs. Wodehouse, widow of the late Right Hon. Edmond R. Wodehouse.*

The Mackenzie Papers, 16th–19th centt., relating to the Clan Mackenzie and especially the families of Suddie, Scatwell, and Findon, and including military papers and diary of Gen. J. R. Mackenzie, killed at Talavera. 25 volumes.

Autograph MS. of five pages of Charles Dickens' Pickwick Papers. *Presented by Lady Wernher, who purchased it at the Red Cross sale.*

Autograph MSS. of "A Century of Roundels" and about twenty other poems and one prose article of A. C. Swinburne. *Bequeathed by Miss Isabel Swinburne.*

Autograph MS. of Robert Louis Stevenson's Fables.

*J. P. Gilson.*

## DEPARTMENT OF ORIENTAL PRINTED BOOKS AND MSS.

*Arrangement and Cataloguing.*—The numbers of the sheets of the various Oriental Catalogues and other publications of the Department which were sent to press in 1915 are :—Arabic Printed Books Catalogue, 14 sheets ; Coptic Texts, vol. 5, 62 sheets ; Gujarati Printed Books Catalogue, 19 sheets ; Hebrew MSS. Catalogue, 7 $\frac{3}{4}$  sheets.

The numbers of Titles written for the Catalogues are :—Abor Miri, 2 ; Arabic, 389 ; Assamese, 24 ; Avestan, 5 ; Bengali, 733 ; Bodo, 14 ; Burmese, 169 ; Cachari, 2 ; Chin, 2 ; Chinese, 2,506 ; Gujarati, 186 ; Hebrew, 261 ; Hindi, 502 ; Hindustani, 599 ; Ho, 4 ; Kachin, 5 ; Kanarese, 131 ; Karen, 14 ; Kashmiri, 7 ; Khasi, 12 ; Kurku, 6 ; Lakher, 2 ; Lushai, 15 ; Malayalam, 44 ; Manipuri, 6 ; Marathi, 39 ; Mundari, 11 ; Naga, 26 ; Oriya, 35 ; Pali, 117 ; Panjabi, 170 ; Persian, 384 ; Prakrit, 44 ; Pushtu, 4 ; Sanskrit, 567 ; Santali, 10 ; Savara, 2 ; Siamese, 2 ; Sindhi, 9 ; Sinhalese, 115 ; Syriac, 28 ; Talaing, 2 ; Tamil, 471 ; Telugu, 437 ; Tibetan, 3 ; Turkish, 55. Total, 8,171.

65 Hebrew MSS. and 45 Indian Charters have been fully catalogued.

32 short descriptions of MSS. have been entered in the Descriptive List, the Register, and the Classed Inventory.

125 MSS. (7,885 folios) have been folioed.

*Publications.*—Vol. 5 of the Series of Coptic Texts edited by Dr. E. A. Wallis Budge, a Supplementary Catalogue of Marathi and Gujarati Printed Books, and part 3 of the Catalogue of Hebrew MSS. have been issued.

*Binding.*—The numbers of Printed Books and MSS. sent to the Binders are :—Arabic, Hindustani, and Persian Books, 32 ; Chinese Books, 37 ; Hebrew Books, 41 ; Books in Sanskrit and other Indian languages, 183 ; MSS., 170.

*Students.*—The number of visits of Students working in the Students' Room attached to the Department during the year was 2,705. The number of Oriental Printed Books read by them in the Department was 16,954 (7,873 of which were issued once only, and 9,081 reserved) and of those used in the Reading Room, 2,359. The number of Oriental MSS. read in the Students' Room was 5,450.

*Photography.*—25 applications have been made to photograph books and MSS. in this Department.

*Additions.*—The number of volumes, pamphlets, etc., added to the collections of the Department during the year is 2,041, of which 2,020 are Printed Books and 21 are MSS.

Of the Printed Books, 119 were bought ; 1,698 were received under the India Copyright Act ; 81 were received under the Colonial Copyright Acts from Ceylon and Hongkong ; 2 were

received in exchange for duplicates ; and 120 were presented. Of the MSS., 10 were bought and 11 presented.

The MSS. are as follows :—

Arabic	-	-	-	-	-	-	10
Chinese	-	-	-	-	-	-	2
Hebrew	-	-	-	-	-	-	2
Persian	-	-	-	-	-	-	3
Persian and Arabic	-	-	-	-	-	-	1
Sanskrit	-	-	-	-	-	-	1
Sogdian	-	-	-	-	-	-	1
Turkish	-	-	-	-	-	-	1
							—
Total	-	-	-	-	-	-	21

The most important acquisitions are :—

*Arabic MSS.*—1. *Sharḥ al-kulliyāt*, a commentary by Kutb al-Dīn Muḥ. b. Maḥmūd al-Shīrāzī on Ibn Sīnā's *Kānūn*. Bk. 1. Copied A.H. 715 (A.D. 1315). 8°. Rare.

2. *Durrat al-mudīyah*, a commentary on Ibn Mālik's *Alfiyah*, by his son Badr al-Dīn Abu 'Abd Allāh Muḥammad. Copied A.H. 793 (A.D. 1390). 4°. Very rare.

3. A supercommentary by Shams al-Dīn al-Shaubarī on Al-Anṣārī's commentary on the *Minḥāj al-tālibīn*. 2 vols. Copied A.H. 1100 (A.D. 1688). 8°. No other copy appears to be on record.

4. *Kitāb al-wāfi*, a work on scholastic theology by Muḥ. b. Murtada (Muḥsin). Pt. 2. 18th-19th cent. 8°. Apparently unique.

5. *Kitāb ikmāl al-dīn*, a treatise on Shī'ah doctrine by 'Imād al-Dīn Abu Ja'far Muḥ. b. 'Alī (Ibn Bābawaih). Copied A.H. 1204 (A.D. 1789). 4°. No other copy appears to be on record.

*Chinese MS.*—1. A letter, written on yellow silk, from a T'ai-ping leader to the Rev. Joseph Edkins, asking to be instructed in Christian doctrine. *Presented by Mrs. Lockhart.*

*Hebrew Books.*—1. The *Yoreh De'ah* of Jacob ben Asher. Printed at Fez about 1520. Fol. Only one other copy of this edition is known to exist.

2. The *Hebrew Grammar* of Kimḥi. The earliest edition known. 1525. 8°.

*Persian MSS.*—1. *Tazkirat i Minuchihr*, lives of eminent Persians, with specimens of their works, by Mu'tamad ul-Daulah Minuchihr Khān. Copied A.H. 1264 (A.D. 1847). Fol. No other copy appears to be on record.

2. *Rāg i mūsīkī*, a treatise on the modes of Hindu music, illuminated, and illustrated with 39 paintings. 18th cent. Fol. *Presented by the Royal College of Music.*

L. D. Barnett.



## DEPARTMENT OF PRINTS AND DRAWINGS.

I.—*Arrangement and Cataloguing, &c.*

*Exhibition.*—The contents of the exhibition of Select Prints and that of Recent Acquisitions have been varied in detail, among the prints exhibited being selections of etchings by Meryon, Legros, Frank Brangwyn, A.R.A., Sir Alfred East, R.A., Muirhead Bone, and Col. R. Goff, lithographs by Albert Belleruche, and colour-prints by A. W. Seaby. In July all the recently acquired prints were removed to make room for an exhibition of the Sale Collection of water-colour drawings.

The engraved fans presented by Lady Charlotte Schreiber are being exhibited in rotation. Two selections, of twenty each, were shown during the year.

*Catalogues.*—Vol. I. of the Catalogue of Dutch and Flemish Drawings, describing the work of Rembrandt and his school, has been published.

A portion of Vol. V. of the Catalogue of Engraved British Portraits, containing descriptions of the portrait groups, has been printed, and an index to the separate persons contained in these groups is being prepared. Progress has been made with the preparation of a supplement to the main body of the Catalogue.

The work of indexing foreign portraits contained in books of prints, the works of engravers, and other parts of the collection to which references had not yet been given, has been commenced.

*Arrangement.*—The books of prints and books of drawings have been completely rearranged, with more regard to schools, dates, and subjects, and re-labelled.

The card index to the books of reference has been continued, and over 3,000 cards have been written.

All books of prints and books of reference recently acquired have been catalogued, labelled, and placed.

The index of periodicals has been brought up to date.

3,153 prints and drawings recently acquired have been incorporated with the divisions of the collection to which they severally belong.

*Registration.*—3,694 items have been entered in the Register of Acquisitions.

*Stamping and Mounting.*—11,288 drawings, prints, &c., recently acquired, have been impressed with the departmental stamp and references to the Register.

The whole of the French drawings in the Malcolm Collection have been mounted.

242 drawings, recently acquired, have been prepared and mounted on sunk mounts; 59 prints have been mounted on sunk, and 57 on plain mounts; 310 book-plates have been placed on paper mounts. A large number of mezzotints from the Cheylesmore Collection have also been placed on sunk mounts. All the above

have been lettered with the artists' names and references to the Register and to Catalogues.

161 drawings have been mounted in albums.

101 drawings, 634 prints, and 664 mounts have been cleaned.

*Students.*—The total number of visitors admitted to the Print Room during the year ended 31st December 1915 was 5,781, being 375 in excess of the number for 1914; in the latter year, however, the room was closed for over four months.

*Photographing.*—231 applications were made for leave to photograph, and 803 photographs were taken.

## II.—Acquisitions.

The total number of prints, drawings, books, &c., acquired during the year was 3,819, of which the following are the most important :—

### ITALIAN SCHOOL.

#### *Drawings.*

Tiepolo, Giovanni Battista. Two drawings of figures; pen and bistre wash.

*Prints arranged to illustrate the Works of Masters.*

Sanzio, Raffaello. St. George, from the picture now at Petrograd. Engraved in 1628 by David des Granges, an engraver of whom no record appears to exist. *Presented by R. Ross, Esq.*

### GERMAN SCHOOL.

#### *Drawings.*

Dürer, Albrecht. Group of knights riding and tilting; signed and dated 1489; pen and ink; from the Andreossi, Lawrence, and Ginsburg Collections. Study of costume, undated; pen and ink; from the Wellesley and Ginsburg Collections. *Presented by the Dürer Society.*

#### *Engravings.*

Anonymous engraver called "Der Meister mit den Blumenrahmen" (15th cent.). "The Passion of Christ," twenty-six small engravings in a volume, from the Huth Collection.

#### *Metal-cut.*

SS. Oswald and Notburga. Unique dotted print of the 15th cent. Schreiber 1717. From the Huth Collection.

#### *Woodcuts.*

St. Anne. Coloured woodcut of the 15th cent., with a prayer for use in time of pestilence, and an indulgence containing the date 1494, cut upon the block. From the S. Leigh Sotheby Collection. A copy of this woodcut, at Nuremberg, is described by Schreiber, No. 1195. *Presented by H. Van den Bergh, Esq., through the National Art-Collections Fund.*

St. Nicholas. Coloured woodcut of the 15th cent., from the S. Leigh Sotheby Collection; unique and undescribed. *Presented by the National Art-Collections Fund, with the aid of contributions from J. P. Heseltine, Esq., C. W. Dyson Perrins, Esq., and Campbell Dodgson, Esq.*

## SCHOOLS OF THE NETHERLANDS.

*Drawing.*

Witel, Gaspar Van (Vanvitelli). Pen and wash drawing of Italian scenery, from the Lawrence and Ginsburg Collections. *Presented by Campbell Dodgson, Esq.*

*Etching.*

Rembrandt. Jacob lamenting the supposed death of Joseph, B. 38. Undescribed first state.

## FRENCH SCHOOL.

*Drawings.*

Guys, Constantin. Two drawings of scenes of Roman life, about 1865; pen and Indian ink wash. *Presented by M. T. H. Sadler, Esq.*

*Engravings.*

Grateloup, Jean Baptiste. Portraits of Bossuet, first state, Descartes, second state, Montesquieu, second state, and Polignac, first state.

*Etchings.*

Jacquemart, Jules. Christ at the Column. *Presented by A. E. Anderson, Esq.*

Meryon, Charles. Title to "Voyage à la Nouvelle-Zélande," Delteil, 63, II. Frame for a portrait, Delteil, 95, IX. *Presented by Campbell Dodgson, Esq.*

Waltner, Charles. Wayfarers, after F. Walker, A.R.A. Vellum proof of the rare first state, before the plate was altered by instructions from Millais. The Peaceful Thames, after F. Walker, A.R.A. Remarque proof on vellum. *Presented by E. E. Leggatt, Esq.*

*Lithograph.*

Corot, J. B. C. La Lecture sous les Arbres. Delteil 33.

## SCANDINAVIAN SCHOOLS.

*Etchings.*

Martin, Johan Fredrik. Two views in Stockholm, etched in outline and tinted in water colours by the artist.

## AMERICAN SCHOOL.

*Etchings.*

J. A. McN. Whistler. The Swan Brewery. Wedmore 89.

*Lithographs.*

Brown, Bolton. Nine original lithographs (landscape and figures). *Presented by the Artist.*

Sargent, John Singer, R.A. Portrait of Albert Belleruche. *Presented anonymously.*

Veresmith, D. A. Four original lithographs: The Romany Chal; "You shall also mount with me"; The Jumble Sale; "Chi è la?" *Presented by the Artist.*

## ENGLISH SCHOOL.

*Drawings.*

The principal acquisition of the year in this class is the collection of water-colour drawings, seventy-five in number, of which only fifty-two belong strictly to the English school, bequeathed by the Rev. C. J. Sale (d. 1896), to which must be added nine water-colours (four by David Cox, two by Copley Fielding, and three by J. M. W. Turner, R.A.) bequeathed by his widow, Mrs. Mary Sale, of Wick Episcopi, near Worcester, who died on January 25th, 1915. The Sale bequest includes eighteen specimens of David Cox, including two of unusual size and importance, "The Vale of Clwyd" and "Beeston Castle," as well as many others of smaller size, but greater artistic interest, which add much in variety of style to the large collection of Cox's work already in the department. Three specimens of Turner's work, "St. Agatha's Abbey, Easby," "Glacier des Bossons," and a Venetian subject, "Storm on the Lagoons," are notable acquisitions. The collection also includes specimens of the following English artists, many of whom were not hitherto represented in the department:—G. Barrett, jun., R. Beavis, C. Branwhite, W. Callow, G. Cattermole, T. S. Cooper, R.A., P. DeWint, M. Birket Foster, G. A. Fripp, Sir J. Gilbert, R.A., J. Holland, W. H. Hunt, W. J. Müller, P. J. Naftel, W. H. Pike, S. Prout, T. M. Richardson, jun., D. Roberts, R.A., F. J. Skill, F. Smallfield, F. Tayler, H. B. Willis, and E. M. Wimperis. The artists of foreign birth, drawings by whom are included in the bequest, are Guido Bach, Carl Haag, Sir Hubert von Herkomer, R.A., E. S. Lundgren, Jozef Israels, and the French animal painter, Charles Olivier de Penne.

Among other English drawings, the following deserve mention:—

Alexander, Edwin. Ten studies of Pigeons; water-colours. *Presented by the Artist.*

Boyce, George Price. Farm Buildings at Streatley-on-Thames; View from Pompey's Pillar at Alexandria; water-colours. *Bequeathed by Mrs. Gillum.*

Bright, Henry. Coast scene; black chalk. *Presented by G. Bellingham Smith, Esq.*

Eve, George William. Twelve preliminary drawings for book-plates. *Presented by G. H. Viner, Esq.*

Mahoney, James. Two illustrations to "Little Dorrit"; pen and ink.

Prout, Samuel. View in Cologne; pencil.

Robertson, George. View near Tunbridge Wells ; water-colours. *Presented by W. C. Alexander, Esq.* Burnham Abbey, Bucks ; water-colours. *Presented by Sir Hickman Bacon, Bart.*

Shaw, R. Norman, R.A. Two architectural drawings ; pencil. *Presented by Mrs. Norman Shaw.*

Steer, P. Wilson. Rodborough Common ; The North Sea ; water-colours. *Presented by the Artist.* A Bend of the Severn ; water-colours. *Presented by Geoffrey Blackwell, Esq.*

Thackeray, W. M. The Little Rebel ; pen and ink. *Bequeathed by Mrs. Gillum.*

#### *Etchings.*

Baskett, C. H. Four landscape subjects ; aquatint. *Presented by Messrs. P. and D. Colnaghi and Obach.*

Bentley, Alfred. Five original landscape and subject etchings. *Presented by the Artist.*

Bone, Muirhead. Piccadilly Circus, 1915 ; dry-point, trial proof and finished state. *Presented by the Artist.* Orvieto ; dry-point, first state (one of two impressions only).

Brangwyn, Frank, A.R.A. Twenty-four etchings of architecture and landscape, including the etchings of the earthquake of Messina and others of the artist's chief works. *Presented by the Artist.*

Cameron, Katharine. Eleven etchings, chiefly of insects and flowers. *Presented by the Artist.*

Eve, G. W. Fifteen proofs of diplomas, invitation tickets, &c. *Presented by G. H. Viner, Esq.*

Gethin, P. F. Gerona, Spain. *Presented by Messrs. P. and D. Colnaghi and Obach.*

Gosse, Sylvia. Eight etchings of interiors, models, landscapes, &c. *Presented by the Artist.*

Griggs, F. L. The Ford. *Presented by the Artist.*

Hay, James Hamilton. The new lion, British Museum ; dry-point. *Presented by the Artist.*

Heseltine, J. P. Twenty-one landscape subjects. *Presented by the Artist.*

Hill, Vernon. Six allegorical subjects. *Presented by John Lane, Esq.*

Osborne, Malcolm. Eight landscape subjects. *Presented by the Artist.*

Robins, W. P. The Brook ; Interior of a Barn ; dry-point. *Presented by Messrs. P. and D. Colnaghi and Obach.*

Sickert, Walter. Nine etchings of architectural and figure subjects. *Presented by the Artist.* The Market, Dieppe. *Presented by Miss S. Gosse.*

Smart, D. I. The Four Chimneys. *Presented by Miss E. P. McGhee.* Twelve etchings of landscape and architecture. *Presented by the Artist.*

Strang, William, A.R.A. Portrait of the Earl Beauchamp, K.G. *Presented by the Earl Beauchamp, K.G.*

Walcot, William. Baths of Caracalla ; Palazzo Pesaro ; and two others. *Presented by H. C. Dickins, Esq.*

Wheatley, John. Susanna and the Elders. Study for the head of elder. *Presented by the Artist.*

*Lithographs.*

Becker, Harry. Three rustic subjects. *Presented by the Artist.*  
Four lithographs (landscape and animals). *Presented by Campbell Dodgson, Esq.*

Belleruche, Albert. Eighteen original works: portraits, landscape, still life.

Flint, W. Russell. The Destruction of a Zeppelin by Flight-Lieutenant Warneford, V.C. *Presented by the Medici Society, Ltd.*

Johnson, E. Borough. Belgian Refugees. *Presented by the Artist.*

Lawson, J. Kerr. Spanish Gipsies (set of six). *Presented by the Artist.*

Linnell, John (jun.) The Sonnet, after W. Mulready, R.A. *Presented by Campbell Dodgson, Esq.*

Pryse, G. Spencer. Belgian Mothers. *Presented by Mrs. Lewis Hind.* Home; Belgium, 1914. *Presented by the Artist.*

Shannon, Charles, A.R.A. The Morning Visit. *Presented by A. E. Anderson, Esq.*

Various posters, by H. Becker, A. S. Hartrick, F. E. Jackson, J. Kerr-Lawson, J. Pennell, G. Spencer Pryse, and L. Raven-Hill, in proof state. *Presented by the Underground Railways, Ltd.*

*Woodcuts.*

Mahoney, James (designed by). Twenty-four illustrations, in proof state. *Presented by E. E. Leggatt, Esq.*

Montbard, G. (after). Seventy-eight proofs of "English Homes." *Presented by E. E. Leggatt, Esq.*

Raverat, Gwendolen. Twelve original woodcuts. *Presented by the Artist.*

Walker, F. S. (designed by). Eighteen illustrations. *Presented by the Artist.*

PORTRAITS.

*Foreign.*

102 engraved portraits, and 14 reproduced by photographic processes, have been acquired.

*English.*

699 engraved portraits, and 266 reproduced by photographic processes, have been acquired. In addition to 52 portraits of members of Grillion's Club, *presented by the Rt. Hon. Sir George Murray, G.C.B.*, the following may be specially mentioned.

Beaconsfield, Benjamin Disraeli, 1st Earl of. Mezzotint by T. L. Atkinson after H. von Angeli.

Bedford, Elizabeth, Duchess of. Mezzotint by G. Zobel after R. Buckner.

Buccleuch, the 5th and 6th Dukes of. Engraved by H. Robinson and J. Brown after G. Richmond.

Butler, Rev. H. Montagu, D.D., Master of Trinity College, Cambridge. Mezzotint by F. Sternberg after Herkomer.

Colenso, J. W., Bishop of Natal. Mezzotint by C. H. Tomkins after S. Sidney.

Exeter, 2nd Marquess of. Mezzotint by C. W. Wass after J. Sant, R.A.

Haden, Sir F. Seymour. Etching by Flameng.

Howard, Philip, Cardinal. Engraving by De Poilly.

Kean, Edmund, as Brutus. Mezzotint by S. W. Reynolds after J. Northcote.

Laurie, Sir Peter. Mezzotint by J. Scott after T. Phillips.

Macready, William Charles (as Werner). Engraving by C. W. Sharpe after D. Maclise, R.A.

Mill, John Stuart. Etching by P. Rajon after G. F. Watts, R.A.

Nightingale, Florence. Engraving by T. H. Ellis after Elston.

Victoria, Duchess of Kent. Engraving by F. Holl after F. Winterhalter.

Westminster, Hugh, 1st Duke of. Mezzotint by T. O. Barlow after Sir. J. E. Millais, P.R.A.

#### BOOK-PLATES.

459 etched by G. W. Eve, chiefly proofs in many varieties of state. *Presented by G. H. Viner, Esq., and others.*

157 engraved on wood by W. H. Hooper, in proof state. *Presented by Campbell Dodgson, Esq.*

278 engraved by C. W. Sherborn, in the final state, as used. *Presented by C. Davies Sherborn, Esq.*

4 engraved on wood by T. Sturge Moore, in proof state. *Presented by the Artist.*

11 etched by H. J. F. Badeley. *Presented by the Artist.*

#### COLLECTIONS AND SETS.

43 engravings and etchings after Rembrandt. *Presented by J. Charrington, Esq.*

150 caricatures etched by M. Darly, entitled "Macaronies" (1771-73), with the six title-pages.

40 rare etchings by various minor etchers of the Norwich School (M. E. Cotman, R. Girling, W. H. Hunt, R. Leman, J. Middleton, H. Ninham, A. Priest, &c.).

A set of progress proofs (partly in duplicate) of the portrait of Henry Graves, the joint work of fifteen different engravers. *Presented by Algernon Graves, Esq., F.S.A.*

37 etchings, mezzotints, &c., after modern artists, published by Messrs. Dowdeswell & Dowdeswells, in proof state. *Presented by Messrs. Dowdeswell & Dowdeswells, Ltd.*

A very extensive collection illustrating the life and work of Frederick Walker, A.R.A., consisting of woodcuts, etchings, photographs from pictures and drawings, &c., arranged in chronological

order, mounted on cards in two Solander volumes, and accompanied by copious notes and documents. *Presented by E. E. Leggatt, Esq.*

BOOKS OF PRINTS AND BOOKS OF REFERENCE.

W. Bode, Frans Hals, his life and work. 2 vols. 1914.

J. Flaxman, The Acts of Mercy, engraved in aquatint by F. C. Lewis. Extra large India paper proofs in wrapper, as issued. *Presented by Mrs. Harvey.*

Das Werk Ferdinand Hodlers. No. 14 of the Museumsausgabe (15 copies). *Presented by Prof. Michael Sadler.*

E. J. Kennedy, The Lithographs of Whistler. Completely illustrated catalogue.

J. D. Harding, Sketches at Home and Abroad. E. Purcell, Sketches in Lithography, 1822. D. Roberts, The Holy Land. 2 vols. 1843, with coloured lithographs.

F. Courboin, Graveurs et Marchands d'estampes au xviii<sup>e</sup> siècle. E. Dacier, L'Œuvre gravé de Gabriel de St. Aubin. A. Mellerio, Odilon Redon. H. T. Bossert and W. F. Storek, Das mittelalterliche Hausbuch. O. A. Weigmann, Neuere Maler-Radierer, Bd. I. S. L. Wenban. *Presented by Campbell Dodgson, Esq.*

*Campbell Dodgson.*

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## SUB-DEPARTMENT OF ORIENTAL PRINTS AND DRAWINGS.

I.—*Arrangement and Cataloguing, &c.*

A woodcut, printed in colour, by Y. Urushibara, after the Chinese painting of Geese (Sung period) in the Museum Collection, has been published and placed on sale.

The final revision and printing of the Catalogue of Japanese Woodcuts has been completed, and an introduction to it has been prepared for press. The Supplementary Catalogue of Chinese Woodcuts has been begun.

With the consent of the Keeper of Oriental Printed Books and MSS., the greater portion of the Japanese picture books and books of designs preserved in that department have been transferred to the Sub-Department in the interests of students of Japanese Art. Among these books are a number of albums of colour-prints; these have been broken up, and the prints of better quality selected and arranged for mounting. The books have been arranged according to schools, placed, and labelled; and a list of them has been prepared for the use of students.

The Index of Japanese Artists has been completed.

All books of prints and books of reference, recently acquired, have been catalogued, placed, and labelled.

A card index of the books of reference has been made. 161 prints, paintings, &c., recently acquired, have been incorporated with the divisions of the collection to which they severally belong.

*Registration.*—834 items have been entered in the Register of Acquisitions.

*Stamping and Mounting.*—347 prints, paintings, &c., recently acquired, have been impressed with the departmental stamp and references to the Register.

3 Japanese paintings have been repaired and remounted.

31 Indian paintings and drawings have been mounted on sunk mounts, twenty-five of which have been specially cleaned and repaired.

428 Japanese prints have been mounted on sunk mounts, 98 of which have been specially cleaned and repaired.

II.—*Acquisitions.*

The total number of paintings, prints, &c., acquired during the year was 1,138, of which the following are the most important:—

## CHINESE.

*Painting.*

Chao Mêng-fu, after. Horses and Grooms. Makimono, painted in colours. Presented by Dr. Scott.

## JAPANESE.

*Woodcuts.*

Chōki. Girls in the Naniwa-ya. Hashirakake. *Presented by R. N. Shaw, Esq.*

Harunobu. Girls embracing ; Girls shooting toy darts ; diptych. *Both presented by R. N. Shaw, Esq.*

Hiroshige, Tōkaidō Meishō Gwajō. Set of fifty-five prints. *Transferred from the Department of Oriental Printed Books.*

Kiyonaga. Sheltering from a Shower ; part of a triptych. Ladies at the Hot Springs ; one of a set.

Koriusai. Walking in the Snow.

Kitawo Masanobu. Fair ones of the Yoshiwara, completing the Museum set of *Seirō Meikun Jihitsu-Shū*. *Presented by R. N. Shaw, Esq.*

Moronobu. Amusements of Men and Women. Set of eighteen prints, coloured by hand. *Transferred from the Department of Oriental Printed Books.*

Shunshō. Visit to a Lady. *Presented by R. N. Shaw, Esq.*

Shunshō's School. One hundred and ninety-eight prints of actors, including sixty-eight diptychs, and nine triptychs. *Transferred from the Department of Oriental Printed Books.*

Shunzan. The Niwaka Procession ; part of a triptych. *Presented by R. N. Shaw, Esq.*

Toyokuni. Girls in a Garden ; triptych. *Presented by R. N. Shaw, Esq.*

Utamaro. Girls in the House of the Fan ; Oiran with Attendants. *Both presented by R. N. Shaw, Esq.*

*Picture Books and Books of Designs.*

Harunobu, 3 ; Hiroshige, 4 ; Hokkei, 2 ; Hokusai, 34 ; Itchō, 5 ; Korin, 4 ; Kyosai, 7 ; Okumura Masanobu, 4 ; Masayoshi, 10 ; Morikuni, 8 ; Moronobu, 4 ; Okyo, 2 ; Sekiyen, 4 ; Shigemasa and Shunshō, 1 ; Shunshō, 3 ; Sukenobu, 5 ; Toyokuni, 2 ; Utamaro, 2. *Transferred from the Department of Oriental Printed Books and MSS.*

## INDIAN.

*Paintings and Drawings.*

Mogul School. Lady and Yōgi ; in colours. *Presented by Charles Ricketts, Esq.*

Kangra School. Girl under flowering tree at night. Krishna at play. The Proud Lady. A man performing an incantation. A prince giving audience. Two girls at a window. Lady and maid on a terrace. Lovers on a balcony at night. All painted in colours. *The last three presented by Herbert Cook, Esq.*

Kashmir School. An Interview ; in colours. *Presented by Herbert Cook, Esq.*

*Woodcuts.*

Fourteen woodcuts illustrating legends of Krishna, &c. *Presented by W. Bateson, Esq.*

## BOOKS OF PRINTS AND BOOKS OF REFERENCE.

Gillot Collection Sale Catalogue. Two vols. *Presented by Arthur Morrison, Esq.*

Reproduction of a Landscape Roll, by Sesshū, in the Hara Collection. *Presented by Hamilton Bell, Esq.*

Paintings by Sesshū (Sesshū Gwashū) ; Paintings of the Southern School (Nangwajūdaikashū) ; Bunjingwa Paintings. *Presented by Robert Ross, Esq.*

Smith, Vincent. History of Fine Art in India and Ceylon.

*Laurence Binyon.*

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## DEPARTMENT OF EGYPTIAN AND ASSYRIAN ANTIQUITIES.

I.—*Arrangement, Cataloguing, &c.*

## EGYPTIAN ANTIQUITIES :—

The removal of portions of the collections to places protected against hostile air-craft has been continued.

The classification and re-arrangement of the Egyptian Collections have been continued, and the greater number of the objects acquired during the year have been cleaned and mounted in readiness for exhibition in due course.

The washing and cleansing of monuments, statues, &c., have been continued, and many stelæ and earthenware vessels have been soaked in water and treated to free them from salt deposits.

The labelling of the Collections has been continued, and broken numbers have been restored, and old, worn-out labels have been replaced by new, full ones. 111 labels have been written and painted, 463 numbers have been painted on objects, and about 20 objects have been photographed.

411 scarabs have been removed from their mounts, moulds and casts of the bases have been made for the Catalogue of Scarabs, which is in course of publication, and the scarabs have been remounted and renumbered. 297 impressions of scarabs have been made.

12 oak cases for mummied birds and animals, 9 alabaster plinths, 4 satin-wood plinths, 9 oak plinths, and 1 frame have been made, and 27 Caen-stone plinths have been prepared; fittings for wall cases in the Fourth Egyptian Room have been prepared and fixed; the locks and bolts of all the table-cases have been examined, and eased where necessary; cupboards and cases in the Students' Room have been fitted with shelves and drawers, &c.

A complete copy of the facsimile of the Ani Papyrus has been fixed to the screen in the room adjoining the Extension, and a cast of the Rosetta Stone has been mounted and exhibited in the Egyptian Gallery. Three objects have been cleaned and repaired.

15 objects have been registered, about 30 stelæ have been copied, and labels have been written for 50 plates of text. Drawings of a number of stelæ have been made for reproduction.

*Works in Progress.*

1. *Coptic Texts*.—Nine MSS. have been copied and the copies collated and printed; indexes have been compiled, descriptions of the plates have been written, and a preface and introduction have been written.

2. *Catalogue of Scarabs*.—329 scarabs have been catalogued for Vol. II.

3. *Egyptian Texts*.—50 plates for Part VI. have been printed.

4. *Hieratic Papyri*.—The transcribing of texts has been begun.

## ASSYRIAN ANTIQUITIES :—

The *Kuyunjik* Collections have been examined and the numbers verified ; the *Babylonian* Collections have been checked and arranged on trays with reference boards ; and numbers have been affixed to 1,200 trays. The exhibited tablets in the *Nineveh* Gallery have been removed to the *Basement*.

100 tablets have been cleaned and 92 repaired ; 4,069 tablets have been placed in numbered boxes ; 3,150 tablets have been numbered, &c.

13 stone plinths, 2 oak plinths, 6 stands, and 3 frames have been made, and 24 cylinders, vases, &c., have been mounted.

2,184 tablets, &c., have been registered ; 43 tablets or fragments have been copied : 2,349 tablets have been catalogued, and 283 slips have been revised ; a Preface for the *Bronze Gates of Shalmaneser* has been written, the making of reference slips for cataloguing purposes has been continued, and the case-books have been kept up to date ; and 100 lithographic plates have been checked in proof.

## PHŒNICIAN AND HITTITE ANTIQUITIES :

122 votive inscriptions have been remounted on stone plinths and labelled ; 36 *Hittite* antiquities have been mounted on satin-wood pedestals and cloth-covered mounts.

*Works in Progress.*

1. *Cuneiform Texts*.—50 plates of epigraph texts, and 50 plates of *Hittite* texts have been printed off.

*Publications.*

1. *Miscellaneous Coptic Texts in the Dialect of Upper Egypt.*
2. *Bronze Reliefs from the Gates of Shalmaneser.*

*Students*.—About 1,700 visits have been made to the Department by students and inquirers, and 4,840 objects have been issued for their use.

*Personally Conducted Parties*.—Eighteen parties with a total of nearly 500 persons have been personally conducted through the Department.

II.—*Acquisitions.*

## I.—EGYPTIAN :—

I.—1-65. *Miscellaneous Egyptian* antiquities, including bronze figures, XXth—XXVIth Dynasties, a blue porcelain *Canopic jar* of *Amen-hetep II.*, bronze boat and figure of *Osiris-Ptah*, a fine group of *ushabtiu* figures (some royal), a blue porcelain scarab and two *Gnostic gēms*.

II.—1-22. A valuable collection of *Coptic* antiquities comprising : Two *bas-reliefs*, two large painted vases, a lamp, two

writing tablets, painted panel, the scene of the Resurrection, spoon, hair-pin, pair of cymbals, and ten miscellaneous wooden objects, many of which were employed at the celebration of the Eucharist.

## II.—ASSYRIAN, &C. :—

- I.—1. A complete baked clay inscribed barrel-cylinder of Sennacherib, king of Assyria, B.C. 705–681. The first part of the text describes his expedition against Merodach-Baladan in 703, and supplies a number of new and important historical facts, and the second part records the building operations of the king of Assyria.
2. Limestone tablet of Anam, or Ilumaila, who may be identified with Anam-gishdabba, a contemporary of Sin-gamil, king of Erech. The text records the restoration of the temple of the goddess Ninni. B.C. 2200.
3. Baked clay foundation record from the palace of Singashid of Erech, who reigned about B.C. 2200.
4. A nearly complete baked clay cylinder of Esarhaddon, king of Assyria, B.C. 681–668, inscribed in the Assyrian character. The text contains a prayer to Nanâ, a prayer for long life, a statement of the king's genealogy, and a series of curses on any successor who shall harm or neglect the Temple of Nanâ, which Esarhaddon restored.
5. A barrel-shaped clay cylinder inscribed with a prayer to a goddess on behalf of Arad-Nanâ, an official of Erech.
6. Portion of a Sumerian liturgical composition containing references to various deities. B.C. 2200.
- 7–17. A group of tablets dealing with sales of land and house property, the transfer of slaves, accounts, &c. B.C. 2200–2000.

## II.—1. Bronze bull-pendant, with Himyaritic inscription.

2. Silver armlet with the legend Wadam Abam in Himyaritic characters.
3. Chalcedony cone engraved with the figure of a priest at an altar, and a name in Phoenician characters. About B.C. 400.
4. Fragment of an Assyrian relief cut from a slab at Nineveh.

## III. *Presents.*

- I.—1. A stone figure of the Ba, or human soul, in the form of a human-headed hawk with pendent Sûdâni female breasts. From Nubia. 1st or 2nd cent., A.D.

*Presented by the Rev. W. Russell Finlay.*

## II.—1-2. Two stone altars with Himyaritic inscriptions.

3. Figure from a sepulchral ornament.

4. Fragment with figure of a horned animal.

5-7. Three small sepulchral monuments. From the collection of the late General Prideaux of Aden.

*Presented by H. Oppenheimer, Esq., F.S.A., and Maurice Rosenheim, Esq., F.S.A.*

## III.—1-3. Three mummied children, one in a pottery coffin.

4-24. Twenty-one mummied birds and animals.

25. A pottery case.

26, 27. Two gilded masks.

*Presented by E. L. Grunning, Esq.*

IV.—1. Painted ushabtiu box of Anhai, a princess, priestess and singing woman of Amen-Rā. B.C. 1000.

2. Four painted ushabtiu of Anhai inscribed with a version of the VIth Chapter of the Book of the Dead.

*Presented by T. H. Green, Esq.*

V.—1-13. A collection of thirteen mud-sealings for jars.

*Presented by the Egypt Exploration Fund.*

VI.—1. Baked clay cylinder of Neriglissar, king of Babylon, B.C. 559-556, with a text describing some of the building operations of this king.

2. Contract of year 18 of Shamash-shum-ukin. B.C. 651.

3. Sumerian liturgical composition. B.C. 2000.

4-7. Fragment of a similar text, fragment of inlaid plaque, and two figures of apes.

*Presented by L. A. Lawrence, Esq.*

VII.— Ushabti figure of a divine father.

*Presented by W. Plowman, Esq.*

VIII.— The Archæological Survey of Nubia for 1909-10.

*Presented by C. H. Firth, Esq., M.A.*

IX.— Sumerian tablets from Umma by C. L. Bedale.

*Presented by the Rylands Library, Manchester.*

X.— Documents of economic statistics of ancient Chaldea (Part II.) from the collection of N. P. Likhachev, Moscow, 1915.

*Presented by the Moscow Archæological Society.**E. A. Wallis Budge.*

## DEPARTMENT OF GREEK AND ROMAN ANTIQUITIES.

## I.—Arrangement, &amp;c.

Special measures have been taken for the protection of the more valuable part of the collection against hostile aircraft attacks, by removal to positions of greater safety, or by methods of protection *in situ*.

In the Sculpture Galleries a series of fragments and mouldings has been arranged in the Mausoleum Room, and some additional fragments of the Priene sculptures mounted. The Salutaris inscription from Ephesus has been improved by the insertion of eighteen new fragments.

In the Upper Galleries the series of armour transferred from the Tower Armoury has been arranged in the Room of Greek and Roman Life; the arrangement of the unexhibited lamps in drawers in the Fourth Vase Room has been completed, the plain black wares in the Third Vase Room rearranged, and the objects from the Ephesus excavations exhibited in the First Vase Room. A finding-list has been made of the Cypriote vases in the First Vase Room.

The publication of the Select Bronzes was completed, and progress was made with the Catalogue of Silver Plate. Progress has also been made with the second part of Volume IV. of the Greek Inscriptions, which has now been set up in page form. An Index to the four volumes of Inscriptions has been compiled, and is now passing through the press.

Moulds have been made of three slabs of the Parthenon frieze and of one slab of the Phigaleian frieze; of the Nike of the Parthenon pediment; of the bronze Apollo (Cat. No. 209); and of the cast of the Guilford puteal. Thirty-five pieces of sculpture have been mounted on stone plinths or pedestals, and twenty-two fragments of inscriptions mounted or incorporated. Two plaster casts and two bronzes have been mounted on wooden pedestals, and a series of gems mounted and rearranged in the Gold Ornament Room; the bronze pumps in the Room of Greek and Roman Life have been remounted. A set of drawers has been fitted in a case in the First Vase Room; additional shelves in the Bronze Room for unexhibited bronzes, and a new book-case for the Keeper's study, have been made. 58 vases, 11 bronzes, 7 terracottas, 6 iron spear-heads, 3 ivories, and 2 wooden objects have been cleaned and repaired. 66 objects were registered, 47 labels written and 7 printed, and 101 objects numbered.

The number of visits to the Departmental Library for the purposes of research was 572; there were 629 other visits to the Staff for enquiry or on departmental business, and 1,798 attendances of students of art and architecture in the Sculpture Galleries.



II.—*Acquisitions.*I.—*Marble.*

1. Sepulchral tablet with an amphora of the type known as Loutrophoros in relief, and a pair of doves naturalistically treated. Inscribed with the names of Menalkes and Melantes.

2. Relief of a family group within a portico, two of the figures inscribed as Metagenes and Philumene, of the deme of Kydathenaion.

3. Fragment of a sacrificial inscription. From Cos. *Presented by the Rev. Henry Francis, Vicar of Tring.* (Cf. Paton & Hicks, *Inscriptions of Cos*, p. 94).

II.—*Gems.*

4. Paste cameo with head of Silenus in white glass on blue ground. From Rome.

5. Paste cameo with laureate head of Apollo, imitating a sardonyx. From Sicily.

4 and 5 *Presented by Henry Wallis, Esq., R.W.S.*

III.—*Silver.*

6. Lamp with four nozzles, in the form of a boat, on which is a figure of the infant Herakles grasping two serpents. *Journ. Hell. Stud.*, xxviii., p. 274, pl. 33. Found in Switzerland.

IV.—*Bronze, &c.*

7. A series of thirty pieces of armour on deposit from the Tower Armoury, including (a) a set of helmet, dagger, and body-armour, from Cumæ, (b) three helmets, (c) a double axe, (d) bronze and iron spear-heads, and lead sling-bolts from Marathon.

8. Fibula of the early Iron Age (anonymous donation).

V.—*Vases.*

9. Two Apulian vases of the 3rd cent. B.C., in the form of squat jugs with covers and knotted handles; on one Eros offering a wreath to a woman, on the other Eros seated and a woman standing. Cf. *Roemische Mitteilungen*, 1914, p. 95.

10. Amphora of blue glazed ware, of the 2nd cent. after Christ. From North Syria.

11. Black glazed lekythos with patterns in red body colour.

12. A series of vases and fragments of pottery from the collection of the late William Ransom of Hitchin, including:

(a) Jug in form of negro's head, from Etruria.

- (b) Fragments of Arretine ware with potters' stamps, found in the Tiber.
- (c) Flask of St. Remy-en-Rollat fabric (about A.D. 25), from Andernach.
- (d) Bowl of Lezoux ware (about A.D. 120), signed by the potter Flavius, from Orange, and other red wares from the Rhine.
- (e) Local Rhenish wares, including a jar inscribed MISCE MI.
- (f) Tile with stamp of Cohors IV. Vindelicorum, from Ems. Cf. *Limes*, I. 3 (Arzbach), pl. 3, fig. 26.
- (g) Bronze bowl from top of censer, from Siena.  
*Presented by F. Ransom, Esq.*

VI.—*Terracottas.*

13. Antefix with head of young Herakles. *Presented by R. Snead Brown, Esq.*

VII.—*Plaster Casts.*

14. Cast of the Lansdowne Herakles.  
15. Cast of the throne with reliefs in the Boston Museum.

*A. H. Smith.*

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DEPARTMENT OF BRITISH AND MEDIÆVAL ANTIQUITIES AND  
ETHNOGRAPHY.

1.—*Arrangement, Cataloguing, &c.*

*Prehistoric Room.*—Most of the wall-cases in the iron gallery of this room, as well as the table-cases, have been painted and re-arranged, to illustrate the Stone and Bronze Ages respectively in foreign countries.

*Central Saloon.*—Bronze Age remains from Great Britain and Ireland will occupy the centre, and three table-cases and two ranges of wall-cases have already been arranged. The Greenwell collection of bronzes has been incorporated, and in the south wing Stone Age antiquities from these islands have been exhibited.

*Iron Age Gallery.*—In what was formerly the Glass and Ceramic Gallery have been exhibited British and Foreign remains of the Iron Age. The Hallstatt and La Tène periods of the Continent with the Late Keltic series occupy the northern side, dating from the 9th cent. B.C. to the Roman period in Britain; on the south side are Anglo-Saxon and Viking remains with the corresponding collections from Europe, usually assigned to the later Iron Age. Two Ogham inscriptions on stone slabs have been transferred from the ground floor; and the gallery, which was opened December 1st, contains national antiquities of about 1,500 years, exclusive of the Roman period.

*Roman Britain.*—Six table-cases of Roman remains from Britain have been transferred to what was formerly the Mediæval Room, and the wall-cases have been cleared for refitting. The collection of "Samian" ware and the lead coffins have already been arranged in wall-cases; and the removal of the remainder from the Central Saloon is in progress.

*King Edward VII. Gallery (Ground floor).*—This gallery has been cleared and prepared for the Waddesdon collection, the Franks collection of mediæval cups and metalwork, the mediæval collection, the English, continental and oriental porcelain and pottery, and glass of all periods. Progress has been made with the transfer and arrangement of several sections.

*Christian Room.*—The Christian Antiquities will be accommodated at the south end of what was formerly the exhibition gallery of Prints and Drawings. The former Christian Room and the two adjoining rooms are being cleared for transfer to the Department of Egyptian and Assyrian Antiquities. A Coptic fresco from Egypt has been restored and mounted.

*Buddhist Room.*—Some progress has been made with the arrangement of the Buddhist collection from the Northern Gallery, in what was formerly the exhibition gallery of the Department of Prints and Drawings.

*Brahman Room.*—After structural alterations, the exhibition of Brahman antiquities and the series of Gandhara sculptures has been almost completed in what was formerly the students' room of the Department of Prints and Drawings.

*Asiatic Saloon.*—Three table-cases have been removed to King Edward VII. gallery and others containing oriental swords transferred from the Ethnographical Gallery. Much of the porcelain has also been removed, to accommodate exhibits of oriental art, especially metal-work. The collection of netsukés and other Japanese carvings has been re-arranged, and the cases placed on temporary plinths.

*Ethnographical Gallery.*—A collection of Malayan silver has been arranged in table-cases and labelled; and various additions made to most sections. A large standard case and four table-cases of oriental arms have been removed to the Asiatic Saloon.

*Registration.*—The registration of current acquisitions has been continued, and 1,322 objects have been added, including ethnographical specimens. Numbers have been painted on 1,293 specimens, and 969 permanent labels written.

Objects have been mounted to the number of 1,474, and the card-catalogue of the departmental library continued.

The series collected by Sir M. A. Stein and formerly exhibited in King Edward VII. gallery, has been divided for distribution.

Many of the most valuable exhibits have been removed from the galleries in view of possible air-raids.

*Publications.*—The catalogue of Engraved Gems of the post-classical period was published in March. Current additions have been made to the slip-catalogue of Oriental pottery and porcelain, and further illustrations prepared for the Romano-British and Anglo-Saxon guides. A report of the excavations conducted at Rickmansworth in 1914 has been prepared and published in *Archæologia*, vol. lxvi., 195.

*Students.*—1,488 students and visitors have been received in the Department, and a demonstration given in the Prehistoric section by a member of the staff.

## 2. *Principal Acquisitions.*

### (1.) *Prehistoric and Early British Antiquities.*

(a) *Stone Age.*—A series of chipped flints found below the Crag deposits and in the middle glacial sands near Ipswich: described by Sir E. Ray Lankester in *Philosophical Transactions*, Series B, vol. 202, pp. 283-336 (1912). *Collected and presented by J. Reid Moir, Esq.*

An ovate flint implement found in the raised beach at Brighton. *Presented by W. Deane, Esq.*

A series of flint implements, flakes and cores of Le Moustier date, from the Coombe-rock at Northfleet, Kent: described in

*Archæologia*, lxii., 515. Presented by the Associated Portland Cement Manufacturers, Ltd.

Ten flint implements of unusual types found in North Ireland. Presented by Robert Welch, Esq.

A series of flint implements from Kent and other districts in England. Bequeathed by Richard Jones, Esq.

(b) *Bronze Age*.—Two British swords and rapier, and socketed sickle and celt of rare type from Co. Mayo. On deposit from the Tower Armoury.

(c) *Early Iron Age*.—Ten bronze vessels, including supposed water-clocks, found together at Wotton, Surrey, and described in *Proc. Soc. Antiq.*, xxvii., 76. Presented by J. H. C. Evelyn, Esq.

A series of Late Keltic cinerary urns found near Hitchin, Herts. Presented by F. Ransom, Esq.

(d) *Foreign*.—Crystal pygmy implements from Ceylon, described in *Spolia Zeylanica*, Dec., 1914. Collected and presented by Principal Hartley.

Bronze sword of unusual dimensions and type from India.

Bronze socketed axe-head found in Asiatic Russia. Presented by Sir Hercules Read, LL.D.

Iron sword and ornamented scabbard of the La Tène II. period found in Canton Berne, Switzerland; described in *Proc. Soc. Antiq.*, xxvii., 107. Presented by Oscar C. Raphael, Esq., F.S.A.

Two bronze swords from Germany. On deposit from the Tower Armoury.

### (2.) *Romano-British.*

Bronze lamp in the form of a dolphin, found at Brettenham, near Thetford, Norfolk. Presented by Sir Hercules Read, LL.D.

Series of "Samian" pottery found in London, and near Hitchin, Herts. Presented by F. Ransom, Esq.

### (3.) *Anglo-Saxon and Foreign Teutonic.*

Weapons and fragments of a glass beaker and bronze bowl, from a grave at Asgarby, Lincs. Presented by C. E. Robinson, Esq.

Sword found at Herringswell, Suffolk. Presented by Oscar C. Raphael, Esq., F.S.A.

Gold finger-ring of the Viking period from the river-bed, Chew valley, W.R. Yorks. Presented by Herbert Horsfall, Esq.

Sword with inlaid hilt of the Viking period, found in the Lea at Edmonton, and described in *Proc. Soc. Antiq.*, xxvii., 217. Presented by Sir Hercules Read, LL.D.

Irish penannular brooch, spear-head from Nottingham, Viking swords and axe-head; and spear-head, axe and scramasax from a burial at Mannheim, Germany. On deposit from the Tower Armoury.

### (4.) *Mediæval and later.*

Remarkable bronze bowl of the 12th cent., engraved with scenes in the life of St. Thomas. Presented by F. Ransom, Esq.

A valuable collection of over 300 plaquettes, chiefly of bronze and of Italian origin, dating from the 16th cent. *Presented by T. Whitcombe Greene, Esq., F.S.A.*

Oval medallion of John Locke, painted in Japan in lacquer on copper. *Presented by Aubrey Le Blond, Esq.*

Bronze medallion portrait of Queen Anne, from model by O'Brisset. *Presented by T. Whitcombe Greene, Esq., F.S.A.*

(5.) *Ceramic and Glass Collections.*

Three large pottery vases probably of the Han dynasty, from Yen-ling, Hsien, Honan. *Presented by J. Brock, Esq.*

A large series of pottery and porcelain vases from China, chiefly of the Sung and Ming periods.

Persian pottery lamp of Mosque type, from Aleppo, Syria.

Four specimens of Persian pottery, 13th cent. *Presented by H. van den Bergh, Esq., through the National Art-Collections Fund.*

Series of cameo portraits in Derby biscuit-porcelain. *Presented by Sir Hercules Read, LL.D.*

(6.) *Collection illustrating various Religions.*

Jain figure of 11th cent. obtained in India by the late Sir Alfred Lyall, and presented in his memory.

A model standard, figures of Buddha, &c., in gilded wood from Mandalay. *Bequeathed by Mrs. Sale*

A Japanese shrine, enamelled and gilt. *Presented by Sir Edgar Boehm, Bt.*

(7.) *Oriental and Ethnographical.*

A large and remarkable series of oriental arms and armour formerly exhibited at the Tower of London, including a number of suits of armour mounted on models; a fine series of matchlocks and other firearms, two swivel guns, brass cannons and early Saracenic helmets. *On deposit from the Tower Armoury.*

Guitar from the house of King Mwanga, Uganda, and knife once used for human sacrifice in Ashanti. *Presented by the Rt. Hon. Austen Chamberlain.*

Series from the Wa Nyika tribes of British East Africa. *Presented by A. M. Champion, Esq.*

Dress of fibre with human skull attached, worn by the chief juju man of a secret society in S. Nigeria. *Presented by Dr. J. Crawford Maxwell, C.M.G.*

A collection from Togoland and N. Ashanti. *Presented by Capt. C. H. Armitage.*

Stone pounders, axes, adzes, and other objects, mainly from the Hervey Islands. *Presented by E. L. Gruning, Esq.*

## CHRISTY COLLECTION.

During the year the Trustees have acquired by donation the following among other objects, which have been transferred to the Trustees of the British Museum :—

1. *Ethnography of Africa.*

Two carved wooden combs from Mendiland, Sierra Leone. Presented by A. C. Hollis, Esq., C.M.G.

Two pottery figures, emblems of fertility, Lala tribe, Nigeria. Presented by Mrs. Boyle.

Spear from the North Ikurava clan of the Munshis of the Katsena Allah district, Muri Province, Nigeria, N.P. Presented by Ronald S. Chapman, Esq.

2. *Ethnography of Oceania.*

A Philippine and two Masai spears, and three Bushman arrows (one with stone point). Presented by A. W. F. Fuller, Esq.

A reed with one end cleft and the other pierced, Philippine Islands. Presented by A. D. Power, Esq.

3. *Ethnography of America.*

Wooden painted doll, from Navajo and Hopi Indians. Presented by Mrs. G. Holmes Thomas.

In addition to the above donations the Christy Trustees have acquired by purchase a series of openwork stone and shell ornaments, also a number of clubs, axes, and articles of dress, from the Solomon Islands.

Charles H. Read.

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## DEPARTMENT OF COINS AND MEDALS.

I.—*Registration and Arrangement.*1. *Greek Series.*

459 coins recently acquired have been registered and incorporated, and numerous casts and electrotypes of coins not in the British Museum have been incorporated. Various collections of coins offered have been examined and selections made. A systematic re-examination of the coins, which had in former years been set aside as duplicates, has been begun. The bibliography of Greek Numismatics has been kept up to date, and additions made to the Card Index of coin-types.

2. *Roman Series.*

72 coins recently acquired have been registered and incorporated. A large collection of casts of Roman medallions presented by Comm. Francesco Gnecchi has been arranged for reference. Collections offered have been examined and selections made. The Roman Imperial denarii of the second half of the 3rd cent. have been examined on behalf of a numismatist studying the subject. The bibliography has been kept up to date.

3. *British and Colonial Series.*

613 coins, medals and tokens recently acquired have been registered and 337 incorporated. Collections offered have been examined and selections made. The coins in the Bodleian Library and Ashmolean Museum have been examined. Re-arrangements in accordance with recent researches have been made in the following series: the coinage of the 8th—9th cent.; the short-cross series (Henry II.—Henry III.); the 17th cent. tokens of the counties from Rutland to Yorks and Wales, and the 18th cent. tokens of Somerset and Scotland; the war medals later than 1760.

4. *Medieval and Modern Series.*

130 coins and medals recently acquired have been registered and 90 incorporated, and 26 casts of coins not in the British Museum incorporated. The re-arrangement of the series of Northern Italy has been begun in accordance with the King of Italy's Corpus. Collections of coins offered have been examined and selections made. The casts of Italian medals not in the British Museum have been arranged for reference in a new cabinet.

5. *Oriental Series.*

222 coins recently acquired have been registered and incorporated. The coins in the Stein Collection from Central Asia have been revised; the re-examination of the duplicates has been begun; the coins of the modern Indian States and of the sub-Sassanian series have been studied and various collections submitted have been examined and selections made.

6. *Departmental Library.*

The re-cataloguing of the library of numismatic works on the card system has been begun, and about two-thirds of the books catalogued.



7. *Exhibition.*

A selection of coins and medals illustrating the history of the Netherlands and their relations with this country has been exhibited.

8. *Safety of the Collections.*

A large and representative selection of the more valuable coins and medals in the collection has been removed to a place of greater safety than the Medal Room for the period of the War.

II.—*Publications.*1. *Catalogue of Greek Coins.*

*Coins of Arabia, Mesopotamia, &c.*, by G. F. Hill.

619 coins have been arranged and catalogued. The historical introductions to the mints of Mesopotamia, Babylonia and Assyria have been written.

2. *Catalogue of English Coins.*

*Norman Kings*, by G. C. Brooke.

The text down to signature Bb has been passed for Press; the rest of the work, with the exception of the Indexes, is in type.

3. *Catalogue of Indian Coins.*

*Hindu Coins*, by J. Allan.

491 coins have been arranged and catalogued. Classifications have been worked out for the early anonymous cast bronze, and the silver punch-marked coins.

4. *Medals.*

*Select Italian Medals*, by G. F. Hill.

This portfolio, with 50 plates, has been completed and published.

III.—*Acquisitions.*

The total number of coins and medals added to the Department during the year 1915 was 3,655, of which 253 were of gold, 2,763 of silver, 473 of bronze and 166 of other metals.

The following table shows the numbers of the new acquisitions classified according to the several series to which they belong:—

Class.	Gold.	Silver.	Bronze.	Other Metals.	Total.
Greek . . . . .	8	92	116	—	216
Roman . . . . .	6	34	33	—	73
British and Colonial . . . . .	177	2,355	201	105	2,838
Mediæval and Modern . . . . .	11	97	70	23	201
Oriental . . . . .	51	184	53	—	288
Chinese . . . . .	—	1	—	38	39
<b>Total . . . . .</b>	<b>253</b>	<b>2,763</b>	<b>473</b>	<b>166</b>	<b>3,655</b>

Of the above 640 have been presented, viz. 12 of gold, 219 of silver, 287 of bronze and 122 of other metals.

The following is a list of benefactors to the Department of Coins and Medals during the past year:—

The Rt. Hon. the Earl Spencer, K.G. ; the Deputy Master of the Mint ; the Government of Madras ; the Government of the United Provinces ; the Director of Agriculture for the Central Provinces ; the Society of Antiquaries ; the British School in Egypt ; the National Art Collections Fund ; the Bombay Branch of the Royal Asiatic Society ; the American Numismatic Society ; J. Allan, Esq. ; Signor Arturo Anzani ; R. D. Banerji, Esq., M.A. ; J. E. Baskett, Esq. ; Miss E. Boyer-Brown ; E. C. Birch, Esq. ; W. H. Buckler, Esq. ; Albert H. Caslon, Esq. ; H. C. Churton, Esq. ; S. C. Cockerell, Esq. ; Richard Dalton, Esq. ; Guy Dickins, Esq. ; Rev. Francis J. Eld ; Miss Helen Farquhar ; J. T. R. Fussell, Esq. ; Henry Garside, Esq. ; Sir Hamilton Goold-Adams, G.C.M.G. ; R. W. Goulding, Esq. ; A. S. F. Gow, Esq. ; S. W. Grose, Esq. ; W. G. Groves, Esq. ; H. A. Grueber, Esq., F.S.A. ; F. D. Harford, Esq., C.V.O. ; D. T. Harris, Esq. ; Lionel Heath, Esq. ; Gray Hill, Esq. ; J. R. Kelly, Esq. ; L. A. Lawrence, Esq., F.S.A. ; Prof. Dr. J. Leite de Vasconcellos ; T. O. Mabbott, Esq. ; George Macdonald, Esq., C.B. ; Alex. Macrae, Esq., M.D. ; J. Grafton Milne, Esq. ; Ellis H. Minns, Esq. ; Professor C. Oman ; Don Guillermo de Osma ; C. R. Peers, Esq., F.S.A. ; Mrs. J. E. Powell ; A. E. Press, Esq. ; Sir Hercules Read, LL.D. ; Rev. Edgar Rogers ; Maurice Rosenheim, Esq., F.S.A. ; Horace Sandars, Esq., F.S.A. ; T. Sheppard, Esq., F.G.S. ; Ernest B. Smith, Esq. ; A. H. Smith, Esq. ; J. Henderson Smith, Esq. ; Mrs. Alfred Sotheby ; Messrs. Spink and Son, Ltd. ; W. Barclay Squire, Esq., F.S.A. ; Henry Symonds, Esq., F.S.A. ; E. Timperley, Esq. ; Charles Tite, Esq. ; Sir William Treloar, Bart. ; Dr. L. O. Tudeer ; Henry Van den Bergh, Esq. ; Rev. J. A. Vanes ; Rev. Hedley Vicars ; W. H. Valentine, Esq. ; Emery Walker, Esq., F.S.A. ; Percy H. Webb, Esq. ; H. Nelson Wright, Esq., I.C.S. ; A. M. Woodward, Esq.

#### IV.—*Remarkable Coins and Medals.*

The year has been marked by the acquisition of a large selection of English coins from the collection made by the late Sir John Evans. Taken as a whole this is the most important addition to the English series that has been made since the purchase of the Roberts Collection in 1810. Among the pieces of outstanding interest may be mentioned the following : A gold Penny of Henry III., one of six specimens now existing of the first gold coinage of England which was ordered by Henry III. in 1257 ; a set of the Florin, Half-florin and Quarter-florin of Edward III. (only one other complete set is at present known of this first attempt of Edward III. to establish a gold coinage) ; also a fine specimen of the very rare first noble of the same reign ; a heavy and a light Half-noble of

Henry IV., the former probably unique; and an extremely rare Quarter-noble of the heavy issue of Edward IV., one of two specimens known of the issue previous to the introduction of the Rose Noble, or Rial.

Of the individual coins acquired, the following are the most important:—

1. *Greek Series*:—

*Lysimacheia in Thrace*.—Seven bronze coins restruck on Seleucid coins in the 3rd—2nd cent. B.C. Presented by *W. H. Buckler, Esq.*

*Autocane in Aeolis*.—A rare bronze coin of the 4th cent. B.C., types, heads of Zeus and Athena. Presented by *Prof. C. Oman.*

*Alabanda in Caria*.—A bronze coin of Antoninus Pius, *rev.* Dionysus. Presented by *W. H. Buckler, Esq.*

*Alinda in Caria*.—An unpublished silver coin of the 1st cent. B.C., *obv.* Head of Heracles, *rev.* Heracles standing.

*Cotiaëum in Phrygia*.—A very fine specimen of a bronze coin of Philip Senior, *rev.* Cybele in lion-car. Presented by *W. H. Buckler, Esq.*

*Temenothyrae in Phrygia*.—A rare bronze “medallion” of Philip Senior, *rev.* Artemis in car drawn by two deer. Presented by *Messrs Spink & Son.*

*Cappadocia*.—King Ariaramnes (about 280-230 B.C.). A rare bronze coin with his portrait, *rev.* Horseman.

*Cyprus*.—An unusual variety of the silver stater of Azbaal, king of Citium (449-425 B.C.), with the stag on the reverse in a half-standing position. Presented by *Sir Hamilton Goold-Adams, G.C.M.G.*

*Barce in Cyrenaica*. A very rare silver stater of the early 5th cent. B.C.; *obv.* Silphium plant; *rev.* Bull standing before palm-tree.

*Arabia*.—*Sabaean and Himyarite kings*. A large and important selection of very rare coins, including one of the only two known gold coins of the series, and nine coins of six rulers of the latest period (1st—2nd cent. after Christ). From the collection of the late Col. W. F. Prideaux, C.S.I.

A fine specimen of a silver coin of the latest Himyarite period, *obv.* Arab head, *rev.* Bucranium. Presented by *Dr. Alex. Macrae.*

2. *Roman and Byzantine Series*:—

Two rare aurei of Galba; one with *rev.* S.P.Q.R. OB C.S. (hitherto only known in silver); the other with *rev.* DIVA AVGVSTA (Livia?).

A rare double siliqua of Julian II., struck at Sirmium and found at Bulbourne, near Tring.

Four rare gold coins of Ezana, Chaleb, Esbael and Bachasa (?) kings of Axum (Aethiopia) of the 4th—5th cent. after Christ. From the collection of the late Col. W. F. Prideaux.

Two bronze coins of Anaeb and Joel, kings of Axum. *Presented by Signor A. Anzani.*

3. *British and Colonial Series* :—

A London penny of type V of William II. ALGAR.ON.LVNDN. *Presented by L. A. Lawrence, Esq. F.S.A.*

A half-crown of Charles I., struck at York ; on the reverse to right of crown, a small letter, apparently B, for Nicholas Briot. *Presented by Miss Helen Farquhar.*

Fifty-one 17th. cent. traders' tokens of Somerset. *Presented by Charles Tite, Esq.*

Unique silver plaque of the time of Charles II., engraved with portraits of Charles I. and Charles II., and an inscription : " Give thy Judgments, O God, unto the King and thy Righteousnesse to the King's Sonn." *Presented by the Rev. Francis J. Eld.*

4. *Mediæval and Modern Series* :—

A gold Merovingian tremissis of the 7th cent., attributed to Pfalzel in Rhenish Prussia. *Presented by A. E. Press, Esq.*

An unpublished gold solidus of Ervigius king of the Visigoths (680-687 A.D.), struck at Elvira in Spain.

A gold coin of Alfonso VIII. of Castile (1158-1214), imitated from contemporary Moorish coins, with ALF and a cross added.

A silver triple-daler of Christian IV. of Denmark (1588-1648). *Presented by the Rt. Hon. the Earl Spencer, K.G.*

A series of rare Portuguese Colonial Coins from the Grogan Collection, including a unique double Xerafim of Don Pedro II. ; a Xerafim of the same ruler struck at Diu, and six other unique Goa coins of various rulers.

5. *Oriental Series* :—

A fine series of gold, silver, and copper coins of various Muhammadan dynasties from the collection formed by the late Colonel W. F. Prideaux, C.S.I. These include rare coins of the Umayyad and Abbasid caliphates of South Arabian mints, a unique series of coins of the Rasulid dynasty, the Imams of Sana, the Imams of Sa'ada and other South Arabian dynasties, a small collection of the coins of Harar, which are almost unknown in European collections, and rarities from Central Asian and Indian mints.

A very rare gold coin of Abd al-Rahim, a feudatory of al-Mansur of Valencia, struck at Valencia between 470-485 A.H. *Presented by Horace Sandars, Esq., F.S.A.*

A series of 23 early Hindu copper coins of various states. *Presented by H. Nelson Wright, Esq., I.C.S.*

A series of 109 rupees of Shah Alam II. of Oudh mints, and of his successors the independent Shahs of Oudh from the Rai Bareli find. *Presented by the Government of the United Provinces.*

6. *Casts and Electrotypes* :—

The collection of casts and electrotypes of coins and medals not in the British Museum has been increased by the following important gifts :

84 plates of casts of coins of Ancient Italy and Sicily in the McClean Collection, Cambridge. *From the Director of the Fitzwilliam Museum.*

19 boxes of casts of coins from recent auction sales. *From Messrs. Spink & Son.*

V.—*Students and Visitors.*

The number of visits made to the Department of Coins and Medals by students and others during the year 1915 was 2,150, the average for the preceeding ten years being 4,080.

*G. F. Hill.*

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## BRITISH MUSEUM (NATURAL HISTORY).

STATEMENT of PROGRESS made in the ARRANGEMENT and DESCRIPTION of the COLLECTIONS, and ACCOUNT of OBJECTS added to them, in the Year 1915.

## GENERAL PROGRESS.

*Visitors.*

The total number of visits made by the public to the Natural History Museum during 1915 was 433,581, as compared with 420,914 in 1914.

The attendance on Sunday afternoons was 48,409, as against 46,960 in the previous year.

The average daily attendance for all open days was 1,194 ; for weekdays, 1,238 ; and for Sunday afternoons, 931.

It will be noted that the figures for 1915 show a considerable increase on those for 1914.

Classes of London County Council School Teachers have again visited the Museum under the guidance of Mr. Leonard, the Official Guide, who has given them a series of demonstrations in the galleries.

Parties of wounded soldiers from the hospitals in and around London have visited the Museum in large numbers, and the services of Mr. Leonard have been in constant demand to explain the exhibits to the men. Warm appreciation of his services in this capacity has been expressed by the hospital authorities and soldiers.

*Swiney Lectures.*

Dr. J. D. Falconer gave his second course of Swiney Lectures in November and December, the subject being, "Ice and the Ice Age."

The lectures, twelve in number, were delivered in the theatre at the Victoria and Albert Museum, and were attended on an average by 143 persons a lecture, as compared with 122 in the previous year.

*Museums Association.*

A report on the proceedings of the Annual Conference of the Museums Association, held in July at the Victoria and Albert Museum, was submitted by Dr. Bather, who represented the Natural History Museum at the Conference. The two main subjects for discussion were, "Museums and the War" and "Museums in relation to Education." The members visited the Natural History Museum, where demonstrations were given by some of the staff.

*The War.*

Up to the end of the year 1915, 58 members of the staff of the Natural History Museum have joined the Colours, with the permission

of the Trustees, for service during the war. In addition, 31 temporary assistants and outside workers associated with the Museum, and 61 sons of members, or of former members, of the staff are serving in either the Navy, the Regular Army, or the Territorials. With one exception, every man of military age on the staff has offered himself for attestation, and been either accepted or excused on the ground of unfitness.

The Museum has been able to render assistance to Government Departments in various matters connected with the war. The following may be mentioned :—

The Zoological Department received from the Military Hospital, Tooting, a specimen of a leech which had been removed from the nose of a soldier invalided home from the Dardanelles. The leech was found to belong to a Mediterranean species well known to give trouble by entering the nasal cavities or the larynx of man, being introduced when swallowing water, or by crawling into the nostrils. As the facts of the case suggested that our soldiers serving in the Near East might be exposed to a danger unknown to the Medical Departments of the Navy and Army, a report on the matter, prepared by Dr. Harmer, was sent to the Head of the Medical Department of the Admiralty and to the Director General of the Army Medical Service, from both of whom acknowledgments have been received, together with an intimation that the medical officers serving in the Mediterranean would be notified in order that the necessary precautions might be taken. The report has also been reproduced in the Journal of the Royal Naval Medical Service.

Advice has been given by the Entomological Department in the matter of the eradication of vermin.

In connection with this subject the Trustees have issued a leaflet for general information on "The Danger of Disease from Flies and Lice" (price 1*d.* for six copies, 1*s.* for 100), and also a pamphlet on "The Louse and its Relation to Disease" (price 1*d.*), uniform with the pamphlet on "The House-fly as a Danger to Health," published two years ago. Steps have been taken to give these pamphlets the widest possible circulation, and large numbers of them have been placed at the service of the Admiralty and the War Office for the use of the Medical Services of the Navy and Army.

The Botanical Department has been consulted by the Naval Air Service as regards the use of a suitable wood material for airship construction. The same Department has given help to the War Office by answering inquiries of a varied nature; for example, as to an organism which was damaging the fabric of air-ships: it proved to be a fungus; the examination of oats with a view to the discovery of poisonous seeds, in connection with an outbreak of presumed fodder poisoning at a Military Veterinary Hospital.

The Army Council have expressed their appreciation of the assistance rendered by the Museum in connection with the inquiry into moth infestation of Army biscuit. The inquiry has given

valuable results as regards methods of treatment for the prevention of such infestation. An exhibit illustrating the subject, brought up to date, has been set up in the Central Hall. (Cf. B. M. Return, 1914, page 123.)

The cases of specimens illustrating the part played by insects as carriers of disease have been largely used for instruction of classes of men of the Royal Army Medical Corps, the Sanitary Corps, and Army Veterinary Corps. Parties of these men have been brought to the Museum almost daily for demonstrations and lectures by their officers.

The War Office having, through the Press, drawn attention to the penalty attaching to the destruction of Homing- or Carrier-pigeons, a case of birds has been placed in the Central Hall to show the difference between these pigeons and the ordinary Dovecot-pigeons, Wood-pigeons, Rock-doves and Stock-doves. Explanatory labels have also been prepared. The specimens of Carrier-pigeons exhibited were specially selected and presented to the Museum by Captain A. H. Osman, of the Pigeon Service Branch of the War Office.

#### *Hibernation of the House-fly.*

Considerable attention has been given in the Entomological Department to the problem of the hibernation of the house-fly. As a result of the publicity given to the matter in the Press and elsewhere, a very large number of hibernating and other flies found in houses in the winter have been sent to the Museum; and in this way it is hoped to get evidence on a wide scale. Very few of the specimens so far received are true house-flies, and none of these had been found in a hibernating condition. The vast majority of the flies found hibernating proved on examination to belong to a species (*Pollenia rudis*) which is not unlike the house-fly and which is frequently mistaken for it. This species lives out of doors in the summer, and only enters houses at the approach of cold weather in order to find shelter and a place in which to hibernate. Its mode of life is different from that of the house-fly, and there is no reason to apprehend any danger to health owing to its presence in the house. While the evidence so far obtained gives no support to the view that house-flies usually hibernate in the adult state, it helps greatly to explain how that view may have arisen and why it is so widely entertained.

#### *Protection of Animals.*

The question of the protection of birds and other animals in our Crown Colonies and Protectorates continues to be the subject of considerable correspondence between the Colonial Office and the Museum. Papers relating to Zanzibar, Fiji, Gambia, Trinidad, Gibraltar, Weihaiwei, British Honduras, South Georgia, Federated Malay States, Turks and Caicos Islands, Gilbert and Ellice Islands, have been sent to the Museum for observations and reports.



Various recommendations have been made for the consideration of the Secretary of State, having for their object the better protection of birds, especially those species which are slaughtered for the trade in plumes.

#### *Investigation of Antarctic Whales.*

A report on whales, based on the notes made by the late Major G. E. H. Barrett-Hamilton during his mission to South Georgia, has been prepared by Mr. M. A. C. Hinton and forwarded to the Colonial Office. The document is of considerable importance in relation to the question of the threatened extinction of some of the species of whales found in the Antarctic seas, and it will be laid in due course before the Inter-Departmental Committee on Whales.

Dr. Harmer has also submitted a report on the result of his study of official papers and statistics on the whaling operations at South Georgia. Dr. Harmer draws attention to the fall in the number of Humpback Whales captured, a reduction which is so marked as to give rise to grave anxiety for the future of the species. The whalers are now devoting their labours principally to the larger species, such as the Fin and Blue Whales, and this appears to be due to the fact that the number of Humpbacks in those waters has seriously diminished.

#### *Stranded Whales.*

The systematic inquiry into the stranding of Cetacea on the British coasts, started with the concurrence and help of the Board of Trade, has been continued. Owing to the abnormal conditions caused by the war, the total number of stranded specimens reported only reached 28, as compared with 76 in 1913 and 57 in 1914. The year's record has nevertheless been of exceptional interest, in that a male specimen of "Cuvier's Whale" (*Ziphius cavirostris*), which was stranded at Fethard, Co. Wexford, has been obtained for the collection. It is noteworthy that the first specimen received at South Kensington after the inauguration of the arrangement with the Board of Trade proved to be another *Ziphius cavirostris*, probably a female, so that two skeletons of this rare cetacean, both from the Irish coast, have through this arrangement been preserved. The Natural History Museum had hitherto possessed no European specimen of the species. A specimen of the rare "Sowerby's Whale" (*Mesoplodon bidens*) was stranded off the coast of Inverness. The thanks of the Trustees are again due to the Receivers of Wreck and Coastguard Officers who have given valuable assistance in the prosecution of this inquiry. A report (the third) on the Cetacea stranded during the year 1915 will be issued early in 1916.

#### *Rowland Ward Bequest.*

The specimens received during 1915 as gifts from the Trustees of the Rowland Ward Bequest amounted to seventeen items in all,

including a Somali Rhinoceros, a Hudson Bay Walrus, a reconstructed model of a Dodo, two Darwin's Rheas (with sterna), a Manchurian Leopard, and a Siberian Wolf.

#### *Doubleday Collection.*

The Doubleday Collection of British and European Lepidoptera, which was deposited on loan in the Bethnal Green Museum in 1876, has been transferred by the Board of Education to the Natural History Museum (as being a more appropriate place for it). The collection has been placed near the other study collections of Lepidoptera in the Entomological Department, under the same conditions of tenure as existed with regard to it prior to the transfer.

#### *Chatham Elephant.*

In the autumn of 1913, information was received from Mr. Sydney Turner, of Luton, Chatham, of a discovery of fossil bones in the grounds of the Royal School of Military Engineering, Upnor, near Chatham. Dr. C. W. Andrews, an Assistant in the Department of Geology, was sent to make an investigation on the spot, and was at once able to identify the remains as those of an elephant. The War Office and the Commandant gave permission to excavate the skeleton and remove it to the Museum. During the dry season of 1914 the outbreak of war prevented the work, but in 1915 the excavation was proceeded with, and the specimen was successfully removed to South Kensington. The find proved to comprise the greater part of a skeleton of *Elephas antiquus* (probably the largest elephant yet discovered in Britain), though of the skull only the molar teeth, one tusk, and part of the lower jaw are capable of preservation. The discovery is especially important as being the first occasion on which the skeleton of this species has been found in England in direct association with the teeth.

The Trustees have recorded their appreciation of the action of the War Office authorities and of the Commandant of the Royal School of Military Engineering, Chatham, in allowing the excavations to be made, and of the valuable assistance rendered by the officers to Dr. Andrews during the progress of the excavations.

#### *Presents.*

The total number of gifts received during the year by the several Departments was 1,825, as compared with 2,336 in the previous year. Many of these comprised large numbers of individual specimens. The details of all the more important of them will be found in the reports of the Keepers of Departments, but the following are mentioned here also as being of special interest or value :—

From Lady Church—the valuable collection of gem-stones formed by her husband, the late Sir Arthur Church, K.C.V.O., consisting of 203 specimens, besides 8 diamond points and 21 diamond brilliants employed in the setting of two of them.

From Mr. A. L. Butler—an important collection of about 2,000 specimens of birds and a number of small mammals, from the Upper Sudan, all admirably prepared and labelled.

From Mr. C. Boden Kloss—an interesting collection of zoological specimens from Siam.

From Mr. George Lewis—a collection of about 7,000 specimens of coleoptera from various localities, contained in a cabinet and seven store-boxes ; also a number of papers published by Marseul and the donor.

From Mr. H. J. Elwes, F.R.S.—a further selection of specimens from his large collection of butterflies.

From the Executors of the late Mr. William Hill, of Hitchin—a cabinet containing about 2,700 slides of thin sedimentary rocks, including the original preparations on which Mr. Hill's published writings were based, and about 400 slides from the collection of the late Mr. Jukes-Browne, F.R.S.

From the Committee of the Middlesex Hospital—the collection of diatoms and literature relating thereto formed by the late Mr. John Augustus Tulk, of Chertsey.

From Mrs. Emily Owen—78 volumes of works by her father-in-law, the late Sir Richard Owen, mostly author's copies containing his autograph notes.

From the Zoological Society—five volumes of a MS. Catalogue of the mammals formerly in the Society's old museum, many of the specimens in which were transferred to the British Museum about the year 1851, when the Society's museum was broken up.

From Mr. C. D. Sherborn—Sir Richard Owen's own interleaved copy of his work on "British Fossil Mammals and Birds."

From Prof. H. F. Osborn—Four hypothetically restored busts of fossil men, and restored models of the skulls and brain-casts of *Pithecanthropus* and *Eoanthropus* (Piltdown).

#### *Purchases.*

Purchases have practically been restricted to a few transactions which partook of the nature of liabilities incurred prior to the outbreak of war. Among the more important of them special attention may be drawn to the following :—

The second and final instalment of the Lowe collection of West Indian Birds, comprising 1,195 skins ; the fifth instalment of the Distant collection of Rhynchota and other insects ; the first instalment of Dr. Malcolm Burr's collection of Dermaptera (earwigs), consisting of 4,500 specimens (55 being types and 390 co-types) ; a collection of 1,500 fossils, from the Bala rocks of North Wales, made by the late Mr. Thomas Ruddy, all labelled with localities ; fossil remains of Woolly Rhinoceros and Mammoth from the frozen earth of Northern Siberia ; the W. E. Cutler collection of fossils from the Upper Cretaceous of Alberta, Canada, comprising a considerable part of a large herbivorous Dinosaur, *Trachodon*, bones of Dinosaurians, and other remains.

*Exchanges and Gifts of Duplicates.*

Exchanges of duplicate specimens have been made with various institutions and individuals.

A replica of the restored plaster cast of the Piltdown skull and mandible has been given to the Public Museum at Cheltenham.

Duplicate specimens have been presented as follows:—

Zoological specimens (other than entomology)—to the Royal Scottish Museum, Edinburgh; the North Staffordshire Field Club Museum, Hanley; Warrington Museum; Newbury Museum; Dundee Central Museum; Sheffield Museum; Tring Museum; Dr. R. F. Leiper; and Dr. N. Annandale (Calcutta).

Entomological specimens—to Sheffield Museum; Prof. Chr. Aurivillius (Stockholm); Prof. T. D. A. Cockerell (Colorado); Mr. H. J. Franklin; the Rev. F. D. Morice; and Mr. A. M. Lea (Adelaide).

Fossils and casts of fossils—to Maidstone Museum; the Welsh National Museum, Cardiff; Dr. Eliot Curwen; Prof. A. G. Nathorst (Stockholm); Dr. Marie C. Stopes; and Prof. C. Schuchert (Yale University).

Meteorite fragments—to the Geological Survey of India, Calcutta.

(N.B.—All the *individuals* named have presented specimens or otherwise benefited the Museum.)

*Publications.*

The following works on Natural History have been published during the year:—

Catalogue of Books, Manuscripts, &c., in the British Museum (Natural History). By B. B. Woodward. Vol. v. SO—Z. Pp. 1,957—2,403. 4to. 1l.

British Antarctic (“Terra Nova”) Expedition, 1910. Natural History Report: Zoology. 4to.

Vol. i., No. 2. Natural History of the Adélie Penguin. By Staff-Surgeon G. Murray Levick, R.N. Pp. 55—84 : 21 plates. 5s.

Vol. i., No. 3. Cetacea. By D. G. Lillie, M.A. Pp. 85—124 : 14 text-figures and 8 plates. 7s. 6d.

Vol. ii., No. 2. Oligochaeta. By H. A. Baylis, B.A. Pp. 13—18 : 1 plate. 1s.

Vol. ii., No. 3. Parasitic Worms. By R. T. Leiper, D.Sc., and Surgeon E. L. Atkinson, R.N. Pp. 19—60 : 11 text-figures and 5 plates. 7s. 6d.

Vol. ii., No. 4. Mollusca, Part I. By E. A. Smith, I.S.O. Pp. 61—112 : 2 plates. 4s.

Vol. ii., No. 5. Nemertinea. By H. A. Baylis, B.A. Pp. 113—134 : 4 text-figures and 2 plates. 2s. 6d.

Vol. iii., No. 1. Pycnogonida. By W. T. Calman, D.Sc. Pp. 74 : 22 text-figures. 5s.

Report on Cetacea stranded on the British coasts. By S. F. Harmer, Sc.D., F.R.S. No. 2. Cetacea stranded during 1914. Pp. 16 : 3 maps, 1 text-figure. 4to. 1s. 6d.

Catalogue of Ungulate Mammals. Vol. iv. By R. Lydekker, F.R.S. Pp. xxi., 438 : 56 text-figures. 8vo. 10s. 6d.

Catalogue of the Fresh-water Fishes of Africa. By G. A. Boulenger, F.R.S. Vol. iii. Pp. xii., 526 : 351 text-figures. Imp. 8vo. 2l. 5s.

Revision of the Ichneumonidæ. By Claude Morley. Part IV. Pp. x., 167 : 1 coloured plate. 8vo. 6s.

The Syrphidæ of the Ethiopian Region. By Mario Bezzi. Pp. 146 : 28 text-figures. 8vo. 6s.

Catalogue of Lepidoptera Phalænæ (Moths). By Sir George F. Hampson, Bart. Supplement, Vol. i. Atlas of 41 coloured plates. 8vo. 1l. 13s. 6d.

Catalogue of Mesozoic Plants. Part VI. The Cretaceous Flora, Part II.—Lower Greensand (Aptian) Plants of Great Britain. By Marie C. Stopes, D.Sc. Pp. xxxvi., 360 : 112 text-figures and 32 plates. 8vo. 1l. 1s.

Guide to the Fossil Remains of Man in the Department of Geology and Palæontology. By A. S. Woodward, LL.D., F.R.S., Pp. 33 : 4 plates and 12 text-figures. 8vo. 4d.

Instructions for Collectors, No. 12—Worms. By H. A. Baylis. Pp. 23 : 17 text-figures. 8vo. 3d.

Economic Series, No. 2—The Louse and its Relation to Disease. Its Life History and Habits, and how to deal with it. By B. F. Cummings. Pp. 16 : 1 plate, and two text-figures. 8vo. 1d.

Economic Leaflets, No. 1—The Danger of Disease from Flies and Lice. Pp. 4. 8vo. 1d. for 6 copies, 1s. for 100.

Reprints have been issued of the "Guide to the Specimens illustrating the Races of Mankind (Anthropology)," price 4d. ; and of the pamphlet, "The House-Fly as a Danger to Health," price 1d.

Selections of the natural history publications of the Museum have been sent to free libraries and other institutions in Great Britain and Ireland, to Colonial, Indian, and foreign (neutral) museums, libraries, and scientific societies, and to persons who have benefited the Museum by helping in the preparation of the works, or in other ways.

The undermentioned works were in preparation during 1915 :—

Library Catalogue. Supplement, Vol. i.

"Terra Nova" Antarctic Report. Further Sections.

Report on Cetacea stranded on the British coasts during 1915, by Dr. S. F. Harmer, F.R.S.

Catalogue of Bats, Vol. ii., by Dr. Knud Andersen.

Catalogue of Ungulate Mammals, Vol. V., by R. Lydekker, F.R.S.

Catalogue of the Freshwater Fishes of Africa, Vol. iv., by G. A. Boulenger, F.R.S.

Third Report on Economic Zoology.

Illustrations of British Flies, Second Series.

Illustrations of African Blood-sucking Flies, Vol. ii., by E. E. Austen.

- Catalogue of Moths, Supplement, Vol. ii., by Sir George F. Hampson, Bart.  
 Flora of Jamaica, Vol. iv., by W. Fawcett and Dr. A. B. Rendle, F.R.S.  
 Revision of Crombie's Monograph of British Lichens, Part I., by Miss A. L. Smith.  
 Catalogue of the Sloane Herbarium, by J. Britten.  
 Catalogue of Fossil Fishes, Part V., by Dr. A. S. Woodward, F.R.S.  
 Guide to British Lichens.  
 Economic Series, No. 3. Fleas as a Menace to Man and Animals, by Rev. J. Waterston.  
 Economic Series, No. 4. Mosquitoes, by F. W. Edwards.

## GENERAL LIBRARY.

The additions to the General Library during the past year have been :—

By purchase	-	-	-	356 volumes.
By transference from other Departments	-	-	-	5 volumes.
By donation	-	-	-	840 volumes, 12 maps, and 21 photographs.
Total				- - 1,201 volumes, 12 maps, and 21 photographs.

All the volumes and maps have been catalogued, press-marked and put in their places, whilst 1,428 volumes have been bound in 617, and 6 have been repaired.

The extent of the collection on the 31st of December was 44,963 volumes, 5,928 maps, and 864 photographs (not including those in the Owen Collection of Drawings, &c.).

The accessions to the Departmental Libraries have also been catalogued as they came in, and duplicate transcripts of the titles have been returned with the books.

Altogether 2,923 title-slips have been written, 81 rewritten, and 3,184 revised (independently of those prepared for printing).

There are now, on a rough estimate, 100,459 volumes (exclusive of continuations and minor separata) and 6,235 maps in the whole building.

The number of visits paid to the General Library during the year by Students and others (irrespective of the Staff and persons to whom the use of a key is granted) was 1,804.

Donations have been received from a great number of Museums, Academies and other corporate bodies, as well as from personal donors. Included is a set of the works and memoirs of the late Sir Richard Owen, K.C.B., being his personal copies and containing his autograph notes, drawings and other memoranda, presented by his daughter-in-law, Mrs. Emily Owen. These have been placed in

special presses with the letters of naturalists to Owen, largely referring to specimens in the collections (presented in 1908) that are now bound in twenty-seven volumes. The whole constitute, as it were, a memorial to the distinguished naturalist who was the prime and successful advocate for the separate establishment of the Natural History Museum.

The printing of the Catalogue was completed with the issue of the fifth volume "SO—Z" in June. Letter "A" of the Supplement, which is estimated to contain upwards of 25,700 entries, has been prepared for press.

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#### INDEX GENERUM ET SPECIERUM ANIMALIUM.

During the year considerable progress has been made with this Index, under Mr. C. Davies Sherborn's charge, and some 30,000 slips have been compiled and incorporated.

The manuscript has been consulted to a more than usual extent during the past year by the Staff and Students, whilst many enquiries have been replied to by Mr. Sherborn in correspondence.

The chief rarities secured for the Library by Mr. Sherborn were:—The first and second issues of Swainson's "Exotic Conchology," 1821—22, and 1834—35; and a curiosity in the shape of a previously unknown little work, "The Naturalists' Pocket Book for 1813," by George Shaw of the British Museum.

The issues of Swainson formed the subject of a paper by C. D. Sherborn and A. Reynell in the Proceedings of the Malacological Society of London (Vol. xi, 1915, pp. 276—282).

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#### INDEX MUSEUM.

All the dissections exhibited in the Hall that are mounted in preservative fluid have been inspected during the year, and several have been resealed and many refilled.

Further progress has been made in the introductory series of animals, plants and rocks, which, when completed, will be exhibited in four table-cases in the middle of the Hall; twenty-four new specimens have been prepared during the year for the fourth case (Vertebrate Animals), and the series of minerals and rocks has been roughly planned out.

The "Dental Exhibition," consisting of skulls, jaws and teeth showing interesting features of dentition, which had been on view in the Hall since July, 1914, was dispersed in July, 1915. One of the two table-cases thus liberated was employed for exhibiting once more, with some additions, the results of experiments conducted by Lieut.-Col. W. W. O. Beveridge and Mr. J. Hartley Durrant with a view to combating the ravages of certain beetles and moths that

had been found to be injuring biscuits made for army service. In the other case has been displayed a series of disease-carrying ticks and some of their harmless relatives, twenty-eight specimens in all. Small maps show the distribution of each of the species selected, and any points of interest in the connection of the ticks with the dissemination of the organisms of disease are explained in the labels placed alongside the specimens.

The series of specimens illustrating the structure and the life-history of house-flies has been increased during the year, and set out in a new, specially designed table case: the series now includes selected specimens of a male and a female of each of the four species of house-fly most frequently met with, models, on an enlarged scale, of the egg, larva, pupa and adult of the common house-fly, *Musca domestica*, and representations of food contaminated by flies, and refuse of the dust-bin serving as a breeding-place for flies.

During the summer a new, specially designed table-case was set up in the middle of the Hall to contain specimens illustrating the life-history of the tropical rat-flea, *Xenopsylla cheopis*, a flea largely responsible for the spread of plague in hot countries. The series as at present displayed comprises a large model,  $\times 200$  linear, of a male, together with a coloured drawing giving the names of the external parts of the body, and models of an egg, a larva, and the head and hind end of an adult female, and models,  $\times 6,000$  linear, of plague bacilli and human blood-corpuscles. The model of the male flea was previously shown in a small temporary case in the Hall; the others are new. Actual specimens are also shown of the adult flea and a larva.

In July important additions were made in the Hall by introducing two large table-cases that had previously been sent to the International Exhibition at Ghent, in 1913, as an illustration of the work being done by the Museum in making known to the public the important part played by insects in the spread of disease. In one of these cases is a series of 335 pinned specimens of tsetse-flies, tabanid flies and mosquitoes, with labels in English and French, and small maps explaining the distribution of each of the species shown; also coloured drawings of ten species of tsetse-flies, and some specimens mounted in alcohol. In the other case are shown two models of one of the disease-spreading mosquitoes, *Anopheles maculipennis*, twenty-eight times (linear) the actual size, and twenty-six models ( $\times 6,000$ ) explaining the complete life-history of the organism of pernicious malaria, a parasite that is transmitted to man by this and other mosquitoes.

A smaller case of the same collection contains a specimen and a model ( $\times 28$ ) of the tiger-mosquito, *Stegomyia fasciata*, of interest as being the cause of the spread of yellow-fever. The distribution of this mosquito over the surface of the earth is explained by means of a map in which the regions where the insect is found are marked in red.



A new microscope, showing in rotation twelve slides of fleas, lice and bugs, has been set up on the west side of the Hall; the interest of each of the specimens in its relation to the spread of disease is indicated in a label placed by the side of the microscope.

An explanatory guide-book to the specimens and models of disease-spreading insects and ticks exhibited in the Hall is in preparation, the pamphlet being to a large extent a compilation of the labels that are attached to the specimens displayed, redrafted in such a manner that they read consecutively. The guide-book will be illustrated by fourteen text-figures, and consist of about fifty pages.

*L. Fletcher,*  
Director.

British Museum (Natural History),  
26 February 1916.

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## DEPARTMENT OF ZOOLOGY.

I.—*Arrangement and Conservation.*

## MAMMALIA.

*Mammal Galleries.*

Work in these as well as in the other Exhibition Galleries has been reduced to a minimum, in order to avoid unnecessary expenditure during the War.

For many years the exhibited specimens of Mammals, Reptiles, and Domestic Animals were in the charge of Mr. Richard Lydekker, F.R.S. His death, on April 16, 1915, has left these important parts of the public galleries without any special provision for their arrangement. The value of the services he had given in rendering the exhibited series attractive to visitors, in writing Guide Books, and in many other ways, can hardly be overestimated.

In the Upper Mammal Gallery the Gorilla Case has been rearranged, with the view of minimising some of the inconveniences due to the reflection of light from the surface of the glass fronts of the cases. The amount of light received by the eye from a black specimen is often less than that reflected by the glass from the floor, windows, and other parts of the gallery. Such specimens may thus be hardly visible through the glass to an observer, who sees the floor and his own reflection with undesirable distinctness.

In the Lower Mammal Gallery two squares of glass have been removed in the large Buffalo Case, and have been replaced by sash windows, facilitating access to the specimens.

The principal additions have been received by presentation from the Trustees of the late James Rowland Ward, and they include the following:—a Somali Rhinoceros (*Rhinoceros bicornis somaliensis*), an Atlantic Walrus (*Odobenus rosmarus*), a Chinese Leopard (*Felis fontaneiri*), a Siberian Wolf (*Canis lupus*), a Ruffed Lemur (*Lemur varius*), a Tamandua Anteater (*Tamandua tetradactyla*) and other specimens. Lady Seton-Karr has given several remarkably fine specimens selected from the collection of her late husband, the well-known sportsman, Sir Henry Seton-Karr; including two heads of Wapiti (*Cervus canadensis*), a head of a Mule Deer (*Odocoileus hemionus*) and a skull with horns of a Bighorn Sheep (*Ovis canadensis*). A recently born Russian Brown Bear (*Ursus arctos*), presented by Dr. Maxime Goldberg, shows the striking disproportion in size between young and adult Bears. Two Squirrels (*Sciurus vulgaris fuscoater*), from the Thuringian Forest, presented by C. T. Seltman, Esq., and the head of a Diggle's Hartebeest (*Bubalis tora digglei*), the gift of W. H. Diggle, also deserve attention. Prof. H. F. Osborn, of the American Museum of Natural History, New York, has presented four busts representing reconstructions of *Pithecanthropus* and the Piltdown, Neanderthal and Cro-Magnon races of Man.

*Whale Room.*—To the series of casts of flippers exhibited on the walls of the galleries have been added preparations of the following Cetacea :—*Mesoplodon*, from Rosslare ; Cuvier's Whale (*Ziphius cavirostris*), from Co. Wexford ; White-beaked Dolphin (*Lagenorhynchus albirostris*), from the Inner Hebrides ; Bottle-nosed Dolphin (*Tursiops truncatus*), from St. Mary's, Scilly Islands ; Common Dolphin (*Delphinus delphis*), from Co. Donegal.

*Study Series.*—The usual work of labelling, registering and incorporating the mammals added to the collection, and their skulls, has been continued, though much impeded by the absence of the lady label-writer hitherto employed.

The whole collection of skins of Chiroptera has been rearranged and spaced, to facilitate Dr. Andersen's work on the Order. The rearrangement of the Ungulata has also been continued, as the result of the publication of the volumes of Mr. Lydekker's Catalogue.

Mr. R. C. Wroughton, Mr. T. B. Fry, and Mr. Martin Hinton have again afforded valuable help in working out accessions to the collection, Mr. Wroughton especially in connection with the large series obtained through the Bombay Natural History Society's Mammal Survey. The species have all been named, reports written on them, and series selected for registration and distribution. Much voluntary assistance has also been given by Miss G. M. Hayman in cleaning skulls ; and this help has been of particular value owing to the depletion of the ordinary staff. The services of Dr. Knud Andersen have been continued for the preparation of the second volume of the Catalogue of Bats.

The fourth volume of the Catalogue of Ungulates, by R. Lydekker, was published in 1915, and the greater portion of the fifth had been prepared before his death in April.

*Osteological Room.*—The arrangement of the skeleton collection has made progress. A cabinet for the bones of large Ungulates has been added, but the storage of the Equidæ is still in an unsatisfactory state.

A number of new skeletons of British Birds have been prepared, to replace old and imperfect specimens. A new Cabinet for Birds' skeletons has been added.

A new sand-pit of large size has been constructed, and will be specially useful for preparing the skeletons of Whales.

#### AVES.

The remounting of specimens in the General Gallery has made considerable progress, and the families Phytotomidæ, Pittidæ, Philepittidæ, Xenicidæ, Hirundinidæ, Muscicapidæ, Campophagidæ, and Timeliidæ have been completed, with distribution-maps, labels, &c. Among the more noteworthy additions to the Gallery may be mentioned two examples of Darwin's Rhea (*Rhea darwini*) and a model of the Dodo (*Didus ineptus*) presented by the Trustees of the late James Rowland Ward.

In the Bird Room the Bustards and Cranes have been arranged in new cabinets. A large portion of the Passeres have been finally arranged and spaced out. Printed labels of the contents have been prepared for the drawers and the outsides of each cabinet. The exact position of each species has been entered in the special Reference Catalogue.

The Report on the Collections of Birds formed by the British Ornithologists' Union Expedition and the Wollaston Expedition to Dutch New Guinea, 1909—1913, has been completed and published in "The Ibis" Jubilee Supplement No. 2. The collection contained 3,395 skins of 312 species, of which 25 proved to be new to science and 39 new to the collection, while there were also eggs of 15 species not previously represented. A complete account of the Scientific results of the Expeditions will shortly appear in two quarto volumes of about 1,200 pages, illustrated by 2 maps and 38 plates.

Register numbers have been put on 15,151 eggs of the Seebohm Collection and 2,681 eggs of the Radcliffe Saunders Collection.

Mr. D. A. Bannerman has completed his series of Reports on the Collections of the late Mr. Boyd Alexander from Annabon, Cameroon Peak and the Manenguba Mountains.

Mr. Claude H. B. Grant has continued his work on the Collection formed by Capt. Gordon P. Cosens in East Africa.

Help in labelling and preparing specimens for incorporation was also received from Mr. Arthur Denman, Mr. Lewis and Mr. Roy Sheppard, who kindly gave up a good deal of their leisure time for this purpose.

Mr. Court Treatt is still absent at the front on Military Service.

The more notable presents were the following :—

From the Bombay Natural History Society the types of three new species. From Messrs. C. B. Kloss and H. C. Robinson a collection of Siamese Birds, including the types of two new species. From Mr. W. J. F. Williamson a collection of birds from Siam, including the types of two new sub-species. From Mr. A. L. Butler a large and very valuable collection from the Sudan, including species new to the British Museum Collection. From the Trustees of the the late James Rowland Ward, two magnificent mounted specimens of Darwin's Rhea; a fine model of the Dodo and other mounted specimens for the Exhibition Gallery.

Among the more important purchases are :—

The remaining portion of the unique West Indian Collection formed by Dr. Percy R. Lowe.

During the year the collection has been regularly consulted by a large number of visitors; systematic work has been done on various groups by Mr. W. L. Selater, Mr. E. C. Stuart Baker, Mr. C. H. B. Grant, Mr. D. A. Bannerman, Mr. G. M. Mathews, Mr. T. Iredale, Dr. P. R. Lowe, Mr. H. F. Witherby, Lord Rothschild, F.R.S., Dr. E. Hartert, Rev. F. C. R. Jourdain, Dr. H. Langton, the Marquess of Tavistock, Miss A. Jackson, Col. R. G. Wardlaw-Ramsay, Dr. C. B. Ticehurst, Rev. J. Waterston, Mr. L. Harrison,

Prof. W. Bateson, F.R.S., Mr. C. F. M. Swynnerton, and Dr. V. G. L. van Someren.

The following artists engaged in preparing drawings for forthcoming books have also made regular use of the collection :—Mr. H. Grönvold, Mr. G. E. Lodge, Mr. Archibald Thorburn, Mr. R. Green, Mr. H. Goodchild, Miss Medland, Major H. Jones.

#### DOMESTICATED ANIMALS.

The skeleton of the famous race-horse, "St. Simon," alluded to in the last Return, has been re-articulated.

The additions to this series include the following :—

A remarkable Donkey, perhaps a Zebra-Ass Hybrid, from the Gold Coast Colony, presented by Capt. C. H. Armitage, C.M.G. A Cross-bred Karakul  $\times$  Scotch Blackface Sheep, presented by the Governors of the Edinburgh and East of Scotland College of Agriculture. A Great Dane Dog, presented by the Rowland Ward Trustees, and a Blue Pug, presented by Miss Grace Bellamy.

A hybrid Greenfinch  $\times$  Canary, presented by Fred Archer, Esq.

#### PISCES.

*Exhibition Galleries.*—In the Fish Gallery several of the old exhibits have been remodelled, or restuffed and repainted; nearly all the fishes of the families Scombridæ and Carangidæ have been treated in this way. Some new exhibits have also been added and amongst these attention may be drawn to casts of a Rainbow Trout (*Salmo irideus*) and a Brown Trout (*Salmo trutta*) made from fishes presented by P. O. Boase, Esq.

In the British Saloon the exhibition of British Freshwater Fishes has been reorganised; nearly all the specimens formerly exhibited have been discarded and they have been replaced by new acquisitions, most of which have been cast or mounted in the museum. The exhibition is now practically completed and includes a series illustrating the various stages in the life-history of the Salmon. There are also some fine examples of other freshwater fishes, including a Bream (*Abramis brama*) from the River Wensum; a Crucian Carp (*Carassius carassius*) from Cheshunt, presented by J. Andrews, Esq.; a Roach (*Rutilus rutilus*) from Hornsea Mere, presented by E. Kempsey, Esq.; a hybrid Roach and Rudd (*Rutilus rutilus*  $\times$  *Scardinius erythrophthalmus*) from Doncaster, presented by W. E. Park, Esq.; and a Perch (*Perca fluviatilis*) from Newbury, and a Tench (*Tinca tinca*) from Buckinghamshire, presented by A. P. Zeffass, Esq. Artistic models of a Gudgeon (*Gobio gobio*), a Stickleback (*Gastrosteus aculeatus*) and male and female Minnows (*Phoxinus phoxinus*) have been made and presented by F. Page, Esq., and a series of enlarged photographs of Scales, presented by J. A. Milne, Esq., have been added to this exhibition.

*Study Series.*—All the accessions have been incorporated, and the work of replenishment with spirit has been continued; but it is

more than ever urgent that some steps should be taken to relieve the congestion in the Spirit Building. A considerable amount of time has been given to the determination of the larval and post-larval fishes of the "Terra Nova" Collection, and a report on them has been prepared.

#### TUNICATA.

The specimens collected by the "Terra Nova" have been put in order, and arrangements have been made for having them investigated.

#### MOLLUSCA.

The roof of the Shell Gallery was repainted during the spring.

In the exhibited series additions have been made to the Sikes Collection of British Land and Freshwater Shells, mainly from further series presented by Mr. Sikes. Mr. G. K. Gude has continued the renaming and re-arrangement of the Helicidæ. The specimens representing several groups (*e.g.* the Sepiidæ, *Eglisia*, *Mesalia* and *Turritelopsis*) have been re-arranged and relabelled, and an account of the latter genera published.

A considerable number of the jars and bottles containing spirit specimens have been refilled.

The study of the shells of the Prosobranchia, Scaphopoda, and Lamellibranchia obtained by the British Antarctic ("Terra Nova") Expedition has been completed and the Report published.

The Nudibranchia and Cephalopoda obtained by the same expedition have been investigated and reports on the collections are being prepared. The Reports upon the Lamellibranchia (anatomy) and Gastropoda Streptoneura (anatomy) commenced in 1914 have been temporarily stopped.

Several collections have been worked out and reported upon, *e.g.* from Borneo, the Philippines, E. Africa and the Sudan. The extension of the range of the American Slipper Limpet (*Crepidula fornicata*) in English coastal waters has been further studied and a paper published upon its extension up the East Coast. A Gastropod commensal with a Crinoid and exhibiting remarkable pigmentation has been examined and reported upon. A selection has been made and specimens mounted from a large series of *Buliminus* and *Petræus* presented by J. H. Ponsonby, Esq. During the year seventy-four microscopical preparations illustrating Molluscan anatomy have been made and added to the collection. These are mainly representative of Antarctic Nudibranchia. Mr. W. Denison Roebuck having kindly volunteered to furnish the Museum with examples of new or rare varieties of British Slugs, experiments have been made with a view to securing a satisfactory preservation of the colour and shape of these animals.

Lieut.-Col. H. H. Godwin-Austen, F.R.S., has continued the preparation and arrangement of the Blanford and Godwin-Austen collections of Indian land and freshwater Mollusca.

The thanks of the Trustees are again due to Mr. E. A. Smith, I.S.O., formerly Assistant Keeper in the Department of Zoology, who has continued to lend valuable assistance to the Department.

#### BRACHIOPODA.

The collection of Brachiopoda obtained by the "Terra Nova" Expedition is being studied by J. W. Jackson, Esq. Owing to service in connection with the war the work can only be proceeded with at intervals.

#### MYRIOPODA AND ARACHNIDA.

Systematic work on parasitic Acari was continued during the year, and several reports on these Arachnids were published, including a description of a new species found on the domestic fowl and the first detailed description of the Akamushi Mite, carrier of the Kedani or River-Fever of Japan. Of the Koch Collection, 6,913 specimens were registered and a considerable portion arranged and labelled. All other accessions received have been incorporated into the general collection.

#### CRUSTACEA AND PYCNOGONIDA.

A large specimen of the Common Lobster has been added to the Exhibited series.

The registration of the spirit specimens in the Norman collection has been completed, a total of 49,284 specimens having been registered during the past three years. The registration of the collection of microscopic slides has been begun, and 1,673 slides have been entered during the year. The other collections alluded to in last year's Return remain untouched.

A Report on the "Terra Nova" collection of Pycnogonida has been published, and the collection itself has been registered and incorporated. In connection therewith many determinations of Pycnogonida have been revised and the whole collection re-arranged.

A large number of bottles of plankton collected by the "Terra Nova" have been searched through and the Crustacea of various orders contained in them have been sorted out.

The doors of the cupboards containing the spirit collection are being re-fitted and made dust-proof.

#### ECHINODERMA.

Great difficulty has been experienced in finding accommodation for specimens preserved in spirit, and the further orderly arrangement of species cannot be completely carried out. Most of the specimens obtained during the year have been determined and all have been incorporated.

The arrangement of microscopic slides in suitable cabinets has been completed, and an index-catalogue to them is in course of preparation; this remark also applies to the Prototracheata, to the Polychæta and their allies, as well as to the Anthozoa.

The revision of the MS. Catalogue of Asteroidea has been completed and progress has been made with that of the Echinoidea.

#### WORMS.

A few specimens obtained during the year have been named and incorporated. The "Terra Nova" collection of Myzostomida has been worked out by Dr. C. L. Boulenger, and a report on them is in preparation.

The collections of Nemertinea, both in spirit and mounted as slide-preparations, have been re-arranged, the former being re-spirited. The classification and nomenclature have been largely brought up to date, and a MS. list has been drawn up. There remain, however, many unnamed specimens.

The numerous additions to the Helminthological collections have been accommodated, as far as possible, in the cases in the spirit building, with the usual difficulties owing to the congested condition that prevails there. Many useful additions have been made to the slide-collection of parasitic worms.

#### POLYZOA.

The "Discovery" collection (partly worked out by Mr. H. W. Burrows) and the "Terra Nova" collection have been entrusted to the Hon. Mary E. Palk to describe, and this work is now well in progress.

#### ANTHOZOA.

Before the shortage of attendants became acute the Coral Gallery was completely cleaned. Owing to the large quantity of glass almost incessant attention is required in this part of the collection.

#### HYDROZOA.

Captain A. K. Totton, who is in charge of this group, has been on active service since the beginning of the war.

127 specimens of Hydroida acquired previously to 1915 have been registered and incorporated.

#### PORIFERA (SPONGES).

The whole spirit-collection of sponges has been re-spirited. To prevent evaporation the method of sealing each bottle with a mixture of vaseline and beeswax has been adopted.

The working out of the sponges collected by the "Terra Nova" in the Antarctic region has been continued. Those collected by the same expedition in the New Zealand area and in localities other than Antarctic have been entrusted to Prof. A. Dendy, F.R.S., and Mr. R. W. H. Row for description.

#### PROTOZOA.

The "Terra Nova" collections of Foraminifera, including sea-bottom samples likely to contain these organisms, have been entrusted to Messrs. E. Heron-Allen and A. Earland to work out.



2,078 slides of Foraminifera of the Norman collection have been registered.

## II.—*Duplicates and Exchanges.*

### (a) *Duplicates.*

Duplicates have been distributed among museums, scientific institutions, &c., as follows :—

*Mammalia.*—Albert Institute and Victoria Galleries, Dundee.

*Aves.*—Royal Scottish Museum, Edinburgh ; Newbury Museum.

*Batrachia.*—Dr. N. Annandale.

*Pisces.*—Albert Institute and Victoria Galleries, Dundee ; North Staffordshire Field Club Museum, Hanley.

*Mollusca.*—Warrington Museum.

*Arachnida.*—

*Myriopoda.*—

*Crustacea.*—

*Pycnogonida.*—

*Chaetopoda.*—

} Public Museum, Weston Park, Sheffield.

*Parasitic Worms.*—Public Museum, Weston Park, Sheffield ; Dr. R. T. Leiper.

*Echinoderma.*—Albert Institute and Victoria Galleries, Dundee.

*Cœlenterata.*—} Albert Institute and Victoria Galleries, Dundee ;

*Porifera.*—} Public Museum, Weston Park, Sheffield.

### (b) *Exchanges.*

Exchanges have been made with the following institutions and individuals :—

*Aves.*—With the University Museum, Oxford ; Tring Museum ; and Colonel Stephenson R. Clarke.

*Reptilia.*— } With Dr. T. Barbour, Museum of Comparative  
*Batrachia.*—} Zoölogy, Cambridge, Mass.

*Pisces.*—With Prof. J. P. Hill, F.R.S. ; Prof. D. Vinciguerra ; and Prof. Max Weber.

*Cestoda.*—With Dr. O. Fuhrmann.

## III.—*Departmental Library.*

The acquisitions of the Library of the Departments of Zoology and Entomology (including the Walsingham Library) during the year, obtained by purchase, presentation and exchange, consist of 42 separate works and pamphlets in 59 volumes, and 1,228 parts of periodicals and works in progress.

466 volumes, including those belonging to the Walsingham Library, have been bound.

The work of collating, stamping, press-marking and entering all additions in the Catalogue has been performed as usual.

The Attendant in the Library, with the aid and supervision of an Assistant, has checked all the entries of Zoological works in that portion of the General Catalogue of Books which has been printed during the year.

Of the donations the following are worthy of special mention :—The Birds of Australia, Vol. IV., parts 2 and 3 ; Vol. V., part 1 ; presented by G. M. Matthews, Esq.

Manuscript Catalogue of the specimens in the Zoological Society's Museum :—Mammalia Catalogue, 5 vols. ; Osteological Catalogue, 1 Vol. ; 65 Manuscript Reports of the Curator of the Society's Museum, Dec. 21st, 1836, to Jan. 1st, 1840 ; Manuscript Catalogue of Skulls, 1 Vol. ; *presented by the Zoological Society of London.*

The most important addition by purchase during the year, was made possible through the generosity of Mr. Alexander Reynell, who allowed the Library to acquire his splendid copies of the first and second issues of SWAINSON'S EXOTIC CONCHOLOGY.

#### IV.—*Publications.*

In addition to the Official Catalogues and other volumes published by the Trustees (*see pp. 60-62*), various reports and descriptive papers have been prepared in connection with the different branches of the collection, and have been published for the most part in scientific journals.

#### V.—*Acquisitions.\**

##### MAMMALIA.

The total number of Mammals added during 1915 was 2,072, of which 1,936 were donations, 134 were purchases, and 2 were received in exchange.

Special attention should be drawn to the Mammalia presented by the Bombay Natural History Society in further continuance of their Mammal Survey of the Indian Empire. The set presented, which form a first and liberal selection from the much larger number collected, amounted in 1915 to 1,190 specimens, more than half of the whole Mammal accessions of the year, and includes 40 types of new species, besides fine series of many rare and little known forms which had not previously been obtained since modern methods of collection and study came into operation. The most notable series included were 266 from Ceylon, collected by Major E. W. Mayor ; 250 from the Chindwin River, Upper Burma (G. C. Shortridge and S. A. Macmillan) ; 238 from Sikkim and 161 from Behar and Orissa (C. A. Crump) ; and 128 from Sind (S. H. Prater).

All the British collectors mentioned have now gone to the front, but the Society is still making an effort to carry on the Survey by the help of native workers. The Society also undertakes the expense of publishing in its Journal a full account of the collections made during the Survey.

\*A table showing the number of specimens added during the year is given on page 82.

The following Mammals have been presented by the Trustees under the Will of the late Mr. J. Rowland Ward:—Chinese Leopard (*Felis fontanieri*) from Manchuria, Siberian Wolf (*Canis lupus*) from the Upper Yenisei, a Walrus (*Odobenus rosmarus*) from Hudson's Bay, a Somali Rhinoceros (*Rhinoceros bicornis somaliensis*) and a few smaller Mammals.

Several of the more interesting animals that have died in the Gardens of the Zoological Society, notably the types of *Mungotictis substriatus* and *Galidictis eximius*, Pocock, and a young Elephant Seal have been presented by the Council of the Zoological Society.

#### Europe.

Harvest Mice (*Micromys minutus*) and House Mice (*Mus musculus*) from the trenches at the front in Northern France; presented by Capt. G. C. Shortridge, Indian Army.

A series of small Mammalia from the neighbourhood of the trenches, including examples of five species of Shrews; presented by Capt. Philip Gosse, R.A.M.C.

88 small Mammals from the Islands off the Coast of Scotland, including the types of four new forms described by Mr. Hinton; presented by W. R. Ogilvie-Grant, Esq.

A Cuvier's whale (*Ziphius cavirostris*) stranded at Bannow Bay, Co. Wexford; presented by the Board of Trade.

Jaws and other parts of Cetacea stranded on the British Coasts during 1915; presented by the Board of Trade.

#### Asia.

1,190 Mammals collected during the Society's Mammal Survey of India, including series from Ceylon, Upper Burma, Sikkim, Behar and Orissa, Sind and elsewhere, with forty types of new species and subspecies; presented by the Bombay Natural History Society.

225 Mammals from S.E. Siam, including the types of twenty-five new species and subspecies; presented by C. Boden Kloss, Esq.

29 Mammals from Siam; presented by K. G. Gairdner, Esq.

8 Mammals from E. Burma, collected by F. Kingdon Ward, and 43 from Lake Baikal, collected by G. A. Burney; presented by Oldfield Thomas, Esq., F.R.S.

5 Mammals from Tibet; presented by Major F. M. Bailey.

#### Africa.

90 Mammals from the Sudan, collected by Willoughby P. Lowe, including the types of three new species; presented by Abel Chapman, Esq.

An embryo of the Dwarf Congo Buffalo, *Bos (Bubalus) nanus*, from the Belgian Congo; presented by Dr. C. Christy.

A skull (human) of "Unzimkulu," South Africa; presented by Miss W. Hoskyns Abrahall.

#### America, South.

32 Mammals from Ecuador, including the type of a new genus and species of Bat (*Corvira bidens*); presented by Walter Goodfellow, Esq.

98 Mammals from Ecuador collected by G. Hammond, and 6 from Bogotá collected by M. Gonsalez ; presented by *Oldfield Thomas, Esq., F.R.S.*

A skeleton and two skulls (human) from Port San Julian, Santa Cruz, Patagonia ; presented by *A. M. E. M. Fournier, through Miss E. A. Warne.*

#### **Australasia.**

16 specimens of the genus *Nyctophilus*, including the type of *N. bifax* ; presented by *the Australian Museum, Sydney.*

13 small Mammals, including the types of *Pteropus basiliscus* and *P. vulcanius* from Dampier and Vulcan Is., New Guinea, collected by A. S. Meek ; presented by *Oldfield Thomas, Esq., F.R.S.*

115 Mammals from Cape York, N. Queensland, collected by Robin Kemp ; purchased.

#### **Antarctica.**

Fœtus of a Common Rorqual (*Balenoptera physalus*) ; head and paddles of a larger fœtus ( $16\frac{1}{2}$  feet) of the same species ; paddles and scapulæ, and a strip of developing baleen of a fœtal Sibbald's Rorqual (*B. musculus*), all from the South Shetlands ; presented by *Dr. J. Hjort, Fiskeridirektor, Norway.*

### **AVES.**

The acquisitions number 6,072. Of these the most noteworthy are as follows :—

#### **Europe.**

35 Birds from Devonshire ; presented by *Willoughby P. Lowe, Esq.*

22 Birds from Iceland ; collected by Mr. G. B. Dinesen ; purchased.

Skeletons of various British Birds ; presented respectively by *the Marchioness of Breadalbane, Miss D. M. A. Bate, Dr. Percy R. Loece, William Brice, Esq., and W. R. Ogilvie-Grant, Esq.*

#### **Asia.**

4 Birds from India, Burma, and Tibet, including the type-specimens of *Tragopan molesworthi*, *Ithagene tibetanus* and *Laiscopus nipalensis whympersi* ; presented by *the Bombay Natural History Society.*

Skeleton of an Open-bill Stork, *Anastomus oscitans*, from India ; presented by *the Zoological Society of London.*

152 Birds from S.E. Siam, including the type-specimens of *Pyrotrogon klossi* and *Myiophoneus klossi* ; presented by *C. Boden Kloss and H. C. Robinson, Esqs.*

255 Birds from Siam, including the type-specimens of *Mirafra williamsoni* and *M. marionæ* ; collected and presented by *W. J. F. Williamson, Esq.*

48 Birds from Baluchistan ; presented by Capt. F. E. W. Venning.

38 Birds from Siam ; presented by K. G. Gairdner, Esq.

15 Bustards, Cranes and Geese from Chin-Wang-tao, N. China ; presented by J. D. La Touche, Esq.

#### Africa.

2,357 Birds from the Sudan ; collected and presented by A. L. Butler, Esq.

57 Birds from Egypt ; collected by the late Capt. J. B. Jenkinson, Rifle Brigade ; presented by Mrs. Jenkinson.

6 Birds from the Gold Coast, mounted for the public gallery ; presented by the Trustees of the late James Rowland Ward.

A Restoration of the Dodo (*Didus ineptus*) ; presented by the Trustees of the late James Rowland Ward.

#### America, North.

40 Birds from North Carolina ; presented by the Hon. G. Charteris.

#### America, Central and South.

2 mounted examples of *Rhea darwini* from Patagonia ; presented by the Trustees of the late James Rowland Ward.

367 Birds from the neighbourhood of Merida, Venezuela ; purchased.

1,211 Birds, chiefly from the West Indies, including the type-specimens of *Euethia johnstonei* and *Cæreba lauræ* ; collected by Dr. Percy R. Lowe ; purchased.

#### Australasia.

The type-specimen of *Trichoglossus brooki* from Pulo Swangi, South of Tarangan Island, Aru Islands ; presented by E. J. Brook, Esq.

45 Birds from Dampier and Vulcan Islands, Northern New Guinea ; purchased.

#### Antarctica.

2 nestling specimens of *Macronectes gigantea* from the South Orkney Islands ; presented by Vere Pack, Esq.

### REPTILIA.

281 specimens were received ; 270 by presentation, 3 by purchase, 8 by exchange.

The following are the most important additions :—

44 specimens from Asia Minor ; presented by M. Henri Gadeau de Kerville.

24 snakes from Ceylon ; presented by A. F. Abercromby, Esq.

23 specimens from Siam ; presented by Dr. Malcolm Smith and C. Boden Kloss, Esq.

13 specimens from Siam, including a Sea-snake (*Distira tuberculata*) new to the collection ; presented by Dr. Malcolm Smith.

38 specimens from Sumatra, including types of two new Lizards (*Japalura robinsoni* and *Gonyocephalus klossi*); from the Robinson-Kloss Expedition to Korinchi Peak.

15 specimens from Mount Chirinda and the Chirinda Forest, Mashonaland; presented by *C. F. M. Swynnerton, Esq.*

Examples of three Lizards (*Anolis maynardi*, *A. luteosignifer*, and *A. argillaceus*), new to the collection, from the West Indies; received in exchange from the Museum of Comparative Zoölogy, Cambridge, Mass.

44 specimens from Southern Colombia, including types of a new *Ampelisbana* (*A. spurrelli*), and a new Snake (*Herpetodryas vicinus*); presented by *Dr. H. G. F. Spurrell.*

A new Lizard (*Lygosoma scharffi*), from Queensland; presented by *Dr. R. F. Scharff.*

#### BATRACHIA.

323 specimens were received, 169 by presentation, 20 by purchase, 134 by exchange.

The following may be specially noticed:—

22 specimens from Asia Minor; presented by *M. Henri Gadeau de Kerville.*

125 specimens of different tadpoles from India and Burma; received in exchange from the Indian Museum, Calcutta.

17 specimens from Siam; presented by *Dr. Malcolm Smith and C. Boden Kloss, Esq.*

32 specimens from Sumatra, including types of three new species (*Rhacophorus modestus*, *R. pæcilonotus*, *Ixalus cornutus*); from the Robinson-Kloss Expedition to Korinchi Peak.

The types of two new Frogs (*Rappia chlorostea* and *R. aylmeri*), from Sierra Leone; presented by the *Zoological Society of London.*

Frogs (*Syrnhopus campi*, from Texas, and *Hylodes dimidiatus*, from Cuba), new to the collection; received in exchange from the Museum of Comparative Zoölogy, Cambridge, Mass.

A Frog (*Hylodes cuneatus*), new to the collection, and types of a new Frog (*Geobatrachus walkeri*), from Northern Colombia; presented by *Prof. A. G. Ruthven.*

76 specimens from Southern Colombia; presented by *Dr. H. G. F. Spurrell.*

The types of a new Frog (*Hyla angiana*), from the Arfak Mountains, New Guinea; presented by *A. E. Pratt, Esq.*

#### PISCES.

The additions number 645. 578 were presented, 56 were purchased and 11 were received in exchange. The most important are:—

##### Europe.

A large Roach (*Rutilus rutilus*), from Hornsea Mere; presented by *E. Kempsey, Esq.*

A large Perch (*Perca fluviatilis*), from Newbury, and a Tench (*Tinca tinca*), from Buckinghamshire ; presented by A. P. Zerfass, Esq.

A very fine hybrid Roach and Rudd (*Rutilus rutilus* × *Scardinius erythrophthalmus*) from Doncaster ; presented by W. E. Park, Esq.

A large Crucian Carp (*Carassius carassius*) from Cheshunt ; presented by J. Andrews, Esq.

A large Bream (*Abramis brama*) from the River Wensum ; purchased.

A Pelamid (*Pelamys sarda*) from Devon ; presented by G. Todd, Esq.

#### Asia.

19 fishes from Sumatra ; from the Robinson-Kloss Expedition to Korinchi Peak.

17 fishes from Siam ; presented by C. L. Groundwater, Esq.

#### Africa.

12 fishes from the Red Sea, including the types of a new Eel (*Neenchelys microtretus*) and a new Pipe-fish (*Halicampus macro-rhynchus*) and examples of other species new to the collection ; presented by Dr. C. Crossland and Prof. W. A. Herdman F.R.S.

33 fishes from the coast of Natal, including the types of two new species (*Hoplegnathus robinsoni* and *Pseudochromis natalensis*) ; presented by Romer Robinson, Esq.

175 fishes from Sierra Leone and Cameroon, including the types of several new species ; presented by N. W. Thomas, Esq.

193 fishes from British East Africa ; presented by Lieutenant S. L. Hinde.

20 fishes from Zululand, including the types of a new species (*Barbus toppini*) ; presented by E. C. Chubb, Esq.

30 fishes from Angola, collected by the late Dr. W. J. Ansorge ; purchased.

A large mounted Characinid Fish (*Hydrocyon lineatus*) from the Zambesi ; presented by Lady Seton-Karr.

#### America.

An Ouananiche (*Salmo salar ouananiche*) from the Saguenay River ; purchased.

An Ouananiche (*Salmo salar ouananiche*) from Lake St. John ; presented by G. J. Disbarats, Esq.

16 fishes from Manaos, including 2 Cat-fishes (*Doras lithogaster* and *Piramutana piramuta*) new to the collection ; presented by Dr. A. Aiken Clark.

#### HEMICHORDATA.

A specimen of *Cephalodiscus gilchristi* from South Africa, presented by Dr. J. D. F. Gilchrist, is noteworthy for showing a massive base of attachment.

## MOLLUSCA.

The total number of acquisitions received and registered during the year is 2,467. Of these 532 were "Terra Nova" specimens, 1,761 were presented by other donors and 174 were purchased.

Attention is directed to the following noteworthy accessions:—

The type and 16 other complete specimens of *Katayama* (*Blanfordia*) *nosophora* from Japan; presented by Lieut.-Col. R. T. Leiper, M.B. (This Mollusc is suspected in connection with the transmission of Schistosomiasis = Bilharziosis).

59 exotic Gastropoda and Lamellibranchia from abyssal depths in the E. Atlantic; presented by the Irish Fishery Board.

643 shells of Palæarctic Buliminoids; presented by John H. Ponsonby, Esq.

337 freshwater Gastropoda and Lamellibranchia, presumed to be intermediate hosts of Trematodes, from the White Nile; presented by the Director of the Wellcome Tropical Research Bureau, Khartoum.

2 valves of *Tridacna gigas* weighing 250 and 233 pounds respectively; presented by Mrs. G. W. Young.

42 shells of brackish-water Gastropoda and Lamellibranchia from Lake Chilka, Orissa; purchased.

## ARACHNIDA.

The accessions number 621, of which the following should be mentioned:—

350 Arachnida from various localities, including the type of a new species of Tick (*Ixodes nairobiensis*); presented by the Imperial Bureau of Entomology.

10 parasitic Mites, including co-types of two new species, from India; presented by the Trustees of the Indian Museum, Calcutta.

20 specimens of a new parasitic mite (*Laelaps nuttalli*) found on rats at Colombo; presented by Dr. L. F. Hirst.

The type of a new Scorpion (*Charmus indicus*); presented by T. Bainbrigge Fletcher, Esq.

The type of a new Pedipalp (*Stygophrynus moultoni*) from Sarawak; presented by J. C. Moulton, Esq.

## CRUSTACEA.

The accessions number 208, of which the following are the most important:—

Syntypes of a recently described species of Copepod from Epping Forest; presented by D. J. Scourfield, Esq.

A large specimen of the common Lobster from Selsey; presented by E. Heron-Allen, Esq.



16 specimens of rare deep-sea Decapods from Irish waters ; *presented by the Department of Agriculture for Ireland.*

Syntypes of two species of Isopoda from Cape Town ; *presented by K. H. Barnard, Esq.*

90 specimens of Copepoda, including syntypes of one recently-described species, from Durban ; *presented by E. C. Chubb, Esq.*

10 specimens of a Copepod parasite (*Pennella exoceti*) of a Flying-fish from Barbadoes ; *presented by the Imperial Bureau of Entomology.*

Specimens of a Copepod (*Cancericola jamaicensis*) parasitic on a land-crab, from Jamaica ; *presented by Dr. C. B. Wilson.*

#### PYCNOGONIDA.

From the "Terra Nova" collection 303 specimens have been registered, including holotypes of eleven new species.

23 specimens from South Georgia, obtained by the late Major G. E. H. Barrett-Hamilton's Expedition, were *presented by the British Association and the Zoological Society of London,*

#### ECHINODERMA.

62 specimens from the "Terra Nova" collection have been registered, in addition to those reported last year.

#### WORMS.

79 Nemertines collected by the "Terra Nova" Expedition, including the types of two new species, were received during the year.

The total number of parasitic worms registered and incorporated was 340. The following are the most important accessions :—

39 Cestodes, representing 13 species, and including 26 co-types, from animals dying in the Zoological Society's Gardens, Regent's Park ; *presented by the Zoological Society of London.*

48 Nematodes, representing 7 species, of which several are new, from the Indian Elephant ; *presented by Major Clayton Lane, M.D., I.M.S.*

Numerous Nematodes, including the types of about a dozen new species, from various Indian animals ; *presented by Major Clayton Lane, M.D., I.M.S.*

25 specimens of a new and interesting Trematode (*Heterorchis crumenifer*) parasitic in *Protopterus*, from Lake Victoria ; *presented by the Imperial Bureau of Entomology.*

#### POLYZOA.

Mr. A. W. Waters has presented 12 specimens, including 3 co-types from various localities, chiefly from British East Africa.

*Summary of the Acquisitions in the Department of Zoology  
during 1915.*

		Donations.	Purchases.	Exchange.	Totals.
Mammalia	General Collection ...	1,936	134	2	2,072
	Osteological Collection:—				
	Anthropology ...	3	—	—	3
	Cetacea ...	14	—	—	14
	Other Mammals ...	6	1	—	7
Aves	Skins ...	3,685	2,259	53	5,997
	Eggs ...	73	—	—	73
	Nests ...	2	—	—	2
	Skeletons ...	17	—	—	17
Domesticated Animals...		6	—	—	6
Reptilia ...		270	3	8	281
Batrachia ...		169	20	134	323
Pisces ...		578	56	11	645
Tunicata ...		1	—	—	1
Hemichordata and Phoronidea ...		2	—	—	2
Mollusca	“Terra Nova” collection ...	532	—	—	2,467
	Other sources ...	1,761	174	—	
Myriopoda ...		16	—	—	16
Prototracheata ...		—	—	—	—
Arachnida ...		577	44	—	621
Crustacea ...		208	—	—	208
Pycnogonida	“Terra Nova” Collection ...	303	—	—	326
	Other sources ...	23	—	—	
Echinoderma ...		63	—	—	63
Worms	Chætopoda, &c. ...	81	—	—	81
	Parasitic Worms, &c....	340	—	—	419
	“Terra Nova” Nemertinea ...	79	—	—	
Brachiopoda ...		16	6	—	22
Polyzoa ...		18	—	1	19
Anthozoa ...		—	—	—	—
Hydrozoa ...		2	—	—	2
Porifera ...		—	—	—	—
Protozoa ...		2	—	—	2
Totals ...		10,783	2,697	209	13,689

### VI.—*Economic Zoology.*

I. Information relating to various matters connected with the War has been given to Government Departments.

#### II. MAMMALIA.

The question of Whaling in Southern waters has received a considerable amount of attention, particularly with regard to the rate of destruction of the Whales. Several communications on this subject have passed between the Colonial Office and the Trustees.

#### III. AVES.

A number of questions relating to the protection of Birds in British Colonies and Protectorates have been referred to the Trustees by the Colonial Office, and have been duly dealt with.

## IV. PISCES.

All work connected with the conservation and arrangement of the collection of Fishes may be regarded as of potential economic importance.

Several investigators engaged in work on economic problems have made use of the collection and have received assistance in their work ; among these may be mentioned Mr. G. W. Paget, of the Board of Agriculture and Fisheries, working on Herrings ; Dr. H. M. Kyle, working on Flat fishes ; and Dr. Mottram and Dr. Hammond-Smith, investigating the life-histories of Salmon and Trout.

A Report has been published on the Fishes trawled off Lagos by the Western Fisheries, Ltd., whose interest in the fishes of this region was commercial.

Among the enquiries answered and specimens determined may be mentioned :

Strips of skins of various sharks, used for covering sword-handles, were identified and their probable place of origin indicated.

Tins of Californian Sardines were examined and the specific name of the fishes contained therein was determined.

An enquiry from the Metropolitan Asylums Board as to the specific name, food-value, &c., of fishes supplied to them under a contract was answered.

An enquiry from the Colonial Office as to poisonous fishes of the West Indies was made the subject of a report.

## V. MOLLUSCA.

Information has been given to the Military Medical Commission working upon the transmission of *Bilharzia* in Egypt.

Sundry fresh-water Lamellibranchia and Gastropoda suspected of being the intermediate hosts of Trematodes have been identified for the Wellcome Bureau, Khartoum. A *Succinea* suspected of causing "itch" in bathing tanks (Tehran) and a *Corbicula* infesting water-supply (Egypt) have been reported upon, and advice and information concerning the identity, habits and reproduction of wood-boring Lamellibranchia (*Teredo* and *Xylotrya*) have been given.

## VI. ARACHNIDA.

The following injurious Arachnida were examined and reported upon.

1. A Mite (*Leiognathus morsitans*) parasitic on the domestic Fowl.

2. A Mite, the "Harvest Bug" (larval form of *Microtrombidium pusillum*), attacking human beings at Ventnor.

3. The Tsutsugamushi (Mite)—*Microtrombidium akamushi*—carrier of Kedani or River Fever in Japan.

4. Information given to the Military Authorities on the life-history of the Itch Mite (*Sarcoptes scabiei*).

5. Ticks (*Dermacentor reticulatus* and *Ixodes ricinus*) biting human beings in Devonshire.

6. A mite (*Rhizoglyphus echinopus*), damaging tubers of an exotic Aroid (*Sauromatum guttatum*).

## VII. CRUSTACEA.

A report on Copepod parasites of Flying Fish has been supplied to the Imperial Bureau of Entomology.

Information has been given to correspondents relating to the invasion of a house at Hastings by Sandhoppers.

## VIII. PARASITIC WORMS.

Parasitic worms and other organisms affecting man and domestic or other animals of economic importance have been determined for the following :—

The Imperial Bureau of Entomology (for a correspondent in Northern Nigeria, and for the Government Economic Biologist in British Guiana).

The Military Hospital, Tooting. In this case the parasite was a leech taken from the nasal cavities of a soldier who had been in the Gallipoli Peninsula ; advice was given with a view to the prevention of such cases.

Various Entozoa and other worms have been determined for private individuals, and information has been given regarding them.

### VII.—*Students and Visitors.*

The number of visits paid to the Zoological Department during the year 1915 by students and other persons requiring assistance or information amounted to 8,020. This number includes the visits paid by Students holding tickets entitling them to do special work in the Exhibition Galleries.

In the 10 previous years the numbers were as follows. From 1905 to 1912 inclusive, the present Department of Entomology was included in the Department of Zoology :—

9,235	in the year	1914.
9,982	”	1913.
12,564	”	1912.
12,175	”	1911.
12,443	”	1910.
11,461	”	1909.
10,220	”	1908.
11,043	”	1907.
10,813	”	1906.
11,811	”	1905.

*Sidney F. Harmer.*

## DEPARTMENT OF ENTOMOLOGY.

I.—*Arrangement and Conservation.*

*Exhibition Series.*—The only change to record in the Exhibition Series is the addition of a cabinet of specimens illustrating the various kinds of flies which serve for food to Trout and Grayling. The collection was presented by Mr. Martin S. Mosely and is displayed in a series of small glass cells, accompanied by figures and explanatory labels and by a series of artificial flies, as used by anglers, for comparison.

*Study Series.*—In the **Coleoptera**, a large series of undetermined Australian Rhynchophora and Phytophaga (Eumolpidæ) was sent to Mr. Arthur Lea for identification, and on their return by him incorporated in the general collection. The important named series of Pselaphidæ and Scydmonidæ in the Sharp and Lewis Collections have been incorporated, as well as the Japanese Erotylidæ and Endomychidæ, while a considerable part of the general collection of Endomychidæ has been transferred and re-arranged, the African genera worked out and many new species described. The new species of Rutelidæ from all parts of the Indian Empire have been described and numerous types acquired by this means. The Bostrichidæ have also been re-arranged.

In the **Hymenoptera**, the arrangement of the Apidæ has been continued, the sub-family Bombinæ completed, and much progress made with the Andreninæ. Mr. Turner, as in former years, has continued voluntarily to devote a great deal of his time to working out the collections, especially those formed by himself in Australia and Tasmania. Considerable collections of Heterogyna, named by specialists, have been received and incorporated, the most important being from Australia and S. Africa. The collection has continued to benefit very much by the help of specialists, loans of specimens having been sent to the Rev. F. D. Morice, Woking, and Mr. S. A. Rohwer, Washington (Tenthredinidæ) to Prof. T. D. A. Cockerell, Colorado, and Dr. Franklin, Massachusetts (Apidæ). Mr. Claude Morley has completed the revision of the sub-families Ichneumonidæ and Cryptinæ, while Mr. Waterston of the Imperial Bureau of Entomology has continued work on the family Chalcididæ.

The collection of **Anoplura** and **Mallophaga** continues to grow rapidly, several hundreds of microscopic slide preparations having been made. The general collection has been removed to slide boxes arranged on a system which will allow of a rapid expansion, while the historic Denny Collection has been housed in a special slide cabinet. A long report is in the Press on a collection of these ectoparasites received from animals in the Zoological Gardens.

In the **Orthoptera** and **Neuroptera** a considerable number of accessions have been dealt with and many small collections named and incorporated.

In the **Rhynchota** the enumeration and description of the large collection of Homoptera made in the Seychelle Islands by the Percy Sladen Trust Expedition have been completed, but owing to the war the report has not yet been published. The revision and re-arrangement of the Membracidæ has been begun, and large collections of Homoptera from India have been worked out and new species described, the types of which, as a rule, remain in the British Museum. The re-arrangement of the important economic families of Aphidæ and Coccidæ has also been commenced.

In the **Lepidoptera** the re-arrangement of the Moths of the sub-family Arctianæ and the family Agaristidæ have been completed; also the sub-family Pyralinæ of the Pyralidæ. The MS. of Volume II. of the Supplement to the Catalogue of Moths has been completed and most of the plates drawn, and the preparation of the MS. on the sub-family Noctuinæ of the Noctuidæ nearly completed.

In the **Tineina**, the determination and arrangement of unincorporated material has been continued, and the concluding parts of the Lepidoptera of the *Biologia Centrali-America* have been published during the year.

The Henry Doubleday Collections of British and European Lepidoptera were transferred without injury from the Bethnal Green Museum to the British Museum (*Nat. Hist.*) on 12th August 1915.

In the **Diptera**, the collection made by Mr. A. F. R. Wollaston in Dutch New Guinea and numerous and extensive collections of mosquitoes from India, Hong Kong, Sarawak, Natal, Sierra Leone, and elsewhere have been worked out and incorporated; a large collection of Tabanidæ made by Mr. S. A. Neave in Nyassaland, and determined by him, has also been incorporated. Prof. M. Bezzi's work on Ethiopian Syrphidæ has been published and the collections belonging to the Imperial Bureau of Entomology with which it deals have been presented to the Museum, and incorporated together with numerous recent accessions of African Syrphidæ. The arrangement of the British species of Simulidæ and Chironomidæ has been completed and the results of a study of the adults of the former family published. A number of undetermined Empididæ have been submitted to Mr. J. E. Collin, Newmarket, and of Oriental Bombylidæ to Mr. E. Brunetti, Calcutta, for identification.

Several papers dealing with the collection have been published during the year.

#### IMPERIAL BUREAU OF ENTOMOLOGY.

The Entomological Department has continued to benefit greatly by the accession of specimens presented by the Imperial Bureau of Entomology. Most of the specimens were already named, or if new, described before being presented by it, and in this way the Department secured a considerable number of valuable types.

II.—*Duplicates and Exchanges.*(a) *Duplicates.*

Duplicates have been presented to the following institution:—

The Public Museum, Sheffield. Duplicates have also been presented to the following gentlemen who have rendered service by naming specimens:—Prof. Chr. Aurivillius, Prof. T. D. A. Cockerell, Mr. H. J. Franklin, Mr. A. M. Lea, and the Rev. F. D. Morice.

(b) *Exchanges.*

Exchanges have been made with the following museums and individuals:—

Hope Department, University Museum, Oxford; and with the Rev. Dexter Allen, Mr. H. Arnold, Mr. G. T. Bethune Baker, M. A. Bourgoïn, Mr. E. Brunetti, Dr. R. Hamlyn Harris, M. Pierre Lesne, Mr. J. R. Mallock, Mr. Mark Pallis, Lord Rothschild, Dr. A. von Schultess, and Mr. C. B. Williams.

III.—*Departmental Library.*

The Library has continued to be worked in conjunction with that of the Zoological Department, and particulars in reference to it will be found included under the corresponding head, in the return made by the Keeper of Zoology.

IV.—*Publications.*

In addition to the official publications issued by the Trustees (see pp. 60-62), several papers and reports have been prepared in connection with different branches of the collection and have been published in scientific journals.

V.—*Acquisitions.*

The number of specimens added to the Insect Collection during the year is 60,282, made up as shown in the following table:—

	Donations.	Purchases.	Exchanges.	Totals.
Coleoptera - - -	14,032	—	33	14,065
Lepidoptera - - -	19,948	120	42	20,110
Hymenoptera - - -	4,938	—	45	4,983
Diptera - - -	6,212	32	201	6,445
Rhynchota - - -	2,304	3,325	—	5,629
Orthoptera - - -	501	5,769	14	6,284
Neuroptera - - -	658	406	—	1,064
Other Orders - - -	649	10	16	675
Larvæ, Pupæ, &c. - -	1,027	—	—	1,027
Totals - - -	50,269	9,662	351	60,282

The most important of these accessions are the following, from various localities :—

13,051 specimens of all orders presented by the Imperial Bureau of Entomology.

13,251 Lepidoptera Rhopalocera, including 205 types ; *presented by F. Du Cane Godman, Esq., D.C.L., F.R.S.*

7,003 Coleoptera ; *presented by George Lewis, Esq.*

1,297 specimens of various orders ; *presented by the Hon. N. C. Rothschild.*

The fifth instalment of the Distant Collection, containing 3,325 Rhynchota, 1,269 Orthoptera, 406 Neuroptera and Odonata.

The first instalment of the Burr Collection of Dermaptera, containing 4,500 specimens, including 55 types and 390 co-types.

### Europe.

831 specimens of British Diptera ; *presented by F. W. Edwards, Esq.*

570 Coleoptera and Rhynchota from France ; *presented by H. B. Preston, Esq.*

### Australia.

889 Hymenoptera, mainly from Queensland ; *presented by R. E. Turner, Esq.*

489 Coleoptera, including many co-types ; *presented by Arthur Lea, Esq.*

### S. America.

640 Lepidoptera from Ecuador and Colombia ; *presented by M. Paul Dognin.*

## VI.—*Economic Entomology.*

The work of the Department in Economic Entomology has been carried on with the assistance of Mr. C. A. Ealand, whose services as a specialist in that branch have again been engaged during the year.

The arrangement of the Economic Series has been completed, and extensive accessions have been incorporated during the year, the chief being presented by the Imperial Bureau of Entomology. Many thousand references have been added to the card index.

The exhibit illustrating the Army Biscuit Enquiry has been relabelled and re-exhibited in the Central Hall at the request of the War Office.

Enquiries on matters of interest have continued to come in from various parts of the country. Amongst the subjects on which information or advice have been sought, and as far as possible given, the following may be mentioned :—

### DIPTERA (FLIES).

- (1) Warbles caused by *Hypoderma* sp. on horses in an army remount station.



- (2) Leather jackets (*Tipula* spp.) damaging flowers in a garden.
- (3) Chrysanthemum leaves ruined by *Spilograpta zoe*, *Phytomyza albiceps*. and *Agromyza flavicola*.
- (4) Various enquiries as to how to prevent mosquitoes breeding in small ponds and water butts.
- (5) *Cecidomyia pyri* rolling the leaves of pear trees.
- (6) *Sciara tritici* Coq. seriously damaging orchids in Yorkshire.
- (7) Leaves of Henbane ruined by larvæ of *Pegomyia hyoscyami*.
- (8) *Æstrus ovis* from North Patagonia (through the Secretary of the Board of Agriculture).
- (9) Enquiries from the trenches regarding mosquitoes and the likelihood of their transmitting malaria.
- (10) Plagues of flies (*Limnophora septemnotata*) in houses.
- (11) Many enquiries regarding houseflies, their breeding places, and how to get rid of them.

#### COLEOPTERA (BEETLES).

- (12) *Dermestes lardarius* and *Ptinus tectus* damaging books and papers in a house.
- (13) *Niptus hololeucus* increasing yearly in a house in such numbers as to become a perfect pest.
- (14) *Sitodrepa panicea* boring into and ruining packets of soups in a shop. (From a Medical Officer of Health.) Also damaging biscuits at Reading.
- (15) *Plinthus caliginosus* Fabr. damaging the roots of hops and now attacking the leaves. (From Prof. F. V. Theobald.)
- (16) *Lyctus brunneus* destroying Italian walnut and oak.

#### LEPIDOPTERA (MOTHS).

- (17) Magpie Moth (*Abraxas grossulariata*) defoliating Gooseberry and Currant plants.
- (18) *Orgyia antiqua*, the caterpillars causing an irritation and rash when they fall off the trees on to the skin.
- (19) Moths damaging the coverings of balloons.
- (20) The Cotton Worm (*Alabama argillacea*) attacking cotton to such an extent in Montserrat that the correspondent seriously thought of giving up the plantation.
- (21) *Oinophila v-flava* damaging wine corks.
- (22) *Myelois phœnicis* Drnt. bred from dates in Algeria, and from dates purchased in London; dates infested by larvæ, probably of this species, received from France, and information received of its occurrence at Putney.
- (23) *Plodia interpunctella* Hb. damaging split peas in barrel on board H.M.S. "Cornwall."
- (24) Two enquiries regarding *Ephestia kihniella* Z. infesting packets of barley and patent food.
- (25) *Ephestia elutella* Hb. damaging cocoa beans.
- (26) *Corecyra cephalonica* Stn. infesting chocolate crackers, &c., in the United States.

## ORTHOPTERA AND ANOPLURA.

- (27) Repeated enquiries regarding remedies for cockroaches—the common Cockroach (*Blatta orientalis*) and the German Cockroach (*Phyllodromia germanica*)—both in private houses and in hospitals.
- (28) A full report on the most approved methods of dealing with locusts sent to a correspondent in British Columbia.
- (29) Information supplied regarding body vermin to private enquirers and to the authorities at New Scotland Yard. A visit was also paid to a military hospital in which Pediculosis had broken out, and advice given on the best means of eradicating it.

## MISCELLANEOUS.

- (30) *Clothilla* sp. damaging artificial silk used in insulating electric cables—conditions under which it could live and breed.
- (31) The Bed Bug (*Cimex lectularius*) infesting a house.
- (32) *Lepisma saccharina*, a perfect plague in a house.
- (33) Larvæ of *Emphytus cinctus* destroying roses in Surrey.
- (34) Larvæ of Gooseberry Sawfly (*Nematus ribesii*) defoliating gooseberries and currants in Anglesea.
- (35) How to get rid of bees which had taken up their abode between the ceiling and the floor of the room above.
- (36) Information wanted regarding various species of Greenfly (Aphidæ).

VII.—*Students and Visitors.*

The number of visits paid to the department during the year by students and other persons seeking information or assistance was 3,354.

*C. J. Gahan.*

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## DEPARTMENT OF GEOLOGY.

I.—*Arrangement and Conservation.*

*Mammalia* (Galleries 1 and 2).—The Palæolithic implements exhibited in table-case 1A have been retablated with new printed labels. The unexhibited flint implements have also been re-arranged in drawers.

A skeleton of the extinct wolf, *Canis dirus*, from the asphalt of Rancho La Brea, California, has been prepared for mounting.

The newly-acquired horn of *Rhinoceros antiquitatis* from Siberia has been mounted on a corresponding skull in pier-case 6.

A partially restored skeleton of the Oligocene American Camel, *Stenomylus hitchcocki*, has been mounted and exhibited in pier-case 13.

Pier-case 18, containing British Pleistocene remains of *Bos*, has been cleaned and re-arranged, and numerous specimens have been mounted on stands.

The labelling and arrangement of the remains of Rodentia exhibited in table-case 16 have been completed.

The unexhibited remains of Australian Marsupialia have been examined, re-arranged and labelled in the drawers of table-case 14.

Progress has been made with the preparation of an imperfect skeleton of *Elephas antiquus* from Chatham, Kent. Numerous mammalian remains from the Lower Tertiary formations of Baluchistan have also been prepared for study.

A revision of the unexhibited Mammalian remains in the basement store-rooms has been completed.

Number of specimens of *Mammalia* registered, 1,206.

*Aves* (Gallery 2).—Two specimens of the pelvis of *Æpyornis hildebrandti* have been mounted for exhibition in wall-case 25.

The unexhibited collection of remains of *Æpyornis*, from Madagascar, has been arranged, labelled, and indexed in the drawers of table-case 12A. Part of the unexhibited collection of *Dinornis* from New Zealand has also been arranged and labelled in drawers of the same table-case.

The unexhibited Tertiary bird-remains from Patagonia have been arranged, labelled, and indexed in the drawers of table-case 13. Progress has also been made with the arrangement and labelling of the European Tertiary bird-remains in the drawers of the same table-case.

The unexhibited collection of Pleistocene bird-remains from the Chatham Islands has been arranged and labelled in the drawers of table-case 13A.

Number of specimens of *Aves* registered, 458.

*Reptilia and Batrachia* (Galleries 3, 4, 5, 11).—Progress has been made with the preparation of Triassic Reptiles from South Africa and Cretaceous Reptiles from Alberta, Canada.

Number of specimens of *Reptilia and Batrachia* registered, 315.

*Pisces* (Gallery 6).—Some skulls of *Hybodus basanus*, from the Wealden of Pevensey Bay, Sussex (Beckles coll.), have been prepared for study and exhibition.

Four slabs of Upper Old Red Sandstone from Dura Den, Fifeshire, showing remains of Crossopterygian and other fishes, have been prepared for study and exhibition, and provided with mahogany frames.

Wall-cases 8, 9, have been cleaned and re-arranged, and refitted to admit new specimens of *Lepidotus*. The unexhibited remains of *Lepidotus* in the drawers of table-case 16, have also been examined and re-arranged.

The branchial apparatus of *Leedsia problematica*, from the Oxford Clay of Peterborough (Leeds coll.), has been mounted for study and exhibition.

Numerous slabs of fossil fishes have been mounted in mahogany frames.

Number of specimens of Pisces registered, 296.

*Mollusca* (Galleries 7 and 8, and Workroom).—The Cephalopoda registered, labelled and incorporated include:—Ordovician Nautiloidea from Scotland (Wm. McPherson coll.); Ammonoidea and Nautiloidea mostly from the Devonian of Devon (A. Champernowne coll.); Devonian Nautiloidea from the Eifel, Germany (S. Dohm coll.); Carboniferous Ammonoidea and Nautiloidea from Yorkshire (J. F. Blake coll.), and Scotland (R. Dunlop coll.); English Liassic Ammonites (J. F. Blake, T. Hunter, L. Richardson and T. J. Slatter colls.); Ammonoidea from the Gault of Kent, Surrey and Sussex (G. E. Dibley, S. C. Tinne, and A. S. Woodward colls.); Upper Cretaceous Ammonoidea and Nautiloidea from Hertfordshire, Lincolnshire and Norfolk (W. Hill coll.); Ammonoidea and Nautiloidea from the Upper Cretaceous of Zululand described by G. C. Crick in the 3rd Report of the Geological Survey of Natal and Zululand, 1907 (W. Anderson coll.); opalised Belemnites from New South Wales (L. A. Lawrence coll.); and a Nautilus from the Barton Cliff, Hampshire (H. Eliot Walton coll.).

A large Carboniferous Nautiloid from Belgium, and two Devonian Nautiloids from Germany have been mounted on blocks in Wall-case 1; and the Carboniferous and Devonian Nautiloids in this case and in the glass case adjoining have been rearranged.

A Cretaceous Nautilus from Kent, one from Saxony, three Cretaceous Nautili from Zululand, and a Nautilus from the Eocene of Belgium have been mounted on blocks in Wall-case 2.

A large British Chalk Ammonite has been added to the glass case between Wall-cases 3 and 4. A Cretaceous Ammonite from Westphalia and two Cretaceous Ammonites from Zululand have been mounted on blocks in Wall-case 4.

A small glass case for two British Chalk Ammonites has been fixed between Wall-cases 4 and 5, and a well-preserved Greensand Ammonite has been placed in the case beneath.

A fine example of *Plesioteuthis prisca* from the Lithographic Stone, Bavaria (described by G. C. Crick in Proc. Malac. Soc., 1915), has been framed and added to Wall-case 7.

A small glass case has been fitted between Wall-cases 10 and 11 for the exhibition of two fine British Inferior Oolite Ammonites.

One section of Wall-case 11 containing Liassic Ammonites has been cleaned, and all the specimens have been re-arranged and relabelled.

A slab of Lower Lias Limestone with Ammonites has been mounted on a block and placed on the top of Wall-case 12.

The Ordovician Nautiloids in Wall-case 14 have been re-arranged, and representatives of four additional genera added.

Further progress has been made with the revision of the whole of the Museum collection of British Lias Ammonites, and with the labelling of the selection prepared for exhibition.

The slip-catalogue of type, figured, and historical specimens of Cephalopoda has been continued.

Palæozoic Gastropoda and Lamellibranchia registered, labelled, and mostly incorporated include:—Ordovician Gastropoda and Lamellibranchia from North Wales (T. Ruddy coll.); Silurian Lamellibranchia from Scotland (W. McPherson coll.); Devonian Gastropoda and Lamellibranchia from the Eifel, Germany (S. Dohm coll.); Gastropoda and Lamellibranchia from the Carboniferous Limestone of Derbyshire (F. A. Bather coll.); Carboniferous Gastropoda and Lamellibranchia from Scotland (J. Bennie and R. Dunlop colls.); Gastropoda and Lamellibranchia from the Lower Carboniferous of Missouri, U.S.A. (D. K. Greger coll.); and Permian Gastropoda and Lamellibranchia from the Malay Peninsula (J. B. Scrivenor coll.).

The unexhibited specimens of Foreign Palæozoic Gastropoda and Lamellibranchia have been transferred from Gallery 8 to drawers in a new cabinet in the back corridor, and the British Carboniferous Gastropoda and Lamellibranchia have been transferred from drawers in the Workroom to drawers beneath the upright cases A 6 and A 7 in Gallery 8.

Progress has been made in the identification and relabelling of the Klipstein collection of Triassic Mollusca from St. Cassian in the Tyrol.

The slip-catalogues of type, figured, and historical specimens of Palæozoic Lamellibranchia and Gastropoda have been continued. Slip-catalogues of the exhibited collections have also been prepared.

The Mesozoic and Tertiary Gastropoda and Lamellibranchia registered, labelled, and incorporated, include:—Upper Cretaceous (Danian) Mollusca from Denmark (Pindborg coll.); and British Lower Cretaceous shells (Aptian) from Great Chart near Ashford, collected by Prof. J. W. Gregory and noticed by him in the Geol. Mag. 1895.

A series of Tertiary non-marine Mollusca from European continental localities has been arranged for exhibition in an upright case in the centre of Gallery 8. A slip-catalogue has been prepared

both for this and the remainder of the same collection, which has been arranged in drawers.

Progress has also been made in the arrangement of drawers of French and Italian Tertiary Mollusca in the cabinets in the Work-room.

Cretaceous and Tertiary Mollusca from Angola and British East Africa have been examined for determination and cataloguing; and Pliocene Mollusca from Lenham (Kent) and the bed of the North Sea, have also been determined and catalogued.

Number of Mollusca registered:—Cephalopoda, 683; Gastropoda, 376; Lamellibranchia, 360. Total, 1,419.

*Arthropoda* (Gallery 8 and Workroom).—The acquisitions registered, labelled, and incorporated include:—Ordovician Ostracoda and Trilobita from Wales and Shropshire (T. Ruddy coll.); Silurian and Devonian Trilobita from Britain and Germany (Champernowne coll.); Cirripedia from the Cretaceous of Bohemia (Fritsch coll.), Denmark (Br. Nielsen coll. and Copenhagen University), and England, and from the Miocene of Italy; Oligocene Insecta from the Isle of Wight (A'Court Smith coll.); and Crustacea from the Red Crag (A. Bell and A. S. Kennard colls.)

The revision of the old collection of Cirripedia has been continued, and several Cretaceous and Tertiary specimens have been mounted for exhibition. Thin sections of various fossil Arthropod shells have been cut to determine the affinities of some Palæozoic fossils referred to Cirripedes.

Among other additions to the exhibited collection are a reproduction of *Arthropleura moyseyi* and several Cambrian trilobites.

The mounting of the collection of amber inclusions has been completed, as also has that of the gum-copal inclusions, except some recent acquisitions.

The slip-catalogue of exhibited specimens has been continued.

Number of specimens of Arthropoda registered, 2,269.

*Echinoderma* (Gallery 8).—The acquisitions registered, labelled, and incorporated, include:—Ordovician Cystidea, Crinoidea, and Asteroidea from Wales (T. Ruddy coll.); squeezes of Devonian Crinoidea from Germany (made by W. E. Schmidt) and of Asteroidea (made by F. Schoendorf); Blastoidea from the Carboniferous of Valcour Id. (Hudson coll.) and of Missouri (Greger coll.); Lias Crinoidea from the West of England (L. Richardson coll.); Jurassic Echinoidea and Crinoidea from Cutch; and Cretaceous Echinoidea and Crinoidea from Bohemia (A. Fritsch coll.)

An incomplete set of the plaster casts of Echinoids made by L. Agassiz (presented by the Geological Society) has been checked by his "Catalogus Ectyporum" and labelled accordingly.

New Edrioasteroidea have been mounted for exhibition with enlarged drawings. A group of the Liassic crinoid, *Pentacrinus*, attached to a piece of wood, has also been exhibited.

The slip-catalogue of exhibited specimens has been continued, and that of specimens of Blastoidea has been brought up to date.

Progress has also been made with the slip-catalogue of genera and species of the Cystidea and Edrioasteroidea.

Number of specimens of Echinoderma registered :—Echinoidea, 52 ; Stelliformia, 52 ; Crinoidea, 627 ; Blastoidea, 45 ; Cystidea and Edrioasteroidea, 138. Total, 914.

*Annelida* (Gallery 8 and Workroom).—The acquisitions registered, labelled, and incorporated include :—Specimens from the Ordovician of Wales (T. Ruddy coll.) ; Jurassic of W. England (L. Richardson coll.) and of Cutch ; Cretaceous of Bohemia (Fritsch coll.) ; and Red Crag of Essex (A. Bell coll.).

Number of specimens of Annelida registered, 143.

*Brachiopoda* (Gallery 8 and Workroom).—The acquisitions registered, labelled, and incorporated include specimens from the Ordovician of Wales (T. Ruddy coll.), Devonian of Germany (S. Dohm coll.), and the Upper Cretaceous of Denmark (Pindborg coll.).

Number of specimens of Brachiopoda registered, 820.

*Polyzoa* (Gallery 8 and Workroom).—Progress has been made in preparing, mounting, and registering Cretaceous Polyzoa as a preliminary to cataloguing. Ordovician Polyzoa from North Wales (T. Ruddy coll.) have also been registered and incorporated, and numerous Palæozoic Polyzoa originally included among Corals have been removed to the cabinets of Polyzoa.

Number of specimens of Polyzoa registered, 653.

*Anthozoa and Hydrozoa* (Gallery 10 and Workroom).—The revision of the Carboniferous Corals has been continued, and 137 specimens have been cut, including many thin sections. To make space for this collection in gallery 10, the unexhibited Ordovician and Silurian Corals have been removed to cabinets in the Workroom. The Ruddy collection of Ordovician Corals from North Wales has been registered and incorporated.

Number of specimens of Anthozoa and Hydrozoa registered, 278.

*Porifera* (Gallery 10).—Ordovician Sponges from North Wales (T. Ruddy coll.) have been registered and incorporated.

Number of specimens of Porifera registered, 16.

*Protozoa* (Gallery 10).—The William Hill collection of thin sections of Chalk has been placed in a slide cabinet in the Workroom. Eocene Foraminifera from Nigeria (Parkinson coll.) have also been registered and incorporated.

Number of specimens of Protozoa registered, 23.

*Plantæ* (Gallery 10).—A selection of the catalogued remains of Cretaceous plants has been tableted and labelled for exhibition in table-case 19 ; and the catalogued microscope-slides have been labelled and arranged in a cabinet in the Workroom.

Numerous microscope-sections of Cretaceous woods have been prepared.

Number of specimens of Plantæ registered, 48.

## II.—*Duplicates and Exchanges.*

Duplicate fossils and plaster casts of fossils have been presented to the National Museum of Wales and the Cheltenham Museum; also (in return for services rendered to the Department of Geology) to the Sedgwick Museum (Cambridge), Maidstone Museum, Peabody Museum (Yale University), Prof. A. G. Nathorst, Dr. Marie C. Stopes, and Dr. E. Curwen.

Exchanges of duplicate fossils have been made with the Royal Agricultural College, Cirencester, and with Mr. W. E. Crane.

## III.—*Departmental Library.*

The additions to the Library which have been registered, stamped, catalogued, and press-marked, comprise 131 new works and pamphlets, of which 16 were purchased and 115 presented; 296 parts of serials in progress, of which 103 were purchased and 193 presented. 35 sheets of maps were acquired, 9 by purchase and 26 presented. 4 photographs were presented. 19 volumes and pamphlets were obtained by transfer from other Departments. 169 volumes have been bound, press-marked, and returned to the shelves. 1,168 visits were made to the Library by students and others.

## IV.—*Publications.*

The second part of the Catalogue of Cretaceous Plants has been published.

A Guide Book to the Fossil Remains of Man has been published.

## V.—*Acquisitions.*

### A.—*By Donation.*

Among numerous donations the following may be enumerated :—

*Mammalia*.—A cervical vertebra of *Zeuglodon* from the Barton Clay, Barton, Hampshire, described and figured in *Quart. Journ. Geol. Soc.*, vol. lxxiii (1907), p. 124. *H. Eliot Walton, Esq.*

Remains of a Zeuglodont from an Eocene formation in a cutting on the Port Harcourt Railway, Omobialla district, Southern Nigeria. *Sir Frederick Lugard, G.C.M.G.*

A nearly complete skeleton of a Beaver from Wicken Fen, Cambridge. *E. B. Williams, Esq.*

Specimens, chiefly limb-bones, of *Anaglochis* and other Ruminants from the Pleistocene cave-deposits of Crete. *Miss D. M. A. Bate.*

A collection of remains of Vertebrata from rock-fissures in the Balearic Isles, obtained by Miss D. M. A. Bate, namely about 40 limb-bones of *Myotragus balearicus* from Majorca, and 1 skull, 10 portions of skulls, 9 mandibular rami, 12 vertebræ and various other bones of *Myotragus* from Minorca. *The Percy Sladen Memorial Trustees.*

A collection of remains from Pleistocene Gravel at Piltdown, Sussex, including the nasal bones, part of a turbinal, and the right



lower canine tooth of *Eoanthropus dawsoni*; a bone implement; a Palæolithic flint implement; 2 Eoliths; a lower incisor and fragment of mandible of *Castor*; portions of molars of *Stegodon* and *Mastodon*; portions of 2 teeth of *Rhinoceros*; and 4 rock-specimens. Described by the donor and Dr. A. S. Woodward in Quart. Journ. Geol. Soc., vols. lxx., lxxi. (1914-5). *Charles Dawson, Esq.*

Plaster casts of restored models of skull and mandible of *Pithecanthropus* and *Eoanthropus*, with casts of brain cavity of the same. Plaster casts of bust-restorations of *Pithecanthropus*, *Eoanthropus*, Neanderthal Man, and Man of Cro Magnon. *Prof. Henry Fairfield Osborn.*

The greater part of a skeleton of *Elephas antiquus* from Frindsbury Hill, Chatham, Kent. *War Office.*

*Reptilia.*—The hinder portion of a mandibular ramus, the type-specimen of *Labyrinthodon lavisii*, H. G. Seeley, Quart. Journ. Geol. Soc., vol. xxxii. (1876), p. 278, pl. xix., with associated fragments, from the Trias of Sidmouth, Devonshire. *The family of the late H. J. Johnston-Lavis, Esq., M.D.*

A fossil Turtle from the Upper Greensand of Melbury Down, near Shaftesbury, Dorset. *Clarence E. Rutter, Esq.*

Portions of carapace and about 15 limb-bones of *Testudo gymnesica* from Minorca, described in Geol. Mag., 1914, pp. 100-107, obtained by Miss D. M. A. Bate from rock-fissures in the Balearic Isles. *The Percy Sladen Memorial Trustees.*

*Pisces.*—Slabs of Old Red Sandstone from Dura Den, Fifeshire, with Fossil Fishes (including *Phyllolepis*, *Gyroptychius*, &c.). *The British Association per Dr. John Horne, F.R.S.*

Selachian teeth and *Cœlorhynchus* from an Eocene formation in a cutting on the Port Harcourt Railway, Omobialla district, Southern Nigeria. *Sir Frederick Lugard, G.C.M.G.*

12 Selachian teeth and 1 fragment of *Cœlorhynchus* from an Eocene formation in a cutting on the Port Harcourt Railway, Omobialla district, Southern Nigeria. *E. M. Bland, Esq.*

*Mollusca.*—A collection of fossils from the Malay Peninsula, including Carboniferous Cephalopoda, Permian Cephalopoda and Scaphopoda, and Triassic Mollusca; recorded in the donor's memoir on "The Geology and Mining Industries of Ulu Pahang, &c." (1911); also three portions of Jurassic Ammonites from Borneo. *J. B. Scrivenor, Esq.*

10 Upper Jurassic Ammonites from Kukatta, Juba River, British East Africa; and a rock-specimen containing Belemnites from Serenli, Juba River, British East Africa. *John Parkinson, Esq.*

38 Ammonites and 12 other Molluscs from the Lower Gault, Wreclesham, near Farnham. *Lieut. S. C. Tinne.*

An opalised Belemnite and an opalised Bivalve from the Upper Cretaceous of New South Wales. *Dr. L. A. Lawrence.*

Upper Cretaceous and Eocene Mollusca from Portuguese East Africa. *E. O. Thiele, Esq., and R. C. Wilson, Esq.*

Mollusca from an Eocene formation in a cutting on the Port Harcourt Railway, Omobialla district, Southern Nigeria. *Sir Frederick Lugard, G.C.M.G.*

72 Gastropoda, 4 Scaphopoda, and 105 Lamellibranchs from the Tertiary rocks of New Zealand. *Director of the Geological Survey of New Zealand.*

About 500 Tertiary fossils, chiefly Mollusca, collected by the donor in Colombia, South America. *Beeby Thompson, Esq.*

A small piece of Pliocene shell-limestone dredged by Capt. Wood from the sea-bottom, about 80-100 miles E.N.E. of Aberdeen. *R. W. Thomson, Esq.*

50 Gastropods and 10 Lamellibranchs from the Upper Pliocene of Corfu, Greece. *Count John Sordina.*

About 50 late Tertiary non-marine Mollusca, collected by the donor in British East Africa, noticed by R. B. Newton, *Abstr. Proc. Geol. Soc.*, No. 980 (1915), pp. 6-8. *John Parkinson, Esq.*

45 Post-Pliocene shells from the Cape Verde Islands. *Walter Child, Esq.*

26 non-marine Gastropoda from cavern deposits in the Balearic Isles. *Miss D. M. A. Bate.*

*Arthropoda.*—A *Caryocaris* from the Skiddaw Slates. *John Postlethwaite, Esq.*

2 Trilobites from the Lower Carboniferous of Missouri. *Dr. D. K. Greger.*

50 remains of Crabs from the Crag, Suffolk. *A. S. Kennard, Esq.*

*Echinoderma.*—60 Blastoids and 78 Crinoids from the Lower Carboniferous of Missouri, U.S.A. *Dr. D. K. Greger.*

A piece of Palæozoic siliceous rock, containing *Fusulina* and Crinoidal remains, &c., from South Portuguese Timor. *F. W. Moon, Esq.*

2 Crinoids (*Tribrachiocrinus*) from the Permo-Carboniferous, Upper Marine Series, of Gerringong, co. Camden, N.S.W. *C. T. Trechmann, Esq.*

12 Echinoid and 27 Crinoid remains from the Jurassic of Cutch. *Director of the Geological Survey of India.*

Eocene Echinoids from Portuguese East Africa. *E. O. Thiele, Esq., and R. C. Wilson, Esq.*

*Brachiopoda.*—14 Brachiopoda, probably Permo-Triassic, from Warepa and other localities in New Zealand. *D. G. Lillie, Esq.*

187 Brachiopoda from the Tertiary rocks of New Zealand. *Director of Geological Survey of New Zealand.*

*Polyzoa.*—A piece of Polyzoa-bearing rock from the Lower Greensand near Shanklin, I. of W. *Ll. Treacher, Esq.*

100 Polyzoa from the Chalk of Sompting, Sussex. *T. H. Withers, Esq.*

145 Polyzoa from the Chalk of Sussex. *C. T. A. Gaster, Esq.*

*Vermes*.—9 Annelids from the Jurassic of Cutch. *Director of the Geological Survey of India.*

3 opercula of *Serpula heptagona* from the Barton Beds of Barton. *H. Eliot Walton, Esq.*

*Cœlentera*.—38 Graptolites from the Skiddaw Slates. *John Postlethwaite, Esq.*

The type-specimen and a figured specimen of the Stromatoporeid *Labechia rotunda*, from the Wenlock Limestone, Much Wenlock, described and figured by the donor in *Geol. Mag.*, 1915, p. 433, pl. xv. *Miss Mary S. Johnston.*

25 British Carboniferous Corals. *Stanley Smith, Esq., D.Sc.*

*Protozoa*.—Eocene Foraminifera from Portuguese East Africa. *E. O. Thiele, Esq., and R. C. Wilson, Esq.*

*Plantæ*.—A slab with leaves of a fern (*Pecopteris*) from the Jurassic Mataura Series at Curio Bay near Waikawa, South Head, South I., N. Zealand. *Lady Campbell.*

A fossil Cycad and fragment of a second specimen from Portland. *President and Council of the Royal Botanic Society.*

4 type-specimens of fossil wood from the Lower Greensand of the I. of Wight, namely, *Sequoia giganteoides*, *Cupressinoxylon lucombense*, *Podocarpoxyylon gothani* and *Vectia lucombensis*; also two specimens of *Cupressinoxylon vectense* from the Lower Greensand of the I. of Wight. *Dr. Marie C. Stopes.*

3 type-specimens of fossil wood from the Lower Greensand, Maidstone, namely, *Hythia elgari*, *Cantia arborescens*, and *Cupressinoxylon cryptomerioides*; also a second fragment of the last species. *Committee of the Maidstone Museum.*

2 fruits (*Nipadites*) from the Eocene Limestone of Mokattam, Cairo. *G. Foster Smith, Esq.*

*Rock-specimens*.—A collection of about 2,700 slides of thin sections of sedimentary rocks, including about 400 slides from the collection of the late Mr. A. J. Jukes-Browne, F.R.S. Most of the slides are of British Cretaceous rocks, referred to in the writings of Messrs. Hill and Jukes-Browne. Others are of the Tertiary rocks of the West Indies and Cyprus, referred to in the writings of Messrs. Hill, Jukes-Browne and Harrison. *Executors of the late William Hill, Esq., F.G.S.*

#### B.—By Purchase.

Among specimens purchased by the grant brought forward from the financial year 1914-15, the following may be enumerated:—

*Mammalia*.—50 jaws and portions of dentition of American Eocene Creodonts.

Horn and skull of *Rhinoceros antiquitatis* from Siberia.

*Reptilia*.—8 fossil reptiles from the Trias of Lossiemouth, Elgin (W. Taylor coll.).

Associated set of bones of a Trachodont Dinosaur from the Upper Cretaceous, Alberta, Canada (W. E. Cutler coll.)

*Mollusca*.—25 Mollusca from the Upper Cretaceous, Alberta, Canada (W. E. Cutler coll.).

20 Ammonites, &c., from the Gault, Aylesford, Kent.

A block of fossiliferous Pliocene Rock dredged up from North Sea.

*Polyzoa*.—200 Polyzoa from the Chalk of Surrey.

*Miscellaneous Invertebrata*.—The Thomas Ruddy Collection of Bala Fossils from North Wales, comprising 120 Ostracoda, 160 Trilobita, 61 Echinoderma, 23 Annelida, 100 Cephalopoda, 143 Lamellibranchia, 37 Conularida, 540 Brachiopoda, 47 Corals, 63 Polyzoa, 4 Hydrozoa and 5 Sponges.

*Plantæ*.—8 plant-remains from the Upper Cretaceous of Alberta, Canada (W. E. Cutler coll.).

The total accessions during 1915 are as follows :—

	Donation.	Purchase.	Exchange.	Total.
Vertebrata - - -	329	101	—	430
Invertebrata - - -	5,123	2,382	8	7,513
Plantæ - - - -	18	8	1	27
<b>Total - - -</b>	<b>5,470</b>	<b>2,491</b>	<b>9</b>	<b>7,970</b>

The total number of specimens registered is 8,810.

#### VI.—*Students and Visitors.*

The number of visits paid to the Department by students and other persons for the purpose of consultation or study during 1915 was 2,531.

The staff received 8 parties (169 persons) for demonstrations in the public galleries.

*Arthur Smith Woodward.*

## DEPARTMENT OF MINERALOGY.

I.—*Arrangement.*

The Collection of Precious Stones formed by the late Sir Arthur Church has been arranged according to species in a special case.

Labels have been prepared and specimens selected and arranged for an Introductory Series of minerals and rocks for the Central Hall.

A selection of the more valuable and unique specimens has been removed from the Gallery and placed in a safe.

Mineral and rock-specimens have been unpacked and examined, and thirty-nine boxes have been packed and despatched.

II.—*Registration, Indexing, and Cataloguing.*

All the specimens of minerals, rocks, and meteorites acquired during the year have been registered, numbered, labelled, and incorporated with the Collection.

The preparation of the slip-catalogues of the mineral-specimens in the Collection, species by species, and of permanent labels giving all available information for each specimen, has been continued for the Divisions of the Oxides and Carbonates. In this connexion permanent labels have been written and placed with the specimens of minium, beauxite, chrysoberyl, calcite and magnesite; permanent labels have also been prepared for pyrolusite, crednerite, and polianite; and specimens belonging to Old Collections have been labelled and entered in the General Register.

The preparation of a copy of the three-volume MS. Catalogue of the Allan-Greg Collection of minerals has been completed; modern names of species have been written in the headings; and a new index has been made.

The history of the physical apparatus in the Department has been investigated, and the items in the Catalogue of Instruments have been arranged as far as possible in order of date of acquisition.

The large collection of rock-specimens from the Cape Verd Islands presented by Mr. Walter Child has been examined, numbered, and arranged.

The preparation of a copy of the register of the specimens in the Collection has been continued, and permanent labels containing particulars drawn from the register have been prepared for the specimens of minerals acquired during the year.

III.—*Preparation.*

165 thin-sections of rocks have been prepared, and thirteen specimens of laterite have been cut.

IV.—*Investigation.*

The crystallographic examination of chabazite and the associated minerals from Co. Antrim collected by Mr. F. N. Ashcroft has

been completed. In the course of this work many crystals of various types of chabazite and also of calcite, analcite, and natrolite associated with it have been measured on the goniometer.

Complex crystals of sartorite and other sulph-arsenites from the Binnenthal, aragonite, barytes, and garnet have been measured, and crystals of iron phosphide from a blast-furnace have been studied and described.

Various doubtful minerals have been examined and determined, including brochantite, bayldonite, tsumebite, from Otavi, S. W. Africa; albite, apophyllite, pectolite, prehnite, &c., from Pwllheli, N. Wales; pascoite from Peru; roscherite and ježekite from Saxony; diopside from Burma; topaz from Tasmania.

The refractive indices of the precious stones in the Church Collection have been determined, and, where possible, the double refraction, dichroism, and absorption have been observed.

Investigations have been made of the meteoric stones of Launton, Warbreccan, Cronstad, and Daniel's Kuil, and quantitative analyses of each have been made in the chemical laboratory.

#### V.—*Departmental Library.*

*Cataloguing and Press-marking.*—14 guard-books of letters have been indexed.

239 volumes and 80 title-slips have been press-marked or repress-marked. All the accessions, including 673 plates, have been catalogued and stamped.

Proofs of the Library Catalogue have been read and checked against the slip-catalogue in the Department.

*Accessions.*—22 volumes of separate works, 24 periodicals (in 254 volumes and parts), 26 pamphlets, 11 parts of works, and 53 mining and survey reports have been added to the Library.

*Binding.*—94 volumes have been bound.

#### VI.—*Acquisitions.*

1,299 specimens have been acquired, namely:—

357 minerals, 930 rocks, and 12 meteorites.

The most important of these acquisitions is the remarkable collection of 203 Precious Stones formed by the late Sir Arthur Church (see pp. 101 and 103).

Exchanges of specimens have been arranged with the Bloemfontein Museum and with Mr. J. Morrow Campbell.

The following mineral names added to the Museum List were previously not represented by specimens in the collection:—

Ferrimolybdite, ježekite, metaheuwettite, paratooite, pascoite, skemmatite.

The specimens acquired by presentation (arranged alphabetically according to donors) and by exchange, and a selection of the more important of those obtained by purchase, are as follows:—

*Minerals.**By Presentation :*

Calcite from Trecastell mine, near Conway, Carnarvonshire :  
by *F. N. Ashcroft, Esq.*

Ruby from Rimu, South Island, New Zealand : by *B. C. Aston, Esq.*

Anhydrite and gypsum from the Hatfield Main Colliery, near  
Doncaster : by *H. Berry, Esq.*

Salt from Cape Verd Islands : by *Senhor Carvalho.*

A blue crystal of zircon, probably from Siam : by *the late Sir Arthur Herbert Church, K.C.V.O., F.R.S.*

A valuable collection of gem-stones formed by the late Sir Arthur Herbert Church, K.C.V.O., F.R.S., presented, in accordance with a wish expressed in his will, by *his widow, Lady Church.*

The collection comprises 203 choice and selected faceted stones, 170 of which are mounted in 162 gold rings (33 stones being unmounted) : in addition, 29 small diamonds are employed in the settings. The following 21 mineral species are represented : corundum (13 stones), spinel (19), chrysoberyl (8), quartz (2), chrysoprase (2), opal (15), zircon (69), peridot (7), phenakite (1), spodumene (1), enstatite (1), moonstone (3), labradorite (1), garnet (22), beryl (4), topaz (8), andalusite (1), cordierite (2), tourmaline (22), sphene (1), turquoise (1). Amongst the garnets is a fine example of spessartite, the rare manganese-garnet ; amongst the tourmalines a very fine rubellite ; amongst the opals very good examples of "black" opal and fire-opal ; and amongst the zircons a fine suite of green stones and two remarkable blue stones.

Chalcedony pseudomorphous after bone from Radley Park, Berks : by *Dr. Frank Corner.*

Glaucconite from Cowcroft, Bucks : by *T. Crook, Esq.*

Aragonite from Alston, Cumberland : by *Rev. Thomas C. Crosby.*

Radiated topaz (pycnite) from Mount Bischoff, Tasmania : by *Rev. Alfred Curtis.*

Forms of artificial silica : by *Allan B. Dick, Esq.*

Gilbertite and quartz pseudomorphs simulating an orthoceroid fossil, from near St. Austell, Cornwall : by *Philip Dollman, Esq.*

Chrysotile, and 10 specimens of gold and tin ores, all from Rhodesia : by *Wm. Drabble, Esq.*

Artificial preparations of various forms of silica : by *Dr. C. N. Fenner.*

Blue beryl from Mont Blanc : by *Miss J. M. Fry.*

Geikelite from Ceylon : by *Sir A. Geikie, K.C.B., F.R.S.*

Pyrrhotite from Pondoland, South Africa : by *W. H. Goodchild, Esq.*

Fluor, a group of large green cubes, from Faulhorn ; adularia, as tabular crystals with asbestos, from Maderanerthal, and, as twisted crystals with black zonal enclosures, from Disentis ; and quartz, enclosing rutile, from Sasso rosso, St. Gotthard ; all from Switzerland : by *Rev. J. M. Gordon.*

Almandine garnet from Kidsty Pike, Westmoreland : *by J. F. N. Green, Esq.*

Monazite sand from Burma : *by Miss D. M. Jewett.*

Blende, molybdenite, phosphorite, and alunogen, from Japanese localities : *by Prof. Kitora Jimbō.*

Vivianite from the Port Harcourt railway, Omobialla district, Southern Nigeria : *by His Excellency Col. Sir Frederick J. D. Lugard, G.C.M.G., C.B., D.S.O.*

Vanadinite from Arizona : *by C. Maitland, Esq.*

Paratooite, a variety of rock-phosphate from South Australia, named and described by the donor : *by Sir Douglas Mawson.*

Chalcedony pebbles, cut and polished, from St. Leonards-on-Sea, Sussex : *by W. H. Pemberton-Barnes, Esq.*

Hæmatite and nitratine from Taltal, Chili : *by Major F. I. Ricarde-Seaver.*

Dolomite, mispickel, axinite, and blende, a series of specimens collected by the donor in 1914 at Mt. Avala, Belgrade, Serbia ; and albite on quartz, from Gimlet Rock, Pwllheli, Carnarvonshire : *by Arthur Russell, Esq.*

Axinite from Penmaenmawr, Carnarvonshire : *by H. C. Sargent, Esq.*

Artificial crystals of iron phosphide from a blast-furnace : *by Dr. J. E. Stead, F.R.S.*

A large crystal of cassiterite weighing 8,253 grams, from Karibib, South-West Africa : *by Percy C. Tarbutt, Esq.*

Alunogen from Dolcoath mine, Camborne, Cornwall : *by R. Arthur Thomas, Esq.*

Phosphorite from Curaçao, West Indies : *by W. H. Wickes, Esq.*

Blende as large black cubes, and stream-tin from Lerui'n Kano, Northern Nigeria : *by A. Stanley Williams, Esq.*

A fine isolated crystal of cassiterite from Tronoh village, Kinta, Perak, Federated Malay States : *by Cecil Wray, Esq.*

Corundum and columbite from Cape Province, South Africa : *by J. Truro Wylde, Esq.*

#### *By Purchase :*

A series of specimens from new occurrences in Madagascar, including large brown crystals of beryl, clear yellow crystals of orthoclase, corundum, tourmaline, spessartite, amazon-stone, korne-rupine, amparngabeite, bismutite, quartz.

New occurrences of American minerals :—including atacamite, connellite (a fine specimen), seligmannite, onofrite, metaheiwettite, hydrozincite from Utah ; precious opal in the form of a tree branch from Nevada ; a fine mass of crystals of native silver from Michigan ; skemmatite from South Carolina ; pseudomorphous quartz, leucophœnicite, and manganosite from New Jersey.

Miargyrite from Mexico.

Albite, apophyllite, pectolite, prehnite, and quartz from Pwllheli, Carnarvonshire.



Miscellaneous specimens illustrating British occurrences selected from the collections of the late Mr. F. W. Rudler, Mr. W. Semmons, and Mr. Warburton, including:—fluor, apatite, chalcotrichite, and copper-glance, from Cornwall; chalybite from Cumberland; anhydrite from Newark.

*Rocks.*

*By Presentation.*

Phonolite from the Wolf Rock, Cornwall: *by Walter Barratt, Esq.*

Set of 16 specimens collected by the donor in British East Africa: *by Arthur Champion, Esq.*

A large collection, numbering 879 specimens, collected by the donor in the Cape Verd Islands: *by Walter Child, Esq.*

Topaz-quartz-porphry from Mt. Bischoff, Tasmania: *by Rev. Alfred Curtis.*

Lava from the volcano of Sakurajima, Japan (eruption of January, 1914): *by Prof. Kitora Jimbō.*

Metamorphosed diabase with axinite from St. Ives, Cornwall: *by F. P. Mennell, Esq.*

Andesite from Mt. Tarawera, New Zealand (eruption of June, 1886): *by Dr. A. B. Rendle, F.R.S.*

Porphyritic basalt from Rye Water, Ayrshire: *by John Smith, Esq.*

Riebeckite-rhyolites from Lerui'n Kano, Northern Nigeria: *by A. Stanley Williams, Esq.*

*By Exchange:*

24 specimens of laterite from West African localities.

*Meteorites.*

*By Presentation:*

Bholghati, Deloi, Orissa, India, a fragment weighing 28·6 grams of the stone which fell on 29th October, 1905.

Chainpur, Azamgarh, United Provinces, India, a fragment weighing 399 grams of the stone which fell on 9th May, 1907.

Karkh, Jhalawan, Baluchistan, 18 chips weighing together 226 grams of the stone which fell on 27th April, 1905.

Khohar, Banda, United Provinces, India, a fragment weighing 338 grams of the stone which fell on 19th September, 1910.

Kuttipuram, Malabar, Madras, India, a fragment weighing 725 grams of the stone which fell on 6th April, 1914.

Lakangaon, Nimar, Indore, India, a fragment weighing 93·8 grams of the stone which fell on 24th November, 1910.

Mirzapur Mauza, Dahariabad, United Provinces, India, a fragment weighing 208·8 grams of the stone which fell on 7th January, 1910.

Shupiyan, Kashmir, India, a fragment weighing 68·9 grams of the stone which fell in April, 1912.

These 8 meteoric stones : *by the Director of the Geological Survey of India.*

Delegate, Wellesley Co., New South Wales, an etched slice weighing 186 grams of this meteoric iron : *by the Department of Mines of New South Wales.*

Molong, Ashburnham Co., New South Wales, fragments weighing 2,022 grams of this meteoric iron : *by the Department of Mines of New South Wales.*

Gilgoin, Clyde Co., New South Wales, a fragment weighing 261.6 grams of one (No. 7) of the stones : *by J. C. H. Mingaye, Esq.*

*By Exchange :*

Winburg, Orange Free State, South Africa, an etched fragment weighing 42 grams of the iron seen to fall in 1881.

All the above Meteorites except Gilgoin and Kuttipuram belong to falls hitherto unrepresented in the Museum Collection.

#### VII.—*Donations of Duplicates.*

Duplicate specimens of meteorites have been given to the Geological Survey Museum at Calcutta and to Sir William Crookes, F.R.S.

#### VIII.—*Students and Visitors.*

The number of visits recorded as made to the Department for purposes of consultation or study is 510. Many specimens of minerals and rocks have been determined for visitors and correspondents.

*G. T. Prior.*

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## DEPARTMENT OF BOTANY.

I.—*Arrangement and Conservation.*

During the past year 24,050 specimens have been incorporated with the Herbarium. This number includes 17,200 Flowering Plants, 2,637 Vascular Cryptogams, 2,035 Mosses, 222 Hepatics, 495 Lichens, 378 Algæ, and 1,083 Fungi.

*Flowering Plants.*—Additions acquired during the year by donation, purchase and exchange have been mounted and incorporated. Progress has been made with the determination, selection and incorporation of the early Australian collections, and outstanding specimens have been determined and incorporated in various families, especially Melastomaceæ, Onagraceæ, Loasaceæ, Turneraceæ, and Rosaceæ.

Work of revision and re-arrangement has been done in various families and genera, especially the genera *Acaena* and *Rubus* which have been revised and arranged in accordance with recent monographs. A large accumulation of unnamed fruits and seeds has been identified and incorporated and the first half of the fruit collection has been re-arranged.

The separation and re-arrangement in the new gallery of the European specimens has been completed.

*Ferns and Mosses.*—The selection and incorporation of outstanding collections of Ferns and Fern-Allies have been continued, and the incorporation of various collections of Indian, Chinese, and Central American Mosses has been completed.

*Algæ.*—The sorting of the Merrifield herbarium has been completed and the George Herbarium of British Algæ has been largely determined and arranged preparatory to incorporation. Progress has been made with the incorporation of outstanding material.

*Fungi and Lichens.*—In the general collection outstanding material of Sphaeropsidæ has been incorporated and in part that of Hyphomycetes; the arrangement of the Polyporaceæ has been revised. Progress has been made with the revision and incorporation of the British Lichens.

*Mycetozoa.*—Various new collections have been prepared for incorporation, as before with the assistance of Miss G. Lister.

*Exhibition Series.*—In the Public Gallery the general exhibition of Algæ has been re-arranged and progress has been made with the exhibition of British Seaweeds. Work of revision has been done generally and numerous additions have been made. In the Index Museum in the Central Hall progress has been made with the preparation of the exhibition illustrating the lower Cellular plants (Thallophytes).

*Catalogues and Guides.*—Progress has been made with the preparation of the *Flora of Jamaica* (Vols. iv and v) by Mr. W. Fawcett and Dr. Rendle ; and with the revision of the first volume of the *Monograph of British Lichens* and the preparation of a guide to the exhibition of British Lichens by Miss Annie Lorrain Smith. Some work on the preparation of the *Catalogue of the Sloane Herbarium* has been done by Mr. J. Britten. An account of the freshwater Algæ collected on the “Terra Nova” expedition has been prepared by Dr. F. E. Fritsch, and of the marine Algæ by Mr. Gepp.

## II.—*Investigation.*

Collections have been determined wholly or in part from the following localities and collectors : New Guinea (Wollaston expedition, Miss Gibbs), New Caledonia (Compton), Sumatra (Robinson and Kloss), Uganda (Dümmer), Queensland (Miss Gibbs), and various smaller collections from different localities.

Dr. Rendle has completed his study of the Tropical Africa genera and species of the family Moraceæ, and Mr. W. Fawcett and Dr. Rendle have continued their work on the Jamaica species of the families of Dicotyledons, mainly Leguminosæ. Mr. Baker has continued his work on the Tropical African species of *Indigofera* and has determined the Anonaceæ collected in Sumatra by H. O. Forbes. Mr. Willmott has continued his critical study of various European genera. Mr. Gepp has investigated small collections of Ferns and Algæ from various localities ; and Mr. Ramsbottom has continued his work on Microfungi.

Assistance has been given to numerous British and foreign workers engaged on special investigations, and many specimens and small collections have been determined for students and collectors. Valuable assistance has been rendered to various Government departments in response to inquiries on matters connected with the war.

In connection with work done in the Department specimens have been generously lent by the Director of the Royal Gardens, Kew ; the Regius Keeper of Botany, Edinburgh ; the Bristol Museum ; and the Government of Jamaica.

Undetermined material has been lent for study and determination to the Director of the Royal Gardens, Kew ; the Regius Keeper of Botany, Edinburgh ; and Mr. H. N. Dixon, Northampton.

## III.—*Departmental Library.*

The arrangement, cataloguing, press-marking and other routine work has been carried out. 165 volumes and 187 pamphlets were acquired by donation and 71 volumes by purchase—in all 236 volumes and 187 pamphlets ; these numbers include 39 periodicals in 192 parts presented, and 47 periodicals in 401 parts purchased—in all 86 periodicals in 593 parts. 71 volumes and 30 pamphlets

from the library of the late J. A. Tulk were presented by the Committee of Middlesex Hospital.

88 volumes have been bound and several others repaired.

#### IV.—*Publications.*

There have been no official publications issued by the Trustees but work has been continued on the Flora of Jamaica by Mr. W. Fawcett and Dr. Rendle and on the second edition of Vol. i. of the Monograph of British Lichens by Miss A. Lorrain Smith.

The publications by Members of the Staff issued by the permission of the Trustees number 13, and 23 have been issued by other Students of the Collections.

#### V.—*Acquisitions.*

##### (1) *By Donation.*

The following are the more important additions to the British Herbarium :—Flowering Plants ; 85 specimens from C. E. Britton, Esq. ; 124 specimens from Rev. E. S. Marshall ; 54 specimens from C. E. Salmon, Esq. ; and 49 specimens from the Watson Botanical Exchange Club. A large collection of Seaweeds, Mosses and Lichens by the late E. George, from the London County Council.

The following are the more important additions to the General Herbarium :—B. Digby, Esq., 92 Siberian plants ; Mrs. M. E. Prescott-Decie, 413 specimens from Northern India ; H. N. Ridley, Esq., C.M.G., 943 Selangor plants ; Dr. E. Hartert, 50 Sahara plants ; A. E. Kitson, Esq., 19 West African plants ; P. Amaury Talbot, Esq., 82 specimens from Degema, Southern Nigeria ; T. F. Cheeseman, Esq., 33 New Zealand plants ; Dr. R. S. Rogers, 82 Australian Orchids ; Dr. F. Stoward, 89 West Australian plants ; A. H. Lyell, Esq., 139 North American plants.

The late J. A. Tulk's collection of Diatoms, comprising 2,665 slides from the Committee of Middlesex Hospital.

##### (2) *By Purchase.*

The following are the more important additions ;—The Botanical Exchange Club, 419 British Flowering plants ; U. Faurie, 1,800 Formosa plants ; R. A. Dümmer, 800 plants from Uganda and British East Africa ; and Miss A. Pegler, 50 Fungi from Kentani, South Africa. Continuations of published sets of European plants from H. Dahlstedt, 55 specimens ; H. Sudre, 100 specimens ; and of North American Algæ by Collins, Holden and Setchell, 100 specimens.

##### (3) *By Exchange of Duplicates.*

The Regius Keeper, Royal Botanic Gardens, Edinburgh, 2,401 plants from China, Tibet and India ; Director, South African

Museum, Cape Town, 100 Basutoland plants ; Director, National Herbarium, Sydney, 101 Australian plants ; Curator, National Museum, Melbourne, 28 Australian plants ; Botanist, Bureau of Science, Manila, 1,643 Philippine plants ; Director, Museu Goeldi, Para, Brazil, 94 Brazilian plants ; California Academy of Sciences, San Francisco, 165 North American plants.

VI.—*Students and Visitors.*

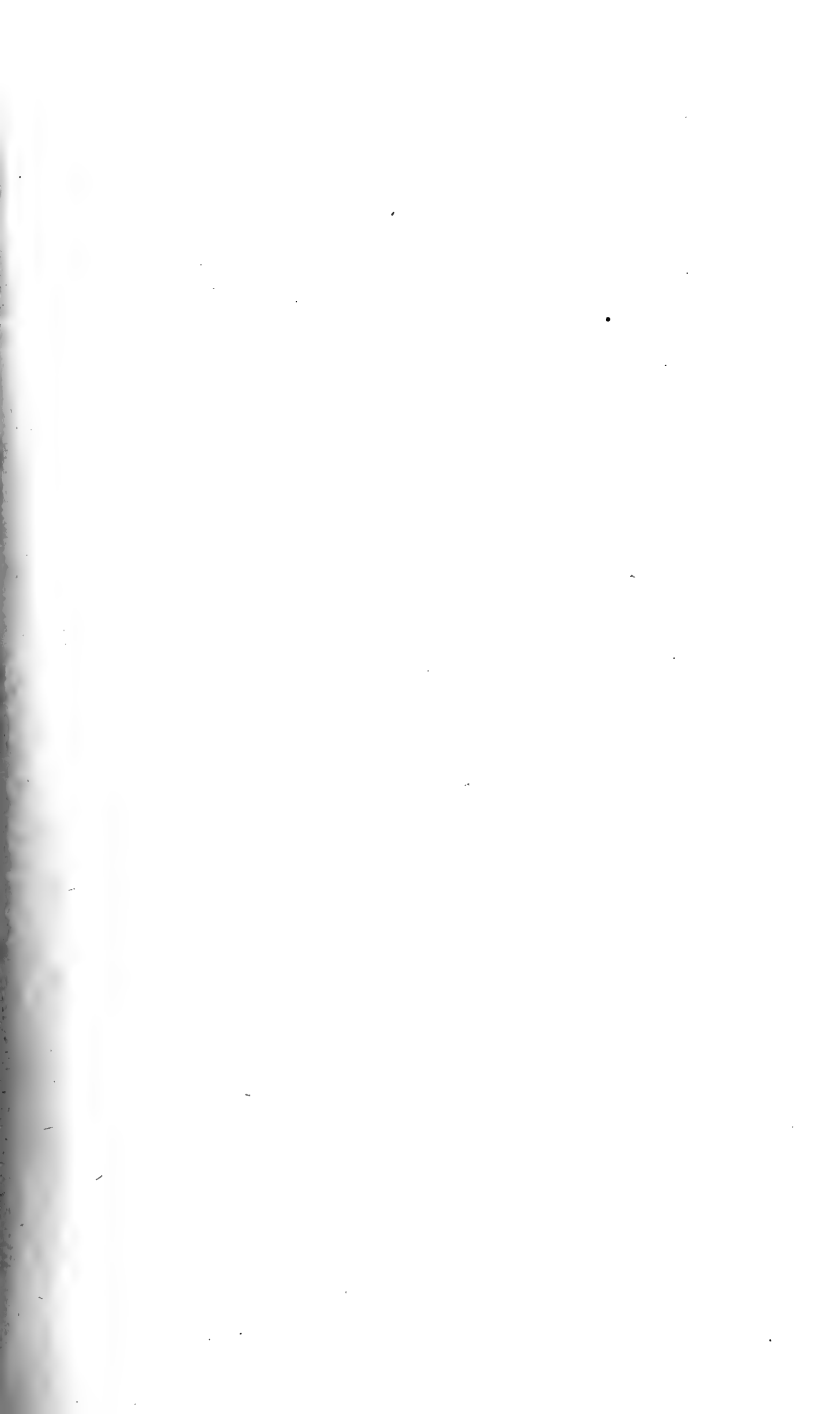
The number of visits to the Department for consultation and research during the year was 3,226.

VII.—*Demonstrations.*

Demonstrations on the collections have been given to members of the Ethical Society and of the Birbeck College Natural History Society.

*A. B. Rendle.*











# RETURN.

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RETURN to an Order of the Honourable The House of Commons,  
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COPY "of Account of the INCOME and EXPENDITURE of the BRITISH MUSEUM (SPECIAL TRUST FUNDS) for the Year ending the 31st day of March 1917; and RETURN of the Number of PERSONS admitted to visit the MUSEUM and the BRITISH MUSEUM (NATURAL HISTORY) in each Year from 1911 to 1916, both Years inclusive; together with a STATEMENT of the PROGRESS made in the ARRANGEMENT and DESCRIPTION of the COLLECTIONS, and an ACCOUNT of OBJECTS added to them in the Year 1916."

---

• Treasury Chambers, }  
1 May 1917 }

T. L. HEATH.

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(*Mr. Herbert Fisher.*)

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*Ordered, by The House of Commons, to be Printed,*  
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I.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the BRIDGEWATER FUND, from the 1st April 1916 to the 31st March 1917.

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
To BALANCES on the 1st April 1916 - - -	407 17 1	13,659 3 2
- DIVIDENDS received on 13,659 <i>l.</i> 3 <i>s.</i> 2 <i>d.</i> Stock in 2½ per Cent. Consols, bequeathed by the Earl of Bridgewater, viz.:		
On the 5th April 1916 - £. 85 7 4	85 7 4	
" 5th July 1916 - - - 85 7 4	85 7 4	
" 5th October 1916 - - - 85 7 4	85 7 4	
" 5th January 1917 - - - 85 7 4	85 7 4	
	341 9 4	
- RENT OF A REAL ESTATE, Whitchurch, bequeathed by the Earl of Bridgewater (less charges) - - - - -	35 1 3	
	£.784 7 8	13,659 3 2

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
By One Year's SALARY of the Egerton Librarian -	175 - -	
- BALANCES ON THE 31ST MARCH 1917, carried to Account for 1917-1918 - - -	609 7 8	13,659 3 2
	£.784 7 8	13,659 3 2

II.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the FARNBOROUGH FUND, from the 1st April 1916 to the 31st March 1917.

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
To BALANCES on the 1st April 1916 - - -	104 2 8	2,879 10 7
- DIVIDENDS received on 2,879 <i>l.</i> 10 <i>s.</i> 7 <i>d.</i> Stock in 2½ per Cent. Consols, bequeathed by Lord Farnborough, viz.:		
On the 5th April 1916 - £. 17 19 11	17 19 11	
" 5th July 1916 - - - 17 19 11	17 19 11	
" 5th October 1916 - - - 17 19 11	17 19 11	
" 5th January, 1917 - - - 17 19 11	17 19 11	
	71 19 8	
	£.176 2 4	2,879 10 7

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
By AMOUNT expended in purchase of Manuscripts -	135 6 3	
- BALANCES ON THE 31ST MARCH 1917, carried to Account for 1917-1918 - - -	40 16 1	2,879 10 7
	£.176 2 4	2,879 10 7



III.—AN ACCOUNT of the RECEIPTS and EXPENDITURE  
of the SWINEY FUND, from the 1st April 1916 to the 31st March 1917.

	CASH.			STOCK, 2½% Consols.		
	£.	s.	d.	£.	s.	d.
To BALANCES on the 1st April 1916 - - -	20	3	1	5,744	-	8
- DIVIDENDS received on 5,744 <i>l.</i> - 8 <i>d.</i> Stock in 2½ per Cent. Consols, bequeathed by Dr. George Swiney for Lectures on Geology, viz.:						
On the 5th April 1916 - - £.35 18 -						
„ 5th July 1916 - - - 35 18 -						
„ 5th October 1916 - - - 35 18 -						
„ 5th January 1917 - - - 35 18 -						
				143	12	-
	£.163	15	1	5,744	-	8
<hr/>						
	CASH.			STOCK, 2½% Consols.		
	£.	s.	d.	£.	s.	d.
BY AMOUNT paid to Dr. J. S. Flett, for Lectures on Geology in 1916 - - - - -	150	-	-			
- BALANCES ON THE 31ST MARCH 1917, carried to Account for 1917-1918 - - -	13	15	1	5,744	-	8
	£.163	15	1	5,744	-	8

IV.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of  
the BIRCH FUND from the 1st April 1916 to the 31st March 1917.

	CASH.			STOCK, 2½% Consols.		
	£.	s.	d.	£.	s.	d.
To BALANCE on the 1st April 1916 - - - - -						
- DIVIDENDS received on 565 <i>l.</i> 3 <i>s.</i> 9 <i>d.</i> Stock in 2½ per Cent. Consols, bequeathed by Dr. Birch in 1766, for the three Under Librarians of the British Museum, viz.:				565	3	9
On the 5th April 1916 - - -£. 3 10 8						
„ 5th July 1916 - - - 3 10 8						
„ 5th October 1916 - - - 3 10 8						
„ 5th January 1917 - - - 3 10 8						
				14	2	8
	£.14	2	8	565	3	9
<hr/>						
	CASH.			STOCK, 2½% Consols.		
	£.	s.	d.	£.	s.	d.
BY LEGACY paid to the three Under Librarians of the British Museum, whose offices existed in 1766, viz., the Keepers of the Departments of Printed Books, Manuscripts, and Natural History - - - - -	14	2	8			
- BALANCE ON THE 31ST MARCH 1917, carried to Account for 1917-1918 - - - - -				565	3	9
	£.14	2	8	565	3	9

V.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the bequest of the late MR. CHARLES DRURY EDWARD FORTNUM from the 1st April 1916 to the 31st March 1917.

	CASH.			STOCK, 5% War Loan.		
	£.	s.	d.	£.	s.	d.
To BALANCE on the 1st April 1916 - - - - -	1,840	-	-			
- 5% WAR LOAN, 1929-1947, purchased with 1,805 <i>l.</i>				1,900	-	-
- INTEREST on fully paid purchase of War Loan -		3	3 4			
	<u>£. 1,843 3 4</u>			<u>1,900 - -</u>		

	CASH.			STOCK, 5% War Loan.		
	£.	s.	d.	£.	s.	d.
BY AMOUNT expended in the purchase of 1,900 <i>l.</i> 5% War Loan, 1929-1947 - - - - -	1,805	-	-			
- BALANCE ON THE 31ST MARCH 1917, carried to Account for 1917-1918 - - - - -		38	3 4	1,900	-	-
	<u>£. 1,843 3 4</u>			<u>1,900 - -</u>		

VI.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the CARCHEMISH EXCAVATIONS FUND from the 1st April 1916 to the 31st March 1917.

	CASH.		
	£.	s.	d.
To BALANCE on the 1st April 1916 - - - - -		88	14 1
	<u>£. 88 14 1</u>		

	CASH.		
	£.	s.	d.
BY AMOUNT expended on Excavations - - - - -		10	- -
- BALANCE on the 31st March 1917, carried to Account for 1917-1918		78	14 1
	<u>£. 88 14 1</u>		

VII.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the bequest of the late MR. HENRY LOUIS FLORENCE from the 1st August 1916 to the 31st March 1917.

	CASH.		STOCK, 6% Exchequer Bond, 1920.	
	£.	s. d.	£.	s. d.
To AMOUNT received from the Executors of the late Mr. Henry Louis Florence - - - -	1,000	- -		
- 6% Exchequer Bond, 1920, purchased with 1,000 <i>l.</i>		- -	1,000	- -
- INTEREST on Exchequer Bond - - - -	18	14 9		
	<u>£. 1,018 14 9</u>		<u>1,000 - -</u>	

	CASH.		STOCK, 6% Exchequer Bond, 1920.	
	£.	s. d.	£.	s. d.
By AMOUNT expended in the purchase of 6% Ex- chequer Bond, 1920 - - - -	1,000	- -		
- BALANCE ON THE 31ST MARCH 1917, carried to Account for 1917-1918 - - - -	18	14 9	1,000	- -
	<u>£. 1,018 14 9</u>		<u>1,000 - -</u>	

*Frederic G. Kenyon,*

Director and Principal Librarian.

VIII.—NUMBER of PERSONS ADMITTED to VISIT the BRITISH MUSEUM and the BRITISH MUSEUM (NATURAL HISTORY).

A.—PERSONS ADMITTED TO VIEW THE GENERAL COLLECTIONS IN THE BRITISH MUSEUM in each Year from 1911 to 1916, both Years inclusive.

	1911		1912		1913		1914		1915		1916	
	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.
January	55,442	2,663	54,607	3,045	61,198	3,886	71,239	4,162	60,764	4,224	56,474	4,148
February	44,315	3,424	49,586	3,128	48,735	3,005	62,365	4,163	52,415	3,779	38,579	3,532
March	58,111	6,633	*13,341	*2,292	70,292	6,655	61,580	7,915	57,858	5,435		
April	64,215	7,993	57,077	4,542	70,361	7,045	73,629	5,010	71,772	5,314		
May	47,400	5,273	54,467	4,202	67,464	4,753	72,249	8,277	54,556	4,859		
June	52,277	6,847	51,891	7,030	61,330	5,715	65,742	5,646	49,615	3,341		
July	61,311	6,156	62,503	5,487	90,497	6,171	78,741	6,002	58,825	4,011		
August	70,068	5,142	101,300	7,343	107,901	8,239	57,020	5,225	64,374	5,545		
September	54,726	4,793	79,456	8,039	102,107	5,192	49,091	4,431	49,759	4,076		
October	55,374	7,113	63,496	4,812	83,091	5,365	60,376	4,775	55,005	5,126		
November	52,588	3,982	54,593	3,898	61,502	4,350	48,899	3,392	49,569	3,844		
December	43,959	3,766	54,777	3,960	59,440	2,686	50,861	3,127	55,488	3,537		
Total Number of Persons admitted to view the General Collections.	659,786	63,785	697,094	57,778	884,028	63,062	751,792	62,725	680,000	53,091	95,053	7,680
	723,571		754,872		947,090		814,517		733,091		102,733	

\* The Museum was closed from March 5 to 24 inclusive.

## NUMBER OF VISITS OF STUDENTS TO PARTICULAR DEPARTMENTS.

	1911.	1912.	1913.	1914.	1915.	1916.
To the Reading Room - - - - -	223,404	236,643	243,659	224,560	178,410	134,501
" Newspaper Room - - - - -	19,212	18,450	17,938	16,704	12,650	9,461
" Map Room - - - - -	584	502	439	400	380	142
" Department of Manuscripts - - - - -	11,731	12,142	12,090	10,277	7,781	5,713
" Department of Oriental Printed Books and Manuscripts.	2,617	2,446	3,254	2,968	2,705	817
" Print Room - - - - -	9,649	9,833	*7,064	*5,406	5,781	2,063
" Egyptian and Assyrian Department - - - - -	3,110	3,451	3,860	3,000	1,700	500
" Greek and Roman Department - - - - -	609	755	†1,744	†1,566	1,201	517
" Galleries of Sculpture - - - - -	2,301	1,879	1,945	2,138	1,798	249
" British and Mediæval Department - - - - -	3,260	3,646	3,827	2,873	1,488	746
" Coin and Medal Room - - - - -	4,050	4,044	3,565	3,321	2,150	377
Total - - - - -	280,527	293,791	299,385	273,213	216,044	155,086

\* The Students' Room of the Department of Prints and Drawings was closed for removal of the fittings to the new wing from 6th September 1913 to 7th May 1914.

† Including visits for archeological inquiry.

The British Museum, Bloomsbury (including the Departments of Printed Books and Maps, Manuscripts, Oriental Printed Books and Manuscripts, Prints and Drawings, Egyptian and Assyrian Antiquities, Greek and Roman Antiquities, British and Mediæval Antiquities and Ethnography, and Coins and Medals) is normally open to the public free daily (except on Good Friday and Christmas Day and days of Public Fast or Thanksgiving) as follows :—

On WEEKDAYS from 10 a.m. to 6 p.m.

After 4 p.m. in January, February, November, December, and after 5 p.m. in March, September, October, only certain of the galleries remain open, viz. :—

On MONDAYS WEDNESDAYS and FRIDAYS.	{ Exhibitions of Manuscripts, Printed Books, Prints and Drawings, Porcelain, Glass and Majolica ; Prehistoric, British, Anglo-Saxon, Mediæval and Ethnographical Collections.
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On TUESDAYS, THURSDAYS, and SATURDAYS.	{ Egyptian, Assyrian, Greek and Roman Galleries ; Gold Ornament Room, American, Prehistoric, British, Anglo-Saxon Collections, and the Waddesdon Bequest Room.
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On SUNDAY AFTERNOONS :—

From 2 to 4	p.m. in January, February, November, December.
„ 2 „ 5	„ „ October.
„ 2 „ 5.30	„ „ March, September.
„ 2 „ 6	„ „ April, May, June, July, August.

Persons applying for the purposes of research and reference are admitted to the Reading Room under certain regulations every weekday, except the days specified below, from 9 a.m. until 7 p.m. The Newspaper Room is open, under similar regulations, from 10 a.m. until 5 p.m.

The Reading Room, Newspaper Room, and Students' Rooms in the Library and Department of Manuscripts are closed on Sundays, Good Friday, Christmas Day, and the first four weekdays in March and September.

Other Students' Rooms are closed on Sundays, Good Friday, and Christmas Day, and occasionally for cleaning.

Students are admitted generally to the several Departments on weekdays, from 10 till 4 or 5 o'clock; and to the Sculpture Galleries from 9 o'clock to the hour of closing.

At present, however, the provision for keeping the galleries open having been suspended by His Majesty's Government in the interests of economy, the Exhibition Galleries are wholly closed to the public. The Reading Room is open to Students from 9 a.m. to 5 p.m., the Newspaper Room and Manuscript Students' Room from 10 a.m. to 5 p.m., on every weekday except Good Friday, Christmas Day, and the first four weekdays in March and September.

British Museum, }  
2 April 1917. }

*Frederic G. Kenyon,*  
Director and Principal Librarian.

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## B.—PERSONS ADMITTED TO VIEW THE COLLECTIONS IN THE BRITISH MUSEUM (NATURAL HISTORY), CROMWELL ROAD, in each YEAR from 1911 to 1916, inclusive.

	1911.		1912.		1913.		1914.		1915.		1916.	
	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.
January	34,294	2,836	31,122	3,115	30,789	2,923	30,067	3,233	29,458	3,177	30,632	4,001
February	26,541	4,537	26,931	3,904	25,439	3,529	27,762	4,404	25,599	3,759	26,948	3,301
March	32,140	5,514	*22,719	*4,558	54,532	5,674	31,344	5,863	29,933	4,266	28,614	3,386
April	40,147	5,956	48,102	3,665	34,400	5,032	41,188	3,688	42,600	4,380	32,024	4,301
May	28,669	4,880	34,473	3,641	39,844	4,130	28,847	5,874	32,483	4,655	28,854	3,161
June	35,803	6,068	30,504	5,310	32,135	4,368	39,074	4,009	27,666	3,340	31,165	3,808
July	31,080	4,514	31,967	3,570	36,993	5,099	31,790	4,317	33,687	3,791	27,792	4,091
August	39,177	3,528	59,729	6,192	51,478	6,372	29,860	3,589	46,712	6,068	33,006	3,902
September	26,981	4,594	34,451	6,170	33,949	4,611	26,368	3,033	27,972	3,886	28,993	3,913
October	30,052	5,871	31,244	4,158	32,185	4,298	31,351	3,271	30,358	4,678	33,228	4,238
November	28,150	3,458	25,453	3,236	27,820	4,487	27,130	3,402	27,523	3,241	29,368	2,479
December	27,957	2,937	28,153	3,246	33,455	2,778	29,173	2,277	31,181	3,168	28,635	2,833
Total Number of Persons admitted to view the Natural History Collections (including students)	380,991	54,693	404,848	50,765	433,019	53,301	373,954	46,960	385,172	48,409	359,259	43,414
	435,684		455,613		486,320		420,914		433,581		402,673	

## NUMBER OF VISITS TO PARTICULAR DEPARTMENTS for the purpose of STUDY.

	1911.	1912.	1913.	1914.	1915.	1916.
Zoology (including Art Students)	12,175	12,564	9,982	9,235	8,020	7,018
Entomology	—	—	4,837	4,284	3,354	3,149
Geology	6,038	5,974	5,613	4,962	2,531	3,000
Mineralogy†	682	1,415	641	717	510	354
Botany	3,084	3,962	3,455	3,164	3,226	3,303
Total	21,979	23,915	24,528	22,362	17,641	16,824

\* The Museum was closed from March 5 to 10 inclusive.

† Study series directly accessible to the public, and so labelled as to render reference to the staff almost unnecessary, have been arranged in this Department.



The Exhibition Galleries of the British Museum (Natural History), Cromwell Road, South Kensington, including the Departments of Zoology, Entomology, Geology and Palæontology, Mineralogy, and Botany, are open to the public (with certain restrictions due to the need for economy) free, daily, except Good Friday and Christmas Day, and days of Public Fast or Thanksgiving.

The regulations at present in force are as under :—

The GALLERIES are open to the PUBLIC, free, as follows :—

WEEK-DAYS.

*Daily.*—Central Hall (Special Exhibits), North Hall (Domesticated Animals, &c.), Bird Gallery, Upper and Lower Mammal Galleries, Shell Gallery, and Botanical Gallery.

On *Mondays, Wednesdays, and Fridays.*—Fossil Mammal Gallery, Fossil Reptile Gallery, and Mineral Gallery. (Eastern side.)

On *Tuesdays, Thursdays, and Saturdays.*—Coral Gallery, Starfish Gallery, Reptile Gallery, Insect Gallery, Fish Gallery, and Whale Room. (Western side.)

SUNDAYS.

Central Hall, North Hall, Bird Gallery, Mammal Galleries (including Whale Room), Fossil Mammal Gallery, Fossil Reptile Gallery, and Mineral Gallery.

The Hours of Admission are :—

On WEEK-DAYS, throughout the year from 10 a.m., in

January	...	...	...	...	to 4	p.m.
February	1 to 14...	...	...	...	„ 4.30	„
„	15 to end...	...	...	...	„ 5	„
March	...	...	...	...	„ 5.30	„
April to August	(inclusive)	...	...	...	„ 6	„
September	...	...	...	...	„ 5.30	„
October	...	...	...	...	„ 5	„
November and December	...	...	...	...	„ 4	„

On SUNDAYS, in

January	...	...	...	from 2	to 4	p.m.
February	1 to 14	...	...	„ 2	„ 4.30	„
„	15 to end...	...	...	„ 2	„ 5	„
March	...	...	...	„ 2	„ 5.30	„
April	...	...	...	„ 2	„ 6	„
May to August	(inclusive)...	...	...	„ 2.30	„ 7	„
September	...	...	...	„ 2	„ 5.30	„
October	...	...	...	„ 2	„ 5	„
November and December	...	...	...	„ 2	„ 4	„

Persons are admitted to study in these Departments every weekday from 10 till 4 o'clock.

The following Galleries are closed continuously for the duration of the War, viz.—Fossil Fishes ; Fossil Cephalopods ; other Fossil Shells, etc. ; Fossil Corals and Sponges, and Fossil Plants ; Stratigraphical and Special Palæontological Collections.

British Museum (Natural History), {  
24 February, 1917.

L. Fletcher,  
Director of the Natural  
History Departments.

## IX. GENERAL PROGRESS AT THE MUSEUM, BLOOMSBURY.

The work of the Museum and all statistics connected with it have been fundamentally affected by the decision to which the Government came, early in the year, to close the Museums and public galleries in London generally, in the interests of economy. Certain exceptions were made to the original drastic proposal. It was obvious that the service of the Library and free access to the Reading Room could not cease without serious injury to public interests, since the Library of the British Museum is the principal national storehouse of knowledge, constantly in request for purposes of business and research of all kinds. It was also found possible to maintain the service of the Manuscript Students' Room, which is essential for the students of history. All the exhibition galleries, however, were closed on March 1st, and the Museum thenceforth ceased its educative and recreative work on behalf of the public generally, as distinct from the students of printed books and of manuscripts.

Statistics of the number of visitors consequently come to an end automatically after the end of February, up to which time there had been 102,733 visitors, as compared with 121,182 in the corresponding months of the previous year.

Visitors to the several departments were fewer than in the previous year, though the total was considerable. Visits to the Reading Room amounted to 134,501, as compared with 178,410; to the Newspaper Room 9,461, as against 12,650; and to the other departments (which were naturally affected by the closing of the galleries) 11,124, as against 24,934.

The staff of the Museum has been very much depleted, only the minimum necessary for the conservation of the collections and the service of the Library being retained. At the end of the year 115 members of the staff at Bloomsbury were absent on military service, and 59 from the Natural History Museum. No member of the staff below the age of 26, and fit for general service, remained in the two Museums, and very few below the age of 35. Seven members of the staff have lost their lives in the service of their country; 20 have been wounded; two have received the Military Cross, and three the Military Medal.

Progress with the re-arrangement of the collections has naturally been very slight; since, in addition to the absence of staff, some materials required for fittings have been practically unobtainable.

On the closing of the galleries, the opportunity was taken to remove the larger part of the collections from the show-cases, and to store them in places of greater safety. Fortunately no injury has been incurred through air attacks.

The number of separate objects incorporated in the several Departments during 1916 is as follows:—

## Printed Books :

Books and Pamphlets	-	-	-	-	-	20,697
Serials and Parts of Volumes	-	-	-	-	-	54,415
Maps and Atlases	-	-	-	-	-	1,234
Music	-	-	-	-	-	9,905
Newspapers (single numbers)	-	-	-	-	-	300,594
Miscellaneous	-	-	-	-	-	3,400
Manuscripts and Seals	-	-	-	-	-	189
Oriental Printed Books and Manuscripts	-	-	-	-	-	2,037
Prints and Drawings	-	-	-	-	-	1,140
"          " (Oriental)	-	-	-	-	-	225
Egyptian and Assyrian Antiquities	-	-	-	-	-	208
Greek and Roman Antiquities	-	-	-	-	-	73
British and Mediæval Antiquities	-	-	-	-	-	1,569
Coins and Medals	-	-	-	-	-	834
Total	-	-	-	-	-	<u>396,520</u>

The number of accessions is, of course, small, since purchases have been almost impossible; but again the Museum has cause to be grateful to many generous friends. The most notable among the accessions, which are set out at greater length in the departmental reports, is the late Lord Avebury's collections illustrating the earliest Iron Age in Europe, obtained by excavations at Hallstatt in 1869 and now presented by his son, together with stone implements from Le Moustier and elsewhere. Some fine mediæval ornaments and a considerable number of prints and drawings have also been presented by various friends of the Museum.

Steps have been taken to obtain for the Museum a representative collection of war posters, trench literature, trench maps, and aerial photographs; in which undertaking cordial assistance has been given by the military authorities. Attention may also be called to the collection of German war-medals, which, though artistically contemptible, are historically valuable, and form an instructive commentary on the psychology of the nation.

The following publications have been issued in the course of the year:—

Catalogue of Books printed in the XVth Century now in the British Museum. Part IV. Italy: Subiaco and Rome. With 13 plates of facsimiles. 4to. 18s.

Ancient Greek Inscriptions. Part IV. Section II. Fol. 11. 10s.

Catalogue of English Coins. The Norman Kings, by G. C. Brooke. In two vols., with an introduction and 62 plates. 8vo. 2l.

British Museum,  
2nd April, 1917.

*Frederic G. Kenyon,*  
Director and Principal Librarian.

X.—PROGRESS made in the ARRANGEMENT AND DESCRIPTION OF THE COLLECTIONS, AND ACCOUNT OF OBJECTS ADDED TO THEM in the Year 1916 (Bloomsbury).

DEPARTMENT OF PRINTED BOOKS.

I. *Arrangement.*—The works added to the collection during the past year have, as far as possible, been placed on the shelves of the Library according to the system of classification adopted in the Museum.

The press-marks, indicating their respective localities, have been marked on the inside and affixed to the back of each volume.

The total number of these press-marks amounts to 59,251; in addition to which 70,282 press-marks have been altered, on books and in the catalogues, in consequence of changes and re-arrangements carried out in the Library; 24,418 labels have been affixed to books and volumes of newspapers, and 57,633 obliterated labels have been renewed.

The number of stamps impressed upon articles received is 318,209.

2,236 presses of books and newspapers have been dusted in the course of the year.

II. *Cataloguing.*—29,856 titles have been written for the General Catalogue and for the Catalogues of Maps and Music.

*Printing.*—28,441 titles and index-slips for the General Catalogue, 2,450 for the Map Catalogue, and 12,200 for the Music Catalogue, have been printed during the year.

*Incorporation.*—*General Catalogue.*—28,163 title-slips and index-slips have been incorporated into each of the three copies of this Catalogue. This has rendered it necessary, in order to maintain as far as possible the alphabetical arrangement, to re-arrange 48,609 title-slips and index-slips in each copy and to add to each copy 649 new leaves.

The system of monthly incorporation of accessions, inaugurated in April, 1915, was carried out regularly throughout the year.

*Map Catalogue.*—1,000 titles have been written for this Catalogue, and 4,798 title-slips have been incorporated into each of three copies of it. This has rendered it necessary to re-arrange 3,753 title-slips in each copy and to add to each copy 42 new leaves.

*Music Catalogue.*—4,771 titles have been written for this Catalogue, and 10,529 title-slips have been incorporated into each of two copies of it. This has rendered it necessary to re-arrange 15,020 title-slips in each copy and to add to each copy 148 new leaves.

*Shelf Catalogue.*—For this Catalogue, in which the title-slips, mounted on cards, are arranged in order of press-marks, 24,863 have been so mounted, and 25,342 have been incorporated in their proper order.

*Catalogue of Books Printed in the XVth Century.*—Part IV. of this Catalogue, mentioned in the last Report as having been passed through the press, has been published. No work has been done on the Catalogue during the year.

III. *Binding.*—The number of volumes and sets of pamphlets sent to be bound in the course of the year was 13,805, including 3,719 volumes of newspapers. In consequence of the frequent adoption of the plan of binding two or more volumes in one, the number of volumes returned was 10,612. In addition, 600 volumes have been repaired in the binders' shops.

Besides this, the following binding work has been done in the Library itself:—5,073 volumes have been repaired, 7,409 cleaned and polished, and 5,933 volumes of reports, parts of periodicals, &c., have been bound in a light style of binding.

The following maps, &c., have also been bound or mounted during the year:—23 atlases and 139 volumes of the 6-inch and 25-inch Ordnance Survey have been bound; in addition, 226 parts of the 1-inch Ordnance Survey and 259 general maps have been mounted on linen in 1,784 sheets, and 45 maps have been mounted on cards in 537 sheets.

41,967 numbers of Colonial Newspapers have been made up into 1,087 parcels, and 1,080 parcels have been tied up and labelled.

Seven volumes of the General Catalogue have been broken up and re-bound. 120 columns have been re-laid, owing to the accumulation of titles under certain headings. 17 volumes of the Music Catalogue have been re-bound in 20 new volumes.

IV. *Reading Room Service.*—The number of volumes replaced in the General Library after use in the Reading Room was 433,307; in the King's Library, 15,537; in the Grenville Library, 1,875; in the Map Room, 2,678; in the presses in which books are kept from day to day for the use of readers, 571,173; and in the Oriental Department, 3,040; making a total of 1,027,610 volumes supplied to readers during the year, exclusive of those to which the readers have personal access on the shelves of the Reading Room.

The number of readers during the year was 134,501, giving an average of 443 daily, the room having been open on 303 days.

*Newspaper Room.*—The number of readers during the year was 9,461, giving a daily average of 32, the room having been open on 303 days. The number of volumes replaced after use was 43,400, giving a daily average of 144, not reckoning volumes taken from the shelves of the Newspaper Room by the readers themselves. In addition, 1,138 country newspapers were brought up to the Library from the Repository at Hendon for the use of readers.

*Map Room.*—142 students were admitted to the Map Room.

*Photography.*—There were 324 applications for leave to photograph from books in the Library, and 1,045 volumes were supplied for this purpose.

V. *Accessions.*—*General Library.*—20,697 complete volumes and pamphlets have been added to the General Library during the year. Of these, 3,184 were presented; 11,268 received by Copyright; 473 by Colonial Copyright; 1,434 by International Exchange; and 4,338 acquired by purchase.

54,415 parts or volumes of serial publications and of works in progress have been added to the General Library. Of these, 2,403 were presented; 33,146 received by Copyright; 420 by Colonial Copyright; 2,066 by International Exchange; and 16,380 acquired by purchase.

*Maps.*—39 atlases, 28 parts of atlases, and 1,167 maps in 4,856 sheets have been added to the collection during the year. Of these, 6 atlases, 28 parts of atlases, and 729 maps were presented; 9 atlases and 399 maps received by Copyright; 13 atlases and 14 maps by Colonial Copyright; 9 atlases and 25 maps acquired by purchase, and 2 atlases by exchange.

*Music.*—9,905 musical publications have been added to the collection during the year. Of these, 8,628 books and pieces and 868 parts were received by Copyright; 331 pieces by Colonial Copyright; and 2 books and 76 parts acquired by purchase.

*Newspapers.*—The number of newspapers published in the United Kingdom, received under the provisions of the Copyright Act during the year, was 3,038, comprising 207,144 single numbers. Thirteen sets, comprising 2,123 single numbers, were received by Colonial Copyright; 347 sets, comprising 76,341 single numbers, of colonial and foreign newspapers have been presented; and 90 sets, comprising three volumes and 14,986 single numbers, of current colonial and foreign newspapers have been purchased.

*Miscellaneous.*—3,400 articles not included in the foregoing paragraphs have been received in the Department. These consist of Parliamentary Papers, single sheets, and other miscellaneous items.

The total number of articles enumerated above as having been received in the Department during the year, exclusive of newspapers, is 89,651.

*Acquisitions of Special Interest.*—The only book of importance acquired by purchase during the year is—

Parasitaster, or the Fawne. By John Marston. T. P. for W.C. [T. Pavier, for W. Creede?] 1606.

The following have been acquired by exchange :—

Breviarium secundum morem Romanæ Curie. Venice, B. Pictor, Ratdolt and Löslein, 1478.

Horarium. For the use of Utrecht. Antwerp, Adreaen van Liesvelt, 1495.

Lichtenberger. Pronosticatio Latina. Mainz, [Jacob Meydenbach], 1491.

Psalterium Latinum cum canticis et symbolo. [Leipzig, Moritz Brandiss, circa 1488.]

Blaeu. Atlas. 1641-1655.

*Donations.*

A collection of 79 books and pamphlets, mostly printed in England and America in the seventeenth century, forming a portion of the Library bequeathed to the Society for the Propagation of the Gospel in Foreign Parts by Bishop White Kennett. *Presented by the Society.*

Archivo y Biblioteca de la Casa de Medinaceli. Vol. 1. *Presented by the Duque de Medinaceli.*

Fourteen leaves completing a copy in the Museum of R. Greene's "Planetomachia," 1585. *Presented by T. J. Wise, Esq., and Prof. Candy.*

The Rape of Lucrece. By Thomas Heywood. 1608. *Presented by W. A. White, Esq.*

Pictures in the Collection of P. A. B. Widener. Early Italian and Spanish Schools. *Presented by P. A. B. Widener, Esq.*

The Mellvill Book of Roundels. (Roxburghe Club.) *Presented by M. Tomkinson, Esq.*

Handleiding tot de Paardenkennis. Deel. 1, 2. *Presented by Captain Thomassen.*

*G. F. Barwick.*

## DEPARTMENT OF MANUSCRIPTS.

1. *Catalogue of Additions*.—Sheets R, S, containing part of the descriptions of MSS. acquired in 1914, have been printed off and part of Sheet T (to Additional MS. 38841) is in type.

Of other MSS. acquired in 1914, Additional 38841, 38842, 38845, 38975–38979 have been described and indexed, and the descriptions down to 38857 revised and sent to the printer.

Of those acquired in 1915, Additional 39180–39183, 39185, 39186, 39216–39252 have been described and indexed.

Of those acquired in 1916, Egerton MSS. 2910–2936 and Additional MSS. 39288–39292, 39294–39298 have been described and indexed.

2. *Catalogue of Greek Papyri*. Vol. V.—Sheets Ll–3 B, completing the descriptions and indices, have been passed through the press, and the introductory matter sent to the printer.

3. *Catalogue of the Royal and King's MSS.*—Sheets C–I of Vol. III. have been printed off and Sheet K, completing the descriptions, is in type. The revision of the general index is in progress and the introduction in preparation.

4. *Catalogue of Cotton MSS.*—The MSS. Caligula E. III., IV. have been indexed.

5. *Catalogue of Early Additional and Egerton MSS.*—Additional MSS. 4500–4756, excepting a few Oriental MSS. and Nos. 4576–4695 (Rymer's collections, &c.) reserved for further consideration, have been described and indexed.

6. *Voluntary assistance*.—The department is indebted to Sir George Warner for much assistance in the revision of the description of the King's MSS. for the new catalogue, and to Mr. Edward Alexander Fry for help in sorting the Dunkin collection.

7. *Binding*.—80 Additional and 37 Egerton MSS. newly acquired and 105 MSS. of the old collections have been bound, repaired or lettered, together with 180 Rolls or Charters and 65 Books of Reference, Facsimiles or Catalogues.

8. *Verification*.—The entire collection of MSS. has been verified by comparison with the Shelf-lists.

9. *Stamping, folioing and placing*.—136 Additional MSS., 37 Egerton MSS., and 101 Books of Reference have been stamped. The total of impressions made was 7,003.

154 MSS. have been folioed, with a total of 25,081 folios.

15,196 sheets, &c., have been numbered.

166 newly acquired MSS. have been placed and 61 MSS. of the old collections replaced. All have been press-marked and entered in Hand- and Shelf-lists. 10 seals and casts have been provided with boxes, placed and entered in Hand- and Drawer-lists.



10. *Books of Reference*.—82 volumes and parts have been received, catalogued and placed.

9 volumes and parts of Facsimiles were added to the series now deposited in the Department and available for the use of Readers.

11. *Consultation of MSS.*—14,777 MSS. and 3,813 Charters and Seals have been consulted in the Students' Room, and 37 MSS. in the Reading Room. The number of Students was 5,713. In addition 2,567 Oriental MSS. have been consulted in the Students' Room by 817 Students.

12. *MSS. photographed*.—272 MSS. (including Papyri, Charters, and Seals) were allowed to be photographed, with a total of 4,676 photographs taken.

13. *Acquisitions*.—The number of Manuscripts and Documents, &c., acquired during the year has been :—

Additional MSS.	-	-	-	-	-	-	-	70
Egerton MSS.	-	-	-	-	-	-	-	43
Charters and Rolls	-	-	-	-	-	-	-	20
Detached Seals and Casts	-	-	-	-	-	-	-	56

This enumeration does not include the Dunkin Collection, the arrangement of which is not completed, but includes 17 volumes transferred from other Departments.

With one small exception (a continuation of Mr. Downman's plans of ancient earthworks) the Department has been entirely dependent this year on the generosity of private donors or on funds for purchase accruing from private bequests. The more important additions are :—

• Three holograph letters of Dr. Johnson relating to the King's Library. *Presented by Lady Wernher, who purchased them at the Red Cross Sale.*

Biographical and Topographical collections of the late E. H. W. Dunkin, Esq., relating to the Sussex clergy, &c. *Presented by Mrs. Dunkin.*

Collections for the history of co. Clare by the late R. W. Twigge, Esq., 10 volumes, besides rolls, &c. *Presented by Mrs. Twigge.*

Transcripts of monumental inscriptions in co. Hertford, by W. B. Gerish, Esq., 14 volumes. *Presented by the compiler.*

Autograph draft of part of Bishop Berkeley's works, correspondence of his family, &c., 13 volumes. *Presented by Mrs. Rose.*

The Granville collection of scores by Handel in 37 volumes.

Miracles of Our Lady, 12th cent.

Latin Poems of Robert Partes, a Reading monk, 12th cent.

Court-book of Rayleigh, co. Essex, 1553–1606.

Autograph letters (4) of S. L. Clemens (Mark Twain).

*These five purchased from the Farnborough fund.*

*Julius P. Gilson.*

## DEPARTMENT OF ORIENTAL PRINTED BOOKS AND MSS.

*Cataloguing.*—The numbers of Titles written for the Catalogues are :—Arabic, 83 ; Armenian, 24 ; Assamese, 16 ; Avestan, 17 ; Bengali, 514 ; Bodo, 2 ; Burmese, 150 ; Chakma, 3 ; Chin, 16 ; Chinese, 124 ; Ethiopic, 4 ; Gujarati, 497 ; Hebrew, 16 ; Hindi, 514 ; Hindustani, 231 ; Ho, 2 ; Javanese, 6 ; Kachin, 9 ; Kanarese, 227 ; Kanawari, 3 ; Karen, 6 ; Kashmiri, 27 ; Khond, 3 ; Kurku, 2 ; Lepcha, 1 ; Lisu, 2 ; Lushai, 5 ; Malayalam, 59 ; Marathi, 346 ; Naga, 7 ; Nagpuria, 6 ; Oriya, 7 ; Pahlavi, 2 ; Pali, 113 ; Panjabi, 45 ; Persian, 332 ; Prakrit, 60 ; Sanskrit, 731 ; Siamese, 20 ; Sindhi, 92 ; Sinhalese, 40 ; Talaing, 2 ; Tamil, 859 ; Telugu, 607 ; Turkish, 15 ; Uigur, 6. Total, 5,851.

11 Indian Charters have been fully catalogued.

11 short descriptions of MSS. have been entered in the Descriptive List, the Register, and the Classed Inventory.

9 MSS (1,119 folios) have been folioed.

*Binding.*—The numbers of Printed Books and MSS. sent to the Binders are :—Arabic, Persian, and Hindustani Books, 84 ; Chinese and Japanese Books, 2 ; Ethiopic and Syriac Books, 3 ; Malay Books, 9 ; Books in Sanskrit and other Indian languages, 165 ; MSS., 24.

*Students.*—The number of visits of Students working upon Oriental MSS. in the Students' Room attached to the Department of Manuscripts during the year has been 817. The number of Oriental MSS. consulted by them was 2,567. The number of Oriental Printed Books used in the Reading Room was 3,040.

*Photography.*—31 applications have been made to photograph books and MSS. in this Department.

*Additions.*—The number of volumes, pamphlets, &c., added to the collections of the Department during the year is 2,037. Of these 2,026 are Printed Books, and 11 are MSS.

Of the Printed Books, 94 were bought ; 1,763 were received under the India Copyright Act ; 62 were received under the Colonial Copyright Acts from Ceylon and Hongkong ; and 107 were presented. Of the MSS., 9 were presented, 1 was bought, and 1 was found in the binding of a book belonging to the Department.

The MSS. are as follows :—

Batta - - - - -	2
Chinese - - - - -	1
Hebrew - - - - -	1
Pali and Sinhalese - - - - -	1
Persian - - - - -	3
Sanskrit - - - - -	1
Sanskrit and Gujarati - - - - -	1
Sanskrit and Hindi - - - - -	1

The most important acquisitions are :

*Batta MSS.*—A Batta Calendar of comparative dates for a number of years from 1720 A.D. onwards ; together with a large number of epistles extracted from the original binding of the calendar. *Presented by Miss E. G. Wren.*

*Persian MSS.*—1. Ta'rikh i Sighārī, an account of Khokand and its rulers during the first half of the 18th century. Copied A.H. 1161 (A.D. 1748). 8°. *Presented by Sir Henry H. Howorth, K.C.I.E.*

2. Part (about half) of Kazvīnī's 'Ajā'ib ul-makhlūkāt, with some good Indian drawings in colour. 18th cent. 8°. *Presented by Sir Henry H. Howorth, K.C.I.E.*

3. A large collection of the poems, with some prose works, of Sardār Ghulām Muḥammad Khān Durrānī, called Tarzī, a modern Afghan writer. Copied A.H. 1305 (A.D. 1887). 8°.

*L. D. Barnett.*

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## DEPARTMENT OF PRINTS AND DRAWINGS.

I.—*Arrangement and Cataloguing, &c.*

*Arrangement.*—1,150 English portraits recently acquired have been distributed according to periods and classes.

2,699 other prints and drawings recently acquired have been incorporated with the divisions of the collection to which they severally belong.

36 books of drawings and prints have been placed.

The unfinished proofs by English engravers, formerly kept apart, have been incorporated with the engravers' works, and the large prints by English engravers have been rearranged.

A new series of solanders containing the mounted work of modern etchers and lithographers is in course of arrangement.

A large number of solanders, portfolios, and books containing drawings and prints of special value have been removed for greater safety to a strong room in the basement.

All books of prints and books of reference recently acquired have been catalogued, labelled, and placed.

*Catalogues and Indexes.*—The new card index to books of reference has been nearly completed.

The index to periodicals has been brought up to date.

The new references to case, shelf, and number have been inserted all through the index to the books of prints.

The new references to cases and books have been inserted in the indexes of artists of the Spanish, Russian, Scandinavian and American schools, and in the index of Foreign Artists working in England; in the case of the Italian school all new references have been inserted except those relating to books.

The artists represented in the collection of woodcuts by the Brothers Dalziel have been indexed as far as vol. 13.

117 references to drawings by Dutch and Flemish artists in the Malcolm collection have been inserted in the index of artists of these schools.

The work of indexing foreign portraits contained in books of prints has been continued. A complete list has been made of all such portraits; references to them have been added on the slips made for the general portrait collection, and new slips have been written for all names occurring only in the books of prints. More detailed slips have also been written for all these portraits with a view to incorporation in a future printed catalogue of the foreign portraits.

*Exhibition.*—No alterations in the exhibition were made during the first two months of the year. On March 1st the gallery was closed, and all prints and drawings were removed from the wall cases, screens and slopes.

*Registration.*—1,063 items have been entered in the Register of Acquisitions.

*Stamping and Mounting.*—5,047 drawings, prints, &c., recently acquired, have been impressed with the departmental stamp and references to the Register.

1,338 prints from the Montague Guest Collection have been impressed with a special stamp.

The work of stamping the foreign book-plates in the Franks Collection has been continued.

The whole of the German drawings in the Malcolm Collection have been mounted.

28 drawings, recently acquired, have been prepared and mounted on sunk mounts; 53 woodcuts by Burgkmair and 16 other early engravings and woodcuts have been mounted; 48 mezzotints from the Cheylesmore Collection and 3 mezzotints printed in colours by Le Blon have been mounted on sunk mounts.

The following modern prints have been mounted, in addition to smaller numbers by other artists:—D. Y. Cameron, 59 etchings; K. Cameron, 12 etchings; C. Conder, 39 lithographs; Eric Gill, 12 woodcuts; Seymour Haden, 270 etchings and mezzotints; E. S. Lumsden, 48 etchings; J. F. Millet, 23 etchings; G. Raverat, 14 woodcuts; C. H. Shannon, 84 lithographs; W. Strang, 102 etchings; F. S. Unwin, 13 etchings.

19 drawings by E. W. Cooke, 20 drawings by J. Webster, 143 drawings by Sir J. Wyatville, 46 drawings by Parkinson, 131 anonymous drawings, 110 woodcuts by Tenniel, and 303 woodcuts by Whymper, have been mounted in albums.

414 book-plates have been mounted on paper mounts.

All the above have been lettered with the artists' names and references to the Register and to catalogues.

Numerous prints, drawings, and mounts have been cleaned.

*Students.*—The total number of visitors admitted to the Print Room during the year ended December 31st, 1916, was 2,063; of these admissions 1,234 were previous to the closing of the Museum to the public on March 1st.

*Photographing.*—176 applications were made for leave to photograph, and 634 photographs were taken.

## II.—Acquisitions.

The total number of prints, drawings, books, &c., acquired during the year was 1,140, of which the following are the most important:—

### ITALIAN SCHOOL.

#### *Drawing.*

Cardi, L. (Il Cigoli). The façade of St. Peter's, and two cartouches; pen and sepia. Presented by Sir E. J. Poynter, Bart., P.R.A.

## GERMAN SCHOOL.

*Drawings.*

Breu, Jörg (I.) The Calumny of Apelles ; pen and ink version of the original drawing by Mantegna in the Department. The immediate original of Breu's free copy is the engraving by Mocetto, in which the church of SS. Giovanni and Paolo and the equestrian statue of Colleoni are introduced in the background. *Presented by Sir E. J. Poynter, Bart., P.R.A.*

Ermels, J. F. Classical landscape ; pen and Indian ink wash. *Presented by John Lane, Esq.*

*Woodcuts.*

Anonymous, 15th century. The relics and insignia of the Holy Roman Empire ; undescribed. *Presented by Senhor G. de Vianna Kelsch.*

Anonymous, 16th century. A woman with a monstrous deformity of the stomach ; broadside with text and coloured woodcut.

Schäufelein, H. L. The Siege of Bethulia. *Presented by Major Howard.*

Springinklee, Hans. St. John, from a rare set of the Apostles (1520-21).

## SCHOOLS OF THE NETHERLANDS.

*Drawings.*

Raemaekers, L. Jackals in the political field ; Ferdinand the Chameleon. *Presented by A. E. Anderson, Esq.* The third German war loan. *Presented by W. Tinker, Esq.* War cartoons ; black chalk and water-colour.

*Etchings.*

Gheyn, J. de (II.) Five of the series of Seven Sages of Greece (1616). *Presented by Campbell Dodgson, Esq.*

Bruycker, Jules de. The Death Knell in Flanders ; Kultur. *Presented by J. de Graaff, Esq.*

Maris, Matthijs. Original plate of the etching, Girl under a tree. *Presented by G. Reid, Esq.*

Poortenaar, Jan. Nine original etchings (views in Amsterdam and London, tiger-lilies). *Presented by J. de Graaff, Esq.*

*Lithographs.*

Poortenaar, Jan. Nine original lithographs (views in Amsterdam and Newcastle, sunflowers). *Presented by J. de Graaff, Esq.*

*Woodcut.*

Anonymous, early 16th cent. Soldiers ; fragment of a very rare set, of which other specimens exist at Berlin, Vienna, and Oxford. *Presented by Mr. C. Aymes.*

## FRENCH SCHOOL.

*Drawings.*

Natoire, C. J. Nude study ; black and white chalk. *Presented by E. Peter Jones, Esq.*

Noë, A. C. H. de ("Cham"). The enthusiastic collector. Water colours. *Presented by A. E. Anderson, Esq.*

*Engravings.*

Moitte, P. E. Le Confessional, after P. A. Baudoin ; first state. *Presented by Campbell Dodgson, Esq.*

*Etchings.*

Buhot, F. Three etchings (Bourcard 54 I, 61 I, 73). *Presented by S. Vacher, Esq.*

Guérard, H. Four etchings. *Presented by S. Vacher, Esq.*

Jou, Louis. Belgique, 1914 ; L'Exode. *Presented by Mons. Eug. Rodrigues.*

*Lithographs.*

Doré, G. Three original lithographs. *Presented by E. E. Leggatt, Esq.*

Fantin-Latour, H. Andromède. *Presented by Campbell Dodgson, Esq.*

Grevédon, H. La Duchesse de Berry, after Lawrence ; proof. *Presented by Campbell Dodgson, Esq.*

*Poster.*

Forain, J. L. Le Prisonnier. *Presented by Dr. Michael Sadler, C.B.*

## SCANDINAVIAN SCHOOLS.

*Drawings.*

Thorwaldsen, B. Pan and a young faun ; three mythological subjects ; pen and ink. *Presented by Campbell Dodgson, Esq.*

*Etchings.*

Annual publication of Föreningen för Grafisk Konst, 1915 (four etchings and one lithograph). *Presented by Campbell Dodgson, Esq.*

## AMERICAN SCHOOL.

*Engraving.*

Cole, Timothy. "Primavera," after Botticelli. Unique proof of an experiment by a special process of intaglio engraving on wood ; printed from an electrotype. *Presented by C. Fairfax Murray, Esq.*

*Etching.*

Whistler, J. A. McN. Title-page for the French set, 1858 ; from a rejected and unpublished plate ; undescribed and probably unique. *Presented by Dennis Day, Esq.*

*Lithographs.*

Brown, Bolton. Twenty-eight original lithographs ; figures, landscape, &c. *Presented by the Artist.*

Whistler, J. A. McN. Study of Thomas Way, a variant (undescribed) of Way, Nos. 107, 108 ; unpublished and cancelled. *Presented by H. J. Wright, Esq.*

## FOREIGN ARTISTS RESIDENT IN ENGLAND.

*Drawings.*

Fuseli, H., R.A. Two life studies ; pen and ink and water-colours. *Presented by E. Peter Jones, Esq.*

*Etchings.*

Lund, N. M. Eight original landscapes, views in the Highlands and the South of England. *Presented by A. E. Anderson, Esq., Mrs. Lund, and Campbell Dodgson, Esq.*

*Woodcuts.*

Kristian, Roald. Animals ; proofs of three original woodcuts published in *Form*. *Presented by the Artist.*

## BRITISH SCHOOL.

*Drawings.*

Burnet, J. Looking at a horse's mouth ; pen and ink. *Presented by Campbell Dodgson, Esq.*

Gethin, P. F. View near Lisdoonvarna ; water colours. The City of Cashel ; water colours. Irish landscape ; water colours. Gerona ; water colours. Study for an etching of Chancellor Dowdall ; pen and ink and wash. Two girls' heads ; black, red, and white chalks. Five studies of Irish girls ; water colours and chalk. *Presented by Mrs. Gethin and Captain Gethin.* A County Mayo town on Market Day ; water colours. *Presented by Miss E. P. McGhee.*

Arthur Hughes. Design for "April Love" ; pen and ink. *Presented by J. P. Heseltine, Esq.* Two designs for "La Belle Dame sans merci" ; pen and ink. *Presented by Dr. Michael Sadler, C.B.* "Home from Work" ; pen and ink. *Presented by Mrs. F. Dodd.*

Lewis, J. F., R.A. A Turkish interior ; chalk and water-colour sketch. *Presented by the National Art-Collections Fund.*



Robertson, G. Landscape with the journey to Emmaus ; water colours. Two oval landscapes with cattle and sheep (1775), from the collection of James Moore, F.S.A. ; water colours. *Presented by Campbell Dodgson, Esq.*

Tenniel, Sir J. Two *Punch* cartoons : "The Learned Welsh Goat," 1895 ; "Good Dog !" 1895 ; pencil. *Presented by Campbell Dodgson, Esq.*

Walker, F. S. Water-lilies ; study for a wood engraving ; Indian ink wash, brightened with white. *Presented by the Artist.*

#### *Engravings.*

Chapman, J. Watkins. Six unpublished proof mezzotints, after Greuze, Romney, &c. *Presented by E. E. Leggatt, Esq.*

Crawford, T. Hamilton. Sixteen proof mezzotints, chiefly portraits (Duchess of Abercorn, after H. Draper, Duke and Duchess of Northumberland, after Sir E. J. Poynter, P.R.A., H. L. Bischoffsheim and Martin R. Smith, after Sir H. Von Herkomer, R.A., Edward Caird, Dr. J. Clifford, and Sir John Bland-Sutton, after the Hon. John Collier, &c). *Presented by the Artist.*

Medland, Thomas. The Panshanger Oak. *Presented by E. E. Leggatt, Esq.*

Smith, J. R. The Hurdy-Gurdy Player, after George Carter, 1775, rare and undescribed. *Presented by Campbell Dodgson, Esq.*

#### *Etchings.*

Airy, Anna. The Cast of Dice. Five etchings of flowers and leaves. *Presented by the Artist.*

Barker, Anthony R. The First Italian Portfolio (12 plates, 1912). *Presented by Campbell Dodgson, Esq.*

Baskett, C. H. Five aquatint landscapes. *Presented by Messrs. P. and D. Colnaghi and Obach.*

Cameron, D. Y., A.R.A. The Royal Scottish Academy, and others, chiefly book-plates. *Presented by James MacLehose, Esq., Miss K. Cameron, and others.*

Dawson, Nelson. Arms of Winchester College and Stamford Grammar School. Soft ground, coloured. *Presented by Campbell Dodgson, Esq.*

Dodd, Francis. Verona. Greenwich. Portraits of J. Craig Annan, W. Burton, J. Hamilton Hay, A. L. Smith, and H. Rushbury ; dry-points. *Presented by the Artist.*

Exley, J. R. G. Seven etchings of fowls ; three landscapes. *Presented by the Artist and by Miss E. P. McGhee.*

Fisher, A. Hugh. Nine etchings of landscape and architecture. *Presented by the Artist and by Campbell Dodgson, Esq.*

Geddes, A. Three states of portrait etchings. *Presented by R. K. Blair, Esq.*

Gethin, P. F. Portrait of Chancellor Dowdall. *Presented by Chancellor Dowdall, K.C.*

Hay, J. Hamilton. The Encased Statue, British Museum *Presented by Campbell Dodgson, Esq.*

Holroyd, Sir Charles. Eve and the Serpent. *Presented by the Artist.*

James, Hon. Walter. The Ilex. Pegwell Bay. *Presented by Miss E. P. McGhee.*

Ray-Jones, R. Portrait of the Artist. *Presented by the Artist.*

Strang, D. R. Breton Landscape. *Presented by the Artist.*

Strang, W., A.R.A. Mealtime. Joan of Arc. Dr. Garnett. *Presented by Campbell Dodgson, Esq.*

Unwin, F. S. Twelve etchings of landscape and architecture. *Presented by the Artist.*

Urwick, W. H. Ten landscape etchings and aquatints. *Presented by Douglas R. Urwick, Esq.*

Watson, C. J. La Chapelle, Rue. *Presented by Miss E. P. McGhee.*

#### *Lithographs.*

Blatherwick, L. Spider's web. *Presented by the Artist.*

Conder, C. Lucien and Esther; second state. *Presented by Campbell Dodgson, Esq.*

Gethin, P. F. A girl's head. The Chef. *Presented by F. V. Burridge, Esq.*

Hartrick, A. S. The Man on the Hill. *Presented by Campbell Dodgson, Esq.*

Shannon, C. H., A.R.A. Five lithographs (Derry, Nos. 79-83). *Presented by the Artist.*

#### *Woodcuts.*

Anonymous, 16th cent. Allegorical subject of anti-papal tendency. *Presented by Campbell Dodgson, Esq.*

Gill, Eric. Sixteen proof woodcuts and a book of emblems. *Presented by Campbell Dodgson, Esq.*

Raverat, G. The Prodigal Son, and two landscapes. *Presented by the Artist.*

#### *Metal Cuts Printed in Colours.*

Giles, W. The Last Glow, Central Corsica; printed from eight zinc blocks. *Presented by the Artist.*

Shrimpton-Giles, A. M. Norcia, early Spring; printed from six zinc blocks. *Presented by the Artist.*

#### *Prints arranged to illustrate the Works of Masters.*

Sir E. Landseer, R.A. A Member of the Royal Humane Society, engraved by Thomas Landseer; proof touched by Sir Edwin Landseer. *Presented by E. E. Leggatt, Esq.*

#### PORTRAITS.

Of the 90 English and 42 foreign portraits acquired during the year, none call for special mention except a collection of 20 portraits of W. Harvey, M.D. *Presented by Sidney H. Badcock, Esq.*

## BOOK-PLATES.

- 26 by A. J. Downey. *Presented by the Artist.*  
12 by G. W. Eve. *Presented by G. H. Viner, Esq., and others.*  
45 by W. F. Hopson. *Presented by the Artist and by G. H. Viner, Esq.*  
7 by S. L. Smith. *Presented by G. H. Viner, Esq., and others.*  
17 by C. A. Voysey. *Presented by the Artist.*  
44 miscellaneous. *Presented by various donors.*

## COLLECTIONS AND SETS.

- 34 lithographic war cartoons by W. Sluiter, Jan Sluyters, and P. Vanderhem, from De Nieuwe Amsterdammer, 1915-16. *Presented by H. Van den Bergh, Esq.*  
37 French lithographic music covers of the 19th cent. *Presented by Captain A. M. Hind, A.S.C.*

*Campbell Dodgson.*

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## SUB-DEPARTMENT OF ORIENTAL PRINTS AND DRAWINGS.

I.—*Arrangement and Cataloguing, &c.*

Immediately after the closing of the Museum in March all the Chinese and Japanese Paintings exhibited in the Gallery were removed. A selection of all the most valuable items in the collections were transferred to the strong room allotted to the Department.

The Catalogue of Chinese Woodcuts has been completed and printed as a supplement to the Catalogue of Japanese Woodcuts. The whole work has been printed off, with the illustrations, and is in process of being bound.

The preparation of a Catalogue of the Japanese Illustrated Books in the Sub-Department has been begun. The greater part of the catalogue has been written in a form which it is intended to amplify later with translations of the more important prefaces and other detail.

The Index of Japanese Artists has been revised.

The preparation of material for a future Catalogue of Chinese Paintings has been set on foot. Translations have been made of passages in Chinese books relative to pictures in the collection; also of all poems and other inscriptions on paintings in the Wegener Collection.

The "Kokka" Magazine has been indexed up to date.

All books of prints and books of reference have been labelled, placed, and catalogued.

653 prints, paintings, &c., recently acquired, have been incorporated with the divisions of the collection to which they severally belong.

*Registration.*—120 items have been entered in the Register of Acquisitions.

*Stamping and Mounting.*—1,462 prints, paintings, &c., recently acquired, have been impressed with the departmental stamp and references to the Register.

15 Japanese paintings have been mounted, one as a *kakemono*.

2 Chinese paintings have been mounted as *kakemono*, and 2 others backed with silk.

6 Indian paintings have been mounted on sunk mounts.

421 Japanese prints (including 55 "triptychs" and 6 five-sheet prints) have been mounted on sunk mounts. 82 of these have been specially cleaned and repaired. All have been lettered with the artists' names and references to the Register and to the Catalogue.

II.—*Acquisitions.*

The total number of paintings, prints, &c., acquired during the year was 225, of which the following are the most important:—

## CHINESE.

*Engravings.*

A set of line-engravings of palaces. *Presented by the Dowager Viscountess Wolseley.*

## JAPANESE.

*Painting.*

Tosa School. "Ippen Shomin Monogatari"; makimono, in ink and colours. *Presented by Oscar Raphael, Esq., and H. P. and H. D. Waley, Esqs.*

*Woodcuts.*

A set of theatre-programmes, and games. *Presented by W. Bateson, Esq., F.R.S.*

## INDIAN.

*Painting.*

Kashmir School. "Teaching a Moslem how to Shoot;" in colour. *Presented by Ernest Debenham, Esq.*

## TIBETAN.

*Painting.*

Magic Circle, with figures of divinities; in colours, on silk. *Presented by A. L. Hall, Esq.*

## BOOKS OF PRINTS AND BOOKS OF REFERENCE.

Ajanta Frescoes.

Catalogue of the Li Wen-ch'ing Collection. *Presented by Charles L. Freer, Esq.*

Coomaraswamy, A. K. Rajput Painting. 2 vols. *Presented by Laurence Binyon, Esq.*

*Laurence Binyon.*

## DEPARTMENT OF EGYPTIAN AND ASSYRIAN ANTIQUITIES.

I.—*Arrangement, Cataloguing, &c.*

## EGYPTIAN ANTIQUITIES :—

The removal of portions of the collections to places protected against hostile air-craft has been continued.

The objects acquired during the year have been cleaned, repaired (when necessary) and mounted in readiness for exhibition in due course.

The labelling of the collections has been continued. 22 labels have been written and painted, and 25 numbers have been painted on plinths, and broken letters and numbers have been repaired.

12 objects have been mounted on stone plinths, one stele has been repaired, several stelæ have been cleaned, 9 pedestals, 5 labels, and several small mounts have been made.

A large selection of autotype reproductions of the principal royal mummies from Dêr al-Bahari has been mounted in four frames for exhibition, and each autotype has been labelled.

The Coptic stelæ from the Egyptian Gallery have been removed to a room in the Second Northern Gallery, and the arrangement of a Coptic Room has been begun.

The casts of the sarcophagi of Tabnith and Eshmûnâzâr have been repaired and painted, and inscriptions picked out in a lighter colour. The Hebrew gravestones from Aden have been cleaned, remounted, and removed upstairs.

The miscellaneous collections and fragments in the Basement have been examined, and a number of objects selected for mounting and exhibition.

The Wall-cases on the North-West Staircase Landing have been re-arranged, and a number of recently acquired objects have been placed in them.

The busts, figures, terra-cottas, inscriptions, &c., from Cyprus have been transferred to the Greek and Roman Department, and the cases which held them have been re-fitted, and filled with Phœnician Inscriptions, &c.

The Semitic Inscriptions have been re-arranged in the First and Second Rooms in the Second Northern Gallery. The First Room contains the inscriptions in the Northern Semitic dialects (Phœnician, Hebrew, &c.), and the Second Room contains those in Southern dialects (Himyaritic, Arabic, &c.). The antiquities from Carthage have also been grouped.

## ASSYRIAN ANTIQUITIES :

4,746 tablets have been numbered, 48 trays have been numbered, 1,992 tablets have been boxed, slip numbers have been affixed to 296 boxes of tablets, 12 labels have been written, 2 tablets have been repaired, the reference numbers to the collections have been continued, and 78 tablets have been catalogued.

*Students.*—About 500 visits have been made to the Department by enquirers, and 333 objects have been issued for the use of students.

## II.—*Acquisitions.*

A collection of Coptic monuments from the ruins of a church at Edfû and the Monastery of St. Jeremiah, to the south of Cairo :—

1. A Coptic stele with crosses and pediment in relief.
2. Coptic sepulchral inscription of Theodore and others.
3. Decorated stele with panels, arch, &c.
4. Stele of Theodore, with Greek inscription and Coptic decoration.
5. Stele of the lady Tsamma, with Cross in relief, on which is cut the name of Apa Psate.
6. Memorial stele of Apa Horp, Herem, and others.
7. Memorial stele of Phoibammôn, Apa Serene, and others.
8. Stele of one John, a monk (?).
- 9–13. Five sepulchral stelæ, richly decorated with sculptures in relief.

## III.—*Presents.*

- I. 1–38. Thirty-eight figures of Egyptian gods and sacred animals.
- 39–58. Twenty hard stone and porcelain amulets.
- 59, 60. Two plaques of Isis, Horus, and Nephthys.
- 61–150. Ninety scarabs, chiefly of the XVIIIth dynasty.
- 151–159. Nine stone scarabs, uninscribed.
- 160–164. Five scarabs in rings.
- 165, 166. Two beads for inlaying ; very fine work.
- 166–170. Five rectangular steatite plaques.
- 171–177. Seven miscellaneous objects.
178. String of beads.
179. Necklace of flat circular beads.
180. Blue glazed ware vase of Rameses III.
181. Ivory figure for inlaying.
- 182–190. Nine rings and other objects.
- 191–193. Three Gnostic gems.

*Bequeathed by the late Rev. W. F. Rose, M.A.*

- II. A large earthenware Egyptian jar, Græco-Roman Period.  
*Presented by Lady Watson.*

- III. Scarab of Rameses II.  
*Presented by Lieut.-Col. E. Mansel Sympson, M.A., M.D., F.S.A.*

*E. A. Wallis Budge.*

## DEPARTMENT OF GREEK AND ROMAN ANTIQUITIES.

I.—*Arrangement, &c.*

On the closing of the Museum, in March, further measures were taken for the protection of the collections from attack. Many objects were removed from the galleries to places of greater safety, or were put in safer positions *in situ*.

While the cases were thus empty, the dust-intercepting velvet puffings were renewed in the upper galleries, the cases of the Room of Ancient Life, and four blocks of cases in the Third Vase Room were repainted. A rearrangement of the frescoes in the Gold Ornament Room was undertaken; 21 of the locks were modified to the Departmental suite; the sculptures of Cyprus were transferred from the Department of Egyptian Antiquities, and their arrangement was begun. A rearrangement of the Hall of Inscriptions is in progress. The arrangement of Slabs I.—XIII. of the North Frieze of the Parthenon has been revised.

The publication of the Greek Inscriptions has been completed with the issue of Vol. IV., Part 2, which includes Indices to the whole collection. Progress was made with the Catalogue of Silver Plate, and with full labels for the Hall of Inscriptions.

Moulds have been made of six slabs of the Phigaleian frieze; of the Blacas Asclepius, the bust of Trajan, the relief of a warrior from Rhodes, and the Towneley bronze Heracles. Twenty-seven pieces of sculpture and 41 Greek and Latin inscriptions have been cleaned, repaired, and mounted. The mosaic from Vienne (Isère) has been laid on the floor in the Græco-Roman basement, and surrounded with a marble curbing. A wooden pedestal, and a box for large negatives were made; 15 vases were cleaned and repaired; 68 labels were written, and the Greek inscriptions were numbered according to Vol. IV., Part 2; 73 objects were registered.

The number of visits to the Departmental Library for the purpose of research was 322; there were 195 other visits to the Staff for enquiry or on departmental business. 249 attendances of students of art and architecture were made in the Sculpture Galleries during the months of January and February.

II.—*Acquisitions.*I.—*Marble.*

1. Fragment of marble kymation with lion's head spout. From an unrecorded site in the Mediterranean. *Obtained by the late Capt. F. D. Lyon and presented by Mrs. Lyon.*

II.—*Bronze.*

1. A portion of the collection formed by the late Lord Avebury, including:—

11 Fibulæ.

6 Spear heads.



- 1 Arrow head.
- 5 Celts.
- 1 Sword blade.
- 1 "Tanged" dagger from Cyprus.
- 1 Mirror.
- 1 Armlet (?)
- 4 "Mace heads."

*Presented (together with the collection in the Department of British and Mediæval Antiquities) by Lord Avebury.*

- 2. Bell from Perugia. *Presented by the Rev. C. H. Goddard.*

### III.—Vases.

1. Jug of Dipylon geometric ware, decorated with mæanders, chequers, and other ornaments. Two nude figures, on square seats, are seen on either side of an uncertain object, a table, tomb, or altar.

- 2. Similar jug, with subjects of Cretan goats.

1-2 found near Athens.

*Presented by Sir H. H. Howorth, K.C.I.E., through the National Art-Collections Fund.*

### IV.—Cast.

- 1. Cast of the mask of the Leconfield Aphrodite. *Presented by Mrs. S. A. Strong.*

### V.—Manuscripts.

Six field note-books, used by the late R. P. Pullan during the excavations at Priene, Teos and the Smintheum. (*Cf. Antiquities of Ionia*, v., p. 25.) *Presented by the Society of Dilettanti.*

*A. H. Smith.*

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DEPARTMENT OF BRITISH AND MÆDIEVAL ANTIQUITIES AND  
ETHNOGRAPHY.1.—*Arrangement, Cataloguing, &c.*

*Prehistoric Room.*—Three more wall-cases in the iron gallery have been cleared, painted and rearranged; and the contents of one removed to the south wing. Two wall-cases below have been painted and refitted for antiquities discovered in barrows, and the cup-and-ring stones have been placed in the lower part of these cases.

*Central Saloon.*—The series of bronze celts have been exhibited according to counties, and the bronze bucket from Heathery Burn placed above the other antiquities from that site in a wall-case. Two wall-cases have been painted, and filled respectively with Bronze Age specimens from Wales, and a type series from England. The doors of a pier-case have been relined. A number of flint implements, not hitherto exhibited, have been mounted and placed in drawers accessible to the public, in the south wing.

*Iron Age Gallery.*—Labelling has been continued, and the Hallstatt series, collected by the late Lord Avebury, has been mounted and exhibited at the west end. Additions have also been made to the British pottery section, and a series from Glastonbury marsh-village incorporated.

*Roman Britain.*—The arrangement of this new room is practically complete, and progress has been made with labelling. A large quantity of pottery removed from the basement has been cleaned and incorporated, and the Ransom collection of pottery added. Two amphoræ have been restored, and shelves and other fittings prepared and fixed. Turned wood models of two bronze bowls have been provided.

*King Edward VII. Gallery (Ground floor).*—The transfer of the ceramic, glass and mediæval collections to this gallery has been completed, and fittings prepared for most of the pier-cases in the western half. Several cases have been cleared for strengthening the sash-bars of the brackets; various enamels and keys have been exhibited in a desk-case, and the Wedgwood plaques replaced on screens. One table-case has been lined with cloth, and several have been newly arranged. The seal matrices with impressions have been placed in exhibition drawers, accessible to the public.

*Christian Room.*—The collection of Early Christian antiquities has been transferred to new wall-cases, and fittings provided. Progress has been made with the rearrangement.

*Buddhist Room.*—The arrangement of the collection in new wall-cases is nearly complete, and a large number of labels and plinths have been provided. Many large carvings not previously exhibited are now included.

*Brahman Room.*—The arrangement and labelling in new wall-cases have been completed, and several important Hindu carvings not previously exhibited have been mounted inside and outside the cases.

*Asiatic Saloon.*—The remainder of the porcelain has been transferred to King Edward VII. Gallery, to make room for exhibits of Oriental art, including the armour recently deposited on loan from the Tower Armoury. Accommodation is also provided for the Stein collection from Chinese Turkestan.

*Exhibition of Plaquettes.*—The collection of Italian plaquettes presented by Whitcombe Greene, Esq., has been mounted in desk-cases in what was formerly the Anglo-Saxon room; and plaquettes and similar objects from the mediæval collection have also been transferred for a temporary exhibition.

*Registration.*—The registration of current acquisitions has been continued, and 1,569 objects have been added. Numbers have been painted on 1,361 specimens, and 625 permanent labels written.

Objects have been mounted to the number of 1,479; 41 photographs and 15 lantern-slides have been prepared, and 426 type-written labels bordered. 20 Roman vases have been repaired, and the negatives of the Waddesdon collection numbered and identified.

The arrangement of the collections illustrating Oriental religions has been greatly facilitated by the assistance of Mr. Longworth Dames, and Mr. Oscar Raphael has given much time to the arrangement of the Ceramic collections. The services of these two gentlemen, when the staff is reduced to a minimum, deserve special acknowledgment.

*Students.*—746 students and visitors have been received in the Department.

## 2.—Principal Acquisitions.

### (1.) Prehistoric and Early British Antiquities.

(a) *Stone Age.*—Series of palæolithic implements collected by the late Lord Avebury, from Ightham and West Wickham, Kent; Thames gravels at Acton; and Paviland Cave, Glamorganshire. *Presented by Rt. Hon. Lord Avebury.*

A large palæolith from Romsey, Hants; implement of spear-head form from Hayes Common, Kent; and series of implements from Hitchin, Herts; and Limpsfield, Surrey. *Presented by Sir Hercules Read, LL.D.*

Flint chopper from the surface at Limpsfield, Surrey. *Presented by V. P. Kitchin, Esq.*

Type-series of the flint and other stone relics of Le Moustier date excavated at St. Brelade Cave, Jersey: described in *Archæologia*, vol. lxxvii. *Presented by the British Association, with the approval of the Société Jersiaise.*

Flint implements excavated on Hackpen Hill, and found at Winterbourn Bassett, Wilts: described in *Proc. Soc. Antiq.*, vol. xxviii. *Presented by Rev. H. G. O. Kendall, F.S.A.*

Implements and flakes found by the donor in brickearth at Luton, near Chatham, Kent. *Presented by S. K. Turner, Esq.*

Flake-implement with faceted butt from Grime's Graves, Weeting, Norfolk; and two implements from Ightham, Kent. *Presented by J. Reid Moir, Esq.*

(b) *Bronze Age*.—Two bronze armlets found (with another in the Museum) in a grave near Ramsgate, Kent. *Presented by Sir Hercules Read, LL.D.*

Circular shield and spear-head found on Brumby Common, near Scunthorpe, Lincs. *Presented by Rt. Hon. Lord St. Oswald.*

(c) *Early Iron Age*.—Series of worked bones, spindle-whorls, rubbing-stones and loom-weights, from the marsh-village at Glastonbury, Somerset. *Presented by the Glastonbury Antiquarian Society.*

Boat-shaped bronze brooch of early Italian type, found near Taunton, Somerset. *Presented by Sir Hercules Read, LL.D.*

(d) *Foreign*.—An important series illustrating the earliest Iron Age of Europe, excavated in 1869 at Hallstatt, in the Salzkammergut, Upper Austria, and collected by the first Lord Avebury (Sir John Lubbock). The principal specimen is a bronze bucket, nearly perfect, of the 8th cent. B.C., the best of its kind from the site; and the collection is illustrated in *Archæologia*, vol. lxvii. Earlier periods are represented by a series of flints from Le Moustier Cavern in the Dordogne, and implements from La Ganterie, Côtes-du-Nord; Aarhus kitchen-middens, Denmark; Swiss Lake Dwellings and Algeria; and bronze implements from Saxony, Spain, Denmark, and Italy. All the specimens not required for the Museum were distributed among 29 provincial museums on behalf of the donor, *Rt. Hon. Lord Avebury.*

Bronze socketed celt from the Thayetmyo district of Burma. *Presented by J. C. Mackenzie, Esq., I.C.S.*

Two bronze open-work relief of animals preying on each other, Archaic Scythian, described in *Man*, 1917, No. 1. *Presented by Louis C. G. Clarke, Esq.*

## (2.) *Romano-British.*

Pair of cinerary urns found with others in an ironstone recess, Bramby Common, Lincs. *Presented by Rt. Hon. Lord St. Oswald.*

## (3.) *Anglo-Saxon and Foreign Teutonic.*

Bronze-gilt boss, probably from the cross of a shrine, with engraved interlaced animals and spirals, niello and settings for amber or glass, a fine example of Irish work of the 8th cent. Found in the churchyard at Steeple Bumpstead, Essex, and for some years preserved

in the Church. Described in *Proc. Soc. Antiq.*, vol. xxviii. Presented by Henry Oppenheimer, Esq., F.S.A., through the National Art-Collections Fund.

Silver-gilt circular brooch with filigree and garnet cell-work, Kentish, early 7th cent., from the Kennard collection, and probably found in the King's Field, Faversham, Kent. Also a pair of gold discs, with cruciform design and gold filigree, forming the clasp of a belt, Lombardic work of the 8th cent. Both presented by the National Art-Collections Fund.

Quadruple gold chain, formed of open-work discs ; a gold composite chain with jewelled discs at the ends and centre ; pair of gold ear-rings with jewelled settings and three hanging chains ; and pair of gold bracelets of serpent pattern. Byzantine, said to have been found in Egypt. Presented by Mrs. Burns.

#### (4.) *Mediæval and Later.*

A double ivory comb, with three sunk medallions on each face, enclosing figures of animals, 12th cent. work ; on one end in mediæval lettering is a Latin inscription, stating that the comb was sent by Pope Gregory to Queen Bertha, but the identity of both is uncertain. Described in *Proc. Soc. Antiq.*, vol. xxviii. Presented by Maurice Rosenheim, Esq., F.S.A.

A jet pendant with bust of Charles I., and date of his execution. Presented by Capt. Annesley Warre, F.S.A.

Three tiles simulating bricks, from the front of Smithfield Gate-House, late 17th cent. Presented by E. A. Webb, Esq., F.S.A.

Two wooden trenchers, one with cavity for salt, from the Drane collection, 17th cent. Presented by Sir Hercules Read, LL.D.

Brass lamp folding into the form of a book, early 18th cent. Presented by Maurice Rosenheim, Esq., F.S.A.

#### (5.) *Ceramic and Glass Collections.*

Slipware dish with Royal Arms within the Garter, and C.R. in the field, with name of the maker, Thomas Toft. Presented by Lady Wernher.

Bristol porcelain dish in form of vine-leaf, with mark. Presented by Miss Bird.

Five pieces of Chinese and Japanese pottery and porcelain from the collection of the late R. Phené Spiers, Esq., F.S.A. Presented by W. L. Spiers, Esq., F.S.A.

#### (6.)—*Collection illustrating various Religions.*

Chalcedony intaglio with the Adoration of the Magi, Early Christian. Presented by Sir Hercules Read, LL.D.

#### (7.)—*Oriental and Ethnographical.*

Copper hand-warmer, with coloured enamels, Japanese ; and a silver kohl-flask, with chain, probably Syrian. Presented by Maurice Rosenheim, Esq., F.S.A.

Bronze spoon with shallow bowl and forked end, probably from an interment in Corea. *Presented by Prof. Bateson, F.R.S.*

Japanese chain used in sword-play ; Chinese padlocks and one from Sweden ; Japanese hand-cuffs and an Indian brass vessel. *Presented by Dr. Hildburgh, F.S.A.*

Embroidered bag and ornaments of a Shan woman, Upper Burma. *Presented by Oscar Raphael, Esq., F.S.A.*

Specimens from the Orang Dusun, British North Borneo, and a stone adze from the coast. *Presented by I. H. N. Evans, Esq.*

Tiger-cowry hook for catching squid, from the Sandwich Islands (Hawaii). *Presented by J. Edge Partington, Esq.*

Four stone body rubbers, from Temma, 100 miles north of Coomassie, Gold Coast. *Presented by B. K. N. Wyllie, Esq., B.Sc.*

Two wooden figures from the Bauchi Province, N. Nigeria. *Presented by E. A. Langslow Cock, Esq.*

A shield, swords, spearheads and quiver from the Nandi Tribe, E. Africa. *Presented by Capt. Noel Monckton.*

Glass and other beads from the beach of Pemba Island, Zanzibar. *Presented by C. E. Hartland, Esq.*

Hat of an Indian woman from Alaska. *Presented by Mrs. J. Y. W. MacAlister.*

A series of ornaments from the Jibaro Indians of Ecuador. *Presented by J. L. Hermessen, Esq.*

Fifteen specimens of pottery from Pueblo Rico, S. Cauca, and from Apia, Colombia. *Presented by Dr. Spurrell.*

Four pottery bowls, Indian, from Uruguay. *Presented by C. E. R. Rowland, Esq.*

Native implements from Patagonia and Tierra del Fuego, and needlework from Fez. *Presented by Mrs. E. A. Warne.*

Jade tikis, fish hook and celts from New Zealand ; and selected specimens from North, Central and South America, New Guinea and South Africa, including a series of Bushman stone implements, from the collection of the late Lord Avebury. *Presented by Rt. Hon. Lord Avebury.*

#### CHRISTY COLLECTION.

During the year the Trustees have acquired by donation the following objects, which have been transferred to the Trustees of the British Museum :—

A wooden figure from the N.W. Coast of America. *Presented by Louis C. G. Clarke, Esq.*

A reaping knife from Dôr, arrows from Dinka, and a stone club from the Lafofa tribe, S. Kordofan. *Presented by Dr. C. G. Seligman.*

*Charles H. Read.*

## DEPARTMENT OF COINS AND MEDALS.

I.—*Registration and Arrangement.*

1. The registration and incorporation of recent acquisitions has proceeded as follows :—

		Greek.	Roman.	British.	Mediæval, &c.	Oriental, &c.
Registered	... ..	115	8	146	577	21
Incorporated	... ..	32	1	77	364	7

2. Eleven collections of coins and medals submitted for examination by their owners have been examined.

The bibliographies of Greek and Roman Numismatics, and of General Numismatic Subjects, have been kept up to date. Progress has also been made with the card-index of Greek coin-types. The Alexandrine coins of Cyprus have been brought together and re-arranged in accordance with recent research.

3. The re-cataloguing of the Departmental Library of numismatic works has proceeded.

4. The exhibitions have been withdrawn, and about five-sixths of the whole collection have been placed in greater security for the period of the War. In order to maintain access to the objects thus removed, lists have been drawn up of the cabinets with reference to their new positions, so that in the majority of cases the removal of the coins has not hindered the work of answering enquiries, or of supplying casts for the illustration of serious numismatic publications.

II.—*Publications.*1. *Catalogue of Greek Coins.*

*Coins of Arabia, Mesopotamia, &c.*, by G. F. Hill.

The coins of Elymais and Susiana (289 in number) have been weighed and catalogued; and the historical introduction to the coinage of the Persian Empire, and part of that to the coinage of Elymais and Susiana, have been written.

27 plates of casts for illustration have been prepared.

2. *Catalogue of English Coins.*

*Norman Kings*, by G. C. Brooke.

This work, in two volumes, has been completed and published.

III.—*Acquisitions.*

The total number of coins and medals added to the Department during the year 1916 was 834, of which 13 were of gold, 249 of silver, 341 of bronze or copper, and 231 of other materials.

The following table shows the number of the new acquisitions classified according to the several series to which they belong :—

Class.	Gold.	Silver.	Bronze.	Other Materials	Total.
Greek ... ..	1	63	52	—	116
Roman ... ..	—	1	8	—	9
British and Colonial ... ..	3	29	32	21	85
Mediæval and Modern ... ..	4	135	241	207	587
Oriental ... ..	5	21	8	3	37
Total ... ..	13	249	341	231	834

Of the above, 799 have been presented, viz. 11 of gold, 230 of silver, 334 of bronze, and 224 of other materials.

The following is a list of the benefactors to the Department during the year :—

Admiral The Marquis of Milford Haven, G.C.B., K.C.M.G. ; the Government of Assam ; the Government of the United Provinces ; the Deputy Master of the Royal Mint ; the Deputy Keeper, Public Record Office ; the Director, Prisoners of War ; the Director, Victoria and Albert Museum ; the Director of the Fitzwilliam Museum, Cambridge ; the National Art Collections Fund ; the American Numismatic Society ; the Society of Antiquaries, London ; the Bombay Branch of the Royal Asiatic Society ; the British School of Archæology in Egypt ; the Yorkshire Archæological Society ; the Joan of Arc Statue Committee, New York ; the Governors of the Shakespeare Memorial Theatre, Stratford-on-Avon ; the Directors of the Great Northern Railway Company ; E. Heron Allen, Esq. ; J. R. Ayris, Esq. ; E. D. Barff, Esq. ; F. J. Brittan, Esq. ; W. H. Buckler, Esq. ; Sig. Memmo Cagiati ; W. Charlton, Esq., J.P. ; J. T. Chell, Esq. ; the Executors of the late S. Cohen, Esq. ; Richard Dalton, Esq. ; A. M. Daniel, Esq. ; M. Achilles Diamantaras ; Sir Arthur Evans, P.S.A., F.R.S. ; Miss Helen Farquhar ; J. T. Fripp, Esq. ; Henry Garside, Esq. ; W. Gilbert, Esq. ; A. Goodwin, Esq. ; Sir Evelyn Grant Duff, K.C.M.G. ; H. St. George Gray, Esq. ; H. T. Grogan, Esq. ; S. W. Grose, Esq. ; W. G. Groves, Esq., J.P. ; Miss Hargrove ; D. T. Harris, Esq. ; F. W. Hasluck, Esq. ; G. F. Hill, Esq. ; Mrs. G. F. Hill ; W. J. Hocking, Esq. ; J. Horne, Esq. ; W. R. Hubbard, Esq. ; L. P. Johnston, Esq. ; R. Lloyd Kenyon, Esq., J.P., D.L. ; L. A. Lawrence, Esq., F.S.A. ; W. Leaf, Esq. ; R. E. Low, Esq. ; G. Macdonald, Esq., C.B. ; C. Macpherson, Esq. ; the late Alexander Mann, Esq. ; J. G. Milne, Esq. ; M. Victor Morin ; E. T. Newell, Esq. ; M. Henry Nocq ; Henry Oppenheimer, Esq., F.S.A. ; M. A. V. Oreshnikov ; Sir Lionel Phillips, Bart. ; H. L. Rabino, Esq. ; Sir Hercules Read ; the Rev. Edgar Rogers ; Maurice Rosenheim, Esq., F.S.A. ; H. Ling Roth, Esq. ; Horace Sandars, Esq., F.S.A. ;



Captain Edw. Shepherd ; Messrs. Spink and Son ; Mrs. Staunton ; Henry Symonds, Esq., F.S.A. ; Prof. J. Havard Thomas ; Henry Van den Bergh, Esq. ; the Rev. J. A. Vanes ; Emery Walker, Esq., F.S.A. ; W. C. Wells, Esq. ; Mr. J. Wilcke ; Mrs. J. S. Wilks ; W. J. Wintle, Esq. ; Howland Wood, Esq. ; A. M. Woodward, Esq.

#### IV.—*Remarkable Coins and Medals.*

##### A. *Coins.*

An electrum half-stater (84·6 grs.) of the 7th cent. B.C., of an uncertain Ionian mint ; *obv.* Star in wreath ; *rev.* Two incuse impressions, one of which has been obliterated by a second impression. From the Kessissoglou Collection. *Presented by Henry Oppenheimer, Esq., F.S.A.*

Twenty silver Persian sigloi from a hoard said to have been found in Ionia, including some hitherto unknown varieties and many peculiar countermarks. *Presented by J. G. Milne, Esq.*

A very rare silver tetradrachm of Syracuse ; *obv.* Four-horse chariot, crowned by Victory ; below, olive-branch ; *rev.* Head of nymph surrounded by four dolphins and usual inscription. Weight 262 grs. From the collection of Dr. A. C. Headlam. The olive-branch symbol suggests that this coin commemorates the peace-congress which was held at Gela in 424 B.C. *Presented by Sir Arthur Evans, F.R.S., P.S.A.*

A hoard of 39 silver Athenian tetradrachms of the 5th and 4th cent. of the usual types, found in the Ptah temenos at Memphis ; most of the specimens are punchmarked or disfigured by testing-marks ; one is a contemporary forgery ; and some are of exceptionally free style. *Presented by the British School of Archaeology in Egypt.*

A rare silver didrachm of Croton (types, eagle and tripod crowned by Victory) of reduced weight (95 grs.), dating from the period 280–277 B.C. From the collection of Dr. A. C. Headlam. *Presented by S. W. Grose, Esq.*

A minute brass coin of the Emperor Hadrian, weighing 13·2 grs. ; *obv.* Head of the Emperor ; *rev.* S.C. in wreath. Only one other specimen is recorded. *Presented anonymously.*

A remarkable and hitherto unknown gold coin of the 18th cent., issued by one of the West Indian colonies, probably Jamaica ; it is made out of a Spanish Peruvian gold onza of 1738, which has been plugged with a piece of gold, bringing the weight up to that of the current "double doubloon," 415·4 grs. On the plug are impressed an alligator and the letters G. C., the initials of the issuing authority. The coin probably dates from the end of the 18th cent. *Presented by the late Alex. Mann, Esq.*

Ten silver reals of the reign of Charles V., with the types of Ferdinand and Isabella. *Presented by Horace Sandars, Esq., F.S.A.*

Forty-eight specimens of the German thaler coinage of various states, chiefly Austria, Mansfeld and Saxony, including a fine double thaler of Johann Georg, Duke of Saxony, 1616. *Presented by the Executors of the late S. Cohen, Esq.*

A selection of 392 modern coins, including a very complete series of the nickel and copper coinage of the German Empire, of various dates and mints hitherto unrepresented in the Museum. *Presented by Henry Garside, Esq.*

Two specimens of the gold *pond* struck by the Boer Government in 1902 out of gold taken from the battery of the Transvaal Gold Mining Estates; *obv.* EEN POND; *rev.* monogram of Z.A.R. and date 1902. Only three specimens are said to have been made of one of these varieties. *Presented by Sir Lionel Phillips, Bart.*

Three gold coins of the vassals of the Almoravids, 11th–12th cent., from a hoard discovered about three years ago in the banks of the Guadalquivir. *Presented by Horace Sandars, Esq., F.S.A.*

A gold Padma Tanka of Shri Rama, 15th–16th cent. *Presented by the Bombay Branch of the Royal Asiatic Society.*

#### B.—Medals.

An unpublished bronze medal commemorating the foundation by Cardinal Jacopo Savelli in 1565 of a house for the association of Papal grooms; *obv.* Virgin and Child with St. Anne; *rev.* Arms of Savelli. *Presented by Maurice Rosenheim, Esq., F.S.A.*

A silver medal of the Swedish freemason Patrick Alstromer, 1785. *Presented by Mrs. J. S. Wilks.*

Twenty-nine medals issued in Germany during the present war, commemorating various events and embodying various claims. Among these are: a large cast iron medal representing an air attack on London, 17th–18th August, 1915, with Zeppelins over the Tower Bridge; the medal (in iron) commemorating the sinking of the "Lusitania" (represented as a war-ship with ram, laden with aeroplanes, guns, &c.); a medal (in bronze) of Admiral von Tirpitz, with Neptune afloat on a submarine shaking his fist at English shipping; a medal (in bronze) of the Crown Prince Wilhelm as young Siegfried; and a silver medal of General von Kluck, *rev.* Fury on horseback "Nach Paris, 1914." *Twenty-one of these were presented by a friend of the Museum.*

Bronze medal or plaque commemorating the Victory of the Marne, by S. Kinsburger.

Bronze medal in memory of the French men of letters who have fallen in the war, by M. Henry Nocq. *Presented by the Artist.*

A silver medal by Chaplain of the 25th anniversary of the Ny-Carlsberg Brewery. *Presented by Miss Hargrove.*

Two bronze medals commemorating the Battles of Heligoland Bight and Dogger Bank, and the Battle of Jutland Bank. *Presented by Admiral The Marquis of Milford Haven, G.C.B.*

The Shakespeare Tercentenary Medal, in silver and in bronze, by Mrs. Dorothy Dick. *Presented by the Governors of the Shakespeare Memorial Theatre.*

Two bronze prize medals in memory of Miss Rosa Morison, by Prof. J. Havard Thomas. *Presented by the Artist.*

Bronze medal of the unveiling of the statue of Joan of Arc in New York. *Presented by the Joan of Arc Statue Committee.*

V.—*Students and Visitors.*

The number of students and visitors admitted to the Department during the months of January and February, 1916, was 377. From March 1st onwards the Department has been closed to the public.

*G. F. Hill.*

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## BRITISH MUSEUM (NATURAL HISTORY).

STATEMENT of PROGRESS made in the ARRANGEMENT and DESCRIPTION of the COLLECTIONS, and ACCOUNT of OBJECTS added to them, in the Year 1916.

## GENERAL PROGRESS.

*Visitors.*

The total number of visits made by the public to the Natural History Museum during 1916 was 402,673, as compared with 433,581 in 1915.

The attendance on Sunday afternoons was 43,414, as against 48,409 in the previous year.

The average daily attendance for all open days was 1,106; for week-days, 1,155; and for Sunday afternoons, 819.

To meet the wishes of His Majesty's Government some of the Geological Galleries are closed to the public for the duration of the war; but the Central Hall and certain of the Zoological Galleries are open to the public daily, and other parts of the Museum on alternate days.

*Swiney Lectures.*

Dr. J. D. Falconer having relinquished his appointment as Swiney Lecturer in order to take up a temporary administrative post in Nigeria, Dr. J. S. Flett was appointed to give the course of Swiney lectures in November and December of 1916. The subject on this occasion was "The Mineral Resources of Europe." The lectures, twelve in number, were delivered at the Royal Society of Arts, the theatre at the Victoria and Albert Museum not being available, and were attended, on an average, by 96 persons a lecture.

*Museums Association.*

The Museum was again represented by Dr. F. A. Bather at the Annual Meeting of the Museums Association, held at Ipswich in July. Among the subjects discussed was the prospect of organising a scheme with a view to museums in this country combining to obtain from home manufacturers all museum apparatus, such as rectangular glass jars, hitherto chiefly supplied by Germany.

*Special Exhibition.*

An exhibition of "Trout-flies" (the natural insects and the artificial "flies" used as bait by anglers), presented by Mr. Martin H. Mosely, has been arranged and placed in the Insect Gallery.

*The War and the Museum Staff.*

At the end of 1916, 59 members of the staff of the Natural History Museum were serving with the Naval and Military forces. In addition, 12 Museum men have joined the Volunteers [1st

Battalion Central London Regiment (United Arts Rifles) ] ; six men are serving as Special Constables ; and six men form a Museum detachment of the London Ambulance Column. This detachment has been very active during the past year, having received and dealt with 286 separate calls to attend wounded men from hospital trains or from the hospitals. Four members of the staff have been lent to the Ministry of Munitions ; one assistant is doing duty as Bacteriologist at Haslar Hospital under the Admiralty ; and another Assistant has been lent to the War Office and is shortly proceeding to Salonika as Protozoologist. Only one man of military age and passed as fit for general service is at present employed at the Museum. This man received exemption as being indispensable for the preservation of the collections.

Three members of the Museum Establishment have been killed in action, and one is reported as missing since the 19th September ; seven have been wounded.

The Military Cross has been awarded to two assistants, viz. :— Captain A. K. Totton, Duke of Cornwall's Light Infantry, and Captain W. Campbell Smith, attached to the Gas Company, Royal Engineers.

A Parliamentary Return has been issued of the number of civil servants on military service, showing that of 26 men of military age remaining at the Natural History Museum on 1st April, 1916, 11 were enrolled, 14 were rejected on medical grounds, and one applied for exemption on the ground of conscientious objection and is now working on a fruit farm.

#### *The War and the Work of the Museum.*

The Museum has been able to render assistance to various public departments in matters connected with the war. Some of these being of a confidential nature cannot be mentioned here, but note may be made of the following as examples of the sort of inquiries which reach the Museum :—

- (a) Nature of some organisms which caused blocking-up of certain sea-water pipes ;
- (b) As to some mite-infested oats at the Front ;
- (c) Application of a remedy for the rice-weevil in connection with the disease of beri-beri ;
- (d) As to methods of destruction of bed-bugs ;
- (e) The identification of specimens of larvæ found in drinking water ;
- (f) Nature of wood used in the construction of a propeller of a Zeppelin brought down in this country ;
- (g) Advice as to certain samples of so-called " Silver Spruce " from British North America ;
- (h) Inquiry as to certain wood stated to possess luminous properties.

The Museum is assisting in the distribution, through its correspondents abroad, of propagandist literature presenting the cause of the Allies. In many cases these correspondents have shown their interest and keenness to help by asking to be supplied with additional copies of the pamphlets, &c.

#### *British and Russian Men of Science.*

A correspondence has passed between the Museum, the Foreign Office, and the Board of Education with reference to the desirability of a closer intercourse between British and Russian men of science.

The Museum represented that one of the chief difficulties in the past that has stood in the way of closer co-operation had been the language, and it was suggested that much might be done to facilitate closer intercourse by the publication in English and French of scientific papers by Russian workers. It was also stated that the Museum would always be ready to encourage exchange of specimens with Russian institutions.

#### *Royal Society Committee on Grain Pests.*

Accommodation at the Museum has been placed at the disposal of the Committee formed by the Royal Society to inquire into the bionomics and economics of grain-infesting insect pests, and Mr. J. Hartley Durrant, a member of the staff of the Entomological Department, has been appointed to serve on the Committee.

#### *Stranded Whales.*

The interest of the records of Cetacea stranded on the British coasts has by no means fallen off during the past year. Altogether 29 records were received (one more than in 1915), the most interesting being a Cuvier's Whale, believed to be the first specimen of this species recorded from the English coast; a Sowerby's Whale; a White-sided Dolphin; a young Sperm Whale; and a Killer, or Grampus, of exceptional size. Parts of most of the specimens were secured for the Museum. Valuable help in this inquiry has again been given by Receivers of Wreck, Coastguard Officers, and others; and the thanks of the Trustees are due also to the Board of Trade for continuing the arrangements which have made it possible to carry on the work.

#### *Antarctic Whales.*

Considerable attention continues to be given to the investigation of whales in the Antarctic. A number of papers and statistics relating to the subject, and especially to whaling operations in South Georgia, have been referred to the Museum by the Colonial Office. In this connection Dr. Harmer has drawn attention to the large increase in the number of Blue Whales captured in the season 1914-15 as compared with previous seasons, and to a corresponding diminution in the number of Humpbacks caught by the whalers—a

very significant and disquieting feature of the operations, as indicative of the consequences of over-fishing of a particular species. Similar evidence is forthcoming from his examination of a report on the South Shetland Whaling Season, 1915-16, which contains valuable information supplementing the reports received from South Georgia. In this case, the statistics show that the total number of whales captured during the season was 4,431, the majority being Blue and Fin Whales, and only 219 Humpbacks, of which comparatively few are left in the South Shetlands area.

#### *Sealing Industry in South Georgia.*

Dr. Harmer has also reported on a number of papers transmitted by the Colonial Office relating to the sealing industry in South Georgia. From these papers it appeared that there was no observable decrease in the number of Elephant-Seals since the industry was established under the terms of an Ordinance of 1909, notwithstanding that the number killed averaged 3,028 annually.

#### *Other Investigations.*

Other matters that have come within the scope of the activities of the Museum during the past year, which may be briefly noted here, are :—

(a) Questions arising out of the Canadian Commission to consider the alleged depredations of Sea Lions on the Pacific Coasts of North America, in connection with the fishing and canning industries ;

(b) The identification of certain animal forms of tinned food such as Pacific Lobsters, Sardines or Sprats, &c. ;

(c) The identification of Poisonous Fishes in the West Indies ;

(d) The Sponge Fishery in the West Indies ;

(e) The introduction of Reindeer and other animals into South Georgia ;

(f) The protection of Birds and Wild Mammals in the Crown Colonies and Protectorates ;

(g) The desirability of a measure to restrict the importation of Wild Birds' Plumage.

#### *Rowland Ward Bequest.*

The Trustees of the Rowland Ward Bequest have presented to the Museum during the year twelve mounted specimens, including a Wild Sheep from Thian-Shan, a Lion from British East Africa, and a female Gorilla from the Cameroons.

#### *Presents.*

The total number of gifts received during the year by the several Departments was 1,697, as compared with 1,825 in 1915. Many of these comprised large numbers of individual specimens.

The details of all the more important of them will be found in the reports of the Keepers of Departments, but the following are mentioned here also as being of special interest or value :—

*From—*

Lady Seton-Karr—five very fine specimens of heads of Big Game selected from the collection of her husband, the late Sir Henry Seton-Karr. (*See Return, 1916, p. 66.*)

The Duke of Hamilton—the head of a bull from his herd of "Wild" white cattle in Cadzow Forest.

Mr. H. F. Varian—a remarkably fine pair of horns, with mask, of a new sub-species of Sable Antelope from Angola.

Lady Strathcona—two complete skeletons and a skull of Musk-Ox, formerly the property of the late Lord Strathcona, her father.

The Board of Trade—the head and paddles of a White-sided Dolphin, stranded at Rathlee, Co. Sligo; and parts of a Grampus or Killer Whale, captured on the Colvend shore, Kirkcudbrightshire.

Captain D. McCalmont—the skeleton of the famous racehorse "Isinglass," winner of the Derby of 1893.

Mr. E. J. Brook—a selection of birds from a collection obtained by Mr. Walter Goodfellow in the high mountains of Ecuador, including the types and co-types of five new species.

Mr. A. L. Butler—a series of birds, consisting of the remainder of his Soudanese collection, specimens from Ceylon, India, and Europe, and a number of Paradise-birds, Kingfishers, and Pittas; in all 1,452 specimens, including several types.

Mr. E. G. Herbert—a fine collection of Siamese birds, consisting of 1,061 skins and 500 eggs.

The Lords of the Admiralty—a Leathery Turtle captured in a net off the Scilly Islands, a very rare specimen.

Messrs. W. Howlett & Sons—a large Sunfish caught off the South of Ireland.

Mr. A. O. Walker—a collection of 657 tubes of specimens of Crustacea, chiefly Amphipoda.

Mr. C. F. Rousselet—his valuable collection of about 1,200 mounted slides of Rotifera and Freshwater Polyzoa.

Mr. Henry Sidebottom—a collection of Foraminifera, of high scientific value, consisting of about 18,000 specimens, including numerous types.

The Trustees of the Percy Sladen Memorial Fund—the first selection from a valuable collection of fossil reptiles from the Cretaceous rocks of Alberta, Canada.

Sir John Eaglesome, Director of Railways and Works in Nigeria—an important collection of Eocene fossils, including part of the sternum of the largest known bird of flight, and interesting remains of other vertebrates, from a railway cutting in Nigeria.

Sir W. Crookes, F.R.S.—a valuable series of mineral specimens from his private collection, consisting of gold, platinum, silver, diamonds (including a crystal coloured by radium), &c.

Mr. F. N. Ashcroft—a fine series of specimens of Zeolites.



Mrs. Litchfield—five sheets of the manuscript of her father Mr. Charles Darwin's famous work "The Origin of Species," for preservation with the series of specimens of handwritings of naturalists.

Mrs. McConnell—a handsomely bound copy of a work on the Birds of British Guiana, published by her in memory of her late husband, Mr. F. V. McConnell, a benefactor of the Museum.

Lord Rothschild—five volumes of drawings of plants, by W. G. Smith, the originals of published plates.

#### *Purchases.*

With the exception of the purchase for £100 of the sixth instalment of the Distant collection of insects, to which the Trustees were committed, and of books for the upkeep of the several libraries, purchases were restricted to a few unimportant transactions.

#### *Exchanges and Gifts of Duplicates.*

Exchanges of duplicate specimens have been made with various institutions and individuals.

The Trustees have readily agreed to a request from the Prime Minister of New Zealand that a representative set of duplicate specimens from the collections of the Scott ("Terra Nova") Antarctic Expedition may be presented to the Dominion Museum at Wellington, and, if numbers permit, to the three other chief Museums of the Dominion at Dunedin, Christchurch, and Auckland. A first set of the duplicates will accordingly be placed at the disposal of the New Zealand Government in due course.

Duplicate specimens have been presented as follows :—

Zoological specimens (other than entomological)—to the Royal Scottish Museum, Edinburgh ; Prof. G. H. F. Nuttall, F.R.S. ; Major E. E. Austen ; Dr. E. Pawlowsky (Petrograd) ; Lt. Commr. A. Cherry-Garrard, R.N. ; Surgeon E. L. Atkinson, R.N. ; Mr. C. S. Wright ; and Prof. E. Fawcett.

Entomological specimens—to Prof. A. Hustache ; M. Antoine Grouvelle ; Mr. H. E. Andrewes ; and Mr. L. B. Prout.

Fossils—to the Sedgwick Museum, Cambridge.

(N.B.—All the *individuals* named have rendered services to the Museum.)

#### *Publications.*

The following works on Natural History have been published during the year :—

British [Scott] Antarctic ("Terra Nova") Expedition, 1910. Natural History Report. Zoology. 4to :—

Vol. i, No. 4. Larval and Post-larval Fishes. By C. Tate Regan, M.A. Pp. 125—156 : 5 text-figures, 10 plates. 9s.

Vol. ii, No. 6. Myzostomida. By C. L. Boulenger, M.A., D.Sc. Pp. 135—140 : 1 plate. 1s.

Vol. iii, No. 2. Crustacea, Pt. I, Decapoda. By L. A. Borradaile, M.A. Pp. 75—110 : 16 text-figures. 3s.

Vol. iii, No. 3. Crustacea, Pt. II, Porcellanopagurus : an instance of Carcinization. By L. A. Borradaile, M.A. Pp. 111—126 : 13 text-figures. 1s. 6d.

Vol. iii, No. 4. Crustacea, Pt. III, Cirripedia. By L. A. Borradaile, M.A. Pp. 127—136 : 7 text-figures. 1s.

Report on Cetacea stranded on the British coasts. By S. F. Harmer, SC.D., F.R.S. No. 3. Cetacea stranded during 1915. Pp. 12 : 1 map. 4to. 1s. 6d.

Catalogue of Ungulate Mammals. Vol. v. Perissodactyla, Hyracoidea, Proboscidea. With Addenda to the earlier volumes. By the late R. Lydekker, F.R.S. Pp. xlv, 207 : 31 text-figures. 8vo. 7s. 6d.

Catalogue of the Fresh-water Fishes of Africa. By G. A. Boulenger, F.R.S. Vol. iv. Pp. xxvii, 392 : 195 text-figures. Imp. 8vo. £1 10s.

Guide to the specimens and enlarged models of Insects and Ticks exhibited in the Central Hall, illustrating their importance in the spread of Disease. By W. G. Ridewood, D.Sc. Pp. 44 : 14 text-figures. 8vo. 6d.

Instructions for Collectors, No. 13—Alcohol and Alcoholometers. By S. F. Harmer, SC.D., F.R.S. Pp. 8. 8vo. 3d.

Economic Series, No. 3.—Fleas as a Menace to Man and Domestic Animals. Their Life-History, Habits and Control. By J. Waterston, B.D., B.Sc. Pp. 21 : 1 plate, 6 text-figures. 8vo. 1d.

Economic Series, No. 4.—Mosquitoes and their relation to Disease. Their Life-History, Habits and Control. By F. W. Edwards, B.A. Pp. 20 : 6 text-figures. 8vo. 1d.

New editions have been issued of two numbers of the "Instructions for Collectors," namely, No. 2, "Birds and their Eggs" (Sixth edition, pp. 14 : 6 text-figures. 8vo. 3d.), and No. 3, "Reptiles, Batrachians, and Fishes" (Fourth edition, pp. 12. 8vo. 3d.).

Selections of the natural history publications have been sent to free libraries and other institutions at home and abroad, and to persons who have benefited the Museum by helping in the preparation of the works, or in other ways.

#### GENERAL LIBRARY.

The additions to the General Library during the past year have been :—

By purchase	-	191	volumes.
By donation	-	719	volumes, 1 map, and 158 photographs.
Total	-	<u>910</u>	<u>1</u> <u>158</u>

All the volumes and maps have been catalogued, press-marked and put in their places, whilst 834 volumes have been bound in 540.

The extent of the collection on the 31st December was 45,873 volumes, 5,929 maps, and 1,022 photographs (not including those in the Owen Collection of Drawings, &c.).

The accessions to the Departmental Libraries have also been catalogued as they came in, and duplicate transcripts of the titles have been returned with the books.

Altogether 1,488 title-slips have been written, 68 rewritten, and 1,934 revised (independently of those prepared for printing).

There are now, on a rough estimate, 101,806 volumes (exclusive of continuations and minor separata) and 6,250 maps in the whole building.

The number of visits paid to the General Library during the year by students and others (irrespective of the staff and persons to whom the use of a key is granted) was 1,681.

Donations have been received from a great number of Museums, Academies, and other corporate bodies, as well as from personal donors.

The printing of the Supplement to the Library Catalogue has been begun, the whole of letter "A" has been set up in type and has been printed off as far as "ALMQ."

#### INDEX GENERUM ET SPECIERUM ANIMALIUM.

During the year considerable progress has been made with this Index, under Mr. C. Davies Sherborn's charge, and some 35,000 slips have been compiled and incorporated.

The manuscript has been continuously and extensively consulted during the past year by the staff and students, whilst many enquiries have been answered by Mr. Sherborn in correspondence.

The recording for the year has been principally done from the journals of Academies and from periodical publications, with a view to the convenience of consultants, and the Index is now in an advanced state, having been carried out as far as the letter "T."

#### INDEX MUSEUM.

All the dissections exhibited in the Hall that are mounted in preservative fluid were inspected during the year, and several have been resealed and others refilled.

An explanatory guide-book to the specimens and models of disease-spreading insects and ticks exhibited in the Hall was issued in January. The pamphlet, which is to a large extent a compilation of the labels that are attached to the specimens displayed, redrafted in such a manner that they read consecutively, consists of forty-five pages and is illustrated by fourteen text-figures.

A series of drawings, enlarged and of actual size, of insects that lay their eggs in the puparia of tsetse-flies was mounted for exhibition in the early part of the year. These insects, from the fact that they prevent the development of the tsetse-flies in the puparia thus parasitised, tend to reduce the numbers of tsetse-flies occurring in a district, and to limit the spread of sleeping-sickness and other diseases of trypanosome origin, such as "nagana," and are consequently to be regarded as beneficial.

In connection with a notice issued by the military authorities forbidding the shooting of carrier-pigeons, a series of three typical carrier-pigeons has been mounted, together with specimens of other

pigeons with which they might be confused. The distinguishing features of the various birds exhibited are explained in the labels that accompany the specimens.

During the month of May there was placed on exhibition a small series illustrating the natural history of the worm *Bilharzia* (*Schistosomum*), that causes a disease of the bladder and rectum, known as bilharziosis, common in Africa, the West Indies, and Japan. The series includes actual specimens of the worms as they occur in the veins of the intestine, and examples are shown of pond-snails which are known to harbour the alternate generation of the parasites. The life-history of the worm is explained by means of drawings of the egg, and of the sporocyst and cercaria stages, and photographs of bilharzia-infected canals in Egypt are mounted to illustrate how the disease may be communicated to human beings by bathing or standing in infected water.

In consequence of the interest taken in the series of lice exhibited under simple lenses in the Hall, the method of display has been adopted in the case of three disease-spreading species of mosquitoes, a flea, and two bugs.

Further progress has been made in the introductory series of animals, plants and rocks which, when completed, will be exhibited in four table-cases in the middle of the Hall. The third case (Invertebrates other than Protozoa) has been roughly planned out, and some progress has been made in the preparation of the specimens it is intended to display in the case.

*L. Fletcher,*  
Director.

British Museum (Natural History),  
24 February, 1917.

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## DEPARTMENT OF ZOOLOGY.

I.—*Arrangement and Conservation.*

## MAMMALIA.

*Mammal Galleries.*

The principal additions to the Exhibition Galleries have been received from the Trustees of the late James Rowland Ward, and include the following :—

A Lion (*Felis leo*) from the Athi Plains, British East Africa ; a female Gorilla (*Gorilla gorilla*) and three Duikers from the Cameroons ; a Big-horn (*Ovis karelini*) from the Thian Shan ; a Muntjac (*Muntiacus lacrymans*) from Sze-chwan, and a Dik-Dik (*Rhynchotragus damarensis variani*) from Angola.

Other specimens are an Albino Badger from Surrey, presented by Lord Hylton ; the Head of a Nilgiri Ibex (*Hemitragus hylocrius*) from the Kundah Hills, presented by W. S. Rowson, Esq. ; a skull of a Musk Ox (*Ovibos moschatus*), presented by Lady Strathcona and Mount Royal ; two skulls of the West African Hartebeest (*Bubalis major*), presented by A. E. Kitson, Esq. ; and male and female horns of the Angolan Sable (*Hippotragus niger variani*), presented by H. F. Varian, Esq.

The specimens in the Gorilla, Lion and large Sheep cases have been rearranged and the ground-work has been remade.

*Study Series.*—The usual work of labelling, registering and incorporating the Mammals added to the Collection, and their skulls, has been continued.

The skins of the Canidæ, Viverridæ, and Caviidæ have been rearranged, in connection with scientific work done upon them. The Seal-skins and the skulls of Hystricomorph Rodents have also been placed in better order.

Mr. R. C. Wroughton, Mr. T. B. Fry and Mr. M. A. C. Hinton have again afforded valuable voluntary help in working out accessions to the collection, the first two especially in connection with the specimens received through the Bombay Natural History Society's Survey. The species have all been named, reports written on them, and series selected for registration and distribution. The services of Dr. Knud Andersen have been continued for the preparation of the second volume of the Catalogue of Bats, but a large part of his time has been taken up at the War Office.

The fifth and last volume of the Catalogue of Ungulates, by the late R. Lydekker, F.R.S., was published in 1916.

*Osteological Room.*—Two large cases, not required in the Exhibition Galleries, have been refitted and re-erected in the Osteological Room, to contain Human crania and skeletons. A number of racks have also been erected to contain skeletons awaiting cabinets. Several Human skulls and skeletons have been removed from the

Exhibition Galleries to the Osteological Room, on account of their great rarity, as a protective measure against the raids of hostile aircraft.

Mr. L. Charliers has worked in this part of the Museum at the conservation of the Collections which have been received on behalf of the Congo Museum at Tervueren.

A Report has been issued on the Human Crania collected by the British Ornithologists' Union Expedition and the Wollaston Expedition to Dutch New Guinea.

A number of casts of Whale-flippers have been made.

#### AVES.

The remounting of specimens in the Exhibition Gallery has been continued, and the families Pycnonotidæ, Troglodytidæ, Cinclidæ, and Mimidæ have been completed, with distribution-maps, labels, &c.

The rearrangement of the study series in the Bird Room has been continued and the remaining portions of the Passeres have been finally arranged in the cabinets, the names of the species placed on the outside of each drawer and the names of the family and genera on the outside of each cabinet; the position of each species of the entire collection has been entered in the Reference Catalogue.

Register-numbers have been put on 3,233 eggs of the Seebohm Collection and on 2,722 eggs of the Radcliffe Saunders Collection. Help in labelling and preparing specimens for incorporation was received from Mr. Cyril W. Mackworth Praed and Miss M. Garnett.

The more notable presents were the following:—

From Mr. A. L. Butler, a large and valuable collection of European, Asiatic and African birds, including three types of new species. From Mr. E. G. Herbert, a valuable collection of birds and eggs from Siam. From Mr. J. D. La Touche, a large collection of eggs from Eastern China. From Mr. G. L. Bates, a collection of eggs from West Africa. From Mr. E. J. Brook, a valuable collection from Western South America, including the types of five forms recently described as new to science. From the Subscribers to the British Ornithologists' Union Expedition to Dutch New Guinea, a very large and valuable collection of birds and eggs from Dutch New Guinea, including the types of nine newly described species. From Lord Rothschild, F.R.S., a fine specimen of Keysser's Cassowary, mounted in the Exhibition Gallery. From the Trustees of the late James Rowland Ward, a restoration of the Great Auk mounted for the Exhibition Gallery.

During the year the study collection has been consulted by the following visitors, who have been occupied in systematic work on various groups:—Mr. E. C. Stuart Baker, Mr. T. Iredale, Colonel Stephenson Clark, Mr. W. L. Sclater, Mr. E. Gibson, Lord Rothschild, F.R.S., Dr. P. R. Lowe, Mr. G. M. Mathews, Mr. W. Goodfellow, Mr. H. F. Witherby, Miss A. Jackson, Mr. W. E. Wait, Dr. H. Langton, Dr. E. Hartert.

The following artists engaged in preparing drawings for forthcoming works have also made use of the collection:—Mr. H. Goodchild, Major H. Jones, Mr. H. Grönvold, Miss Medland, Mr. R. Green, Mr. Archibald E. Thorburn, Mr. G. E. Lodge.

#### DOMESTICATED ANIMALS.

The more interesting additions are the following:—

The head of a bull from the herd of "Wild White Cattle" in Cadzow Forest, presented by the Duke of Hamilton. The head of a "Siberian Sheep," a race of unknown origin, presented by H. J. Elwes, Esq., F.R.S. A Tibetan Spaniel, presented by Mrs. Wilmot Corfield.

A Coucou de Malines Fowl, presented by Mrs. R. Terrot. Three Homing Pigeons, presented by Capt. A. H. Osman.

#### REPTILIA AND BATRACHIA.

The Assistant in charge has completed a revision of the Family Lacertidæ, of which parts have already been published and others are in the press.

Owing to the lack of assistance, little could be done in the way of changing spirit and replenishing jars in the collection, but the greater part of the Snakes and the whole of the Lacertidæ have been overhauled.

Casts and dissections have been made of a large Leathery Turtle obtained off the Scilly Islands and presented by the Admiralty.

#### PISCES.

*Exhibition Galleries.*—Of the additions to the Fish Gallery special mention may be made of a very large Sunfish (*Orthogoriscus mola*) presented by Messrs. W. Howlett; and of the model of a Goldsinny (*Crenilabrus melops*), made and painted by the donor, F. Page, Esq.

The Exhibition of Freshwater Fishes in the British Saloon has been finished and a Guide to this series has been written. Notable additions during the year are a Tench (*Tinca tinca*) of 5 lbs. from Gatton Park, Surrey, presented by F. R. Graham, Esq.; and a Dace (*Leuciscus leuciscus*) weighing 1½ lbs. from the Kennet, presented by F. Barker, Esq.

*Study Series.*—All the accessions have been incorporated and have added to the congestion in the Spirit Building. The work of replenishing the collection with spirit has been continued; nearly 200 gallons have been used during the year and have sufficed for about one-third of the Fish Collection. It is most important that this work should continue at the same rate.

Considerable progress has been made with a revision and rearrangement of the Clupeidæ.

#### MOLLUSCA.

Mr. Robson, the Assistant in charge of the Mollusca, was absent on military duty during the greater part of the year, and there are few changes to notice in this part of the collection.

A Report on the Cephalopoda of the British Antarctic ("Terra Nova") Expedition, by Miss A. L. Massy, has been published, and the specimens have been returned to the Museum.

Lieut.-Col. H. H. Godwin-Austen, F.R.S., has continued his work on the Oriental land and freshwater Mollusca.

The death, on July 22nd, 1916, of Mr. E. A. Smith, I.S.O., formerly Assistant-Keeper, was a very serious loss to the Department, to which he continued to give valuable aid, after his retirement in 1913, almost to the end of his life.

#### MYRIOPODA AND ARACHNIDA.

Special attention was given to parasitic Acari during the year, and a number of species of economic importance were dealt with, including some rare forms, such as the *Demodex* of the horse, the *Chorioptes* affecting the feet of sheep, &c. A Guide to the species of Arachnida and Myriopoda injurious to Man has been prepared and is now in the press. The arrangement of the Kóch Collection was continued but has been somewhat impeded by the delay in delivering the glass tubes necessary for this work.

#### CRUSTACEA AND PYCNOGONIDA.

A few spirit specimens in the exhibited series have been refilled and resealed.

The periodical refilling and cleaning of the bottles in the Spirit Collection has been carried on with many interruptions due to lack of assistance.

A large collection presented during the year by Mr. A. O. Walker has been roughly sorted and stored to await proper arrangement and registration. With this exception the specimens received have all been registered and incorporated in the general collection. It has not been possible to make any progress with the registration of the Norman Collection or of the other collections alluded to in former Returns.

#### ECHINODERMA.

The respiriting of several groups of Echinoderms has been carried out.

A small but interesting collection from South Australia, received some time since, has been determined and will shortly be incorporated.

The Index Catalogue to the collection of Microscopic slides, illustrating this and other groups mentioned in last year's Return, has been completed.

The revision of the MS. Catalogue of Echinoidea has been finished, and progress has been made with that of the Ophiuroidea.

#### WORMS.

Mr. Baylis, the Assistant in charge of part of the collection of Worms, is absent, being engaged in war work at the R. Naval Hospital, Haslar.



The Beddard Collection of Oligochæta has been respired and the exhibited collection of worms has been rearranged.

#### POLYZOA.

Important acquisitions have been registered and incorporated.

#### ANTHOZOA.

The chief work with this portion of the collection has been the cleaning of part of the study collection.

#### HYDROZOA.

Mr. Totton, Assistant, to whom the Military Cross has been awarded, is still absent owing to the war ; and hardly any work has therefore been done in this part of the collection.

#### PORIFERA (SPONGES).

The working out of the "Terra Nova" collection has been continued.

The conservation of the spirit collection, which was completely respired in 1915 and partly sealed with a preparation of beeswax and vaseline, has received further attention.

#### PROTOZOA.

The acquisitions of the year have been registered and incorporated.

The most important addition is the collection of Foraminifera, presented by H. Sidebottom, Esq., and noticed on p. 71.

### II.—*Duplicates and Exchanges.*

#### (a) *Duplicates.*

Duplicates have been distributed among museums, scientific institutions, &c., as follows :—

*Mammalia*.—Mr. A. J. Rudd.

*Aves*.—Royal Scottish Museum, Edinburgh ; Surg. E. L. Atkinson, R.N. ; Lt.-Com. A. Cherry-Garrard, R.N. ; Mr. C. S. Wright.

*Reptilia*.—Prof. E. Fawcett.

*Mollusca*.—Major E. E. Austen.

*Arachnida*.—Prof. G. H. F. Nuttall, F.R.S.

#### (b) *Exchanges.*

Exchanges have been made with the following institutions and individuals :—

*Mammalia*.—University Museum of Zoology, Cambridge ; Museo Civico, Genoa ; Prof. W. Leche.

*Aves*.—Tring Museum ; Mr. E. C. Stuart Baker ; Messrs. Rowland Ward, Ltd.

*Reptilia and Batrachia*.—U.S. National Museum, Washington ; Prof. S. Hatta.

*Pisces*.—Prof. C. H. Eigenmann ; Col. C. E. Shepherd.

*Mollusca*.—Wellcome Laboratory, London ; M. J. H. Young.

*Arachnida*.—Indian Museum, Calcutta ; Dr. E. Pawlowsky.

### III.—*Departmental Library.*

The acquisitions to the Library of the Departments of Zoology and Entomology (including the Walsingham Library) during the year, obtained by purchase, presentation and exchange, consist of 38 separate works and pamphlets in 50 volumes, and 1,285 parts of periodicals and works in progress.

236 volumes, including those belonging to the Walsingham Library, have been bound.

The work of collating, stamping, press-marking, and entering all additions in the Catalogue has been performed as usual.

The Attendant in the Library, with the aid and supervision of an Assistant, has checked all the entries of Zoological works in the portion of the General Catalogue of Books which has been printed during the year.

Of the donations the following are worthy of special mention :—The Birds of Australia, Vol. V., parts 2-4 ; Vol. VI., part 1 ; presented by G. M. Mathews, Esq. ; and a very fine copy of Wilkes, B., "The English Moths and Butterflies together with the Plants, Flowers and Fruits whereon they feed and are usually found." First edition ; presented by Lord Rothschild, F.R.S.

The most important addition by purchase during the year was : Poda, N., "Insecta Musei Græcensis."

### IV.—*Publications.*

In addition to the Official Catalogues and other volumes published by the Trustees (see pp. 53-54), various reports and descriptive papers have been prepared in connection with the different branches of the collection, and have been published for the most part in scientific journals.

### V.—*Acquisitions.\**

#### MAMMALIA.

Total number 922, of which 872 were donations, 36 were purchases, and 14 were received in exchange.

The contribution of the Bombay Natural History Society again forms the largest item (382 specimens) of the accessions, although not to the same extent as last year. All the Society's regular

\* A table showing the number of specimens added during the year is given on page 71.

collectors have gone to the Front, but by the help of native collectors and the donations of Mr. Mackenzie of the Forest Service, much good work is still being carried out. Papers on the various collections, mostly by R. C. Wroughton and O. Thomas, have continued to be published.

The Mammals presented by the Trustees of the Will of the late James Rowland Ward have already been enumerated (p. 57).

Several of the more interesting animals which have died in the Gardens of the Zoological Society have been presented by the Society.

Various friends of the Museum engaged in the war have sent contributions obtained during the campaign, as follows:—

Two Lemmings (*Lemmus lemmus*) from the Murman Coast of N.W. Russia. Presented by Capt. R. S. Gwatkin-Williams, R.N.

A Souslik (*Citellus citellus*) from Salonika. Presented by Capt. H. S. Hollis.

A Rodent Mole (*Spalax*) from Salonika; presented by Capt. Malcolm Burr; and another from Lemnos, presented by Capt. H. M. Warrender.

A Field Mouse (*Apodemus sylvaticus*) from Lemnos. Presented by Viscount Ennismore.

Other accessions:—

### Europe.

Three Wild Cats (*Felis silvestris grampia*) from Ross-shire. Presented by Miss Firth.

An Albino Badger (*Meles meles*) from Surrey. Presented by Lord Hylton.

11 British Bats and Shrews from the collection of the Rev. L. Jenyns, including the types of four species described by him about 1837; received in exchange from the University Museum of Zoology, Cambridge.

Parts of Cetacea stranded on the British Coasts during 1916, including several specimens of much interest, and particularly:—

Part of the skull of a Cuvier's Whale (*Ziphius cavirostris*) from the Cornish Coast;

The head of a White-sided Dolphin (*Lagenorhynchus acutus*) from Co. Mayo;

The flippers and other parts of a specially large Killer Whale (*Orcinus orca*) from the Solway Firth;

The head of a Sowerby's Whale (*Mesoplodon bidens*) from Lincolnshire;

Part of the lower jaw, with uncut teeth, of a young Sperm Whale (*Physeter catodon*) from Co. Galway.

Presented by the Board of Trade.

The skeleton of the celebrated thoroughbred Horse "Isinglass." Presented by Capt. Dermot McCalmont.

Cranium and portion of the face of a Romano-British skull, and portions of a Human trunk-skeleton of the same period, found near Grantham. Presented by C. J. Brown, Esq.

**Asia.**

19 Mammals from Chih-li, N. China. *Presented by J. D. La Touche, Esq.*

382 mammals collected during the Bombay Natural History Society's Mammal Survey of India, including 117 from Darjeeling obtained by Messrs. R. S. Lister & H. Stevens, with the types of four new species, one of these forming a new genus (*Dacnomys*); 89 from the Bhutan Duars, collected by N. A. Baptista; 31 Jackals and 56 specimens of *Scotophilus* from various localities; and 89 specimens from the Chin Hills, contributed by J. V. D. Mackenzie, Esq. *Presented by the Bombay Natural History Society.*

2 skulls of Porcupines, 11 Muridæ, and 57 Bats from Sumatra and the Malay Peninsula, including the types of three new species. *Presented by the Government of the Federated Malay States, through H. C. Robinson, Esq., Director of Museums, Kuala Lumpur.*

2 Molars of *Elephas indicus*. *Presented by Mrs. R. F. Thorp.*

**Africa.**

19 Mammals from British East Africa. *Presented by C. W. Mackworth Praed, Esq.*

20 Mammals from Angola, including the typical head and horns of the Angolan Sable (*Hippotragus niger variani*). *Presented by H. F. Varian, Esq.*

20 skulls of Monkeys, Carnivora and Ungulates from Northern Rhodesia. *Presented by Hereward C. Dollman, Esq.*

**America, North.**

The skeletons of a male and female Musk Ox (*Ovibos moschatus*). *Presented by Lady Strathcona and Mount Royal.*

**America, South.**

58 Mammals from Cordova and 95 from Bonifacio, Buenos Ayres, collected by Robin Kemp. *Presented by Oldfield Thomas, Esq., F.R.S.*

A skull, and portions of the trunk-skeleton, of a "Bolivian Indian" from Argentina. *Presented by Wilfred Smithers, Esq.*

The skulls of two Indians from Peru. *Presented by C. E. R. Rowlands, Esq.*

**AVES.**

The acquisitions number 9,466. Of these the most noteworthy are as follows:—

**Europe.**

A restoration of the Great Auk (*Plautus impennis*). *Presented by the Trustees of the late James Rowland Ward.*

261 birds from various localities in Europe. *Presented by A. L. Butler, Esq.*

3 Carrion Crows (*Corvus corone*) from Berwickshire. *Presented by Miss D. M. A. Bate.*

A short-eared Owl (*Asio accipitrinus*) from King's Co., Ireland. Presented by R. McCombe, Esq.

A little Owl (*Athene noctua*) from Tonbridge. Presented by the Rev. J. H. Hale.

A Red-legged Partridge (*Caccabis rufa*) from Pershore, Worcestershire. Presented by Col. A. C. Bailward.

A little Auk (*Alca alle*) from Perth. Presented by G. Brooksbank, Esq.

#### Asia.

10 Eggs of the Mikado Pheasant (*Calophasis mikado*). Presented by the Duke of Bedford, K.G.

1,077 birds and 380 eggs from Siam. Presented by E. G. Herbert, Esq.

906 eggs of birds from Eastern China. Presented by J. D. La Touche, Esq.

293 birds, chiefly from India and Ceylon. Presented by A. L. Butler, Esq.

#### Africa.

713 birds from various localities, chiefly the Sudan, including the types of three newly-described species. Presented by A. L. Butler, Esq.

1,315 birds from British East Africa and Uganda, including two types of newly-described forms. Presented by Capt. G. P. Cosens.

590 eggs of birds from the Cameroons. Presented by G. L. Bates, Esq.

98 birds from the Cameroons, collected by G. L. Bates, Esq. Received in exchange.

#### America, South.

Two examples of the Great Snipe (*Gallinago gigantea*), from Paraguay. Presented by the Trustees of the late James Rowland Ward.

20 eggs and four nests of birds from Western Ecuador. Presented by W. Goodfellow, Esq.

89 birds from Western Ecuador, including the types of five new species. Presented by E. J. Brook, Esq.

#### Australasia.

1,529 birds, 38 eggs, and 13 nests, including nine types of newly-described species, from Dutch New Guinea. Presented by the Subscribers to the British Ornithologists' Union Expedition to Dutch New Guinea.

A mounted example of Keysser's Cassowary (*Casuarium keysseri*) from the Rawlinson Mountains, N.E. New Guinea. Presented by Lord Rothschild, F.R.S.

## REPTILIA.

The additions number 232, of which 223 were received by presentation and 9 by exchange.

Principal additions :—

**Europe.**

A Leathery Turtle (*Dermochelys coriacea*) caught in the vicinity of the Scilly Islands, June 16th. Presented by the Admiralty.

14 lizards from Switzerland. Presented by W. Morton, Esq.

19 lizards from France. Presented by M. Chabanaud.

14 lizards from Marseilles. Presented by Prof. A. Vayssière.

**Asia.**

8 specimens from Saghalien Island and Japan. Received in exchange from Prof. S. Hatta.

20 specimens from Chih-fung, N.E. Chih-li, China, including a new snake (*Coluber anomalus*). Presented by A. L. Hall, Esq.

A lizard (*Tachydromus dorsalis*) from the Loo Choo Islands, new to the collection. Received in exchange from the United States National Museum.

50 specimens from Siam, including examples of a lizard (*Gymnodactylus oldhami*) and two snakes (*Tropidonotus inas*, *Thalassophis anomalus*) new to the collection. Presented by Dr. Malcolm Smith.

**Africa.**

14 specimens from Southern Abyssinia. Presented by A. F. Abercromby, Esq.

15 specimens from Southern Nigeria. Presented by C. A. Francis, Esq.

A Blind Snake (*Typhlops caecatus*), from West Africa, new to the collection. Presented by the East Africa and Uganda Natural History Society.

6 lizards from South Africa, including a syntype of a new species (*Eremias aspera*). Presented by the South African Museum.

10 lizards from Kimberley. Presented by J. H. Power, Esq.

**America, North.**

A Terrapin (*Chrysemys mobiliensis*), new to the collection, and the type of a new Horned Lizard (*Phrynosoma brevicornis*). Presented by the Zoological Society of London.

**America, South.**

22 specimens from South-West Colombia. Presented by Dr. H. G. F. Spurrell.

5 specimens from Western Ecuador. Presented by W. Goodfellow, Esq.

A specimen of a rare lizard (*Tupinambis rufescens*), from Argentina. Presented by the Zoological Society of London.

## BATRACHIA.

The additions number 204, of which 193 were received by presentation and 11 by exchange.

Principal additions :—

**Asia.**

11 specimens from Japan. Received in exchange from Prof. S. Hatta.

80 specimens from Siam, including the very rare *Glyphoglossus molossus*. Presented by Dr. Malcolm Smith.

**Africa.**

51 specimens from British East Africa, including a frog (*Rappia balfouri*), new to the collection. Presented by H. J. Allen Turner, Esq.

9 specimens from Nairobi. Presented by the East Africa and Uganda Natural History Society.

4 Cæcilians from South Cameroon. Presented by G. L. Bates, Esq.

An example of a rare frog (*Heleophryne regis*) from Knysna, Cape Colony. Presented by the South African Museum.

**America, North.**

Examples of the recently discovered salamander, *Batrachoseps major*, from California. Presented by Dr. C. L. Camp.

**America, South.**

21 specimens from Colombia, including 10 syntypes of a new toad, *Atelopus carrilseri*. Presented by Dr. A. G. Ruthven.

19 specimens from South-West Colombia. Presented by Dr. H. G. F. Spurrell.

Examples of the rare aquatic Cæcilian, *Typhlonectes compressicauda*, from Manaos, Brazil. Presented by A. Aiken Clark, Esq.

## PISCES.

The additions number 587. 545 were presented, 25 were purchased, and 17 were received in exchange.

The most important are :—

A collection of otoliths, mounted on slides. Presented by E. Heron-Allen, Esq.

211 larval and post-larval fishes from the "Terra Nova" collection, including the types of five new species (*Paraliparis terrae-novae*, *Lampanyctus longipinnis*, *Stylophthalmus macenteron*, *Leptocephalus acuticeps* and *L. hexastigma*). Presented by the British Antarctic Expedition, 1910.

**Europe.**

A large Sun-fish (*Orthogoriscus mola*) from off the S. of Ireland. Presented by Messrs. W. Howlett.

A very rare fish (*Centrolophus britannicus*), from off the S. of Ireland. Presented by J. Pryor, Esq.

A rare Ray (*Raia undulata*), from Plymouth; purchased.

70 Parr of the Salmon (*Salmo salar*) from the Wye, illustrating the growth of the species in fresh water. Presented by J. A. Hutton, Esq.

A large Tench (*Tinca tinca*), from Gatton Park, Surrey. Presented by F. R. Graham, Esq.

Three large Dace (*Leuciscus leuciscus*), from the Kennet. Presented by F. Barker, Esq.

#### Asia.

Four fishes from Japan, including examples of two species new to the collection (*Dactylopterus peterseni* and *Callionymus altivelis*). Presented by Colonel C. E. Shepherd.

#### Africa.

47 fishes from Durban, Natal, including specimens of *Anthias squamipinnis* and *A. manadensis*, species new to the collection. Presented by Romer Robinson, Esq., and H. W. Bell Marley, Esq.

29 fishes from the Benue River, including the type of a new Barbel (*Barbus francisci*). Presented by A. Claude Francis, Esq.

14 fishes from San Thomé. Presented by Dr. J. A. Henriques.

A Horse-fish (*Agnopus torvus*) from South Africa. Presented by W. Hart, Esq.

24 fishes from British East Africa, including the types of three new Cyprinids (*Labeo gracilis*, *Barbus procatopus* and *B. loveridgii*). Presented by the East Africa and Uganda Natural History Society.

#### America.

14 fishes from the San Juan River, Colombia. Presented by Dr. H. G. F. Spurrell.

19 fishes from Manaos, including a Cat-fish (*Piratinga filamentosa*), new to the collection. Presented by Dr. A. Aiken Clark.

The type of a new Loricariid (*Arges mindoensis*), from Ecuador. Presented by W. Goodfellow, Esq.

15 fishes of the genus *Arges*, from Ecuador and Colombia. Received in exchange from Prof. C. H. Eigenmann.

#### TUNICATA.

Nine specimens of the rare, deep-sea, stalked Simple Ascidian, *Culeolus murrayi* Herdman, in various stages of growth (only one specimen, the type, had been previously known). Attached to a cable brought up from 1,500 fathoms between Java and West Australia. Presented by the Eastern and Associated Telegraph Companies.

#### MOLLUSCA.

45 specimens were presented, and 24 were purchased during the year. The more noteworthy are :—



14 land-shells, from the Oriental Region. *Presented by G. K. Gude, Esq.*

23 land-shells, from the same Region. *Purchased.*

9 land-shells, from the Abor Hills. *Presented by the Indian Museum, Calcutta.*

9 British Slugs. *Presented by W. Denison Roebuck, Esq.*

A Pecten (*Pecten (Chlamys) scabricostatus*, Sowb.), from Da Costa's collection. *Presented by G. B. Sowerby, Esq.*

A remarkably fine group of Vermetidæ (*Vermiculus spiratus*), from Bermuda. *Presented by John P. Bartram, Esq.*

#### MYRIOPODA.

The accessions numbered 17, including the syntypes of a European Bristly Millipede (*Lophoproctus inferus*). *Presented by Prof. F. Silvestri.*

#### ARACHNIDA.

The acquisitions numbered 435, the following being especially noteworthy :—

The types of a new *Solpuga (S. toppini)*, from Zululand. *Presented by E. C. Chubb, Esq.*

63 Pseudoscorpions, from S. Africa, representing 14 different species, most of which are new to the collection. *Presented by Robert Godfrey, Esq.*

55 slides of British Water-Mites (Hydrachnidæ), mounted by W. Saville Kent, Esq. *Presented by A. S. Hirst, Esq.*

A specimen of *Limulus*, from Kuching River, Sarawak, Borneo, having the telson bifurcated. *Presented by Philip Schidrowitz, Esq., Ph.D., F.C.S.*

#### CRUSTACEA.

The most important addition made during the year was the collection presented by Mr. A. O. Walker, consisting of Amphipoda, Isopoda, and other Crustacea, chiefly from British seas, the Mediterranean, and the Indian Ocean. The extent of this collection, which contains many types and other specimens described by the donor, cannot be precisely stated until it has been properly arranged, but it is contained in over 650 bottles and tubes, and comprises also about 40 microscopic preparations. The other accessions number 379, and include :—

89 specimens taken from Telegraph cables in the West Indies, the Mediterranean, and the Malay Archipelago. *Presented by the Eastern and Associated Telegraph Companies.*

49 River-crabs and prawns, from Sierra Leone. *Presented by N. W. Thomas, Esq.*

144 Amphipoda and Isopoda, from South Africa, including syntypes of 17 species. *Presented by K. H. Barnard, Esq.*

16 Crustacea, from the Mawson Antarctic Expedition, including the holotype of one species, and paratypes of another. *Presented by Prof. W. A. Haswell, F.R.S.*

Syntypes of three species of Decapoda, from the Red Sea. Presented by Prof. W. A. Herdman, F.R.S.

#### ECHINODERMA.

The Eastern and Associated Telegraph Companies have again presented interesting specimens from deep water, most of which have been determined.

#### WORMS.

The most important acquisition in this part of the collection is the series of Rotifera and other microscopic organisms, mostly from fresh water, collected, mounted, and presented by Mr. C. F. Rousselet. The collection consists of more than 1,000 slides of Rotifera, with a few Gastrotricha, the Polyzoa noticed below, and other slides and tubes. The specimens are admirably preserved, and the slides are mounted with great skill.

Other noteworthy additions are as follows :—

A specimen of the rare *Marionina georgiana*, from the Falkland Islands. Presented by Dr. J. H. Ashworth, F.R.S.

Small collections of parasitic worms made by Mr. G. E. Bodkin in British Guiana, and by Dr. W. M. Aders in Zanzibar. Presented by the Imperial Bureau of Entomology.

3 species of parasitic worms, &c., including types. Presented by Dr. J. H. Ashworth, F.R.S.

Specimens of *Bilharzia* or *Schistosoma*, producing the formidable disease Bilharziosis, from Egypt. Presented by Major E. E. Austen.

Specimens of the Land-Planarian, *Rhynchodemus terrestris*, and their egg-capsules, from Oswestry. Collected and presented by Capt. H. E. Quick, R.A.M.C., T.

#### ANTHOZOA.

The only specimens obtained during the year have been a few collected in deep water. Presented by the Eastern and Associated Telegraph Companies.

#### POLYZOA.

109 specimens, comprising a duplicate set, including many paratypes, of the species of Polyzoa described in "The Polyzoa of the 'Siboga' Expedition," Part I, "Entoprocta, Ctenostomata and Cyclostomata," by S. F. Harmer. Presented by Prof. Dr. Max Weber.

8 specimens of Polyzoa, including two types and four other figured specimens described or referred to in Dr. Harmer's "Siboga" Report. Presented by the University Museum of Zoology, Cambridge.

178 specimens of Polyzoa, mostly fresh-water, including numerous examples beautifully preserved and mounted, with tentacles extended. Presented by C. F. Rousselet, Esq.

## HYDROZOA.

1 specimen of the deep-sea Siphonophoran, *Pterophysa studeri*, Lens and Riemsdijk; found adhering to a cable brought up from 800 fathoms between Java and W. Australia. Presented by the Eastern and Associated Telegraph Companies.

## PORIFERA (SPONGES).

15 specimens of the deep-sea Monaxonellid Sponge *Esperella biserialis*, Ridley and Dendy, growing on a cable brought up from 1,500 fathoms between Java and W. Australia. Presented by the Eastern and Associated Telegraph Companies.

## PROTOZOA.

18,000 specimens of Foraminifera belonging to the genus *Lagena*, from the South West Pacific, known as the "W. B. Thornhill Collection." The collection was bequeathed to H. Sidebottom, Esq., who completed the sorting and mounting of the material, and described the species in the Journal of the Quekett Microscopical Club (1912-13). Presented by H. Sidebottom, Esq.

Summary of the Acquisitions in the Department of Zoology during 1916.

		Donations.	Purchases.	Exchanges.	Totals.
Mammalia	General Collection ...	851	36	14	901
	Osteological Collection:—				
	Anthropology ...	5	—	—	5
	Cetacea ...	11	—	—	11
	Other Mammals ...	5	—	—	5
Aves	Skins ...	5,506	100	—	5,606
	Eggs ...	3,829	4	—	3,833
	Nests ...	17	—	—	17
	Skeletons ...	10	—	—	10
Domesticated Animals...		9	—	—	9
Reptilia ...		223	—	9	232
Batrachia ...		193	—	11	204
Pisces ...		545	25	17	587
Tunicata ...		9	—	—	9
Hermichordata and Phoronidea ...		1	—	—	1
Mollusca ...		45	24	—	69
Myriopoda ...		17	—	—	17
Prototracheata ...		—	—	—	—
Arachnida ...		435	—	—	435
Crustacea	Walker Collection (approximate)	700	—	—	1,079
	Other sources ...	375	—	4	
Pycnogonida ...		—	—	—	—
Echinoderma ...		16	—	—	16
Worms	Chætopoda, &c. ...	3	—	—	3
	Parasitic Worms ...	137	—	—	137
Rotifera, &c. ...		1,000	—	—	1,000
Brachiopoda ...		—	—	—	—
Polyzoa ...		302	—	—	302
Anthozoa ...		9	—	—	9
Hydrozoa ...		17	—	—	17
Porifera ...		17	—	—	17
Protozoa ...		18,009	—	—	18,009
Sea-bottom samples ...		9	—	—	9
Totals ...		32,305	189	55	32,549

VI.—*Economic Zoology.*

I. Information relating to various matters connected with the War has been given to Government Departments.

## II. MAMMALIA.

The question of Whaling in Sub-Antarctic waters has continued to engage much attention. A large body of statistics bearing on this subject has been analysed, and the results have been forwarded to the Colonial Office.

Reports have also been sent to the Colonial Office on other subjects connected with South Georgia, namely the pursuit of Elephant Seals, and the acclimatization of Reindeer and other animals in that Island.

Correspondence has passed between the Department and Mr. W. Hamar Greenwood, with reference to the protection of Pacific Sea-Lions.

## III. AVES.

A large number of enquiries relating to the protection of Birds in British Colonies and Protectorates have been dealt with, in response to applications from the Colonial Office. Some of these enquiries have included subsidiary references to Mammals, Reptiles, and Fishes.

## IV. PISCES.

Considerable progress has been made with the revision and re-arrangement of the collection of Clupeidæ.

A memoir dealing with the genera *Clupea*, *Sardina* and *Alosa* has been published; and further papers are in the press and in course of preparation.

Among the enquiries answered and specimens determined may be mentioned :—

Further questions from the Colonial Office on the subject of poisonous fishes in the West Indies.

Fragments of "Indian Sardines" received from the Board of Agriculture and Fisheries; species determined as *Sardinella longiceps*.

## V. ARACHNIDA (TICKS, MITES, ETC.).

The following enquiries have been dealt with :—

1. A Sarcoptid Mite (*Cnemidocoptes mutans*) causing "Scaly leg" in poultry.

2. A tropical Fowl-mite (*Liponyssus bursa*) occurring in Australia and attacking human beings.

3. Parasitic Mange in horses, caused by various species of Acari; advice on this subject has been given to the Veterinary Service (Territorial).

4. A parasitic Mite (*Chorioptes ovis*) affecting the feet of English Sheep.

5. A Mite (*Tyroglyphus longior*, var.) destroying stored corn in Colombia.

6. Tyroglyphid Mites damaging stored oats in Flanders; information given to the Military authorities.

7. Several enquiries referring to the Furniture Mite (*Glyciphagus domesticus*), infesting houses.

## VI. CRUSTACEA.

At the request of the London Chamber of Commerce, an investigation was made of certain brands of tinned "Lobster," and it was demonstrated to the satisfaction of representatives of the firms engaged in the trade that the contents of the tins were the leg-muscles of a Japanese crab, *Paralithodes camtschatica*.

Boring Crustacea (*Limnoria* and *Chelura*) have been determined as causing damage to submarine telegraph-cables in the Mediterranean, and measures have been suggested for preventing their attacks.

Young crabs (*Callinectes*, sp.) found preying on mosquito larvæ in West Africa have been determined for the Imperial Bureau of Entomology.

Information has been given to the manufacturers of anti-fouling composition regarding the fouling of ships by barnacles, and to other visitors and correspondents with reference to damage done by Woodlice.

## VII. PORIFERA.

The question of the cultivation of commercial Sponges in the West Indies has been reported on for the Colonial Office.

## VIII. MISCELLANEOUS QUESTIONS.

Injuries to Submarine Telegraph cables due to various animals, such as Fishes, Crustacea and Polychæte Worms, have been examined and reported on.

A series of specimens illustrating the "Biology of Waterworks" has been assembled and will shortly be exhibited in the Central Hall; and an illustrated Guide to the series is in course of preparation.

## VII.—*Students and Visitors.*

The number of visits paid to the Zoological Department during the year 1916 by students and other persons requiring assistance or information amounted to 7,018.

This number includes the visits paid by Students holding tickets entitling them to do special work in the Exhibition Galleries.

In the 10 previous years the numbers were as follows. From 1906 to 1912 inclusive, the present Department of Entomology was included in the Department of Zoology :—

8,020	in the year	1915.
9,235	„	1914.
9,982	„	1913.
12,564	„	1912.
12,175	„	1911.
12,443	„	1910.
11,461	„	1909.
10,220	„	1908.
11,043	„	1907.
10,813	„	1906.

*Sidney F. Harmer.*

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## DEPARTMENT OF ENTOMOLOGY.

I.—*Arrangement and Conservation.*

*Exhibition Series.*—No change of importance either by additions or alterations has been made in this series during the year.

*Study Series.*—Owing to the services rendered by voluntary workers, the progress made in the naming and arrangement of the collections has been greater than could have been anticipated in view of the loss sustained by the death in March of Mr. G. Meade Waldo, Assistant in charge of the Hymenoptera, and the absence on War Service of so many other members of the Staff of the Department.

In the **Coleoptera**, the undetermined Carabidæ of many Oriental genera have been incorporated and arranged after determination by Mr. H. E. Andrewes. Rhynchophora of various groups have been similarly dealt with after having been submitted to Prof. A. Hustache and Mr. Arthur Lea and named by those specialists. The Hawaiian Nitidulidæ have been incorporated; and numerous undetermined Cryptophagidæ have been named or described by Monsieur Grouvelle. The Endomychidæ have been expanded and revised and many new species described. A large number of new species of Rutelinæ and Melolonthinæ have also been described. The family Meloidæ has been in great part revised and the accessions incorporated. The Australian species of Alleculidæ have been reincorporated in the collection after determination by Mr. H. J. Carter. The Bruchidæ have been revised and re-arranged and the accessions incorporated. By the kind permission of Mr. Godman, Mr. G. C. Champion has continued to work upon the collections of Coleoptera and in the course of the year has arranged the Heteromera of the families Melandryidæ, Scaptiidæ, Xylophilidæ, and Pedilidæ as well as part of the Lagriidæ, and has described many new species.

In the **Hymenoptera** the arrangement of the Apidæ was continued and completed. The Rev. F. D. Morice, who has voluntarily devoted almost the whole of his time to the work, has arranged the British Aculeates and incorporated the Saunders Collection. Mr. Rowland Turner has continued to give his services voluntarily as in previous years, and has completed the arrangement of the Psammocharidæ, while Mr. H. St. J. Donisthorpe, another voluntary worker, has arranged the Formicidæ of the Palæarctic region. Several small collections sent to him on loan have been named by Prof. T. A. Cockerell. Mr. J. Waterston, of the Imperial Bureau of Entomology, has continued his work in determining and arranging the economically very important parasitic Hymenoptera of the family Chalcididæ.

In the **Rhynchota** the revision and re-arrangement of the Membracidæ have been completed so far as the Oriental and Æthiopian regions are represented, and accessions from the Distant

collection and other sources have been incorporated. Progress has also been made in working out some large collections of Homoptera received from various sources in India and from Indo-China.

The work of mounting Coccidæ and Aphidæ on slides, thus making them more valuable for the purpose of study, and the incorporation of accessions in these important economic groups have been continued.

The arrangement of the Anoplura and Mallophaga has been continued, and two parts of a long report on a fine collection of these insects received from the Zoological Society have been published with illustrations in the Society's "Proceedings."

In the Lepidoptera, the re-arrangement of the Pyralidæ of the sub-families Hydrocampinæ, Scoparianæ, and Gallerianæ has been completed and that of the Crambinæ commenced. The preparation of the MS. dealing with the Noctuinæ for the Catalogue of Moths has been continued and completed, and the MS. is now about equivalent in extent to that of three published volumes.

In the Tineina, the determination and incorporation of species belonging to the Gelechiadæ, Ægeriadæ, Hyponomeutidæ, Tortricidæ, and Hèpialidæ have been continued, and some new forms have been described.

In the Diptera, the arrangement of the exotic Tipulidæ has been continued and completed, and accessions have been incorporated; the collection of flies made by the Robinson-Kloss Expedition to West Sumatra has been worked out and a report on it prepared for publication. Several collections of mosquitoes have been determined; and a pamphlet on "Mosquitoes in Relation to Disease" has been published in the Economic Series.

#### IMPERIAL BUREAU OF ENTOMOLOGY.

The work carried on by the Imperial Bureau of Entomology has continued to be of considerable benefit to the Department of Entomology; a large number of accessions has been received through that source, and as many of these accessions had been worked out and in some cases contained a good proportion of types, they formed a valuable addition to the Museum collection.

#### II.—*Duplicates and Exchanges.*

##### (a) *Duplicates.*

Duplicates have been presented to the following gentlemen who have rendered service by naming specimens:—Mr. H. E. Andrewes, M. Antoine Grouvelle, Prof. A. Hustache, and Mr. L. B. Prout.



(b) *Exchanges.*

Exchanges have been made with the following:—M. A. Grouvelle, Dr. E. W. Ferguson, Mr. O. E. Janson, Prof. N. Sacharov, Mr. T. V. Sherrin, and Mr. H. G. T. Watkins.

III.—*Departmental Library.*

As the Library has continued to be worked in conjunction with that of the Zoological Department, particulars in reference to it will be found included under the corresponding head, in the return made by the Keeper of Zoology.

IV.—*Publications.*

In addition to the official publications issued by the Trustees (see pp. 53, 54) several papers and reports have been prepared in connection with different branches of the collection and have been published in scientific journals.

V.—*Acquisitions.*

The number of specimens added to the Insect Collection during the year is 40,124, made up as shown in the following table:—

	Donations.	Purchases.	Exchanges.	Totals.
Coleoptera ... ..	12,233	2,000	1,273	15,506
Lepidoptera ... ..	6,436	—	4	6,440
Hymenoptera ... ..	3,554	—	12	3,566
Diptera ... ..	6,843	—	26	6,869
Rhynchota... ..	2,694	3,000	42	5,736
Orthoptera ... ..	633	—	5	638
Neuroptera ... ..	176	—	—	176
Other Orders ... ..	595	—	—	595
Larvæ, Pupæ, &c. ...	598	—	—	598
Totals ... ..	33,762	5,000	1,362	40,124

The most important of these accessions are the following from various localities:—

12,565 insects of all orders including types of 131 new species. *Presented by the Imperial Bureau of Entomology.*

The sixth instalment of the Distant Collection containing 3,000 specimens of Rhynchota and 2,000 specimens of Coleoptera.

**Europe.**

3,786 named British Diptera. *Presented by Lieut.-Col. J. W. Yerbury.*

1,743 Coleoptera and Rhynchota. *Presented by H. B. Preston, Esq.*

1,041 Coleoptera from South Russia ; received in exchange from Prof. N. Sacharov.

#### Asia.

5,000 Coleoptera from Sikkim collected by Mr. H. Stevens. Presented by H. E. Andrewes, Esq.

667 Coleoptera from Ceylon. Presented by E. E. Green, Esq.

#### Africa.

270 Thysanura and Collembola from the Seychelles. Presented by Prof. J. Stanley Gardiner, F.R.S.

#### Australia.

937 Hymenoptera from North Queensland. Presented by R. E. Turner, Esq.

#### America.

4,139 Lepidoptera Rhopalocera, including 91 types. Presented by F. Du Cane Godman, Esq., D.C.L., F.R.S.

### VI.—Economic Entomology.

The work of the Department in Economic Entomology has been carried on by members of the staff with the assistance of Mr. C. A. Ealand, whose services as a specialist in that branch were again engaged during the year.

Further large accessions of material presented for the most part by the Imperial Bureau of Entomology, have been incorporated in the Economic Series, and considerable additions have been made to the card index of injurious insects.

The naming and arranging of families and groups of insects of more than ordinary economic importance, such as the Aphidæ and Coccidæ amongst the Rhynchota, and the Bruchidæ amongst the Coleoptera, have received special attention, and have made a fair amount of progress.

As a result of a correspondence in the Press on the question of hibernation of the common house-fly (*Musca domestica*) large numbers of flies found in houses in various parts of the United Kingdom during the first three months of the year were received at the Museum. These flies have all been examined and identified, and it has been found that in the consignments from more than 160 different persons, the common house-fly was present in only 18, the total number of specimens of this species (*M. domestica*) received being 32, most of which had been captured in kitchens or other warm rooms, and while in a more or less active condition. The evidence thus obtained gave no support whatever to the idea that the common house-fly passes through the winter as a rule in the adult stage. In contrast with the very small proportion of true

house-flies received, was the great preponderance of *Pollenia rudis*, a species known as the cluster-fly. This species was present in 103 out of the 160 consignments, and the specimens received, although stated in most cases to be only a few samples of the kinds found, reached to some thousands in number. In several houses, the cluster-fly was hibernating in such vast numbers as to become a serious nuisance, and many requests for information on the best means of getting rid of them were received. Next in point of numbers to the cluster-flies, and frequently associated with them in the same hibernating swarms, were the two species, *Limnophora septemnotata* and *Musca autumnalis*. Flies found hibernating under the roofs of churches were found in a few cases to consist chiefly of the latter species.

Enquiries on other matters of importance from an economic point of view have continued to come in both from this country and abroad, including Government and Colonial Departments. Amongst the subjects on which information or advice has been sought and as far as possible given the following may be mentioned:—

#### DIPTERA (FLIES).

- (1) House-flies. Several enquiries.
- (2) Gnats and biting-flies and how to prevent their attacks.
- (3) Measures to take in regard to infestations of fleas, and possible origin of the pest.
- (4) Warble-flies on cattle and deer.
- (5) Larvæ of *Eristalis* evacuated *per rectum* by a soldier.

#### COLEOPTERA (BEETLES).

- (6) Species of *Anobium* destroying books and furniture.
- (7) „ *Lyctus* injurious to panelling, furniture, and imported woods.
- (8) *Dinoderus japonicus* damaging bamboo poles.
- (9) *Tribolium confusum*, *Necrobia rufipes*, &c., as pests in warehouses and factories (from Public Health Department, Glasgow).
- (10) *Bruchus chinensis*, infesting peas (from the Admiralty).
- (11) *Aræocerus fasciculatus* destroying cocoa beans.
- (12) *Ptinus tectus* feeding on red pepper.
- (13) *Carpophilus hemipterus* in dried figs.
- (14) *Rhizotrogus solstitialis* and *Phyllopertha horticola* as garden pests.

#### LEPIDOPTERA (MOTHS).

- (15) *Anaphe* spp. The commercial possibilities of silk manufacture from their cocoons.
- (16) *Gazalina* sp. Defoliating forests in Burma (from Chief Conservator of Forests, Burma).
- (17) *Tæniocampa gothica*. Defoliating oaks in the Isle of Wight.

## MISCELLANEOUS.

- (18) Bed-bugs infesting houses and a ship.
- (19) *Cæcilius pedicularis* swarming in macaroni.
- (20) Cockroaches and methods of getting rid of them.
- (21) Ants in houses.
- (22) *Lepisma saccharina* as a food pest.

VII.—*Students and Visitors.*

The number of visits paid to the department during the year by students and other persons seeking information or assistance was 3,149.

C. J. Gahan.

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## DEPARTMENT OF GEOLOGY.

I.—*Arrangement and Conservation.*

*Mammalia* (Galleries 1 and 2).—The collection of Lower Pliocene mammalian remains from Pikermi, Greece, has been examined in detail, and duplicates have been removed from it. The whole collection has now been registered and incorporated. Skulls, jaws, and limb-bones of *Rhinoceros* have been mounted and labelled for exhibition in pier-case 8, and skulls and frontlets of Antelopes have been similarly mounted and labelled in pier-case 16.

Feet of the primitive rhinoceros *Hyracodon*, from the Oligocene of Dakota, U.S.A., have been mounted and exhibited in table-case 4.

A fine pair of Antlers of *Cervus belgrandi* (*C. verticornis*), from the Forest Bed of Pakefield, Norfolk, has been restored and mounted on the top of pier-case 13.

The first stages in the preparation of the skeleton of *Elephas antiquus* from Chatham have been completed, and a selection of the bones has been placed on exhibition in pier-case 31.

Number of specimens of *Mammalia* registered, 787.

*Aves* (Gallery 2).—The original specimen of *Archæopteryx* has been further prepared, the right coracoid and the two pubes being now completely exposed.

The sternum of the largest known bird of flight (*Gigantornis eaglesomei*), from the Eocene of Southern Nigeria, has been prepared and mounted in table-case 13.

A slab of footprints of *Dinornis* has been prepared and placed in wall-case 23.

The miscellaneous European Pleistocene remains of birds in drawers have been arranged and labelled.

Number of specimens of *Aves* registered, 430.

*Reptilia and Batrachia* (Galleries, 3, 4, 5, 11).—Progress has been made with the preparation of Triassic Reptiles from South Africa and Cretaceous Reptiles from Alberta, Canada.

A skull of the horned dinosaurian *Monoclonius*, from the Cretaceous of Alberta, has been mounted, with a cast of its brain-cavity, in wall-case 5.

The unexhibited collection of Coprolites and remains of Mosasaurians in the drawers have been arranged and labelled. Miscellaneous other unexhibited specimens have also been labelled.

Wall-cases 10 and 11 have been reconstructed to admit large specimens of Amphibia and Anomodont Reptiles.

Number of specimens of *Reptilia* and *Batrachia* registered, 78.

*Pisces* (Gallery 6).—The fossil fishes contained in the Geological Society's Collection have been registered, labelled, and incorporated.

Several specimens of *Lepidotus* have been prepared and mounted for exhibition in wall-case 9, and numerous slabs of fossil fishes have been mounted in mahogany frames.

Wall-case 14B, containing specimens of *Aspidorhynchus*, has been cleaned and repainted.

Number of specimens of Pisces registered, 341.

*Mollusca* (Galleries 7 and 8, and Workroom).—The Cephalopoda registered, labelled and incorporated include:—Upper Ordovician Nautiloidea from Wales (T. Ruddy coll.); Devonian specimens from Belgium (A. Champernowne coll.); English Liassic Ammonoidea (J. F. Blake, Lieut. Dan Haggard, and W. D. Lang colls.); Callovian Ammonoidea from France (A. de Grossouvre coll.); Oxfordian Ammonoidea from the neighbourhood of Peterborough (E. T. Leeds coll.); Upper Cretaceous Nautiloidea from Denmark (Miss C. Birley coll.); Upper Cretaceous Ammonoidea from Natal (Natal Government, per Sir Frederick Abel, Bart.); Cretaceous Ammonoidea from Canada (W. E. Cutler coll.); Cretaceous Belemnoida from New Zealand (Prof. James Park coll.); and Cretaceous Ammonoidea and Tertiary Nautiloidea from Portuguese East Africa (E. O. Thiele and R. C. Wilson coll.).

All the Jurassic and Cretaceous Ammonoidea previously exhibited in table-cases 5 to 15 have been so re-arranged that the British Jurassic specimens now occupy table-cases 5 to 8; the Foreign Jurassic examples, table-cases 9 and 10 (in part); the British Cretaceous Ammonoidea, table-cases 10 (in part), 11, 12 and 13 (in part); and the Foreign Cretaceous specimens, table-cases 13 (in part), 14 and 15.

The following Cephalopoda have been mounted, labelled, and added to the exhibited collection:—An Ammonite from the Kimeridge Clay (table-case 8), 5 Foreign Cretaceous Ammonites (table-case 14), 39 Ammonoids from the Upper Cretaceous of Zululand, North America, and Syria (table-case 15), 8 Cretaceous Belemnoids from England, New Zealand, and New South Wales (table-case 16), a specimen of *Bostrychoceras polyplacum* from the Cretaceous of Westphalia (wall-case 3), the example of *Ammonitoceras tovilense*, from the Lower Greensand near Maidstone, described by G. C. Crick, Proc. Malac. Soc., vol. xii., parts 2 and 3, 1916, pp. 118-120, pl. vi. (wall-case 3), and an Ordovician Nautiloid from China (wall-case 14).

The nomenclature of some of the Cretaceous Ammonoidea exhibited in wall-cases 4 and 5, and in table-cases 12, 14 and 15, has been revised.

Further progress has been made with the labelling of the selection of British Liassic Ammonites prepared for exhibition.

The slip-catalogue of type, figured, and historical specimens of Cephalopoda has been continued.

The Palæozoic Gastropoda and Lamellibranchia registered, labelled, and mostly incorporated, include:—Devonian Gastropoda from Devon (J. G. Hamling coll.) and the Eifel (Upfield Green coll.); and Devonian Lamellibranchia from Devon (A. Champernowne and J. G. Hamling colls.).

The Mesozoic and Tertiary Gastropoda and Lamellibranchia registered, labelled, and incorporated, include:—British Jurassic and Cretaceous specimens (J. W. Butler coll.); Post-pliocene marine shells from Ayrshire (John Smith coll.); Tertiary Mollusca from Australia (J. H. Young coll.); New Zealand Tertiary Mollusca (Geological Survey of New Zealand); Cretaceous Mollusca from Africa (Angola) (J. W. Gregory coll.), described by R. Bullen Newton, Trans. Roy. Soc. Edinburgh, 1916, vol. li., part 3 (No. 15), pp. 561–580, pls. i., ii.; and natural casts of British Lower Greensand (Aptian) Lamellibranchia (R. Broom coll.).

Number of Mollusca registered:—Cephalopoda, 947; Gastropoda, 294; Lamellibranchia, 494. Total, 1,735.

*Arthropoda* (Gallery 8 and Workroom).—The acquisitions registered, labelled, and incorporated include:—Devonian and Carboniferous trilobites from Devonshire (J. G. Hamling coll.); various groups from the Coal Measures of Coseley, Staffs. (S. Priest coll.); and insects in amber and gum copal transferred from the Zoological Department.

The large collection of Arthropods, mainly insects, from the Bembridge beds of Gurnet Bay, has been sorted into Orders.

Number of specimens of Arthropoda registered, 1,148.

*Echinoderma* (Gallery 8).—The acquisitions registered, labelled, and incorporated include:—Ashgillian Cystoids from the Lake District (Marr coll.); Silurian *Stephanocrinus* from Canada and Tennessee (Parks and Foerste colls.); Crinoids from the Chouteau, Keokuk, and St. Louis Limestones of Missouri, Illinois, and Iowa (Greger and Worthen colls.); from the Mesozoic rocks of England (Möckler coll.); Blastoids from the Chouteau and Keokuk Limestones of Missouri (Greger coll.); Echinoids from the Jurassic of Dorset (J. W. Butler coll.) and the Tertiary of Portuguese East Africa (Thiele and Wilson coll.); Asteroids from the Mesozoic of England (Möckler coll.) and Bohemia (Fritsch coll.).

In the exhibited series the chief accessions are:—A *Melocrinus gregeri* (see Donations) and a *Stereocidaris merceyi* with apical system in place. Various specimens from the Pliensbachian of Mickleton tunnel have been re-mounted and re-labelled.

The collections of *Agaricocrinus* and *Dorycrinus* from North America, and of the Cidarids from the Hartwell Clay, have been revised and relabelled.

The slip-catalogues of exhibited specimens, of specimens of Blastoidea, and of genera and species of other Classes, have been continued.

Number of specimens of Echinoderma registered:—Echinoidea, 121; Stelliformia, 95; Crinoidea, 274; Blastoidea, 58; Cystoidea and Edrioasteroidea, 24. Total, 572.

*Annelida* (Gallery 8 and Workroom).—The acquisitions registered, labelled, and incorporated include specimens from the

Devonian and Carboniferous of Devonshire (Hamling coll.), the Cornbrash of England (Blake coll.), and the Cretaceous of Angola (J. W. Gregory coll.).

Number of specimens of Annelida registered, 39.

*Brachiopoda* (Gallery 8 and Workroom).—The acquisitions registered, labelled, and incorporated include specimens from the Silurian of England, the Devonian of England (R. H. Valpy coll.) and Asia Minor, the Trias of New Zealand (T. W. Lillie coll.), and the Tertiary of New Zealand (Geol. Surv. N. Zealand coll.) Many type and figured specimens have been mounted, labelled, and placed in the exhibition cases.

Number of specimens of Brachiopoda registered, 637.

*Polyzoa* (Gallery 8 and Workroom).—The acquisitions registered, labelled, and incorporated include specimens from the Palæozoic of the N. Shan States (Geol. Surv. India coll.), from the British Devonian (J. G. Hamling coll.), the Carboniferous of Derbyshire (F. A. Bather coll.), and the Chalk of Surrey and Sussex (Gamble, Gaster, and Wright colls.)

Enlarged models of Cretaceous Polyzoa have been prepared and exhibited in a table-case.

Number of specimens of Polyzoa registered, 250.

*Anthozoa and Hydrozoa* (Gallery 10 and Workroom).—The acquisitions registered, labelled, and incorporated include specimens from the Palæozoic of the N. Shan States (Geol. Surv. India coll.) and the Federated Malay States (J. B. Scrivenor coll.), from the Devonian of the Eifel (R. F. Tomes coll.) and Devonshire (J. G. Hamling coll.), the Jurassic of India (J. F. Blake coll.), various Cretaceous formations (J. E. Lee coll.), the Miocene of Burma (Dalton coll.), and the Tertiary of Colombia, S. America (Beeby Thompson coll.).

Enlarged models showing the relations of the hard and soft parts of Corals have been prepared and exhibited in wall-case 1.

Number of specimens of Anthozoa and Hydrozoa registered, 1,509.

*Porifera and Protozoa* (Gallery 10).—Among specimens registered and incorporated are Foraminiferal rocks from the Eocene of Burma (Dalton coll.)

Number of specimens of Porifera and Protozoa registered, 54.

*Plantæ* (Gallery 10).—The making of microscope sections of Cretaceous petrified plants has been continued.

Number of specimens of Plantæ registered, 72.

*Rock-specimens and Tracks* (Gallery 11).—Acquisitions have been incorporated.

Number of specimens registered, 29.



II.—*Duplicates and Exchanges.*

Duplicate fossils have been presented to the Sedgwick Museum, Cambridge, in return for services rendered to the Department of Geology.

Exchanges of duplicate fossils and plaster casts have been made with the Zoological Museum, Cambridge, and the Denstone College Museum, Uttoxeter.

III.—*Departmental Library.*

The additions to the Library which have been registered, stamped, catalogued, and press-marked, comprise 116 new works and pamphlets, of which 27 were purchased and 89 presented; 452 parts of serials in progress, of which 114 were purchased and 338 presented. Nine sheets of maps were acquired by presentation. Eight photographs were presented. 10 volumes and pamphlets were obtained by transfer from other Departments. 100 volumes have been bound, press-marked, and returned to the shelves. 446 British Geological Survey maps were mounted on linen. 1,053 visits were made to the Library by students and others.

IV.—*Research and Publications.*

Among researches in the department may be mentioned a detailed study of the fossils of Trinidad made to facilitate the explorations for oil-bearing deposits in that island.

21 papers have been contributed to scientific serials by members of the staff and others working in the Department.

V.—*Acquisitions.*A.—*By Donation.*

Among numerous donations the following may be enumerated :—

*Mammalia*.—One upper premolar and one astragalus of *Palæotherium*, from the Barton Clay, Hampshire. *H. Eliot Walton, Esq.*

Zeuglodont jaws from an Eocene formation in a cutting on the Port Harcourt railway, Ombialla district, Southern Nigeria. *Sir John Eaglesome, K.C.M.G.*

Twelve Mammalian remains from the Miocene Santa Cruz Beds of Maquinchao, Argentina, including a skull and mandible of a carnivorous Marsupial, *Pharsophorus*. *T. C. Norris, Esq.*

Fragment of antler of *Cervus verticornis* (*C. belgrandi*) from the Forest Bed, Pakefield; being a portion of a specimen in the British Museum. *Committee, The Castle Museum, Norwich.*

Portion of mandible and associated bones of *Mastodon* from the Island of Imbros, Grecian Archipelago. *Col. R. Girvin, R.A.M.S.*

Molar and tusk of a small elephant from an alluvial deposit in the Mongbwalo Gold Mine, Ituri River, N. E. Belgian Congo. *Monsieur Grégoire, Managing Engineer of the Mongbwalo Mines, per Sir Alfred Sharpe, K.C.M.G.*

*Aves*.—Sternum of a new bird (*Gigantornis eaglesomei*) from an Eocene formation in a cutting on the Port Harcourt railway, Ombialla district, Southern Nigeria. *Sir John Eaglesome, K.C.M.G.*

*Reptilia*.—Group of vertebræ, &c., of *Mixosaurus*, from the Trias of Sticky Keep, Sassen Bay, Spitzbergen. *John Newton, Esq.*

Two portions of a Cetiosaurian pelvis from the Inferior Oolite of Harlestone, Northampton. *Eli Craddock, Esq.*

A Chelonian mandibular symphysis and a sacrum and ungual phalange of *Trionyx*, from the Barton Clay, Hampshire. *H. Eliot Walton, Esq.*

*Pisces*.—A dentary bone of *Cybium bartonense*, and other fish-remains, from the Barton Clay, Hampshire. *H. Eliot Walton, Esq.*

Portions of four Siluroid skulls, from an Eocene formation in a cutting on the Port Harcourt railway, Ombialla district, Southern Nigeria. *Sir John Eaglesome, K.C.M.G.*

*Mollusca*.—Polished section of a coiled Nautiloid, probably of Ordovician age, from China, and a portion of Baculite obtained by Mr. Archibald Little near Pike's Peak, Colorado, July, 1865. *Miss Alice Little.*

168 Mollusca from the Devonian of Devonshire illustrating papers by the donor in Quart. Journ. Geol. Soc., 1895, Trans. Devon. Assoc., 1908, and Proc. Geol. Assoc., 1910. *J. G. Hamling, Esq., F.G.S.*

About a hundred Ammonites from the Oxford Clay near Peterborough. *E. Thurlow Leeds, Esq.*

One Cephalopod, fourteen Gastropods and twenty-two Lamellibranchs from the British Jurassic and Cretaceous, being part of the collection of the late James W. Butler, Esq. *Miss Daisy Butler.*

A Hippurite from the Chalk of Boughton churchyard, near Faversham, Kent. *Joseph Acworth Plommer, Esq.*

Thirty fragments of Belemnites from the Upper Cretaceous of New Zealand. *Prof. James Park.*

Cretaceous Mollusca from Angola, West Africa, described and figured by R. Bullen Newton, Trans. Roy. Soc. Edinburgh, vol. li. (1916), pp. 561-580, pls. i., ii. *Prof. J. W. Gregory, F.R.S.*

Eight Mollusca from the Tertiary and Cretaceous of Saghalien, Siberia. *Bequeathed by the late D. A. Louis, Esq.*

12 Mollusca, from an Eocene formation in a cutting on the Port Harcourt Railway, Ombialla district, Southern Nigeria. *Sir John Eaglesome, K.C.M.G.*

Two Gastropods and 9 Lamellibranchs, from the Miocene of Eastern Cyreniaca. *Captain R. S. Gwatkin-Williams, R.N.*

Tertiary Mollusca from Trinidad. *John Parkinson, Esq., M.A.*

32 Gastropods and 11 Lamellibranchs, from the Tertiary of Trinidad. *C. S. Rogers, Esq., Conservator of Forests, Trinidad.*

*Arthropoda*.—Two specimens of *Homalonotus*, and one plaster cast of the same, from the Llanvirn rocks, Carmarthenshire. *John Innes, Esq.*

Phylloporids, from the Lower Ordovician of Victoria, Australia.  
*J. H. Young, Esq.*

31 Trilobites, being part of a collection of Devonian and Carboniferous fossils from Devonshire, illustrating papers by the donor, in Quart. Journ. Geol. Soc., 1895, Trans. Devon. Assoc., 1908, and Proc. Geol. Assoc., 1910. *J. G. Hamling, Esq., F.G.S.*

42 Arthropoda (twenty having counterparts) in Iron-stone nodules, from the Coal Measures of Coseley, near Dudley; including the type-specimen of *Anthracomartus priesti*, Pocock. *S. Priest, Esq., F.G.S.*

*Echinoderma*.—One Cystid, from the Ordovician of Oddgill, Cautley, Yorkshire, and two Cystids, from the Ashgillian beds, near Windermere. *Dr. J. E. Marr, F.R.S.*

Three calyces of *Stephanocrinus*, collected by the donor in the Upper Ordovician of Sweden. *Dr. F. A. Bather, F.R.S.*

19 Crinoids (*Stephanocrinus*), from the Silurian of Grimsby, Ontario. *Prof. W. A. Parkes.*

Two Asteroidea and 53 Crinoidea, being part of the collection of the donor, from the Devonian and Carboniferous rocks of Devonshire, illustrating papers by the donor in Quart. Journ. Geol. Soc., 1895, Trans. Devon. Assoc., 1908, and Proc. Geol. Assoc., 1910. *J. G. Hamling, Esq., F.G.S.*

One of the four known specimens of *Melocrinus gregeri* from the Devonian, Craghead Creek, Callaway Co., Missouri, twenty-three Crinoids from the basal Burlington Limestone of the same locality; five Crinoids and one Blastoid from the Chouteau Limestone, and one Blastoid from the basal Burlington Limestone, Easily, Boone Co., Missouri; two Crinoids (*Onychocrinus* and *Scytalocrinus*), from the Carboniferous of Missouri, and twenty-one Crinoids, and six Blastoids from the Chouteau Limestone, Lupus, Moniteau Co., Missouri. *Mr. D. K. Greger.*

12 Oolitic Echinoids, from the collection of the late James W. Butler, Esq. *Miss Daisy Butler.*

One Miocene Echinoid, from Eastern Cyreniaca. *Captain R. S. Gwatkin-Williams, R.N.*

*Brachiopoda*—250 Brachiopoda, being part of the donor's collection from the Devonian and Carboniferous of Devonshire, illustrating his papers in Quart. Journ. Geol. Soc., 1895, Trans. Devon. Assoc., 1908, and Proc. Geol. Assoc., 1910. *J. G. Hamling, Esq., F.G.S.*

Brachiopoda from Angola, West Africa, described and figured by R. Bullen Newton, Trans. Roy. Soc. Edinburgh, vol. li. (1916), pp. 561-580, pls. i. and ii. *Prof. J. W. Gregory, F.R.S.*

*Vermes*.—One Annelid (*Spirorbis*) on a plant, from the Ludlow Beds, near Clun, Shropshire. *John Bateson, Esq.*

*Polyzoa*—Twenty-five Polyzoa, being part of the collection of the donor from the Devonian of Devonshire, illustrating his papers in Quart. Journ. Geol. Soc., 1895, Trans. Devon. Assoc., 1908, and Proc. Geol. Assoc., 1910. *J. G. Hamling, Esq., F.G.S.*

108 Polyzoa from the Chalk of Surrey and Sussex. *C. T. A. Gaster, Esq.*

Tertiary Polyzoa from Trinidad. *John Parkinson, Esq., M.A.*

*Coelentera*.—Graptolites from the Lower Ordovician, Victoria, Australia. *J. H. Young, Esq.*

Twenty-eight Corals, being part of the collection of the donor from the Devonian and Carboniferous of Devonshire, illustrating his papers in *Quart. Journ. Geol. Soc.*, 1895, *Trans. Devon. Assoc.*, 1908, and *Proc. Geol. Assoc.*, 1910. *J. G. Hamling, Esq., F.G.S.*

Thirteen pieces of Carboniferous Limestone containing corals from Bukit Cheras, Kuantan district, Pahang, Federated Malay States. *J. B. Scrivenor, Esq., M.A.*

*Porifera*.—One Sponge from the Culm of Codden Hill, Devonshire. *J. G. Hamling, Esq., F.G.S.*

One Sponge (*Cliona*) from the Upper Greensand Cornstones of Wiltshire. *B. Pope Bartlett, Esq., M.R.C.S.*

*Protozoa*.—Ten Foraminiferal rocks and other Foraminifera from the Tertiary of Trinidad. *John Parkinson, Esq., M.A.*

*Miscellaneous Invertebrata*.—Ninety-eight fossils from the Tertiary of Victoria, Australia. *J. H. Young, Esq.*

*Tracks*.—Tracks (*Cruziana*) from the Carboniferous Lower Limestones, above Hosie Limestone, Seafield, Fife. *James Wright, jun., Esq.*

*Plantæ*.—Seven specimens of fossil wood and a piece of a cone of *Bennettites*, sp. nov., from the Gault of Folkestone. *G. C. Walton, Esq., F.L.S.*

A piece of coniferous wood from the Upper Greensand of Pewsey, Wilts, and five microscope-slides of the same; four pieces of Sarsen Stone from Little Bedwin, Wilts, containing rootlets of Palms and six microscope-slides of the same. *Thomas Codrington, Esq., F.G.S.*

*Rock-specimens*.—Three clay-ironstone nodules from Ardley, British Columbia. *John H. Wright, Esq.*

Sands, &c., collected by the late Rev. R. Ashington Bullen in Bermuda, illustrating his paper on the Geology of the Bermuda Islands, *Geol. Mag.*, 1911, pp. 385-395, 433-442. *Mrs. Ashington Bullen.*

22 faceted pebbles from Glacial Gravel, Pendleton, Manchester, described by the donor in *Abstr. Proc. Geol. Soc.*, Nov. 17th, 1916, p. 5. *J. Wilfrid Jackson, Esq.*

#### B.—By Exchange.

*Mammalia*.—Antlers of *Cervus belgrandi* (*C. verticornis*) from the Forest Bed of Pakefield, Norfolk, described by Dr. S. F. Harmer in *Trans. Zool. Soc.*, vol. xv. (1899), p. 97, pl. xxi. *Zoological Museum, Cambridge.*

Maxilla of *Hyæna* from the Upper Tertiary of Salonika, Greece.  
*Denstone College Museum.*

C.—*By Purchase.*

The following specimens were purchased by the grant brought forward from the financial year 1914-15 :—

*Reptilia.*—A large part of the skeleton of an armoured Dinosaur, a skull of *Monoclonius*, the snout of a Megalosaurian, a foot of *Ornithomimus*, and other reptilian remains from the Upper Cretaceous, Alberta, Canada (W. E. Cutler coll.).

*Mollusca.*—A small series of shells associated with the above (W. E. Cutler coll.).

The total accessions during 1916 are as follows :

	Donation.	Purchase.	Exchange.	Total.
Vertebrata ... ..	59	100	2	161
Invertebrata ... ..	2,021	25	—	2,046
Plantæ ... ..	25	—	—	25
Rocks and Tracks ... ..	29	—	—	29
	<u>2,134</u>	<u>125</u>	<u>2</u>	<u>2,261</u>

The total number of specimens registered is 7,609.

VI. *Students and Visitors.*

The number of visits paid to the Department by students and other persons for the purpose of consultation or study during 1916 was 3,009.

The staff received 10 parties (246 persons) for demonstrations in the public galleries.

*Arthur Smith Woodward.*

## DEPARTMENT OF MINERALOGY.

I.—*Arrangement.*

The incorporation in the General Collection of the recent acquisitions, including specimens of zeolites belonging to the large Ashcroft collection, has involved many re-arrangements of the species in the case-tops and drawers, and the opportunity has been taken in the case of some species to arrange them topographically.

Mineral and rock-specimens have been unpacked and examined, and twenty-six boxes have been packed and despatched.

II.—*Registration, Indexing, and Cataloguing.*

All the specimens of minerals, rocks, and meteorites acquired during the year have been registered, numbered, labelled, and incorporated with the Collection.

The preparation of the slip-catalogues of the mineral-specimens in the Collection, species by species, and of permanent labels giving all available information for each specimen, has been continued for the Divisions of the Oxides and Carbonates. In this connexion slips have been prepared for the species zircon, thorite, rutile, anatase, brookite, baddeleyite, melanophlogite, cristobalite, and tridymite amongst the Oxides, and for thirty-three species from dolomite to malachite of the Carbonates; specimens belonging to old collections have been entered in the General Register; and permanent labels have been written and placed with the specimens. In the course of this work many doubtful specimens have been examined and determined, and additions and corrections have been made in the General Register.

The slip-catalogue of the Precious Stones has been brought up to date, and a list has been prepared of all the gem-stones in the Collection mounted in finger-rings.

All the specimens of Meteoric Irons and Siderolites have been carefully examined for rusting, and those showing signs of rust have been cleaned and coated with french polish. A card index of the specimens has been prepared to facilitate reference to the dates at which particular specimens were treated.

Sixteen guard-books of letters for the years 1800–1900 have been indexed.

The preparation of a copy of the register of the specimens in the Collection has been continued, and permanent labels containing particulars drawn from the register have been prepared for the specimens of minerals acquired during the year.

III.—*Preparation.*

54 thin-sections of rocks and meteorites have been prepared.

IV.—*Investigation.*

A crystallographic investigation of sartorite has been in progress, a considerable number of crystals of this rare mineral having been made available for a detailed study through the kindness of Mr. R. H. Solly and Dr. C. O. Trechmann. In the course of this work several crystals of other sulpharsenites of lead (baumhauerite, jordanite, and rathite) from the Binnenthal were measured and the indices of the faces were determined.

A twin-crystal of gypsum representing a new type has been examined, figured, and described.

Investigations have been made of the meteoric stones of Khairpur, Soko-Banja, and Simondium. As a result of these and previous investigations a genetic relationship of all meteorites has been suggested, and on this a new classification has been based.

V.—*Departmental Library.*

*Cataloguing and Press-marking.*—All the accessions, including 713 plates, have been catalogued and stamped.

The collection of treatises on mineralogy, numbering 490 volumes, have been removed from the Keeper's Room and arranged in chronological order in the new case in the Library Room.

Proofs of the Library Catalogue (Supplement) have been read and checked against the slip catalogue in the Department.

*Accessions.*—27 volumes of separate works, 19 periodicals (in 211 volumes and parts), one print, 20 pamphlets, three parts of works, 84 Mining and Survey reports, and six sheets of maps have been added to the Library.

*Binding.*—116 volumes have been bound.

VI.—*Acquisitions.*

866 specimens have been acquired, namely :—

464 minerals (including artificial crystallized products), 395 rocks, and 7 meteorites.

Three meteorites have been acquired by exchange from the South African Museum, Cape Town.

The following mineral names added to the Museum List were previously not represented by specimens in the collection :—

Pyroxmangite, spencerite, yukonite.

Only three specimens of minerals have been purchased.

The specimens acquired by presentation (arranged alphabetically according to donors) and by exchange are as follows :—

*Minerals.**By Presentation :*

Further instalments from the donor's collection of zeolites, comprising 304 specimens from 47 localities in the British Isles, Germany, Bohemia, Tyrol, Switzerland, Australia, Japan, U.S.A.,

and Mexico. Many of these are choice specimens, and their value is enhanced by the detailed information on the accompanying labels as to their exact locality and mode of occurrence. Also a series of specimens recently collected by the donor in Wales; namely, paracelsian, albite on quartz, and cerussite with dundasite, from Carnarvonshire; and fluor with blende, copper-pyrites, and calcite, from Halkin mine, Flintshire; large cubes of grey fluor from a new occurrence in Stanhope Burn mine, Weardale, Co. Durham; and fine crystals of idocrase in matrix from Acharagda River, Siberia: *by F. N. Ashcroft, Esq.*

Crystallized corundum (ruby) artificially produced in the extraction of chromium: *by The British Thermit Co., Ltd.*

Witherite and barytes, from Virgin mine, Redmire, Yorks: *by James Broadhead, Esq.*

Artificial forms of calcium carbonate from water-works: *by W. T. Burgess, Esq.*

Stalactitic calcite from Mexico, and magnetite from Taberg, Sweden (from the collection of the donor's husband, the late Colonel G. Earl Church): *by Mrs. A. M. Church.*

Mica sand from Mauritius: *by Miss E. E. Clark.*

Pereylite, two specimens from Chili (from the collection of the donor's father, the late F. W. Crick): *by G. C. Crick, Esq.*

Ankerite in coal from Lancashire; phosphorite from Ocean Island, South Pacific; tourmaline, a large brown crystal from Ceylon; quartz, showing conchoidal fracture; diatomite from Skye: *by T. Crook, Esq.*

Gold from North Wales, South Australia, Peru and Ashanti; 11 crystals of diamond, one of them coloured by exposure to radium emanations; platinum from the Urals; silver from Kongsberg, Norway; rhabdophane from Cornwall; blende from the Pyrenees, a portion of the original material in which gallium was discovered by Lecoq de Boisbaudran in 1875; pitchblende and carnotite from Colorado; wulfenite from Arizona; monazite sand from North Carolina; and various other specimens selected from the donor's private collection: *by Sir William Crookes, O.M., F.R.S.*

Three crystals of diamond from Agua Suja, and crystals of brookite from Arassuahy, Brazil: *by David Draper, Esq.*

Pilolite from Gourdon, Kincardineshire: *by W. Duncan, Esq.*

Crystals of corundum from Namaqualand, South Africa: *by H. C. Fowler, Esq.*

Zircon, corundum, and graphite, from Madagascar: *by Benjamin Gallewski, Esq.*

Epidote, a fine polished slice (10 × 6 cm.) from a large, clear, rich green crystal; pyrrhotite collected by the donor at Carrock Fell Mine, Cumberland; two fine, large specimens of iridescent pyrites from Wanlockhead, Dumfriesshire: *by the Rev. J. M. Gordon.*

Wavellite and beekite from Devonshire: *by J. G. Hamling, Esq.*

Plumbogummite with cassiterite from Ninkada, Northern Nigeria: *by R. T. Hancock, Esq.*



Artificially crystallized tungstic oxide : *by High Speed Steel Alloys Ltd.*

Quartz pseudomorphous after limonite, perforated with holes, from Llandrindod Wells, Wales : *by J. Innes, Esq.*

Wolframite from Lower Burma : *by Miss D. M. Jewett.*

Tremolite crystals in crystalline dolomite from Southern Nigeria : *by A. E. Kitson, Esq.*

Bitumen in limestone from Sicily : *by C. C. Lacaita, Esq.*

A fine suite of 12 rich specimens of gold tellurides with native gold from North Block, Oroya Brownhill mine, Boulder, Kalgoorlie, Western Australia : *by the Directors, Lake View and Oroya Exploration Ltd.*

Diamond, a small faceted stone, mauve coloured, showing dichroism ; two faceted blue zircons : *by Dr. L. A. Lawrence.*

Zircon crystals isolated from monazite sand, from Travancore, India : *by Prof. Henry Louis.*

Gold in quartz from Rio de Contas, Bahia, Brazil : *by Joseph Mawson, Esq.*

Chalybite (clay-ironstone) nodule from Westmoreland : *by R. A. Metcalfe-Gibson, Esq.*

Monazite sand from Bahia, Brazil : *by R. Tucker Pain, Esq.*

Idocrase with achtaragditite from Achtaragda River, Siberia : *by Madame Maria Rings.*

Crystals of scheelite from South-West Africa : *by Dr. A. W. Rogers.*

Fire-opal from Mexico, agate from Uruguay, quartz from Madagascar, and malachite from North-Western Rhodesia : *by W. Schmassmann, Esq.*

Calcite with fluor from Beith, Ayrshire : *by John Smith, Esq.*

Kyanite-garnet gravel from Zanzibar : *by Dr. Spurrier.*

Cut and polished section of malachite showing remarkable regular concentric structure, probably from Bwana M'Kubwa, North-Western Rhodesia : *by Dr. J. E. Stead, F.R.S.*

Twinned crystal of cerussite, encrusted with hemimorphite, from Broken Hill, Rhodesia : *by Percy C. Tarbutt, Esq.*

Different varieties of sugar crystals : *by Messrs. Henry Tate & Sons, Ltd.*

Limonite from Elgin : *by W. Taylor, Esq.*

Garnet and chalcedony from Cumberland : *by Sir John Tweedy.*

Yukonite, from Yukon, Canada ; a new species described by the donor : *by J. B. Tyrrell, Esq.*

Spencerite, a new species of zinc phosphate, from British Columbia, described by the donor and named by him after Mr. L. J. Spencer of the Mineral Department : *by Prof. T. L. Walker.*

Almandine-garnet in biotite-gneiss from Southern Rhodesia : *by Miss E. M. Whittaker.*

*Rocks.**By Presentation.*

Australites (obsidianites) from Kalgoorlie, Western Australia : *by J. Vere Arkle, Esq.*

Opicalcite, two polished slabs, the one from Glen Tilt, Perthshire, and the other from Iona, Argyllshire : *by the Rev. J. M. Gordon.*

A series of miscellaneous rock-specimens (14 from British and three from foreign localities) : *by Upfield Green, Esq.*

A small selection from a collection from Pechili province, north China : *by Alexander L. Hall, Esq.*

A series of 307 specimens collected by the donor at various localities in Devonshire ; also 14 specimens from neighbouring districts in east Cornwall and west Somerset : *by J. G. Hamling, Esq.*

Rocks collected by the late D. A. Louis on the island of Sakhalin, East Siberia : *by the Exors. of the late D. A. Louis.*

Volcanic sand from Jan Mayen Island, Arctic Ocean : *by R. Tucker Pain, Esq.*

A series of 28 volcanic rocks collected by the donor in British East Africa : *by J. Parkinson, Esq.*

Septarian nodule of limestone from Montgomeryshire : *by F. R. Paxford, Esq.*

Pierite with pyrope from Millour Burn, Ayrshire : *by John Smith, Esq.*

*Meteorites.**By Presentation :*

*Barraba*, Darling Co., New South Wales, a slice weighing 107 grams. of this iron.

*Bingera*, Murchison Co., New South Wales, a slice weighing 14·7 grams. of the iron found in 1880.

*Temora*, Bland Co., New South Wales, a slice weighing 6·6 grams. of the iron found in 1890.

Gilgoin, Clyde Co., New South Wales, a coloured plaster cast of the stone No. 7.

These three meteorites and cast : *by the Department of Mines of New South Wales.*

*By Exchange :*

*St. Marks*, Tembuland, Cape Province, South Africa, a partly crusted fragment weighing 102·6 grams. of the stone which fell on January 3, 1903.

*Kouga Mountains*, Humansdorp district, Cape Province, South Africa, a slice weighing 297 grams. of the 2,585 lb. mass of this iron.

*Ratteldraai*, Kenhardt Co., Cape Province, South Africa, a slice weighing 235·5 grams. of the 1,210 lb. mass of iron found in 1909.

All the above Meteorites except Gilgoin belong to falls hitherto unrepresented in the Museum Collection.

VII.—*Donations of Duplicates.*

Duplicate specimens of meteorites have been given to Sir William Crookes, and to the Mining Museum of Sydney, New South Wales.

VIII.—*Students and Visitors.*

The number of visits recorded as made to the Department for purposes of consultation or study is 354. Many specimens of minerals and rocks have been determined for visitors and correspondents.

*G. T. Prior.*

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## DEPARTMENT OF BOTANY.

I.—*Arrangement and Conservation.*

During the past year 14,125 specimens have been incorporated with the Herbarium. This number includes 13,475 Flowering Plants, and 650 Cryptogams.

*Flowering Plants.*—Additions acquired during the year by donation, purchase and exchange have been mounted and incorporated. Progress has been made with the determination, selection and incorporation of the early Australian collections, and outstanding specimens have been determined and incorporated in various families, especially Geraniaceæ, Rutaceæ, Leguminosæ, Passifloraceæ, Cactaceæ, Rubiaceæ, Compositæ, Lauraceæ, and Amaryllidaceæ.

Work of revision and re-arrangement has been done in various families, especially Cappariidaceæ, Araliaceæ, Compositæ, and Urticaceæ, and genera, especially *Vigna*, *Rhynchosia*, *Euphorbia* and *Croton* (Tropical African species) and *Anchusa* and *Pulmonaria* (European species).

The British Herbarium has been placed in the same gallery as the European Herbarium, and the space thus gained in the Great Herbarium has been allotted to the General Collection, where room for expansion is greatly needed.

*Ferns and Mosses.*—The selection and incorporation of outstanding extra-European material of Ferns and Mosses (including Liverworts) has been continued and several genera have been revised.

*Algæ.*—Work of incorporation has been done in several families.

*Fungi and Lichens.*—Work of revision and incorporation has been done in the Microfungi, mainly British, and in various genera of other groups of Fungi. Progress has been made with the revision and incorporation of the British Lichens.

*Exhibition Series.*—Progress has been made with the exhibition of the Cellular Cryptogams in the Index Museum and with the exhibition of British Seaweeds. Some time has been devoted to experiments in preparing specimens, including seaweeds, for exhibition in their natural colours.

*Catalogues and Guides.*—Progress has been made with the preparation of the Flora of Jamaica (Vols. iv. and v.) by Mr. W. Fawcett and Dr. Rendle; and with the revision of the first volume of the Monograph of British Lichens and the preparation of a guide to the exhibition of British Lichens by Miss Annie Lorrain Smith.

II.—*Investigation.*

Collections have been determined wholly or in part from the following localities and collectors: Southern Nigeria (Talbot), Cameroons (Bates), Angola (Gossweiler), Uganda (Dümmer), British East Africa (Buchanan), Rhodesia and Transvaal (Rogers), West Australia (Stoward, Maryon), New Caledonia (Compton), and various smaller collections from different localities.

Work of investigation has been done in various families of flowering plants, especially Urticaceæ (Tropical African species) and Rubiaceæ, also in several critical European genera and on the Microfungi.

Assistance has been given to numerous students engaged on special investigations, and specimens and small collections have been determined for students and collectors.

Assistance has been rendered to various Government Departments in response to inquiries on matters connected with the War.

In connection with work done in the Department specimens have been generously lent by the Director of the Royal Botanic Gardens, Kew; the Regius Keeper of Botany, Edinburgh; the Bristol Museum; and the Government of Jamaica.

Undetermined material has been lent for study and determination to the Director of the Royal Botanic Gardens, Kew, and to the Regius Professor, Royal Botanic Gardens, Edinburgh.

### III.—*Departmental Library.*

The arrangement, cataloguing, press-marking and other work has been carried out. 30 volumes and 146 pamphlets have been acquired by donation and 71 volumes by purchase—in all 101 volumes and 146 pamphlets; these numbers include 15 periodicals in 118 parts presented and 50 periodicals in 307 parts purchased—in all 65 periodicals in 425 parts.

### IV.—*Publications.*

There have been no official publications issued by the Trustees, but work has been continued on the Flora of Jamaica, by Mr. W. Fawcett and Dr. Rendle, and on the second edition of Vol. I. of the Monograph of British Lichens, by Miss A. Lorrain Smith.

Various members of the staff assisted Mr. H. N. Ridley, C.M.G., in his Report on the Botany of the Wollaston Expedition to Dutch New Guinea which has been published in the Transactions of the Linnean Society.

Other publications by members of the staff issued by permission of the Trustees number six, and six have been issued by other students of the collections.

### V.—*Acquisitions.*

#### (1) *By Donation.*

The following are the more important additions to the British Herbarium:—Flowering Plants; 64 Portfolios, estimated to contain 3,000 specimens, from R. S. Standen, Esq.; 27 specimens from G. C. Druce, Esq.; 26 specimens from C. E. Salmoñ, Esq.; 33 specimens from H. S. Thompson, Esq.

The following are the more important additions to the General Herbarium:—Lt. A. Buchanan, 109 specimens from British East Africa; P. Amaury Talbot, Esq., 171 specimens from Degema, S. Nigeria; G. L. Bates, Esq., 254 specimens from West Tropical

Africa ; R. A. Dümmer, Esq., 160 specimens from Uganda ; Capt. C. Tristram, 38 specimens from Himalayas ; Director, Botanic Gardens, Singapore, 33 specimens from Malay Peninsula ; Capt. W. H. Shakespear, 36 specimens from Arabia ; Linnean Society, 163 Australian plants ; Dr. F. Stoward, 525 specimens, and J. E. C. Maryon, Esq., 109 specimens, from West Australia ; Dr. R. R. Gates, 135 specimens of cultivated *Oenothera* ; E. A. Bowles, Esq., 82 specimens, W. F. Ledger, Esq., 8 specimens, and Royal Horticultural Society, 14 specimens of cultivated plants. P. A. Saccardo "Mycotheca Veneta," being 1,600 dried Fungi, transferred from the Department of Printed Books ; J. Groves, Esq., 7 European Characeæ ; Torquay Natural History Society, 33 Muscinæ from the East Indies and North America ; Dr. C. W. Andrews, 13 Cryptogams from Christmas Island ; Mrs. Cara Shinn, 11 species of Fungi from Nyasaland.

(2) *By Purchase.*

Botanical Exchange Club, 570 specimens of British Flowering plants ; Miss B. Corfe, 12 coloured drawings of British plants ; R. A. Dümmer, 222 Flowering plants and 164 Cryptogams from Uganda and British East Africa ; Miss A. Pegler, 50 Cryptogams from Kentani, South Africa ; continuations of published sets of European plants, from H. Dahlstedt, 50 specimens, and from H. Sudre, 100 specimens, and of North American Algæ by Collins, Holden and Setchell, 50 specimens.

(3) *By Exchange of Duplicates.*

The Regius Keeper, Royal Botanic Gardens, Edinburgh, 18 species of *Primula* from Yunnan, W. China ; Director, South African Museum, Cape Town, 75 South African Ericaceæ and Leguminosæ ; Curator, Auckland Museum, Auckland, New Zealand, 33 New Zealand plants ; Prince Bonaparte, 97 Mexican plants ; Department of Agriculture, Washington, D.C., U.S.A., 200 North American Grasses ; United States National Museum, Washington, D.C., U.S.A., 1,142 North American plants, 263 Tropical African plants (Col. Theo. Roosevelt Expedition, 1909-10), and 163 Argentine and North American plants ; Director, Botanic Gardens, New York, U.S.A., 703 Jamaica plants ; Director, Museu Goeldi, Para, Brazil, 972 Brazilian plants.

VI.—*Students and Visitors.*

The number of visits to the Department for consultation and research during the year was 3,303.

VII.—*Demonstrations.*

A demonstration on the collections was given to members of the Birkbeck Natural History Society.

A. B. Rendle.





# RETURN.

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## BRITISH MUSEUM.

1917.

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*Ordered, by The House of Commons, to be Printed,*  
*1 May 1917.*

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# RETURN.

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# BRITISH MUSEUM.

1918.

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23, FORTH STREET, EDINBURGH ;  
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---

1918.

Price 2d.



# BRITISH MUSEUM.

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RETURN to an Order of the Honourable The House of Commons,  
dated 11 March 1918; for,

COPY "of Account of the INCOME and EXPENDITURE of the BRITISH MUSEUM (SPECIAL TRUST FUNDS) for the Year ending the 31st day of March 1918; and RETURN of the Number of PERSONS admitted to visit the MUSEUM and the BRITISH MUSEUM (NATURAL HISTORY) in each Year from 1912 to 1917, both Years inclusive; together with a STATEMENT of the PROGRESS made in the ARRANGEMENT and DESCRIPTION of the COLLECTIONS, and an ACCOUNT of OBJECTS added to them in the Year 1917."

---

Treasury Chambers, }  
17 May 1918 }

STANLEY BALDWIN.

---

(*Mr. Herbert Fisher.*)

---

*Ordered, by The House of Commons, to be Printed,*  
28 May 1918.

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I.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the BRIDGEWATER FUND, from the 1st April 1917 to the 31st March 1918.

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
To BALANCES on the 1st April 1917 - - -	609 7 8	13,659 3 2
- DIVIDENDS received on 13,659 <i>l.</i> 3 <i>s.</i> 2 <i>d.</i> Stock in 2½ per Cent. Consols, bequeathed by the Earl of Bridgewater, viz.:		
On the 5th April 1917 - £. 85 7 4		
"    5th July 1917 - - 85 7 4		
"    5th October 1917 - - 85 7 4		
"    5th January 1918 - - 85 7 4		
	341 9 4	
- RENT OF A REAL ESTATE, Whitchurch, bequeathed by the Earl of Bridgewater (less charges) - - - - -	23 12 11	
	<u>£.974 9 11</u>	<u>13,659 3 2</u>

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
By One Year's SALARY of the Egerton Librarian -	175 - -	
- AMOUNT expended in purchase of Manuscripts -	477 14 6	
- BALANCES ON THE 31ST MARCH 1918, carried to Account for 1918-1919 - - -	321 15 5	13,659 3 2
	<u>£.974 9 11</u>	<u>13,659 3 2</u>

II.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the FARNBOROUGH FUND, from the 1st April 1917 to the 31st March 1918.

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
To BALANCES on the 1st April 1917 - - - -	40 16 1	2,879 10 7
- DIVIDENDS received on 2,879 <i>l.</i> 10 <i>s.</i> 7 <i>d.</i> Stock in 2½ per Cent. Consols, bequeathed by Lord Farnborough, viz.:		
On the 5th April 1917 - £. 17 19 11		
"    5th July 1917 - - 17 19 11		
"    5th October 1917 - - 17 19 11		
"    5th January, 1918 - - 17 19 11		
	71 19 8	
	<u>£.112 15 9</u>	<u>2,879 10 7</u>

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
By AMOUNT expended in purchase of Manuscripts -	40 19 0	
- BALANCES ON THE 31ST MARCH 1918, carried to Account for 1918-1919 - - -	71 16 9	2,879 10 7
	<u>£.112 15 9</u>	<u>2,879 10 7</u>

III.—AN ACCOUNT of the RECEIPTS and EXPENDITURE  
of the SWINEY FUND, from the 1st April 1917 to the 31st March 1918.

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
To BALANCES on the 1st April 1917 - - -	13 15 1	5,744 - 8
- DIVIDENDS received on 5,744 <i>l.</i> - 8 <i>d.</i> Stock in 2½ per Cent. Consols, bequeathed by Dr. George Swiney for Lectures on Geology, viz.:		
On the 5th April 1917 - - £.35 18 -		
"    5th July 1917 - - - 35 18 -		
"    5th October 1917 - - 35 18 -		
"    5th January 1918 - - 35 18 -		
	143 12 -	
	£.157 7 1	5,744 - 8

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
By AMOUNT paid to Dr. J. S. Flett for Lectures on Geology in 1917 - - - - -	140 - -	
- BALANCES ON THE 31ST MARCH 1918, carried to Account for 1918-1919 - - -	17 7 1	5,744 - 8
	£.157 7 1	5,744 - 8

IV.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of  
the BIRCH FUND from the 1st April 1917 to the 31st March 1918.

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
To BALANCE on the 1st April 1917 - - - - -	—	565 3 9
- DIVIDENDS received on 565 <i>l.</i> 3 <i>s.</i> 9 <i>d.</i> Stock in 2½ per Cent. Consols, bequeathed by Dr. Birch in 1766, for the three Under Librarians of the British Museum, viz.:		
On the 5th April 1917 - - -£.3 10 8		
"    5th July 1917 - - - 3 10 8		
"    5th October 1917 - - 3 10 8		
"    5th January 1918 - - 3 10 8		
	14 2 8	
	£.14 2 8	565 3 9

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
By LEGACY paid to the three Under Librarians of the British Museum, whose offices existed in 1766, viz., the Keepers of the Departments of Printed Books, Manuscripts, and Natural History - - - - -	14 2 8	
- BALANCE ON THE 31ST MARCH 1918, carried to Account for 1918-1919 - - - - -	—	565 3 9
	£.14 2 8	565 3 9

V.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the bequest of the late MR. CHARLES DRURY EDWARD FORTNUM from the 1st April 1917 to the 31st March 1918.

	CASH.			STOCK, 5% War Loan.		
	£.	s.	d.	£.	s.	d.
To BALANCE on the 1st April 1917 - - - -	38	3	4	1,900	-	-
- INTEREST on War Loan - - - -	74	16	3			
	<u>£. 112 19 7</u>			<u>1,900 - -</u>		

	CASH.			STOCK, 5% War Loan.		
	£.	s.	d.	£.	s.	d.
BY BALANCE ON THE 31ST MARCH 1918, carried to Account for 1918-1919 - - - -	112	19	7	1,900	-	-
	<u>£. 112 19 7</u>			<u>1,900 - -</u>		

VI.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the CARCHEMISH EXCAVATIONS FUND from the 1st April 1917 to the 31st March 1918.

	CASH.		
	£.	s.	d.
To BALANCE on the 1st April 1917 - - - -	78	14	1
	<u>£. 78 14 1</u>		

	CASH.		
	£.	s.	d.
BY AMOUNT expended on Excavations - - - -	10	-	-
- BALANCE on the 31st March 1918, carried to Account for 1918-1919	68	14	1
	<u>£. 78 14 1</u>		

VII.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the bequest  
of the late MR. HENRY LOUIS FLORENCE from the  
1st April 1917 to the 31st March 1918.

	CASH.			STOCK.		
	£.	s.	d.	£.	s.	d.
To BALANCE on the 1st April 1917, Cash and 6% Exchequer Bond, 1920 - - - - -	18	14	9	1,000	-	-
- 5% War Loan, 1929-47 from conversion of 6% Exchequer Bond - - - - -	-	-	-	1,052	12	6
- INTEREST on Exchequer Bond - - - - -	15	2	6			
- " " 5% War Loan, 1929-47 - - - - -	26	6	3			
	<hr/>			<hr/>		
	£. 60	3	6	2,052	12	6
	<hr/>			<hr/>		

	CASH.			STOCK.		
	£.	s.	d.	£.	s.	d.
By 6% Exchequer Bond, 1920, converted into 1052l. 12s. 6d. 5% War Loan, 1929-47 - - - - -	-	-	-	1,000	-	-
- BALANCE ON THE 31ST MARCH 1918, carried to Account for 1918-1919 - - - - -	60	3	6	1,052	12	6
	<hr/>			<hr/>		
	£. 60	3	6	2,052	12	6
	<hr/>			<hr/>		

1st April 1918.

*Frederic G. Kenyon*

Director and Principal Librarian.



VIII.—NUMBER of PERSONS ADMITTED to VISIT the BRITISH MUSEUM and the BRITISH MUSEUM (NATURAL HISTORY).

A.—PERSONS ADMITTED TO VIEW THE GENERAL COLLECTIONS IN THE BRITISH MUSEUM in each Year from 1912 to 1917, both Years inclusive.

	1912		1913		1914		1915		1916		1917
	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.	
January	54,607	3,045	61,198	3,886	71,239	4,162	60,764	4,224	56,474	4,148	
February	49,586	3,128	48,745	3,005	62,365	4,163	52,415	3,779	38,579	3,532	
March	*13,341	*2,292	70,292	6,655	61,580	7,915	57,858	5,435			
April	57,077	4,542	70,361	7,045	73,629	5,010	71,772	5,314			
May	54,467	4,202	67,464	4,753	72,249	8,277	54,556	4,859			
June	51,891	7,030	61,330	5,715	65,742	5,646	49,615	3,341			
July	62,503	5,487	90,497	6,171	78,741	6,002	58,825	4,011			
August	101,300	7,343	107,901	8,239	57,020	5,225	64,374	5,545			
September	79,456	8,039	102,107	5,192	49,091	4,431	49,759	4,076			
October	63,496	4,812	83,091	5,365	60,376	4,775	55,005	5,126			
November	54,593	3,898	61,502	4,350	48,899	3,992	49,569	3,844			
December	54,777	3,960	59,440	2,686	50,861	3,127	55,488	3,537			
Total Number of Persons admitted to view the General Collections.	697,094	57,778	884,028	63,062	751,792	62,725	680,000	53,091	95,053	7,680	
	754,872		947,090		814,517		733,091		102,733		

\* The Museum was closed from March 5 to 24 inclusive.

## NUMBER OF VISITS OF STUDENTS TO PARTICULAR DEPARTMENTS.

	1912.	1913.	1914.	1915.	1916.	1917.
To the Reading Room - - - - -	236,643	243,659	224,560	178,410	134,501	121,538
" Newspaper Room - - - - -	18,450	17,938	16,704	12,650	9,461	9,108
" Map Room - - - - -	502	439	400	380	142	170
" Department of Manuscripts - - - - -	12,142	12,090	10,277	7,781	5,713	5,483
" Department of Oriental Printed Books and Manuscripts.	2,446	3,254	2,968	2,705	817	691
" Print Room - - - - -	9,833	*7,064	*5,406	5,781	2,063	1,254
" Egyptian and Assyrian Department - - - - -	3,451	3,860	3,000	1,700	500	-
" Greek and Roman Department - - - - -	755	†1,744	†1,566	1,201	517	219
" Galleries of Sculpture - - - - -	1,879	1,945	2,138	1,798	249	-
" British and Mediaeval Department - - - - -	3,646	3,827	2,873	1,488	746	486
" Coin and Medal Room - - - - -	4,044	3,565	3,321	2,150	377	-
Total - - - - -	293,791	299,385	273,213	216,044	155,086	138,949

\* The Students' Room of the Department of Prints and Drawings was closed for removal of the fittings to the new wing from 6th September 1913 to 7th May 1914.

† Including visits for archaeological inquiry.

The British Museum, Bloomsbury (including the Departments of Printed Books and Maps, Manuscripts, Oriental Printed Books and Manuscripts, Prints and Drawings, Egyptian and Assyrian Antiquities, Greek and Roman Antiquities, British and Mediæval Antiquities and Ethnography, and Coins and Medals) is normally open to the public free daily (except on Good Friday and Christmas Day and days of Public Fast or Thanksgiving).

At present, however, the provision for keeping the galleries open having been suspended by His Majesty's Government in the interests of economy, the Exhibition Galleries are wholly closed to the public, though the re-opening of certain galleries with a temporary exhibition is in contemplation. The Reading Room is open to Students from 9 a.m. to 5 p.m., the Newspaper Room and Manuscript Students' Room from 10 a.m. to 5 p.m., on every weekday except Good Friday, Christmas Day, and the first four weekdays in March and September.

British Museum, }  
25th April 1918. }

*Frederic G. Kenyon,*  
Director and Principal Librarian.

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B.—PERSONS ADMITTED TO VIEW THE COLLECTIONS IN THE BRITISH MUSEUM (NATURAL HISTORY), CROMWELL ROAD, in each YEAR from 1912 to 1917, inclusive.

	1912.		1913.		1914.		1915.		1916.		1917.	
	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.
January	31,122	3,115	30,789	2,923	30,067	3,233	29,458	3,177	30,632	4,001	30,594	2,578
February	26,931	3,904	25,439	3,529	27,762	4,404	25,599	3,759	26,948	3,301	25,452	3,046
March	*22,719	*4,558	54,532	5,674	31,344	5,863	29,933	4,266	28,614	3,386	30,165	4,020
April	48,102	3,665	34,400	5,032	41,188	3,688	42,600	4,380	32,024	4,301	44,284	5,880
May	34,473	3,641	39,844	4,130	28,847	5,874	32,483	4,655	28,854	3,161	31,785	4,106
June	30,504	5,310	32,135	4,368	39,074	4,009	27,666	3,340	31,165	3,808	28,304	4,122
July	31,967	3,570	36,993	5,099	31,790	4,317	33,687	3,791	27,792	4,091	28,981	4,742
August	59,729	6,192	51,478	6,372	29,860	3,589	46,712	6,068	33,006	3,902	42,316	4,284
September	34,451	6,170	33,949	4,611	26,368	3,033	27,972	3,886	28,993	3,913	27,705	4,849
October	31,244	4,158	32,185	4,298	31,351	3,271	30,358	4,678	33,228	4,238	29,377	3,296
November	25,453	3,236	27,820	4,487	27,130	3,402	27,523	3,241	29,368	2,479	30,026	2,753
December	28,153	3,246	33,455	2,778	29,173	2,277	31,181	3,168	28,635	2,833	27,671	2,792
Total Number of Persons admitted to view the Natural History Collections (including students)	404,848	50,765	433,019	53,301	373,954	46,960	385,172	48,409	359,259	43,414	376,660	46,468
	455,613		486,320		420,914		433,581		402,673		433,128	

NUMBER OF VISITS TO PARTICULAR DEPARTMENTS for the purpose of STUDY.

	1912.		1913.		1914.		1915.		1916.		1917.	
	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.
Zoology (including Art Students)	12,564	9,982	9,982	9,235	9,235	9,235	8,020	7,018	7,018	6,314	6,314	6,314
Entomology	-	4,837	4,837	4,284	4,284	4,284	3,354	3,149	3,149	2,909	2,909	2,909
Geology	5,974	5,613	5,613	4,962	4,962	4,962	2,531	3,000	3,000	3,623	3,623	3,623
Mineralogy†	1,415	641	641	717	717	717	510	354	354	404	404	404
Botany	3,962	3,455	3,455	3,164	3,164	3,164	3,226	3,303	3,303	2,751	2,751	2,751
Total	23,915	24,528	24,528	22,362	22,362	22,362	17,641	16,824	16,824	16,001	16,001	16,001

\* The Museum was closed from March 5 to 10 inclusive.

† Study series directly accessible to the public, and so labelled as to render reference to the staff almost unnecessary, have been arranged in this Department.

The Exhibition Galleries of the British Museum (Natural History), Cromwell Road, South Kensington, including the Departments of Zoology, Entomology, Geology and Palæontology, Mineralogy, and Botany, are open to the public (with certain restrictions due to the need for economy) free, daily, except Good Friday and Christmas Day, and days of Public Fast or Thanksgiving.

The regulations at present in force are as under :—

The GALLERIES are open to the PUBLIC, free, as follows :—

#### WEEK-DAYS.

*Daily*.—Central Hall (Special Exhibits), North Hall (Domesticated Animals, &c.), Bird Gallery, Upper and Lower Mammal Galleries, Shell Gallery, and Botanical Gallery.

On *Mondays, Wednesdays, and Fridays*.—Fossil Mammal Gallery, Fossil Reptile Gallery, and Mineral Gallery. (Eastern side).

On *Tuesdays, Thursdays, and Saturdays*.—Coral Gallery, Starfish Gallery, Reptile Gallery, Insect Gallery, Fish Gallery, and Whale Room. (Western side.)

#### SUNDAYS.

Central Hall, North Hall, Bird Gallery, Mammal Galleries (including Whale Room), Fossil Mammal Gallery, Fossil Reptile Gallery, and Mineral Gallery.

The Hours of Admission are :—

On WEEK-DAYS, throughout the year from 10 a.m., in

January and February	...	...	...	...	to 5	p.m.
March	...	...	...	...	„ 5.30	„
April to August (inclusive)	...	...	...	...	„ 6	„
September	...	...	...	...	„ 5.30	„
October, November and December	...	...	...	...	„ 5	„

On SUNDAYS, in

January	...	...	...	from 2	to 4	p.m.
February 1 to 14	...	...	...	„ 2	„ 4.30	„
„ 15 to end	...	...	...	„ 2	„ 5	„
March	...	...	...	„ 2	„ 5.30	„
April	...	...	...	„ 2	„ 6	„
May to August (inclusive)	...	...	...	„ 2.30	„ 7	„
September	...	...	...	„ 2	„ 5.30	„
October	...	...	...	„ 2	„ 5	„
November and December	...	...	...	„ 2	„ 4	„

Persons are admitted to study in these Departments every week-day from 10 till 4 o'clock.

The following Galleries are closed continuously for the duration of the War, viz.—Fossil Fishes ; Fossil Cephalopods ; other Fossil Shells, etc. ; Fossil Corals and Sponges, and Fossil Plants ; Stratigraphical and Special Palæontological Collections.

British Museum (Natural History), {  
23 February, 1918.

L. Fletcher,  
Director of the Natural  
History Departments.

## IX. GENERAL PROGRESS AT THE MUSEUM, BLOOMSBURY.

The exhibition galleries of the Museum have continued closed throughout the year. In order to palliate the loss to the nation of so important a source of education and recreation, and in particular to avoid the distressing necessity of turning away from the doors hundreds of Overseas and other soldiers desiring admittance, authority was obtained towards the end of the year to arrange for parties to be personally conducted round such parts of the galleries as had not been stripped of their contents for purposes of protection. This scheme, however, was frustrated by the necessity, which became obvious towards the end of the year, of taking precautions against air-raids of a much more formidable character than those previously experienced. Steps were accordingly taken, and were in progress at the end of the year, to remove a larger proportion of the collections to places of greater safety, and to cover up the others *in situ*. These measures have made it impossible, at any rate for the present, to proceed with the scheme for the partial readmittance of visitors.

The Reading Room, Newspaper Room, Manuscript Students' Room, and to some extent the other departmental Students' Rooms, have remained open. Visitors to the Reading Room numbered 121,538, as compared with 134,501 in 1916. This total is slightly less than half the total in 1913. The Newspaper Room figures were 9,108, a reduction of 353, and less than half the figures of 1911 and 1912. The Manuscript Room had 5,483 visits, 230 less than in 1916, but again less than half the latest peace-time figures. Other departments had only 2,820 visitors, as against 5,411 in 1916.

Further reductions in the staff were made in the course of the year for purposes connected with the war, and by the end of the year all men fit for general service below the age of 36 had been released, with the exception of one fireman, whose services are indispensable. At one time all men of the highest classification had been released; but a fresh medical classification placed a few of the older men in the general service category, whom it has not as yet been possible to replace. A beginning has been made with the employment of women as attendants in the Reading Room.

The total number of members of the staff at Bloomsbury on military service is now 115, and at the Natural History Museum 60. 16 have lost their lives in the service of their country; 34 have been wounded; 19 have been invalided out of the army; 3 have received the Military Medal; 36 have been granted commissions.

Progress was made with the re-arrangement of the collections in the departments of Antiquities. The Coptic Room has been arranged, and the collections of Babylonian and Assyrian bricks, boundary-stones, gate sockets, &c., transferred to their new quarters in the Second Northern Gallery. The Hall of Greek and Latin

Inscriptions has been re-arranged, and a small hand-book to it prepared. The Phigaleian Room and the Gold Ornament Room have also been taken in hand. The Brahman Room has been completed, and the Buddhist Room nearly so, and progress made with the Asiatic Saloon and the Glass and China Gallery in the King Edward VII.'s Galleries. All work of this kind was much delayed through the difficulty of obtaining labour or furniture, and was ultimately entirely suspended on account of the measures, above referred to, for the greater protection of the collections against air attack.

The number of separate objects incorporated in the several Departments during 1917 is as follows:—

Printed Books :

Books and Pamphlets	-	-	-	-	-	18,947
Serials and Parts of Volumes	-	-	-	-	-	52,155
Maps and Atlases	-	-	-	-	-	939
Music	-	-	-	-	-	8,421
Newspapers (single numbers)	-	-	-	-	-	271,580
Miscellaneous	-	-	-	-	-	3,763
Manuscripts and Seals	-	-	-	-	-	1,989
Oriental Printed Books and MSS.	-	-	-	-	-	1,971
Prints and Drawings	-	-	-	-	-	5,172
"          " (Oriental)	-	-	-	-	-	106
Egyptian and Assyrian Antiquities	-	-	-	-	-	51
Greek and Roman Antiquities	-	-	-	-	-	18
British and Mediæval Antiquities	-	-	-	-	-	930
Coins and Medals	-	-	-	-	-	1,861
Total	-	-	-	-	-	<u>367,903</u>

In consequence of the shortage of paper, it has been thought right this year to omit the usual departmental reports of accessions. The necessity of omitting these reports is the more regrettable, since it involves the omission of a public recognition and record of many generous gifts to the national collections. It would also be unfortunate, for the purposes of future reference, if the completeness of the record of the more important accessions to the Museum were to be broken. It is accordingly intended that the detailed reports shall eventually be issued in full in the first Annual Report after the restoration of normal conditions.

Meanwhile brief reference must be made to a few of the most important additions made to the collections in the course of 1917. Foremost among them stand three benefactions of special size and importance, namely the papers of Sir Robert Peel, presented by the Hon. George Peel, the Zouche manuscripts, bequeathed by the late Baroness Zouche, and the splendid collection of engravings presented by Lady Lucas. In the Department of Antiquities special mention may be made of the famous Orestes vase from the Deepdene collection, towards the purchase of which a generous contribution was made by the National Art-Collections Fund; a remarkable

Chinese statue in glazed pottery, presented by the same Fund and other donors; and the unique silver penny of the Welsh King Howel Dda (913-948), purchased with the assistance of several private benefactors.

Arranged by Departments, the most notable accessions are as follows:—

*Printed Books.*—Caxton's "Diets and Sayings of the Philosophers," 3rd ed., 1489.

Dialogus linguæ et ventris, by W. Horman, Vice-Provost of Eton, printed by Pynson (c. 1494).

Life of Petronylla, printed by Pynson (c. 1495).

Würzburg Missal of 1509. *Presented by Mr. Campbell Dodgson, Mr. C. H. St. John Hornby, and Mr. M. Rosenheim.*

Private Prayers of Queen Elizabeth, 1563.

Fifteen volumes from the sixth portion of the Huth sale.

Thirteen musical works by Bach, Handel, &c., from the Cummings sale.

A set of 567 trench maps, forwarded by the Ordnance Survey, as a first instalment.

*Manuscripts.* Correspondence and political papers of Sir Robert Peel. *Presented by the Hon. George Peel.*

The Zouche MSS., a collection of 91 Western and 103 Oriental MSS. *Bequeathed by the late Baroness Zouche.*

Autographs of Charles I (after Naseby), Charles II, Louis XI of France, Michael Angelo, Philip de Comines, W. Hogarth, William Cowper, Charles Lamb, Danton, Lafayette, several of Napoleon's Marshals, etc., from the Morrison sale.

A collection of Gypsy Stories by C. G. Leland, and of drawings of gypsies by Mr. Joseph Pennell. *Presented by Mr. and Mrs. Pennell.*

Letters and collections of Bishop Percy. *Presented by Mrs. A. Broadwood.*

Fourteen musical MSS. by Purcell, Croft, Mendelssohn, etc., from the Cummings sale.

A collection of MS. Music of the 17th century for viols and lute. *Bequeathed by Dr. T. L. Southgate.*

Sixty-one letters of Sir F. Seymour Haden. *Presented by Mr. C. D. Sherborn.*

A volume of Middle English religious pieces in prose and verse, early 15th century. *Purchased with the assistance of contributions collected by Prof. I. Gollancz in memory of the late Mr. H. B. Wheatley.*

Holograph letter of the Duke of Wellington, begun before and finished after Waterloo. *Presented by R. F. Norton, Esq., K.C.*

*Prints and Drawings.* The Lucas Collection; about 4,400 prints, selected from the collection at Wrest Park, of all schools, but



especially French and English, 17th—19th centuries, with special groups of Naval and Topographical prints. *Presented by Baroness Lucas, in memory of her brother, the late Lord Lucas, R.F.C.*

The original Drawings made by Mr. Muirhead Bone on the Western Front; to pass to the Museum as soon as they cease to be required by the Government for purposes of propaganda.

About 120 Drawings of Munition Works, by Mr. Joseph Pennell. *Presented by the Artist.*

Portrait of Anne, Countess of Radnor, by Gainsborough. *Presented by Mr. G. Harland Peck.*

Twenty Engravings and Woodcuts of the Italian, Flemish, and German schools, from the Pembroke sale.

Twenty Drawings and forty-four Engravings, by foreign artists working in England, early 17th century, taken from a book of goldsmith's patterns.

Proofs of original etchings, by Mr. Frank W. Benson. *Presented by the Artist.*

*Greek and Roman Antiquities.* The famous Orestes vase from the Deepdene sale. Purchased with the assistance of the National Art-Collections Fund.

Two important Vases, the Anodos of Dionysus and Apollo on the Swan, from the Deepdene sale.

Five Vases from the Deepdene sale. *Presented by Mr. G. Durlacher.*

*British and Mediaeval Antiquities.* A number of ancient Chinese Sculptures, including some assigned to the Han and Tang dynasties. *Presented by Messrs. Hampton and Sons.*

An important Chinese Pottery Statue, of the Ming dynasty. *Presented through the National Art-Collections Fund, by eighteen contributors, through the exertions of Mr. O. C. Raphael.*

A series of Gandhara Sculptures, from the Deepdene sale. *Presented by Mr. G. Eumorfopoulos and the National Art-Collections Fund.*

Polynesian stone implements, collected on Pitcairn Island. *Presented by the Pitcairn Islanders.*

*Coins and Medals.* Two Greek Gold Staters, from a hoard found in Macedonia.

Unique Silver Penny of Howel Dda, 10th century. *Purchased with the assistance of contributions by Sir A. Evans, Sir H. Howorth, Mr. O. C. Raphael, and others.*

Leaden impression of a bust engraved by Roettier as a model for a medal of James II. *Presented by Mr. J. Whitcombe Greene.*

A set of nine Plaquettes representing rulers of Baroda, designed by modern medallists from contemporary native drawings. *Presented by H.H. the Gaekwar of Baroda.*

Three bronze medals, commemorating the battle of Jutland, to which prizes offered by Sir A. Evans were awarded. *Presented by Sir A. Evans.*

A collection of 217 German War medals, confiscated by H.M. Procurator General.

The following publications have been issued in the course of the year :—

Catalogue of Greek Papyri, vol. v. by H. I. Bell, 4to.  
2*l.* 2*s.*

Catalogue of Japanese and Chinese Woodcuts, by L. Binyon. 4to. 1*l.*

Guide to Select Greek and Latin Inscriptions, by A. H. Smith. Small 4to. 6*d.*

*Frederic G. Kenyon,*

Director and Principal Librarian.

British Museum,  
25th April 1918.

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## X. BRITISH MUSEUM (NATURAL HISTORY).

## SUMMARY of GENERAL PROGRESS made at the Natural History Museum in the year 1917.

On account of the extreme shortage of paper the Annual Return for 1917 has been confined to the Director's Summary, on the understanding that the full reports by the Keepers of the several Departments will be printed after the close of the war for purposes of record.

The total number of visits made by the public to the Natural History Museum during 1917 was 423,128, as compared with 402,673 in 1916. The attendance on Sunday afternoons was 46,468, as against 43,414 in the previous year. The average daily attendance for all open days was 1,166 ; for week-days 1,211 ; and for Sunday afternoons, 894.

Dr. J. S. Flett, F.R.S., gave, at the Royal Society of Arts in November and December, the Swiney course of twelve lectures, his subject being "The Mineral Resources of the British Empire," which were attended, on an average, by 80 persons a lecture. The lectures attracted considerable attention, and a copy of the full abstract has been supplied to the Ministry of Munitions of War, Department of Development of Mineral Resources, for purposes of reference.

The Trustees have readily given their assent to a request of the Committee formed to promote a National Memorial to the late Captain F. C. Selous, D.S.O., who was killed in action in East Africa, on January 4th, 1917, to place in the Natural History Museum a bronze bust of the great hunter and naturalist, to whom the Museum is indebted for so many of its finest exhibited specimens of big game. The Trustees desire to place on record here their sense of the valuable services rendered by Captain Selous to the Museum.

At the close of 1917, 60 members of the staff of the Natural History Museum were serving with the Military Forces, while seven were doing war work in other Government Departments to which they were lent for the purpose.

Since the outbreak of war seven members of the staff have been killed, fourteen have been wounded, and seven have been invalided out of the army ; ten have been granted commissions, of whom two have received the Military Cross, and one has been mentioned in despatches.

As will be seen, the staff has been considerably depleted by military duty and the calls of the War Departments for the services of scientific experts. Nevertheless the Museum has been able to render important help in various ways in matters directly relating to the War.

The Museum has co-operated with other Departments in the consideration of questions connected with food economy and the food resources of the country. Information has been furnished on matters relating to the utilization of the eggs of sea-gulls and other wild birds as food and for industrial purposes; the facilities that might safely be granted for the shooting of migratory edible birds; measures for increasing the supplies of fresh-water fishes for food, &c.

A new case has been installed in the Central Hall dealing with the subject of Food Economy as related to food-stuffs obtained from plants. The several sections of the exhibit comprise cereals, bread, roots and tubers and other vegetables, nuts, pulses, fresh fruits, beverages, and sugar and its substitutes. A feature of the exhibit is the series of coloured diagrams showing the nutritive values of some typical foods.

In view of the enormous ravages of rats and mice, which are responsible for the loss of thousands of tons of valuable food-material, and for the dissemination of disease, the Trustees have undertaken the preparation of a short treatise dealing with the mode of life, breeding, and economic importance of these small rodents. The pamphlet, which is in preparation by Mr. M. A. C. Hinton, will be published as a number of the Economic Series.

In the Department of Botany the following matters, among others, have been dealt with:—The examination of a fungus which was destroying army tents at Malta and causing serious loss—an effective remedy being suggested; inquiries as to camouflage of guns in winter; the source of supply of sphagnum moss for surgical dressings; sources of supply of timbers; damage to timber by diseases. Inquiries connected with food production, including the cause of ropiness in bread and the fungus-attack of sacks of flour during transport, were also dealt with.

Reports have been prepared in the Department of Geology on several collections of fossils from Trinidad, to facilitate the explorations for oil-bearing deposits in that island.

A memorandum was prepared in the Department of Minerals on sources of supply of colourless fluor and of Iceland spar, and fragments of rocks from concrete used in German fortifications were compared with the large series of German rocks in the Department.

Owing to the influx of malaria\* patients from overseas, and the danger that malaria might be spread in this country through the agency of the native anopheline (or malaria carrying) species of mosquitoes, it had become very important to know the distribution of the latter in England and Wales, and in consequence every effort has been made to obtain all the knowledge possible on the subject. With the assistance of the Local Government Board and of various scientific bodies, specimens of mosquitoes have been received from many parts of the country, and have been identified in the Entomological Department. This work is still being carried on, and the Department has in hand the preparation of a map which will make the knowledge thus obtained accessible in a convenient form.

Much correspondence has taken place with the Colonial Office relating to the protection of birds in the British Colonies and Dependencies, also with reference to such questions as food fishes and poisonous fishes, the sponge fisheries in the West Indies, investigation into whales and the whale fisheries in Southern waters, and acclimatisation of animals in South Georgia.

An exhibition illustrating the Biology of Waterworks has been set up in the Central Hall to the east of the principal staircase, and has attracted much interest. The importance of the scientific and practical questions connected with this subject is, perhaps, not generally appreciated. It has been proved by sad experience in this country and abroad, that in a water-supply which is not protected by adequate filtration microscopic organisms gain access to the pipes, and can there serve as food for animals which depend on this kind of nutriment. The result may be the occurrence, in the water-pipes of a town, of masses of various fresh-water animals. Not only do these tend to restrict the effective size of the pipes and block strainers and taps, but their decay results in the fouling of the water and the encouragement of the growth of bacteria.

These and other points are illustrated in the Exhibition, to which an illustrated guide-book has been issued (see p. 23).

An exhibit of birds useful to agriculture is in preparation.

The records of Cetacea stranded on the British coasts show no sign of falling off in interest. The number of specimens reported from various sources in 1917 was 31, or two more than in the preceding year. Special mention may be made of the following specimens:—A white-sided Dolphin, from Lincolnshire, believed to be the first specimen to have been recorded from the English coast; a large Sperm Whale, from Caithness; a Cuvier's Whale, from co. Clare; a Risso's Grampus, from Devonshire; and a Common Rorqual, from the Scilly Islands. In Dr. Harmer's Report on the subject (the fifth since the commencement of the series) special attention has been devoted to the occurrence of the Bottle-nosed Whale in British waters. The cordial thanks of the Trustees are due to the Board of Trade and its Officers for the great interest shown in the inquiry and the valuable assistance so willingly afforded, as well as to many others who have given their help.

The project for an Anglo-Swedish Biological Station in Graham Land in which the Museum was to have participated has been abandoned in consequence of the war.

Mr. A. E. Kitson, Director of the Geological Survey of the Gold Coast, visited the Ameki cuttings of the new Port Harcourt Railway, Southern Nigeria, and made for the Museum an important collection of Eocene fossils, chiefly Mollusca, which will add much to our knowledge of the geology of that part of Africa. The necessary expenses were paid by Mr. W. Heward Bell.

The mounted specimens received during the year from the Trustees of the Rowland Ward Bequest include fine specimens of a male Tschego and a young female Gorilla, from the Bapindi

District, Cameroons, a female Ostrich from British East Africa, a Chanler's Reedbuck, a Queensland Koala, two Galago Lemurs, and a Pygmy Squirrel, besides about 100 small birds.

The total number of gifts received during the year by the several Departments was 1,393. Many of these comprised large numbers of individual specimens. The following may be mentioned as being of special interest or value; from:—

Mrs. L. de L. Gwatkin—the collection of Molluscan Radulæ formed by her husband, the late Professor H. M. Gwatkin, and presented by her in accordance with his wishes. The collection consists of some 8,000 specimens, contained in three microscope-slide cabinets, besides some 3,500 so-called “duplicate” slides.

Mr. F. D. Godman—two fragments and a lower molar tooth of a second skull discovered in the Piltown gravel in a new locality by the late Mr. Charles Dawson.

The Duke of Portland—the skeleton of the thoroughbred stallion “William III.”

Mr. A. G. Dixon—the complete skeleton and skin of a specially fine specimen of female Dugong, captured in Delagoa Bay some years ago.

The Bombay Natural History Society—162 Mammals.

Mrs. Manby—a series of 18 specimens of heads of Big Game, specially selected from the collection of sporting trophies, made in Burma by the late Mr. C. W. A. Bruce.

Mr. Lowther Bridger—an exceptionally fine salmon, weighing about 55 lbs., caught by him in the river Eden in 1888.

Miss Margaret Tanner—a collection of land and fresh-water shells, mainly British, formed by the late Mr. Kenneth McKean.

Lady Strathcona—a collection of butterflies from the Niger Delta at Warri, Calabar.

Mr. Rowland E. Turner—a well-made mahogany insect cabinet, together with such of the contents (butterflies, beetles, hymenoptera) as might be desired for the Museum.

The First Commissioner of H.M. Works, &c.—a main purlin from the roof of Westminster Hall, in which the destructive work of the beetle *Xestobium tessellatum* is very well shown.

Dr. C. T. Trechmann—an interesting and valuable series of upwards of 100 specimens of minerals selected from the collection formed by his father, the late Charles Otto Trechmann.

The Government of Peru—a large and important series of minerals and ore specimens presented through the Peruvian Consul-General in London.

The Derwent Valley Water Board—a fine ganoid fish (*Acrolepis hopkinsi*) from the Lower Carboniferous of Bamford, Derbyshire.

Mr. W. G. Wallace and Miss V. I. Wallace—Two MS. notebooks in the handwriting of their father, the late Mr. Alfred Russel Wallace, on specimens (chiefly insects), collected by him in the Malay Archipelago.

The Board of Governors of the Adelaide Public Library, Museum, and Art Gallery—a fine series of coloured casts of Meteorites.

With the exception of the purchase for 100*l.* of the seventh instalment of the Distant Collection of insects (4,000 Rhynchota and 1,000 Coleoptera, including 250 types), a continuation of an arrangement to which the Trustees were committed, and of books for the upkeep of the Library, purchases were limited to a few unimportant transactions.

The following works on Natural History have been published during the year :—

British Antarctic (“Terra Nova”) Expedition, 1910. Natural History Report. 4to :—

Zoology :

Vol. III., No. 5. Crustacea, Part IV. Stomatopoda, Cumacea, Phyllocarida, and Cladocera. By W. T. Calman, D.S.C. Pp. 137—162 : 9 text-figures. 2*s.*

Vol. IV., No. 1. Echinoderma, Part I. Actinogonidiata. By F. J. Bell, M.A. Pp. 10 : 2 plates. 2*s.* 6*d.*

Botany :

Part I. Freshwater Algæ. By F. E. Fritsch, D.S.C. Pp. 16 : 1 plate. 1*s.*

Part II. Marine Algæ. By A. Gepp, M.A., and Ethel S. Gepp. Melobesieæ. By Mme. Paul Lemoine. Pp. 17—28 : 4 text-figures. 1*s.*

Report on Cetacea stranded on the British Coasts. By S. F. Harmer, SC.D., F.R.S. No. 4. Cetacea stranded during 1916. Pp. 13 : 1 map. 4to. 1*s.* 6*d.*

Guide to British Fresh-water Fishes. By C. Tate Regan, M.A., F.R.S. Pp. 39 : 23 text-figures. 8vo. 6*d.*

Instructions for Collectors. No. 1a. Mammals. Part II. Skeletons, with special notes on the collection of specimens of Cetacea. By S. F. Harmer, SC.D., F.R.S. Pp. 8 : 4 text-figures. 8vo. 3*d.*

Economic Series of Pamphlets :

No. 5. The Bed-Bug : its Habits and Life-History, and how to deal with it. By B. F. Cummings. Pp. 20 : 7 text-figures. 8vo. 1*d.*

No. 6. Species of Arachnida and Myriopoda (Scorpions, Spiders, Mites, Ticks, and Centipedes) injurious to Man. By S. Hirst. Pp. 60 : 26 text-figures, 3 plates. 8vo. 6*d.*

No. 7. The Biology of Waterworks. By R. Kirkpatrick. Pp. 58 : 18 text-figures. 8vo. 1*s.*

Poster-leaflets, 18 in. by 12 in., on “The Fly Danger” and “The Mosquito Danger.” Price  $\frac{1}{2}$ *d.* each.

Permission has been obtained from the Colonial Office to utilize the portions of the journal kept by the late Major G. E. H. Barrett-Hamilton during his mission to South Georgia, 1913-14, other than those relating to whales, which have been dealt with by Mr. M. A. C. Hinton. The journal has been presented to the Museum by Mrs. Barrett-Hamilton.

The extent of the collection of books, &c., in the Library on the 31st December, 1917, was, on a rough estimate, 102,975 volumes (exclusive of continuations and minor separata) and 6,263 maps.

*L. Fletcher,*  
Director.

British Museum (Natural History),  
23 February 1918.



11 JUL 1920



# BRITISH MUSEUM.

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RETURN to an Order of the Honourable The House of Commons,  
dated 1 April 1919 ; *for*,

COPY "of Account of the INCOME and EXPENDITURE of the BRITISH MUSEUM (SPECIAL TRUST FUNDS) for the Year ending the 31st day of March 1919 ; and RETURN of the Number of PERSONS admitted to visit the MUSEUM and the BRITISH MUSEUM (NATURAL HISTORY) in each Year from 1913 to 1918, both Years inclusive ; together with a STATEMENT of the PROGRESS made in the ARRANGEMENT and DESCRIPTION of the COLLECTIONS, and an ACCOUNT of OBJECTS added to them in the Year 1918."

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Treasury Chambers, }  
16 June 1919

STANLEY BALDWIN.

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(*Mr. Herbert Fisher.*)

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Ordered, by The House of Commons, to be Printed,  
24 June 1919.

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37, PETER STREET, MANCHESTER; 1, ST. ANDREW'S CRESCENT, CARDIFF;  
23, FORTH STREET, EDINBURGH;  
or from E. PONSONBY, LTD., 118, GRAFTON STREET, DUBLIN.



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I.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the  
BRIDGEWATER FUND, from the 1st April 1918 to the 31st March 1919.

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
To BALANCES on the 1st April 1918 - - -	321 15 5	13,659 3 2
- DIVIDENDS received on 13,659l. 3s. 2d. Stock in 2½ per Cent. Consols, bequeathed by the Earl of Bridgewater, viz.:		
On the 5th April 1918 - £. 85 7 4		
" 5th July 1918 - - 85 7 4		
" 5th October 1918 - 85 7 4		
" 5th January 1919 - 85 7 4		
	341 9 4	
- RENT OF A REAL ESTATE, Whitchurch, bequeathed by the Earl of Bridgewater (less charges) - - - - -	23 12 -	
	<u>£. 686 16 9</u>	<u>13,659 3 2</u>

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
By One Year's SALARY of the Egerton Librarian -	175 - -	
- AMOUNT expended in purchase of Manuscripts -	395 2 -	
- BALANCES ON THE 31ST MARCH 1919, carried to Account for 1919-1920 - - -	116 14 9	13,659 3 2
	<u>£. 686 16 9</u>	<u>13,659 3 2</u>

II.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the  
FARNBOROUGH FUND, from the 1st April 1918 to the 31st March 1919.

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
To BALANCES on the 1st April 1918 - - -	71 16 9	2,879 10 7
- DIVIDENDS received on 2,879l. 10s. 7d. Stock in 2½ per Cent. Consols, bequeathed by Lord Farnborough, viz.:		
On the 5th April 1918 - £. 17 19 11		
" 5th July 1918 - - 17 19 11		
" 5th October 1918 - 17 19 11		
" 5th January, 1919 - 17 19 11		
	71 19 8	
	<u>£. 143 16 5</u>	<u>2,879 10 7</u>

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
By AMOUNT expended in purchase of Manuscripts -	124 11 -	
- BALANCES ON THE 31ST MARCH 1919, carried to Account for 1919-1920 - - -	19 5 5	2,879 10 7
	<u>£. 143 16 5</u>	<u>2,879 10 7</u>

III.—AN ACCOUNT of the RECEIPTS and EXPENDITURE  
of the SWINEY FUND, from the 1st April 1918 to the 31st March 1919.

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
To BALANCES on the 1st April 1918 - - -	17 7 1	5,744 - 8
- DIVIDENDS received on 5,744 <i>l.</i> - 8 <i>d.</i> Stock in 2½ per Cent. Consols, bequeathed by Dr. George Swiney for Lectures on Geology, viz.:		
On the 5th April 1918 - £. 35 18 -		
"    5th July 1918 - - 35 18 -		
"    5th October 1918 - - 35 18 -		
"    5th January 1919 - - 35 18 -		
	143 12 -	
	£. 160 19 1	5,744 - 8
BY AMOUNT paid to Dr. T. J. Jehu, for Lectures on Geology in 1918 - - - - -		
	155 - -	
- BALANCES ON THE 31ST MARCH 1919, carried to Account for 1919-1920 - - -	5 19 1	5,744 - 8
	£. 160 19 1	5,744 - 8

IV.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of  
the BIRCH FUND from the 1st April 1918 to the 31st March 1919.

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
To BALANCE on the 1st April 1918 - - - -	—	565 3 9
- DIVIDENDS received on 565 <i>l.</i> 3 <i>s.</i> 9 <i>d.</i> Stock in 2½ per Cent. Consols, bequeathed by Dr. Birch in 1766, for the three Under Librarians of the British Museum, viz.:		
On the 5th April 1918 - -£. 3 10 8		
"    5th July 1918 - - 3 10 8		
"    5th October 1918 - - 3 10 8		
"    5th January 1919 - - 3 10 8		
	14 2 8	
	£. 14 2 8	565 3 9
BY LEGACY paid to the three Under Librarians of the British Museum, whose offices existed in 1766, viz., the Keepers of the Departments of Printed Books, Manuscripts, and Natural History - - - - -		
	14 2 8	
- BALANCE ON THE 31ST MARCH 1919, carried to Account for 1919-1920 - - - - -	—	565 3 9
	£. 14 2 8	565 3 9

V.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the bequest of the late MR. CHARLES DRURY EDWARD FORTNUM from the 1st April 1918 to the 31st March 1919.

	CASH.		STOCK, 5% War Loan.	
	£.	s. d.	£.	s. d.
To BALANCES on the 1st April 1918	112	19 7	1,900	- -
- INTEREST on War Loan	95	- -		
	<u>£. 207 19 7</u>		<u>1,900 - -</u>	

	CASH.		STOCK, 5% War Loan.	
	£.	s. d.	£.	s. d.
BY BALANCES ON THE 31ST MARCH 1919, carried to Account for 1919-1920	207	19 7	1,900	- -
	<u>£. 207 19 7</u>		<u>1,900 - -</u>	

VI.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the CARCHEMISH EXCAVATIONS FUND from the 1st April 1918 to the 31st March 1919.

	CASH.	
	£.	s. d.
To BALANCE on the 1st April 1918	68	14 1
	<u>£. 68 14 1</u>	

	CASH.	
	£.	s. d.
BY BALANCE on the 31st March 1919, carried to Account for 1919-1920	68	14 1
	<u>£. 68 14 1</u>	

VII.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the bequest  
of the late MR. HENRY LOUIS FLORENCE from the  
1st April 1918 to the 31st March 1919.

	CASH.			STOCK. 5% War Loan.			
	£.	s.	d.	£.	s.	d.	
TO BALANCES on the 1st April 1918 - - -		60	3	6	1,052	12	6
- INTEREST on 5% War Loan, 1929-47 - - -		52	12	6			
	<u>£.</u>	<u>112</u>	<u>16</u>	<u>0</u>	<u>1,052</u>	<u>12</u>	<u>6</u>

	CASH.			STOCK. 5% War Loan.			
	£.	s.	d.	£.	s.	d.	
BY BALANCES ON THE 31ST MARCH 1919, carried to Account for 1919-1920 - - - -	112	16	0	1,052	12	6	
	<u>£.</u>	<u>112</u>	<u>16</u>	<u>0</u>	<u>1,052</u>	<u>12</u>	<u>6</u>

VIII.—AN ACCOUNT of the JOHN A. ROEBLING FUND from the  
3rd February 1919 to the 31st March 1919.

	STOCK. 5% War Loan.		
	£.	s.	d.
TO STOCK purchased with proceeds of sale of \$ 5,000 Bonds presented by Mr. John A. Roebling - - - -	1,049	8	10
	<u>£.</u>	<u>1,049</u>	<u>8</u>

1st April 1919.

*Frederic G. Kenyon,*  
Director and Principal Librarian.

## IX.—NUMBER of PERSONS ADMITTED to VISIT the BRITISH MUSEUM and the BRITISH MUSEUM (NATURAL HISTORY).

## A.—PERSONS ADMITTED TO VIEW THE GENERAL COLLECTIONS IN THE BRITISH MUSEUM in each Year from 1913 to 1918, both Years inclusive.

	1913		1914		1915		1916		1917	1918
	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.		
January	61,198	3,886	71,239	4,162	60,764	4,224	56,474	4,148	Galleries Closed. Jan.—July.  Temporary Exhibition. Week-day.        Galleries Closed.	33,995 28,408 27,417 24,590 36,032
February	48,745	3,005	62,365	4,163	52,415	3,779	38,579	3,532		
March	70,292	6,655	61,580	7,915	57,858	5,435				
April	70,361	7,045	73,629	5,010	71,772	5,314				
May	67,464	4,753	72,249	8,277	54,556	4,859				
June	61,330	5,715	65,742	5,646	49,615	3,341				
July	90,497	6,171	78,741	6,002	58,825	4,011	Galleries Closed.			
August	107,901	8,239	57,020	5,225	64,374	5,545				
September	102,107	5,192	49,091	4,431	49,759	4,076				
October	83,091	5,365	60,376	4,775	55,005	5,126				
November	61,502	4,350	48,899	3,992	49,569	3,844				
December	59,440	2,686	50,861	3,127	55,488	3,537				
Total Number of Persons admitted to view the General Collections.	884,028	63,062	751,792	62,725	680,000	53,091	95,053	7,680	150,442	
	947,090		814,517		733,091		102,733			

## NUMBER OF VISITS OF STUDENTS TO PARTICULAR DEPARTMENTS.

	1913.	1914.	1915.	1916.	1917.	1918.
To the Reading Room - - - - -	243,659	224,560	178,410	134,501	121,538	114,543
" Newspaper Room - - - - -	17,938	16,704	12,650	9,461	9,108	10,890
" Map Room - - - - -	439	400	380	142	170	188
" Department of Manuscripts - - - - -	12,090	10,277	7,781	5,713	5,483	4,621
" Department of Oriental Printed Books and Manuscripts.	3,254	2,968	2,705	817	691	826
" Print Room - - - - -	*7,064	*5,406	5,781	2,063	1,254	777
" Egyptian and Assyrian Department - - - - -	3,860	3,000	1,700	500	—	—
" Greek and Roman Department - - - - -	†1,744	†1,566	1,201	517	219	—
" Galleries of Sculpture - - - - -	1,945	2,138	1,798	249	—	—
" British and Mediæval Department - - - - -	3,827	2,873	1,488	746	486	576
" Coin and Medal Room - - - - -	3,565	3,321	2,150	377	—	—
Total - - - - -	299,385	273,213	216,044	155,086	138,949	132,421

\* The Students' Room of the Department of Prints and Drawings was closed for removal of the fittings to the new wing from 6th September 1913 to 7th May 1914.

† Including visits for archaeological inquiry.



The British Museum, Bloomsbury (including the Departments of Printed Books and Maps, Manuscripts, Oriental Printed Books and Manuscripts, Prints and Drawings, Egyptian and Assyrian Antiquities, Greek and Roman Antiquities, British and Mediæval Antiquities and Ethnography, and Coins and Medals) is normally open to the public free daily (except on Good Friday and Christmas Day and days of Public Fast or Thanksgiving).

At present, however, the Print Department and the galleries of the Egyptian and Assyrian Department on the upper floor, being still in the occupation of the Registry of Friendly Societies, to which they were lent during the war, are closed to the public. The remainder of the Museum, excepting King Edward VII.'s Galleries, is open to the public daily on week-days from 10 a.m. to 6 p.m., from April to August inclusive. After 4 p.m. in January, February, November, and December, and after 5 p.m. in March, September, and October, only certain of the galleries remain open.

Sunday opening of the Exhibition Galleries has not yet been resumed.

The Reading Room is open to Students from 9 a.m. to 6 p.m., the Newspaper Room and Manuscript Students' Room from 10 a.m. to 5 p.m., on every weekday except Good Friday, Christmas Day, and the first four weekdays in March and September.

British Museum, }  
10th June 1919. }

*Frederic G. Kenyon,*  
Director and Principal Librarian.

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B.—PERSONS ADMITTED TO VIEW THE COLLECTIONS IN THE BRITISH MUSEUM (NATURAL HISTORY), CROMWELL ROAD, in each YEAR from 1913 to 1918, inclusive.

	1913.		1914.		1915.		1916.		1917.		1918.	
	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.
January	30,789	2,923	30,067	3,233	29,458	3,177	30,632	4,001	30,594	2,578	32,056	2,723
February	25,439	3,529	27,762	4,404	25,599	3,759	26,948	3,301	25,452	3,046	26,245	3,193
March	54,532	5,674	51,344	5,863	29,933	4,266	28,614	3,386	30,165	4,020	29,022	4,268
April	34,400	5,032	41,188	3,688	42,600	4,380	32,024	4,301	44,284	5,880	38,064	3,896
May	39,844	4,130	38,847	5,874	32,483	4,655	28,854	3,161	31,785	4,106	31,695	3,784
June	32,135	4,368	39,074	4,009	27,666	3,340	31,165	3,808	28,304	4,122	27,034	4,780
July	36,993	5,099	31,790	4,317	33,687	3,791	27,792	4,091	28,581	4,742	33,588	4,252
August	51,478	6,372	29,860	3,589	46,712	6,068	33,006	3,902	42,316	4,284	40,681	4,037
September	33,949	4,611	26,368	3,033	27,972	3,886	28,993	3,913	27,705	3,419	26,768	6,300
October	32,185	4,298	31,351	3,271	30,358	4,678	33,228	4,238	29,377	3,296	30,991	3,567
November	27,820	4,487	27,130	3,402	27,523	3,241	29,368	2,479	30,026	2,753	27,426	2,416
December	33,455	2,778	29,173	2,277	31,181	3,168	28,635	2,833	27,571	2,792	33,126	2,893
Total Number of Persons admitted to view the Natural History Collections (including students)	433,019	53,301	373,954	46,960	385,172	48,409	359,259	43,414	376,660	46,408	376,696	46,109
	486,320		420,914		433,581		402,673		423,128		422,805	

NUMBER OF VISITS TO PARTICULAR DEPARTMENTS for the purpose of STUDY.

	1913.		1914.		1915.		1916.		1917.		1918.	
	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.
Zoology (including Art Students)	9,982	9,235	9,235	8,020	7,018	6,314	5,553	2,909	3,149	3,277	3,214	3,214
Entomology	4,837	4,284	4,962	3,354	3,000	3,623	404	461	2,751	2,657	15,162	
Geology	5,613	717	3,164	3,226	17,641	16,824	16,001					
Mineralogy†	641	3,455	22,362	24,528	24,528	24,528	24,528	24,528	24,528	24,528	24,528	24,528
Botany	-	-	-	-	-	-	-	-	-	-	-	-
Total -	-	-	48,632	48,632	48,632	48,632	48,632	48,632	48,632	48,632	48,632	48,632

† Study series directly accessible to the public, and so labelled as to render reference to the staff almost unnecessary, have been arranged in this Department.

The Exhibition Galleries of the British Museum (Natural History), Cromwell Road, South Kensington, including the Departments of Zoology, Entomology, Geology and Palæontology, Mineralogy, and Botany, are open to the public, free daily, except Good Friday and Christmas Day, and days of Public Fast or Thanksgiving.

The Hours of Admission are as under :—

On WEEK-DAYS, throughout the year from 10 a.m., in

January and February	...	...	...	...	to 5	p.m.
March	...	...	...	...	„ 5.30	„
April to August	...	...	...	...	„ 6	„
September	...	...	...	...	„ 5.30	„
October, November and December	...	...	...	...	„ 5	„

On SUNDAYS, in

January	...	...	...	...	from 2	to 4	p.m.
February 1st to 14th	...	...	...	...	„ 2	„ 4.30	„
„ 15th to end	...	...	...	...	„ 2	„ 5	„
March	...	...	...	...	„ 2	„ 5.30	„
April	...	...	...	...	„ 2	„ 6	„
May to August	...	...	...	...	„ 2.30	„ 7	„
September	...	...	...	...	„ 2	„ 5.30	„
October	...	...	...	...	„ 2	„ 5	„
November and December	...	...	...	...	„ 2	„ 4	„

Persons are admitted to study in these Departments every weekday from 10 till 4 o'clock.

British Museum (Natural History), {  
1st April, 1919.

S. F. Harmer,  
Director of the Natural  
History Departments.

## X. GENERAL PROGRESS AT THE MUSEUM, BLOOMSBURY.

During the early part of the year the whole work of the Museum was conditioned by the warning, received towards the close of 1917, that air-raids in greater force, and utilising much heavier bombs, might be expected in the spring. Since the Museum offered a large and conspicuous area for attack, and no building could be considered proof against a direct hit by a heavy bomb, it was resolved to remove (so far as might be practicable) the most valuable objects in the collections to positions of greater safety. Accordingly the most important among the portable objects in the Departments of Antiquities (including the Frieze of the Parthenon, the best of the Greek vases and bronzes, the chief Assyrian bas-reliefs, the Rosetta Stone, and the finest objects of mediæval art), together with practically the whole collection of Coins and Medals, were transferred to a station on the newly completed Postal Tube Railway, some fifty feet below the surface of Holborn. Special provision for their accommodation and for their protection against damp was made by His Majesty's Office of Works; and the station was continuously warded by members of the Museum staff.

For the printed books, manuscripts, and prints and drawings, accommodation was offered by the Governors of the National Library of Wales in their new buildings at Aberystwyth, and some fifteen van-loads of the most precious literary and artistic treasures of the Museum were transferred thither, together with a portion of the staff. A small selection of exceptionally valuable printed books was housed by Mr. C. W. Dyson Perrins in the strong room of his house near Malvern.

A further selection of objects, ranking next in importance to those removed, was placed in the strong rooms in the basement of the Museum, where they were believed to be safe against anything except a direct hit from a bomb of the heaviest type. In the basement also were placed, under coverings of sandbags, the sculptures which were too heavy for removal to the Tube, including the figures from the Pediment of the Parthenon, and the collection of mummies. The Assyrian bulls, the larger Egyptian sculptures, and the metopes of the Parthenon, which could not be removed from their positions in the galleries, were protected *in situ* by sandbags. Much of the glass and china, which could not be removed, was protected against the risk of concussion by being stored in packing cases.

In view of this partial clearance of the galleries (which, however, was very far indeed from emptying the Museum), it was suggested that the vacant space might be utilised for the accommodation of Government Departments, thereby relieving

the pressure upon hotels and other buildings in London; and, in particular, a most unfortunate proposal was made to place the Air Board there. Fortunately both for the Air Board and the Museum the approval originally given to the scheme by the Government was rescinded, in view of (1) the proved unsuitability of the accommodation for the purposes of the Board, (2) the length of time that would be required to remove the contents of the Museum with due regard to their safety, (3) the reluctance of the public to see the Museum endangered by placing a large combatant Department in it, thereby making it a very legitimate as well as conspicuous mark for air attack. After the rejection of this proposal it was, however, agreed to provide accommodation, in two ranges of almost unoccupied galleries, for the Registry of Friendly Societies. The accommodation was very inconvenient for the purposes of the Registry, and since the armistice the presence of this alien Department has greatly retarded the restoration of the Museum as a whole; so that this experiment on a comparatively small scale has confirmed the wisdom of the rejection of the earlier and more far reaching proposal.

The occupation of a portion of the Sub-Ground Floor of the new wing by the Statistics Branch of the Medical Research Committee, and of a portion of the Basement by the effects of German prisoners under the charge of the Prisoners of War Bureau, has continued throughout the year.

The work of all this removal of collections by a much depleted staff necessitated the postponement of the scheme for re-opening portions of the Museum to the public; but as soon as the removal was completed the scheme was taken up again. The originals in the galleries of Greek and Roman sculpture, including the Elgin Room, were replaced by casts; electrotypes of coins and a selection of Greek vases were added; an exhibition of manuscripts and printed books was arranged in the Grenville Room; and thus a small exhibition, reaching from the Grenville Room through the Entrance Hall and Graeco-Roman galleries to the Elgin Room, was prepared and opened to the public in August. The exhibition proved attractive and enabled many of the overseas troops to see something at least of the British Museum.

As soon as the armistice was signed, the restoration of the Museum was at once taken in hand. The removal of sandbags began immediately, and before the end of the year the Assyrian Transept, containing the great bulls and lions from Nineveh, had been restored to view. The return of collections from Aberystwyth, Malvern, and the Tube station began in December. But the main work of bringing back the collections from their places of safety, and of restoring them to their positions, fell into the ensuing year.

Visitors to the Reading Room during the year amounted to 114,543, as compared with 121,538 in 1917, giving a daily average of 378. The visitors to the Newspaper Room were 10,890, as against 9,108, and to the Manuscript Room 4,621, as against 5,483. Much use was made of the resources of the Library

by the Intelligence Departments of the Admiralty and War Office. The visitors to the temporary exhibition between August and December amounted to 150,442.

The number of separate objects incorporated in the several Departments during 1918 is as follows :—

Printed Books :

Books and Pamphlets	-	-	-	-	-	18,612
Serials and Parts of Volumes	-	-	-	-	-	51,835
Maps and Atlases	-	-	-	-	-	2,344
Music	-	-	-	-	-	6,938
Newspapers (single numbers)	-	-	-	-	-	258,084
Miscellaneous	-	-	-	-	-	3,609
Manuscripts and Seals	-	-	-	-	-	244
Oriental Printed Books and MSS.	-	-	-	-	-	1,356
Prints and Drawings	-	-	-	-	-	2,234
"    "    (Oriental)	-	-	-	-	-	114
Egyptian and Assyrian Antiquities	-	-	-	-	-	690
Greek and Roman Antiquities	-	-	-	-	-	15
British and Mediæval Antiquities	-	-	-	-	-	652
Coins and Medals	-	-	-	-	-	1,149
Total	-	-	-	-	-	<u>347,876</u>

The full list of accessions is again omitted, since the need for economy in paper and printing still continues. The departmental reports are accordingly reserved for future publication.

The purchase grant being still limited to the acquisition of current books, notable acquisitions were again mainly confined to the gifts of generous friends of the Museum. The most important were a selection of drawings of Old Masters from Sir Edward Poynter's collection, presented by Mr. Otto Beit; the bequest of the Rev. E. S. Dewick, supplemented by gifts from his son, the Rev. E. C. Dewick, including twelve printed and eight manuscript liturgical books; a selection of Blake's illustrations to Dante, partly purchased and partly presented; and the torso of an Aphrodite, some classical gems, and 162 fine Greek coins, bequeathed by Mr. and Mrs. John Ford. In addition the Museum derived some early Sumerian objects from excavations undertaken by Mr. R. Campbell Thompson on its behalf at the sites of Ur and Erech in Mesopotamia. On Mr. Thompson's return from the East, Mr. H. R. Hall was sent out to assist the military authorities in Mesopotamia with advice as to the protection of antiquities, and to make such further researches as might be feasible.

Arranged by Departments, the most notable accessions are as follows :—

Printed Books :

- Phalaris, *Epistolæ*, printed at Valencia, about 1474.
- Amadis of Gaul, book vi, printed at Salamanca, 1510.
- Indulgence, printed by Pynson, 1515.

Palmerin da Oliva, printed at Seville, 1525.

Twelve service-books, 1499–1590. *Bequeathed by the Rev. E. S. Dewick.*

Cavendish, Book of Madrigals, 1598.

Ptolemy, *Geographia*, 1513, Speed's *Theatrum Magnæ Britanniae*, 1616, and 13 maritime atlases and pilot books, 1794–1810.

The Glen Collection of Scottish Music, containing over 500 volumes. *Deposited by Lady Dorothea Ruggles-Brise.*

*Manuscripts.* Four liturgical MSS., including a Hereford Missal, 14th century, and a York Diurnal, 15th century. *Bequeathed by the Rev. E. S. Dewick.*

Pontifical of Treves, 1456–1503. *Presented by the Rev. E. C. Dewick.*

Missal of the Cistercian Abbey of Morimondo, 1302, and two other MSS., purchased from the Dewick Library.

Dante, *Divina Commedia*, early 14th century, from the Vernon Library.

Peterborough chartulary, 14th century.

Hogarth's *Analysis of Beauty*, autograph.

Several autographs from the Morrison collection.

Vala, by William Blake, autograph, with drawings. *Presented anonymously.*

Eight letters of Charlotte Brontë to G. H. Lewes. *Presented by Mrs. C. Lewes.*

*Oriental.* A Persian MS. of the 14th century and a fine Turki and Persian MS., about 1500. *Presented by R. S. Greenshields, Esq.*

*Prints and Drawings.* Nine drawings from the Poynter collection. *Presented by Otto Beit, Esq.*

Several chiaroscuro woodcuts from the collection of the Rev. J. Franck Bright. *Partly presented by Lord Glenconner, J. P. Heseltine, Esq., and other donors.*

A. Dürer, *Death and the Soldier*, the rare first edition. *Presented by the Dürer Society.*

A large collection of lithographs by Daumier, Gavarni, etc. *Presented by C. L. Rutherston, Esq.*

W. Blake, *Illustrations to the Divina Commedia*. *Partly presented by the National Art-Collections Fund, E. Debenham, Esq. and C. Ricketts, Esq.*

Louisa, Marchioness of Waterford, 24 drawings and a sketch book. *Presented by Major-Gen. the Hon. Sir Richard Talbot, K.C.B., and Lady Talbot.*

Sir Charles Holroyd, 46 etchings. *Presented by Lady Holroyd.*

Various war subjects, by E. A. Kennington, C. R. W. Nevinson, and P. Nash. *Presented by the Artists.*

*Egyptian and Assyrian Antiquities.* Basalt statue of a Ptolemaic official, about 260 B.C., and other Egyptian sculptures.

About 670 objects excavated at Abû Shahrên, Mukayyar, and other early Babylonian sites.

*Greek and Roman Antiquities.* Torso of a nude Aphrodite, probably of the Medici type, and six engraved gems. *Bequeathed by Mr. and Mrs. J. G. Ford.* Contents of a tomb, excavated on the Strymon. *Presented by Dr. Eric Gardner, R.A.M.C.*

*British and Medieval Antiquities.* A series of hand-axes from gravel near Bournemouth, collected by the Rev. D. Woodroffe. *Presented by O. C. Raphael, Esq.*

Bronze Age hoard from Kilnhurst, formerly in the Greenwell Collection., and an iron axe-head of the Viking period. *Presented by Louis Clarke, Esq.*

Pottery fragments, excavated by the donor in the New Forest. *Presented by G. Heywood Sumner, Esq.*

Three alabaster figures of saints, an ivory group, and nine Italian plaquettes. *Bequeathed by the Rev. E. S. Dewick.*

*Coins and Medals.* Collection of 162 Greek coins, mostly of the finest period, from Metapontum, Heraclea, Syracuse, Macedonia, Corinth, etc. *Bequeathed by J. G. Fort, Esq.*

Thirty-eight Parthian coins, and a very fine series of the Sassanian dynasty of Persia. *Presented by Sir E. Grant Duff, K.C.M.G.*

Sixteen gold solidi and eight silver coins of the Byzantine emperors; a series of English gold and silver coins, and other coins. *Bequeathed by the Rev. E. S. Dewick.*

A series of 270 silver and bronze coins of European states and their colonies, including a set from German East Africa; and 180 modern British and Colonial coins. *Presented by H. Garside, Esq.*

A very fine specimen, perhaps an artist's trial proof, of the medal of Domenico Malatesta, by Pisanello. *Bequeathed by Constance, Lady Stern.*

A lead portrait medal of Bernhard Walter of Augsburg, apparently unique. *Presented by Maurice Rosenheim, Esq.*

Several war medals, German, French, and Dutch.

The only publication issued during the year was a short Guide to the Temporary Exhibition.

*Frederic G. Kenyon,*  
Director and Principal Librarian.

British Museum,  
10th June 1919.



## XI. BRITISH MUSEUM (NATURAL HISTORY).

## SUMMARY of GENERAL PROGRESS made at the Natural History Museum in the year 1918.

In view of the continued shortage of paper, only a summary of the departmental reports of progress and acquisitions has been printed, as in the preceding year.

The total number of visits made by the public to the Natural History Museum during 1918 was 422,805, as compared with 423,128 in 1917. The attendance on Sunday afternoons was 46,109, as against 46,468 in the preceding year. The average daily attendance for all open days was 1,165; for week-days, 1,211; and for Sunday afternoons, 887.

With the exception of the northern Geological Galleries all the Exhibition Galleries of the Natural History Museum were open to the public either on alternate days or daily, including Sundays, during the war.

The daily opening of all the exhibition galleries has been resumed, and steps have been taken with a view to the release from military service of all members of the staff, so as to enable them to take up their duties at the Museum as soon as possible.

It has been decided to keep the Museum open to the public till 5 p.m. on weekdays during the winter months (November-February).

The services of the Official Guide Lecturer have been continued throughout the same period, and have been much in request by parties of soldiers, many of them wounded, and others. The principles of colour-protection have been demonstrated by him to officers and men of the Camouflage School on many occasions, and in these demonstrations the following exhibits have been of special service:—In the Central Hall, Thayer's bird-models illustrating protective coloration, the cases containing Northern Animals in Summer and Winter Dress and Desert Animals, and the Mimicry case; amongst the Mammals, the Lion, Tiger, and Leopard, the Ruffed Lemur, Great Panda, Takin, Zebra, and Giraffe; and in other galleries, such exhibits as the cases of Terns and Plovers with eggs and chicks, the Little Bittern, the Python, Coral Snake and Krait, the Tree Frogs, Mackerel and Tunny, and many Insects.

Dr. T. J. Jehu gave, at the Royal Society of Arts, a course of twelve lectures on the Swiney foundation, his subject being "Man and his Ancestry." The total attendance for the course was 2,563, or on an average 214 persons per lecture.

A "Guide to Rats and Mice as Enemies of Mankind" has been prepared, giving some account of the instrumentality of these rodents in destroying crops and in spreading various serious diseases such as Bubonic Plague and Trichinosis. (Economic Series, No. 8.)

A small exhibit is being prepared to illustrate the transmission of disease by rodents and other small mammals.

A special exhibit of Birds Beneficial to Agriculture is also in preparation, to which a Guide-book will be issued forming a further number of the Economic Series.

A series of mounted birds, collected by Officers of the 10th Black Watch and 77th Infantry Brigade Headquarters on the Balkan front during the years 1915-18, has been lent for exhibition by Major P. Stormonth-Darling.

Various arrangements were made for the security of the contents of the Museum against hostile air raids, including the temporary removal of the more valuable collections to places outside London. Accommodation for the study collection of small mammals was kindly provided by the Committee of the Royal Albert Memorial Museum, Exeter; the Sloane herbarium and a number of type specimens and original drawings of plants of historical value as well as a number of meteorites were, by the kindness of Lord Rothschild, housed in his Museum at Tring. Since the cessation of hostilities all the specimens removed have been safely returned without loss or mishap.

The following matters connected with the war have been referred to the Natural History Museum for advice and information:—

A report has been furnished to the Food (War) Committee of the Royal Society with reference to an important practical question in relation to the movements of certain fishes.

Research work has been undertaken by a member of the staff (Dr. W. T. Calman) in connection with an inquiry into the corrosion of cement, metals, and wood in sea water, initiated by the Institution of Civil Engineers at the request of the Food (War) Committee of the Royal Society. To illustrate this work an exhibit of boring animals is in preparation.

Information has been given to the Board of Agriculture and Fisheries with reference to consignments of frozen fish sent over from Canada for Army food purposes and determined as being "Squirrel Hake," a species of fish very inferior to genuine Hake, under which name the fish had been released from cold storage for distribution.

The attention of the Ministry of Food and other Departments has been called to the possibility of utilizing whale flesh as a source of food supply.

In reply to an enquiry, information has been furnished to the Admiralty with regard to the rate of growth of certain marine invertebrates.

Correspondence has continued to take place with the Colonial Office in relation to a variety of subjects, of which the following are the most important:—

- (a) The occurrence of poisonous fishes in the West Indies and Malay States.
- (b) The re-introduction of the Fur-Seal into South Georgia.

(c) The protection of animals in Tonga Island and British Honduras.

(d) Whaling statistics in Southern waters. On this subject attention has been drawn to the very significant diminution in the catch of Humpback Whales during recent years. A Committee has been formed for the Dependencies of the Falkland Islands, including in its terms of reference the consideration of a scheme for an investigation into Whales and other problems in the Antarctic. On this Committee the Natural History Museum is represented by Dr. Harmer.

(e) The possibilities of a fishing industry in South Georgia, with special reference to a certain species known as *Notothenia rossii*.

(f) The preservation of Elephant-Seals in South Georgia. Reports have been received furnishing information as to the relative abundance of these animals during different months of the year, the general impression produced by a perusal of which is a satisfactory one, inasmuch as it appears that the effect of sealing during recent years has not been a marked reduction of the stock of Elephant-Seals, the evidence indicating that they are still abundant. The Colonial Office has been informed that the Trustees regard with satisfaction the suggested establishment of a Seal Reserve at South Georgia.

(g) Sponge culture in the Bahamas.

(h) The acclimatization of Reindeer in South Georgia. The experiment of introducing these animals has met with considerable success, inasmuch as from the 17 individuals imported seven years ago at least 62 are known to have sprung. It has been recommended that fresh stock should be imported from Norway to strengthen the breed.

In reply to an inquiry as to the possibility of exterminating Land-leeches in the Tropics, information has been furnished as to the life-history and mode of life of these animals.

Lord Swaythling has generously provided a sum of money sufficient to defray the expenses of a zoological collector for one year, to work for the benefit of the Museum in ex-German East Africa.

Mrs. Anderson, widow of the late Dr. John Anderson, F.R.S., formerly Director of the Indian Museum, Calcutta, has bequeathed to the Museum the heads and horns of 10 mammals, six of the specimens being specially mentioned in Dr. Anderson's "Mammals of Egypt" (1902).

The mounted specimens received during the year from the Trustees of the Rowland Ward Bequest include examples of Mandrill, male and female, from the Cameroons; Grévy's Zebra, male, from British East Africa; Yellow Baboon, Red Howler Monkey, White-headed Saki Monkey, Illiger's Marmoset, Indri, Tupaia, tusks of Water Elephant, Toy Bull-terrier, 67 Birds for the Gallery, and 44 Birds for the exhibit "Birds and Agriculture."

The total number of gifts received during the year by the several Departments was 1,280. Many of these comprised large numbers of individual specimens.

The following may be mentioned as being of special interest or value, namely, from :—

Mr. R. L. Scott—a mounted specimen of the Water Elephant from Lake Leopold II., Belgian Congo.

Captain H. W. Murray—the skull of a lion of specially large size, and the skull and horns of a Blackfaced Highland or Scotch Mountain Sheep, male, from Loch Awe, 1887.

Mr. Guy R. G. Nevinson—the remainder of the collection of Exotic Coleoptera formed by his father, the late Mr. B. G. Nevinson, consisting of about 120,000 specimens contained in 19 cabinets and numerous boxes.

The Council of the Royal Microscopical Society—about 1,000 microscope-slides illustrating the “oozes” spread over the ocean floor at great depths, forming part of the collection of the late Dr. G. C. Wallich.

Mr. E. Heron-Allen—a supplementary set of some 212 slides of oozes from the same collection, with notebooks, maps and charts.

Mrs. Hinde—the valuable collection of fossils, chiefly specimens from the Silurian and Ordovician rocks of Canada, the United States, and Sweden, made by the late Dr. George J. Hinde, F.R.S., together with his unique series of microscopic preparations of rocks and fossils.

Mr. A. E. Kitson, Director of the Geological Survey of the Gold Coast—a large collection of fossil shells and vertebrate remains from the Ameki cuttings on the Port Harcourt Railway, Southern Nigeria.

Mr. James Groves—the British and European herbarium (6,000 specimens) formed by himself and his brother, Mr. Henry Groves.

The Rev. E. F. Linton—his British and European herbarium of 2,500 specimens.

Mrs. Ethel B. Ede—an interesting table with a top of inlaid marbles removed, 1850–1853, from the ancient tombs beside the Appian Way.

The principal purchases made during the year include the eighth instalment of the Distant collection of insects, comprising 5,000 specimens of Rhynchota and Coleoptera, and including 250 types; the second and final instalment of the Malcolm Burr collection of Dermaptera (Earwigs), consisting of about 4,500 specimens, and including 64 types and 406 co-types; series of 255 and 144 microscope-slides of anatomical preparations of Land Mollusca, mounted by Lt.-Col. H. H. Godwin-Austen, F.R.S.; and nine volumes containing some 700 original drawings of the plates in the first 18 volumes of “Curtis’s Botanical Magazine,” for 100*l.*, towards which sum 25*l.* was generously contributed by Lord Rothschild.

Exchanges and gifts of duplicate specimens have been made with various institutions and persons.

The following new works on Natural History have been published during the year :—

British Antarctic ("Terra Nova") Expedition, 1910. Natural History Report. 4to —

Zoology :

Vol. II., No. 8. Brachiopoda. By J. W. Jackson, F.G.S. Pp. 177—202 : 1 plate. 5s.

Vol. III., No. 6. Arachnida, Part I.—Araneæ (Spiders). By H. R. Hogg, M.A., F.Z.S. Pp. 163—174 : 3 text-figures. 1s. 6d.

Vol. IV., No. 2. Cephalodiscus. By W. G. Ridewood, D.Sc. Pp. 11—82 : 12 text-figures, 5 plates, 1 map. 12s.

Vol. V., No. 1. Coelenterata, Part I.—Actiniaria. By T. A. Stephenson. Pp. 68 : 6 plates. 10s.

Report on Cetacea stranded on the British Coasts. By S. F. Harmer, sc.D., F.R.S. No. 5. Cetacea stranded during 1917. Pp. 21 : 3 text-figures, 1 map. 4to. 2s. 6d.

Monograph of British Lichens. Part I. Second Edition. By Annie Lorrain Smith, F.L.S. Pp. xxiv, 520 : 12 text-figures, 71 plates. 8vo. 1l. 10s.

Report of the Temperature reached in Army Biscuits during baking, especially with reference to the destruction of the imported Flour-moth, *Ephestia kühniella*, Zeller. By J. H. Durrant and Col. W. W. O. Beveridge, C.B., D.S.O., R.A.M.C. Pp. 24. Royal 8vo. 2s.

Map showing the known distribution in England and Wales of the Anopheline Mosquitos, with explanatory text and notes. By W. D. Lang, M.A. Pp. 63 : map (2 ft. 3 in. by 1 ft. 9½ in.). Royal 8vo. 2s. 6d.

Economic Series, No. 8. Rats and Mice as Enemies of Mankind. By M. A. C. Hinton. Pp. 63 : 2 plates, 6 text-figures. 8vo. 1s.

Poster-leaflet : The Louse Danger. Price ½d.

New editions have been issued of the following Guide-books, etc. :—

Guide to the Races of Mankind (Anthropology). Third edition. Pp. 35 : 16 illustrations. 8vo. 1s.

Guide to Fossil Remains of Man. Second edition. Pp. vi, 32 : 4 plates, 13 text-figures. 8vo. 6d.

Guide to Domesticated Animals (other than Horses). Third edition. Pp. 56 : 25 illustrations. 8vo. 1s.

Introduction to the Study of Minerals. Fifteenth edition. Pp. 123 : 41 text-figures. 8vo. 1s. 6d.

Introduction to the Study of Rocks. Fifth edition. Pp. 155. 8vo. 2s.

Instructions for Collectors, No. 9. Soft-bodied and other Invertebrate Animals. Fourth edition. Pp. 18. 8vo. 6*d.*

Economic Series, No. 5. The Bed-Bug: its habits and life-history, and how to deal with it. Second edition. Pp. 20: 7 text-figures. 8vo. 2*d.*

Economic Leaflet, No. 1. The Danger of Disease from Flies and Lice. Second edition. Pp. 4. 8vo. 1*d.* for 3 copies, 2*s.* 6*d.* for 100.

Poster-leaflet: The Fly Danger. Second edition. Price  $\frac{1}{2}$ *d.*

The undermentioned works are in preparation:—

Library Catalogue. Supplement, Vol. I.

“Terra Nova” Antarctic Report. Further sections.

Report on Cetacea stranded during 1918. By Dr. S. F. Harmer, F.R.S.

Catalogue of Moths, Supplement, Vol. II. By Sir G. F. Hampson, Bart.

Studies on Acari (Mites), No. 1. The Genus *Demodex*. By A. S. Hirst.

Dr. A. J. Chalmers, Director of the Wellcome Tropical Research Laboratories, Khartoum, has been allowed to issue Arabic translations of the posters on “The Fly Danger” and “The Mosquito Danger,” for free distribution to the peoples of the Sudan.

Mohamed Shafik Pasha, Under-Secretary of State, Ministry of Wakfs, Cairo, has been granted permission to have the first seven numbers of the Economic Series of pamphlets translated into Arabic and published at his own expense in Egypt, where he considered they would be of great interest and importance to the people.

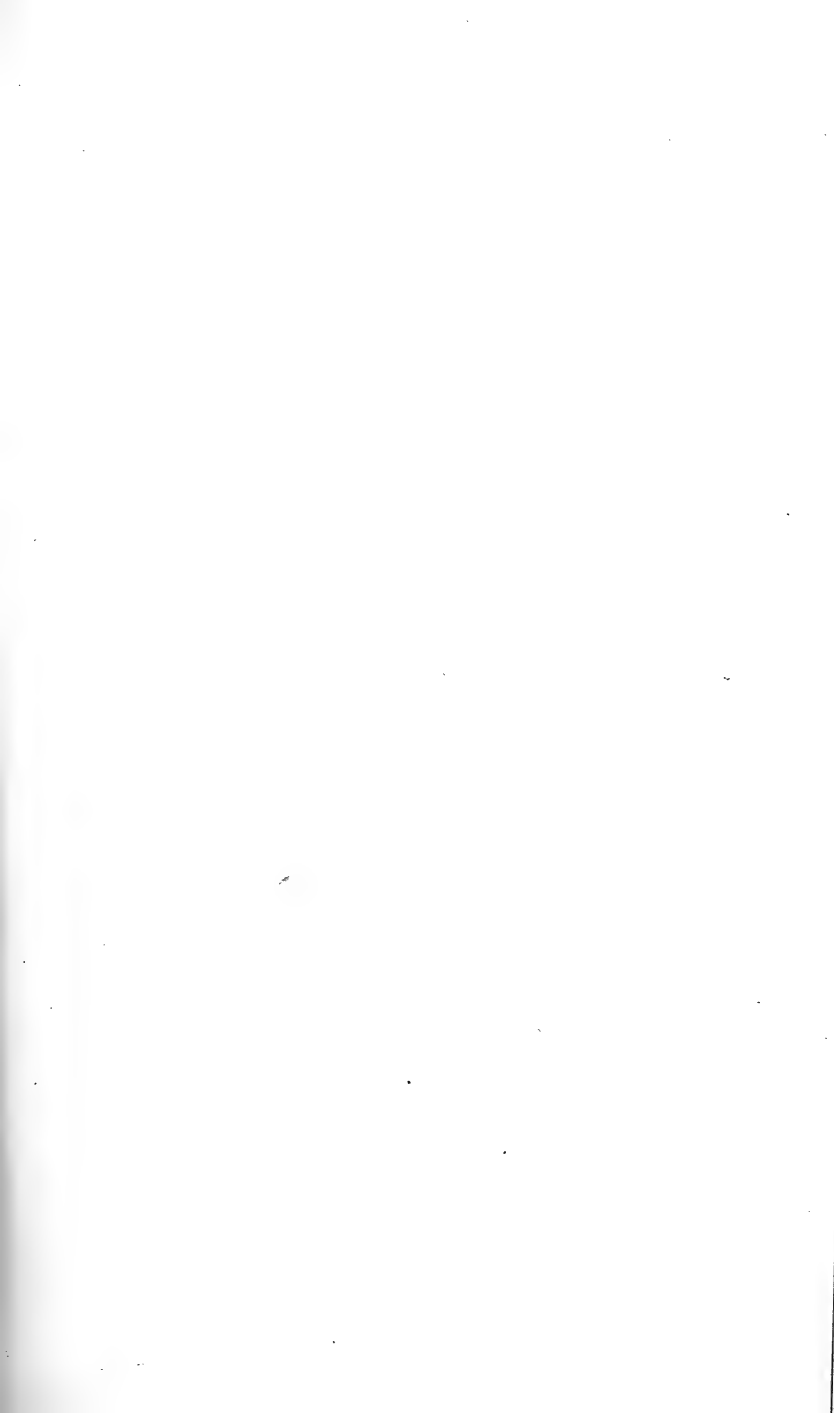
The Museum has prepared series of lantern slides to illustrate protective coloration of animals, and sets of these have, at the request of the Military Authorities, been sent to France for the British Army Schools for Scouting and Sniping, and to the Sniping School at Aldershot.

The extent of the collection of books, etc., in the Library on the 31st December, 1918, was, on a rough estimate, 103,939 volumes (exclusive of continuations and minor *separata*) and 6,263 maps.

S. F. Harmer,  
Director.

British Museum (Natural History),  
1st April, 1919.









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RETURN.

31 JAN 19  
NATURAL HISTO

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BRITISH MUSEUM.

1920.

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21 July 1920.*

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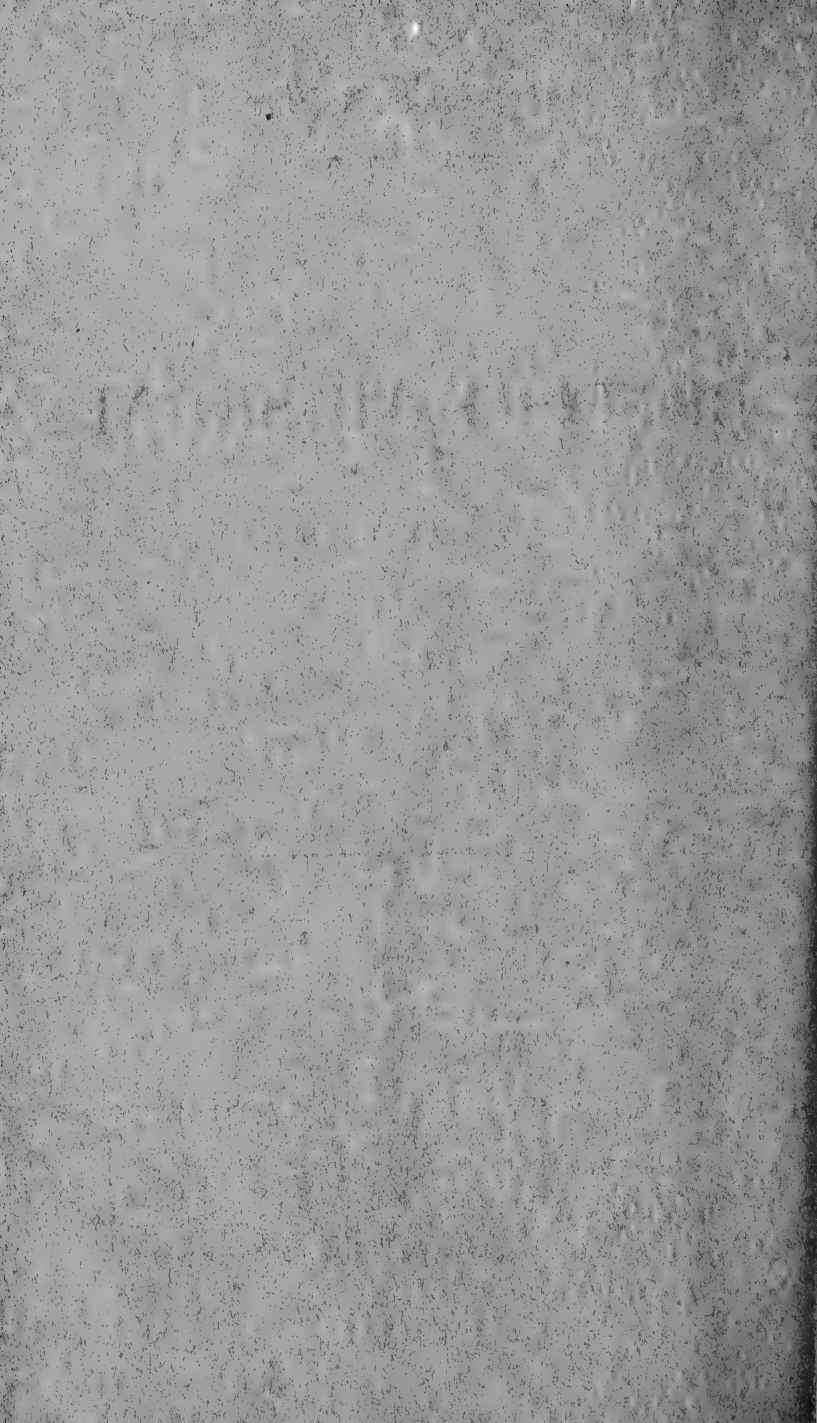
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1920.

*Price 1s. 6d. net.*



BRITISH MUSEUM.

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RETURN to an Order of the Honourable The House of Commons,  
dated 27 February 1920 ; *for*,

COPY "of Account of the INCOME and EXPENDITURE of  
the BRITISH MUSEUM (SPECIAL TRUST FUNDS) for  
the Year ending the 31st day of March 1920 ; and  
RETURN of the Number of PERSONS admitted to visit  
the MUSEUM and the BRITISH MUSEUM (NATURAL  
HISTORY) in each Year from 1914 to 1919, both Years  
inclusive ; together with a STATEMENT of the PROGRESS  
made in the ARRANGEMENT and DESCRIPTION of the  
COLLECTIONS, and an ACCOUNT of OBJECTS added to  
them in the Year 1919."

---

Treasury Chambers, }  
21 July 1920

STANLEY BALDWIN.

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(*Mr. Herbert Fisher.*)

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*Ordered, by The House of Commons, to be Printed,*  
21 July 1920.

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I.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the BRIDGEWATER FUND, from the 1st April 1919 to the 31st March 1920.

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
To BALANCES on the 1st April 1919 - - -	116 14 9	13,659 3 2
- DIVIDENDS received on 13,659 <i>l.</i> 3 <i>s.</i> 2 <i>d.</i> Stock in 2½ per Cent. Consols, bequeathed by the Earl of Bridgewater, viz.:		
On the 5th April 1919 - £. 85 7 4		
"    5th July 1919 - - 85 7 4		
"    5th October 1919 - - 85 7 4		
"    5th January 1920 - - 85 7 4	341 9 4	
- RENT OF A REAL ESTATE, Whitechurch, bequeathed by the Earl of Bridgewater (less charges) - - - - -	23 7 6	
	<u>£.481 11 7</u>	<u>13,659 3 2</u>

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
By One Year's SALARY of the Egerton Librarian -	175 - -	
- AMOUNT expended in purchase of Manuscripts -	106 1 -	
- BALANCES ON THE 31ST MARCH 1920, carried to Account for 1920-1921 - - -	200 10 7	13,659 3 2
	<u>£.481 11 7</u>	<u>13,659 3 2</u>

II.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the FARNBOROUGH FUND, from the 1st April 1919 to the 31st March 1920.

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
To BALANCES on the 1st April 1919 - - -	19 5 5	2,879 10 7
- DIVIDENDS received on 2,879 <i>l.</i> 10 <i>s.</i> 7 <i>d.</i> Stock in 2½ per Cent. Consols, bequeathed by Lord Farnborough, viz.:		
On the 5th April 1919 - £. 17 19 11		
"    5th July 1919 - - 17 19 11		
"    5th October 1919 - - 17 19 11		
"    5th January, 1920 - - 17 19 11	71 19 8	
	<u>£.91 5 1</u>	<u>2,879 10 7</u>

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
By AMOUNT expended in purchase of Manuscripts -	55 13 -	
- BALANCES ON THE 31ST MARCH 1920, carried to Account for 1920-1921 - - -	35 12 1	2,879 10 7
	<u>£.91 5 1</u>	<u>2,879 10 7</u>

III.—AN ACCOUNT of the RECEIPTS and EXPENDITURE  
of the SWINEY FUND, from the 1st April 1919 to the 31st March 1920.

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
To BALANCES on the 1st April 1919 - - -	5 19 1	5,744 - 8
- DIVIDENDS received on 5,744 <i>l.</i> - 8 <i>d.</i> Stock in 2½ per Cent. Consols, bequeathed by Dr. George Swiney for Lectures on Geology, viz.:		
On the 5th April 1919 - £. 35 18 -		
" 5th July 1919 - - 35 18 -		
" 5th October 1919 - - 35 18 -		
" 5th January 1920 - - 35 18 -		
	143 12 -	
	£. 149 11 1	5,744 - 8

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
BY AMOUNT paid to Dr. J. D. Falconer, for Lectures on Geology in 1919 - - - - -	140 - -	
- BALANCES ON THE 31ST MARCH 1920, carried to Account for 1920-1921 - - -	9 11 1	5,744 - 8
	£. 149 11 1	5,744 - 8

IV.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of  
the BIRCH FUND from the 1st April 1919 to the 31st March 1920.

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
To BALANCE on the 1st April 1919 - - - -	—	565 3 9
- DIVIDENDS received on 565 <i>l.</i> 3 <i>s.</i> 9 <i>d.</i> Stock in 2½ per Cent. Consols, bequeathed by Dr. Birch in 1766, for the three Under Librarians of the British Museum, viz.:		
On the 5th April 1919 - - £. 3 10 8		
" 5th July 1919 - - - 3 10 8		
" 5th October 1919 - - - 3 10 8		
" 5th January 1920 - - - 3 10 8		
	14 2 8	
	£. 14 2 8	565 3 9

	CASH.	STOCK, 2½% Consols.
	£. s. d.	£. s. d.
BY LEGACY paid to the three Under Librarians of the British Museum, whose offices existed in 1766, viz., the Keepers of the Departments of Printed Books, Manuscripts, and Natural History - - - - -	14 2 8	
- BALANCE ON THE 31ST MARCH 1920, carried to Account for 1920-1921 - - - - -	—	565 3 9
	£. 14 2 8	565 3 9

V.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the bequest of the late MR. CHARLES DRURY EDWARD FORTNUM from the  
1st April 1919 to the 31st March 1920.

	CASH.			STOCK, 5% War Loan.		
	£.	s.	d.	£.	s.	d.
To BALANCES on the 1st April 1919 - - -	207	19	7	1,900	-	-
- 5 per Cent. War Loan 1929-47, purchased with 189l. 8s. 6d. - - - - -				200	-	-
- INTEREST on War Loan - - - - -	100	-	-			
	<u>£. 307 19 7</u>			<u>2,100 - -</u>		

	CASH.			STOCK, 5% War Loan.		
	£.	s.	d.	£.	s.	d.
By Amount expended in the purchase of 200l. 5 per Cent. War Loan, 1929-47 - - - - -	189	8	6			
- BALANCES ON THE 31ST MARCH 1920, carried to Account for 1920-1921 - - - - -	118	11	1	2,100	-	-
	<u>£. 307 19 7</u>			<u>2,100 - -</u>		

VI.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the  
CARCHEMISH EXCAVATIONS FUND from the  
1st April 1919 to the 31st March 1920.

	CASH.		
	£.	s.	d.
To BALANCE on the 1st April 1919 - - - - -	68	14	1
- DONATION (further anonymous contribution) - - - - -	2,000	-	-
	<u>£. 2,068 14 1</u>		

	CASH.		
	£.	s.	d.
By EXPENDITURE on Excavations - - - - -	1,534	2	3
- BALANCE on the 31st March 1920, carried to Account for 1920-1921	534	11	10
	<u>£. 2,068 14 1</u>		

VII.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the bequest  
of the late MR. HENRY LOUIS FLORENCE from the  
1st April 1919 to the 31st March 1920.

	CASH.	STOCK. 5% War Loan.
	£. s. d.	£. s. d.
To BALANCES on the 1st April 1919 - - -	112 16 -	1,052 12 6
- INTEREST on 5% War Loan, 1929-47 - - -	52 12 6	
	<u>£. 165 8 6</u>	<u>1,052 12 6</u>

	CASH.	STOCK. 5% War Loan.
	£. s. d.	£. s. d.
BY AMOUNT expended in purchase of Prints and Drawings - - - - -	120 8 -	
- BALANCES ON THE 31ST MARCH 1920, carried to Account for 1920-1921 - - - - -	45 - 6	1,052 12 6
	<u>£. 165 8 6</u>	<u>1,052 12 6</u>

VIII.—AN ACCOUNT of the JOHN A. ROEBLING FUND from the  
1st April 1919 to the 31st March 1920.

	CASH.	STOCK. 5% War Loan.
	£. s. d.	£. s. d.
To BALANCE ON THE 1ST APRIL 1919 - - -	—	1,049 8 10
- INTEREST on War Loan - - - - -	52 9 6	
	<u>£. 52 9 6</u>	<u>1,049 8 10</u>

	CASH.	STOCK. 5% War Loan.
	£. s. d.	£. s. d.
BY BALANCES ON THE 31ST MARCH 1920, carried to Account for 1920-1921 - - - - -	52 9 6	1,049 8 10
	<u>£. 52 9 6</u>	<u>1,049 8 10</u>

1st April 1920.

*Frederic G. Kenyon,*  
Director and Principal Librarian.



## IX.—NUMBER OF PERSONS ADMITTED TO VISIT THE BRITISH MUSEUM and the BRITISH MUSEUM (NATURAL HISTORY).

A.—PERSONS ADMITTED TO VIEW THE GENERAL COLLECTIONS IN THE BRITISH MUSEUM in each Year from 1914 to 1919, both Years inclusive.

	1914		1915		1916		1917	1918	1919
	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.			
January	71,239	4,162	60,764	4,224	56,474	4,148	Galleries Closed.	Galleries Closed Jan.—July.  Temporary Exhibition. Week-day.	50,346 39,239 54,314 74,698 56,143 50,635 55,990 75,735 63,930 54,227 57,732 58,661
February	62,365	4,163	52,415	3,779	38,579	3,532			
March	61,580	7,915	57,858	5,435					
April	73,629	5,010	71,772	5,314					
May	72,249	8,277	54,556	4,859					
June	65,742	5,646	49,615	3,341					
July	78,741	6,002	58,825	4,011	Galleries Closed.				
August	57,020	5,225	64,374	5,545					
September	49,091	4,431	49,759	4,076					
October	60,376	4,775	55,005	5,126					
November	48,899	3,992	49,569	3,844					
December	50,861	3,127	55,488	3,537					
Total Number of Persons admitted to view the General Collections.	751,792	62,725	680,000	53,091	95,053	7,680		150,442	691,650
	814,517		733,091		102,733				

## NUMBER OF VISITS OF STUDENTS TO PARTICULAR DEPARTMENTS.

	1914.	1915.	1916.	1917.	1918.	1919.
To the Reading Room - - - - -	224,560	178,410	134,501	121,538	114,543	130,198
" Newspaper Room - - - - -	16,704	12,650	9,461	9,108	10,890	10,407
" Map Room - - - - -	400	380	142	170	188	260
" Department of Manuscripts - - - - -	10,277	7,781	5,713	5,483	4,621	6,013
" Department of Oriental Printed Books and Manuscripts.	2,968	2,705	817	691	826	888
" Print Room - - - - -	*5,406	5,781	2,063	1,254	777	2,588
" Egyptian and Assyrian Department - - - - -	3,000	1,700	500	—	—	2,300
" Greek and Roman Department - - - - -	†1,566	1,201	517	219	—	368
" Galleries of Sculpture - - - - -	2,138	1,798	249	—	—	552
" British and Medieval Department - - - - -	2,873	1,488	746	486	576	804
" Coin and Medal Room - - - - -	3,321	2,150	377	—	—	2,424
Total - - - - -	273,213	216,044	155,086	138,949	132,421	156,802

\* The Students' Room of the Department of Prints and Drawings was closed for removal of the fittings to the new wing from 6th September 1913 to 7th May 1914.

† Including visits for archaeological inquiry.

The British Museum, Bloomsbury (including the Departments of Printed Books and Maps, Manuscripts, Oriental Printed Books and Manuscripts, Prints and Drawings, Egyptian and Assyrian Antiquities, Greek and Roman Antiquities, British and Mediæval Antiquities and Ethnography, and Coins and Medals) is normally open to the public free daily (except on Good Friday and Christmas Day and days of Public Fast or Thanksgiving).

At present, however, the Print Department and the galleries of the Egyptian and Assyrian Department on the upper floor, having only been vacated by the Registry of Friendly Societies, to which they were lent during the war, at the end of March, 1920, are closed to the public. The remainder of the Museum, excepting King Edward VII.'s Galleries, is open to the public daily on week-days from 10 a.m. to 6 p.m., from April to September inclusive. After 4 p.m. in January, February, November, and December, and after 5 p.m. in March, and October, only certain of the galleries remain open.

Sunday opening of the Exhibition Galleries will be resumed in the course of 1920.

The Reading Room is open to Students from 9 a.m. to 6 p.m., the Newspaper Room and Manuscript Students' Room from 10 a.m. to 5 p.m., on every weekday except Good Friday, Christmas Day, and the first four weekdays in March and September.

British Museum, }  
1st April, 1920. }

*Frederic G. Kenyon,*  
Director and Principal Librarian.

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B.—PERSONS ADMITTED TO VIEW THE COLLECTIONS IN THE BRITISH MUSEUM (NATURAL HISTORY), CROMWELL ROAD, in each YEAR from 1914 to 1919, inclusive.

	1914.		1915.		1916.		1917.		1918.		1919.	
	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.
January	30,067	3,233	29,458	3,177	30,632	4,001	30,594	2,578	32,056	2,723	33,715	3,628
February	27,792	4,404	25,599	3,759	26,945	3,301	25,452	3,046	26,245	3,193	25,989	3,912
March	31,344	5,863	29,933	4,266	28,614	3,386	30,165	4,020	29,022	4,268	32,370	6,843
April	41,188	3,688	42,600	4,380	32,024	4,301	44,284	5,880	38,064	3,896	48,131	4,577
May	28,817	5,874	32,483	4,655	28,854	3,161	31,785	4,106	31,695	3,784	29,719	4,721
June	39,074	4,009	27,666	3,340	31,165	3,898	28,304	4,122	27,034	4,780	34,216	5,311
July	31,790	4,317	33,687	3,791	27,792	4,091	28,981	4,742	33,588	4,252	32,452	5,676
August	29,860	3,589	46,712	6,068	33,006	3,902	42,316	4,284	40,681	4,037	40,965	5,989
September	26,368	3,033	27,972	4,386	28,993	3,913	27,705	4,849	26,768	6,300	28,548	4,600
October	31,351	3,271	30,358	4,678	33,228	4,238	29,377	3,296	30,991	3,567	31,363	3,829
November	27,130	3,402	27,523	3,241	29,368	2,479	30,026	2,753	27,426	2,416	28,174	4,076
December	29,173	2,277	31,181	3,168	28,655	2,833	27,671	2,792	33,126	2,893	33,521	3,511
Total Number of Persons admitted to view the Natural History Collections (including students)	373,954	46,960	385,172	48,409	359,259	43,414	376,660	46,468	376,696	46,109	399,063	56,673
	420,914		433,581		402,673		423,128		422,805		455,736	

NUMBER OF VISITS TO PARTICULAR DEPARTMENTS for the purpose of STUDY.

	1914.		1915.		1916.		1917.		1918.		1919.	
	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.	Week-days.	Sun-days.
Zoology (including Art Students)	9,235	8,020	7,018	6,314	5,553	7,459	5,553	7,459	5,553	7,459	5,553	7,459
Entomology	4,284	3,354	3,149	2,909	3,277	3,306	3,149	2,909	3,277	3,306	3,149	2,909
Geology	4,962	2,531	3,000	3,214	4,648	3,214	3,623	3,214	4,648	3,214	4,648	3,214
Mineralogy†	717	510	354	404	461	915	404	461	461	915	404	461
Botany	3,164	3,226	3,303	2,751	2,657	3,170	2,751	2,657	3,170	2,657	3,170	2,657
Total	22,362	17,641	16,824	16,001	15,162	19,498	15,162	16,001	15,162	19,498	15,162	19,498

† Study series directly accessible to the public, and so labelled as to render reference to the staff almost unnecessary, have been arranged in this Department.

The Exhibition Galleries of the British Museum (Natural History), Cromwell Road, South Kensington, including the Departments of Zoology, Entomology, Geology and Palæontology, Mineralogy, and Botany, are open to the public, free daily, except Good Friday and Christmas Day, and days of Public Fast or Thanksgiving.

The Hours of Admission are as under :—

On WEEK-DAYS, throughout the year from 10 a.m., in

January and February	...	...	...	...	to 5	p.m.
March	...	...	...	...	„ 5.30	„
April to September	...	...	...	...	„ 6	„
October, November and December	...	...	...	...	„ 5	„

On SUNDAYS, in

January	...	...	...	...	from 2	to 4	p.m.
February 1st to 14th	...	...	...	...	„ 2	„ 4.30	„
„ 15th to end	...	...	...	...	„ 2	„ 5	„
March	...	...	...	...	„ 2	„ 5.30	„
April	...	...	...	...	„ 2	„ 6	„
May to August	...	...	...	...	„ 2.30	„ 7	„
September	...	...	...	...	„ 2	„ 6	„
October	...	...	...	...	„ 2	„ 5	„
November and December	...	...	...	...	„ 2	„ 4	„

Persons are admitted to study in these Departments every week-day from 10 till 4 o'clock.

On Sundays the following galleries are open, namely :—Central Hall, North Hall, Bird Gallery, Mammal Galleries (including Whale Room), Fossil Mammal Gallery, Fossil Reptile Gallery, and Mineral Gallery.

British Museum (Natural History), {  
1st April, 1920.

S. F. Harmer,  
Director of the Natural  
History Departments.

## X. GENERAL PROGRESS AT THE MUSEUM, BLOOMSBURY.

The year 1919 saw the return to the Museum of all objects removed from it to places of safety during the war, and the restoration of the greater part of the galleries to their normal state. But for the continued occupation of parts of the Museum by the Government Departments housed there during the war, the restoration could have been completed within the year. All the collections deposited at Malvern and Aberystwyth, and in the Tube Station under the West Central Post Office, had been brought back before the end of March. The re-opening of exhibition galleries continued progressively up to July, by which time all had been restored to the public except those that were still occupied by the Registry of Friendly Societies. But (in spite of promises of preferential treatment of Museums) it was not until the end of September that the effects of German Prisoners of War were removed from the basement of the new wing, while the Medical Research Committee were still in occupation of the sub-ground floor of the new wing, and the Registry of Friendly Societies was still in the Department of Prints and Drawings and a great part of the Department of Egyptian and Assyrian Antiquities at the end of the year.

The re-opening of the galleries was at once appreciated by the public. Visitors to the Museum on week-days (the Museum still remaining closed on Sundays) amounted to 691,650 in 1919, as compared with 680,000 in 1915, the last complete year; a satisfactory total, though far below the 884,028 of 1913. Visitors to the Reading Room were 130,198 as compared with 114,543 in the previous year, and 243,659 in 1913; while the students admitted to the Departmental working rooms amounted to 16,197, as compared with just under 7,000 in 1918 and just under 37,800 in 1913. Visitors to the Newspaper Room were 10,407, a total about 480 below that of 1918, and 7,500 below that of 1913. When the Students' Room of the Prints Department is once again open, considerable additions may be expected to the figures of visitors.

The number of separate objects incorporated in the several Departments during 1919 is as follows:—

## Printed Books :

Books and Pamphlets	-	-	-	-	-	23,932
Serials and Parts of Volumes	-	-	-	-	-	71,403
Maps and Atlases	-	-	-	-	-	1,610
Music	-	-	-	-	-	9,506
Newspapers (single numbers)	-	-	-	-	-	199,107
Miscellaneous	-	-	-	-	-	1,649
Manuscripts and Seals	-	-	-	-	-	453



XI.—PROGRESS made in the ARRANGEMENT AND DESCRIPTION OF THE COLLECTIONS AND ACCOUNT OF OBJECTS ADDED TO THEM in the year 1919 (Bloomsbury).

DEPARTMENT OF PRINTED BOOKS.

I. *Arrangement*.—The works added to the collection during the past year have, as far as possible, been placed on the shelves of the Library according to the system of classification adopted in the Museum.

The press-marks, indicating their respective localities, have been marked on the inside and affixed to the back of each volume.

The total number of these press-marks amounts to 56,810 ; in addition to which 50,821 press-marks have been altered on books and in the catalogues, in consequence of changes and re-arrangements carried out in the Library ; 37,512 labels have been affixed to books and volumes of newspapers, and 37,056 obliterated labels have been renewed.

The number of stamps impressed upon articles received is 341,111.

7,755 presses of books and newspapers have been dusted in the course of the year.

II. *Cataloguing*.—37,905 titles have been written for the General Catalogue and for the Catalogues of Maps and Music.

*Printing*.—22,806 titles and index-slips for the General, and 3,063 for the Map, Catalogue have been printed during the year.

*Incorporation*.—*General Catalogue*.—21,713 title-slips and index-slips have been incorporated into each of the three copies of this Catalogue. This has rendered it necessary, in order to maintain as far as possible the alphabetical arrangement, to re-arrange 45,560 title-slips and index-slips in each copy and to add to each copy 634 new leaves.

The system of monthly incorporation of accessions, inaugurated in April, 1915, was carried out regularly throughout the year.

*Map Catalogue*.—2,414 titles have been written for this catalogue, and 1,488 title-slips have been incorporated into each of three copies of it. This has rendered it necessary to re-arrange 1,898 title-slips in each copy and to add to each copy 27 new leaves.

*Music Catalogue*.—7,507 titles have been written for this Catalogue. 22,247 title-slips have been relaid on 1,489 new leaves.

*Shelf Catalogue*.—For this Catalogue, in which the title-slips, mounted on cards, are arranged in order of press-marks, 20,300 have been so mounted, and 22,740 have been incorporated in their proper order.



*Catalogue of Books printed in the XVth Century.*—Work on this Catalogue was resumed in July, 1919, and full descriptions of the incunabula from the first 42 Venetian presses have now been completed. Rather more than a quarter of the Venetian books have thus been dealt with.

III. *Binding.*—The number of volumes and sets of pamphlets sent to be bound in the course of the year was 13,251, including 4,228 volumes of newspapers. In consequence of the frequent adoption of the plan of binding two or more volumes in one, the number of volumes returned was 10,742. In addition, 956 volumes have been repaired in the binders' shops.

Besides this, the following binding work has been done in the Library itself:—4,334 volumes have been repaired, 7,668 cleaned and polished, 5,152 volumes of reports, parts of periodicals, &c., have been bound in a light style of binding.

The following maps, &c., have also been bound or mounted during the year:—Four atlases and 80 volumes of the 25-inch Ordnance Survey have been bound; in addition, 115 general maps, in 419 sheets, have been mounted on linen, 180 maps in 644 sheets mounted on cards, and 468 Admiralty Charts mounted on linen.

56,943 numbers of Colonial Newspapers have been made up into 1,251 parcels, and 1,259 parcels have been tied up and labelled.

74 volumes of the General Catalogue have been broken up and re-bound. 632 columns have been re-laid, owing to the accumulation of titles under certain headings. 15 volumes of the Music Catalogue have been re-bound.

IV. *Reading Room Service.*—The number of volumes replaced in the General Library after use in the Reading Room was 413,719; in the King's Library, 12,507; in the Grenville Library, 1,803; in the Map Room, 2,974; in the presses in which books are kept from day to day for the use of readers, 605,214; and in the Oriental Department, 3,396; making a total of 1,039,613 volumes supplied to readers during the year, exclusive of those to which the readers have personal access on the shelves of the Reading Room. The number of readers during the year was 130,198, giving an average of 431 daily—the room having been open on 302 days.

*Newspaper Room.*—The number of readers during the year was 10,407, giving a daily average of 35—the room having been open on 302 days. The number of volumes replaced after use was 38,868, giving a daily average of 129 not reckoning volumes taken from the shelves of the Newspaper Room by the readers themselves. In addition, 1,100 country newspapers were brought up to the Library from the Repository at Hendon for the use of readers.

*Map Room.*—260 students were admitted to the Map Room.

*Photography.*—There were 200 applications for leave to photograph from books in the Library and 601 volumes were supplied for this purpose.

V. *Accessions.*—*General Library.*—23,932 complete volumes and pamphlets have been added to the General Library during the year. Of these, 3,377 were presented, 13,060 received by Copyright, 311 by Colonial Copyright, 1,600 by International Exchange and 5,584 acquired by purchase.

71,403 parts or volumes of serial publications and of works in progress have been added to the General Library. Of these, 6,406 were presented, 49,118 received by Copyright, 150 by Colonial Copyright, 3,534 by International Exchange, and 12,195 acquired by purchase.

*Maps.*—56 atlases, 49 parts of atlases, and 1,505 maps in 4,398 sheets have been added to the collection during the year. Of these 39 atlases, 24 parts of atlases and 603 maps were presented; 9 atlases, 25 parts of atlases and 654 maps were received by Copyright; 2 atlases and 16 maps were received by Colonial Copyright; and 6 atlases and 232 maps were acquired by purchase.

*Music.*—9,506 musical publications have been added to the collection during the year. Of these 21 books were presented, 8,365 books and 659 parts were received by Copyright; 310 pieces by Colonial Copyright; and 23 books and 128 parts acquired by purchase.

*Newspapers.*—The number of newspapers published in the United Kingdom and received under the provisions of the Copyright Act during the year was 3,050, comprising 199,107 single numbers. Of these newspapers, 1,056 were published in London and its suburbs, 1,474 in other parts of England and Wales and in the Channel Islands, 289 in Scotland, and 231 in Ireland. Two sets, comprising 311 single numbers, were received by International Exchange; 35 sets, comprising 4,289 single numbers, by Colonial Copyright; 708 sets, comprising 190,020 single numbers, of colonial and foreign newspapers have been presented; and 43 sets, comprising 8,595 single numbers, have been purchased.

*Miscellaneous.*—1,649 articles not included in the foregoing paragraphs have been received, consisting of single sheets, photographs and other items.

#### *Acquisitions of Special Interest.*

The following is a list of the most important and interesting books acquired by purchase during the year.

(1) Books printed in the 15th century.

Augustinus Datus: *Isagogicus libellus in eloquentiæ præcepta.* Printed by Philippus de Lavagna, Milan, 1475, and one of the earliest books produced by his press.

Thomas Aquinas : *De diuinis moribus*. Printed by Seuerinus Ferrariensis, Ferrara, ca. 1475, and possibly the earliest of his productions.

Albertus de Eyb : *Margarita poetica*. Printed by Stephan Planck, Rome, 1480. Only one earlier book from Planck's press is known to exist.

*Martyrologium siue Viola sanctorum*. Printed by Nicolaus Philippi and Marcus Reinhard, Lyons, ca. 1480.

Maurice de Sully, Bishop of Paris : *Lexposition des euuangelles et des epistres de tout lan translatees de nouueau de latin en francoys*. Printed by Antoine Neyret, Chambéry, 1484. The earliest of the four dated incunabula, all excessively rare, registered as having been printed at Chambéry. It contains about fifty woodcuts and the present copy is a particularly large and clean one.

Bernardus : *Sermons in Dutch*. Printed by Petrus de Os, Zwolle, 1484, 1485. In two parts. A fine woodcut representing the Virgin and Child and S. Bernard occurs in each part.

*Psalterium latinum cum canticis*. Printed by Pierre Levet, Paris, 1488.

Joannes Balbus : *Catholicon*. Printed by Jean du Pré, Lyons, 1492.

Terentius : *Comœdiæ*. Printed by Perrin Le Masson, Lyons, 1495.

Altogether 25 Fifteenth Century books were acquired for the Museum by purchase during the year.

## (2) English Books printed before 1640.

The Forme and Maner of subuention or helpyng for pore people, deuysed and practysed in the cytie of Hypres in Flaunders, whiche forme is auctorisid by the Emperour, and approved by the facultie of diuinitie in Paris. Translated out of laten into englishe. Printed by Thomas Godfray, London, 1535.

Thomas Phaer : *The Regiment of Life*. Edward Whitchurch, London, 1550.

The Tragedie of Claudius Tiberius Nero, Romes greatest tyrant. Francis Burton, London, 1607. From the library of Lord Mostyn.

Thomas Heywood : *The Rape of Lucrece* . . . The third impression. Nathaniel Butter, London, 1614. From the library of Lord Mostyn. A very rare edition.

R. Speed. *The Counter Scuffle*. Whereunto is added, the Counter Ratt. Written [in verse] by R. S. R. Meighens, London, 1628.

Altogether 59 English books of this period were acquired by purchase during the year, including numerous pamphlets of historical interest from the Christie Miller collection.

## (3) Later English books.

Edmond Wingate : *The Use of the Rule of Proportion in Arithmetique and Geometrie*. First published at Paris in the French tongue. M. F. for P. Stephens, London, 1645.

Oliver Wallinby : *Planometria or the whole Art of Surveying of Land*. Nathanael Brooks, London, 1650. Really written by W. Leybourn.

Tears Wip'd Off, or the second essay of the Quakers by way of poetry : occasioned by the coronation of James and Mary. By W. P., a Servant to the Light. J. P. for Henry Playford, London, 1685. This piece was disavowed by William Penn in a specially issued broadside.

The English Hermit, or the Adventures of one Philip Quarll. London, 1727. A dedication copy, bearing the name of the author, Peter Longueville, hitherto unknown.

(4) Early Spanish books.

Aurea expositio hymnorum, studio Iacobi Alora correcta, annotata a Petro Aguesalaga, 1506. Libri minores de nouo correcti per Antonium Nebrissensem, ca. 1506. Orationes ex diuino officio collectae, 1507. All three books printed by Arnaldus Guillen de Brocar at Logroño.

Antonio de Aranda : *Verdadera informacion de la tierra santa*. Juan de Ayala, Toledo, 1537.

Pedro Mexia : *Silua de varia lecion*. M. Nucio, Antwerp, 1544.

Pedro de Medina : *Arte de nauegar*. Francisco Fernandez de Cordoua, Valladolid, 1545. A fine copy of the very rare first edition of this famous work on navigation.

La Regla y establecimiento de la Orden de la Caualleria de Santiago del Espada. Andres de Angulo, Alcalá de Henares, 1565. A very fine copy of an early edition of the rules of this Order.

*Donations.*

The following donations may be mentioned :—

Jacobo Sannazaro : *Libro pastorale nominato Arcadia*. Venice, 1502. In the original pasteboard covers, each cover decorated with a woodcut ornamental design. *Presented by C. W. Dyson Perrins, Esq.*

Girolamo di Portia : *The Spirituall Conflict*, Antwerp, 1598, and seven other Roman Catholic books dating from 1564 to 1605, walled up after the Gunpowder Plot by the Tresham family in Rushton Hall, Northamptonshire, and unwalled in 1828. *Presented by T. B. Clarke-Thornhill, Esq.*

Walter Thornbury : *The Life of J. M. W. Turner*, London, 1862. Extra illustrated by John Platt, Llandudno, 1899. In thirteen volumes. *Bequeathed by John Platt, Esq.*

A collection of Old Charts and Maps. *Presented by the Marquis of Lansdowne.*

A Collection of Siamese Postage Stamps, formed by the late R. W. Harold Row, Demonstrator in Zoology, King's College, University of London. *Presented in his memory by his mother, Mrs. Eliza Row.*

*Alfred W. Pollard.*

## DEPARTMENT OF MANUSCRIPTS.

1. *Catalogue of Additions.*—The following MSS. acquired in 1914 have been described and indexed :—Additional 38,981-38,986, 38,997-39,020, 39,049-39,052, 39,056-39,059, 39,061-39,063, 39,067, 39,070, 39,071, 39,076-39,078, 39,081-39,090, 39,097.

Of those acquired in 1915, Additional 39,172, 39,178, 39,187-39,211, 39,213, 39,215, 39,255; of those acquired in 1916, Additional 39,256, 39,317, 39,319-39,321, 39,325, and Egerton 2,949-2,951; of those acquired in 1917, Additional 39,547, 39,548, 39,558-39,562, 39,575, 39,576, 39,585-39,597, 39,638, 39,639, 39,643, 39,646, 39,665, 39,671-39,674, and Egerton 2,974, 2,975; of those acquired in 1918, Additional 39,775-39,777, 39,780-39,793; and of those acquired in 1919, Additional 39,828-39,839, 39,863, 39,871-39,904, and Egerton 3,022-3,024, have been described and indexed.

2. *Catalogue of Greek Papyri.*—Papyri 2,078-2,102, acquired in 1919, have been provisionally transcribed.

3. *Catalogue of the Royal and King's MSS.*—Sheets K-Y of Vol. III, completing the descriptions and beginning the general index, have been printed off, and sheets Z, Aa are in type. The revision of the index of initia has been continued.

4. *Catalogue of Irish MSS.*—Additional 39,665 has been described.

5. *Catalogue of Charters.*—Additional Charters 57,625-57,768, acquired in 1913, have been described and indexed.

6. *Binding.*—Sixty-five additional MSS. and one Egerton MS., newly acquired, and sixty-two MSS. of the old collections have been bound, repaired, or lettered, together with twenty-eight Books of Reference and Catalogues. Five Charters and Rolls have been repaired.

7. *Verification.*—The entire collection of MSS. has been verified by comparison with the Shelf-lists.

8. *Reproductions.*—Three sets of Pictorial Postcards (Months' Occupations, Twelfth Century Initials, and Henry VI's Psalter) have been issued. Three miniatures have been selected for reproduction in colours; two of these (Royal 15 D. II, f. 3, and Additional 25,698, f. 8) have been passed, the third (Additional 18,850, f. 65) is in course of preparation.

9. *Stamping, folioing, and placing.*—42 Additional MSS., 8 Arundel MSS., 2,594 Charters and 97 Books of Reference have been stamped. The total number of impressions made was 8,798.

223 MSS. have been folioed, with a total of 41,915 folios.

21,098 slips have been numbered.

Twenty-seven newly acquired MSS. have been placed. All have been press-marked and entered in Hand- and Shelf-lists. 1,121 Additional Charters and Rolls have been placed, and have been entered in the Hand-list. Thirty-seven seals and casts have been provided with boxes, placed, and entered in Hand- and Drawer-lists.

10. *Books of Reference*.—134 volumes and parts have been received, catalogued and placed.

Eight volumes and parts of Facsimiles were added to the series now deposited in the Department and available for the use of readers.

11. *Consultation of MSS.*—17,946 MSS. and 3,015 Charters and Seals have been consulted in the Students' Room. The number of Students was 6,013. In addition 2,012 Oriental MSS. have been consulted in the Students' Room by 801 Students.

12. *MSS. photographed*.—616 MSS. (including Papyri, Charters, and Seals) were allowed to be photographed, with a total of 2,456 photographs taken.

13. *Reconstruction*.—Early in the year the restoration to their usual places of the MSS., Charters, Papyri, Seals, and Casts, which had been sent to Aberystwyth, or removed to the basement, as a precaution against hostile aircraft, was completed.

A selection of the most valuable MSS. has been placed permanently in safes.

14. *Exhibitions*.—In the course of the year the temporary exhibition was replaced by the permanent exhibition as before the war (with a few slight modifications, mainly due to recent acquisitions of exceptional public interest).

15. *Acquisitions*. The number of Manuscripts and Documents, &c., acquired during the year has been :—

Additional MSS.	-	-	-	-	-	-	113
Egerton MSS.	-	-	-	-	-	-	6
Charters and Rolls	-	-	-	-	-	-	275
Papyri	-	-	-	-	-	-	25
Detached Seals and Casts	-	-	-	-	-	-	34

The additions this year, if not so many as usual, are of more than average importance. By the generosity of Mr. Henry Yates Thompson, whose unequalled private collection of illuminated MSS. is being dispersed, the Museum received the gift of the very fine East Anglian Psalter of the early 14th century, which was executed for the St. Omer family. An even finer MS. executed in France about the same period or a little earlier, The Sainte Abbaye, with other tracts, was acquired by purchase at Mr. Yates Thompson's sale, together with an Italian illuminated MS. of Brunetto Latini's Trésor and other treatises, dated 1425. The former purchase brings together again the two parts of one splendid volume, for the Somme Le Roi which has been in the Museum since 1869 is part of the same book.

Another munificent donation was received from Mr. (now Sir) James Buchanan, who purchased for 5,000*l* at Sotheby's auction-rooms the Master's Log of H.M.S. Victory, from Sept., 1805, to Jan., 1806, including entries relating to the battle of Trafalgar.

Other gifts and purchases include :—

Twenty-four Greek papyri, nearly all from the archives of Zeno, a Philadelphia official of the 3rd century B.C.

Fragments of an 11th century martyrology (N. France) and of Edward Grim's Life of St. Thomas of Canterbury, &c.

An original bull of Pope Lucius II to the Abbey of St. Omer, 1144.

Original instructions from Margaret, Duchess of Burgundy, to her deputies to treat with Henry IV, 1404.

Letter of Henry VI to the town of Schiedam, 1436.

Over forty original letters of Sir John Fastolf and other documents from the Paston family archives, 1435-1472.

Wardrobe-book of Henry VIII, 1511-1512. Also Proceedings at the Coronation of Edward VI, 1547. *Both purchased from the Bridgewater Fund.*

Letter-book of Sir Thomas Chamberlayne, Ambassador to Spain, 1559-1561.

Collections relating to Martin Frobisher's voyages.

The Tresham Papers, chiefly of Sir Thomas Tresham, father of Francis Tresham who was arrested on suspicion of complicity in the Gunpowder Plot. The papers were found in 1828 concealed in a wall at Rushton Hall, co. Northt. *Presented by T. B. Clarke-Thornhill, Esq.*

Papers of Sir Charles Cornwallis, *tempp.* Jas. I and Chas. I, transcribed by his son.

"Truth cleared of Scandals," a work of the 17th cent. Quaker, Richard Farnworth.

Copies by Samuel Pepys, in his cypher, of evidence concerning the birth of the Old Pretender; also his memorandum to the King about the Navy, 1686.

A letter-book of Royal letters of William III, 1695-1701.

The original correspondence between Jonathan Swift and Esther Vanhomrigh (Vanessa). *From the Morrison sale.*

Proceedings of the Prize Court of Barbados, relating to capture of French ships, 1744.

A naval signal-book, 1779, and other nautical MSS. *Presented by the Marquess of Lansdowne.*

Entry-book of correspondence relating to Tanjore, 1782.

Entry-book of correspondence of the Embassy to Tipu Sultan, 1783-1784, 2 vols.

Memoirs by Sir Alexander Cuming concerning his relations with the Cherokee Indians.

Diaries and other papers of Warren Hastings, supplementary to the large collections already in the Museum. *Bequeathed by Miss Marian Winter.*

Letters of Lord Grenville to the Austrian Ambassador, 1793-1801.

Letter-book of Gen. Gordon Forbes in San Domingo, 1795-1796.

Reminiscences and impressions of European travel after Waterloo by Major Frye. *Presented by Mademoiselle Gatayes, of Paris.*

Correspondence of Sir John Hall, Inspector-General of Hospitals in the Crimea, with Florence Nightingale and others.

Autograph letter of Gen. Hugh Wheeler from Cawnpore, immediately before the outbreak, 1857.

Autograph MS. of Samuel Butler's novel, "The Way of All Flesh." *Presented by H. Festing Jones, Esq.*

Autographs of Presidents of the United States, from Washington to Pres. Wilson. *Bequeathed by Zenas Crane, Esq., of Dalton, Mass.*

Court-rolls and reeves' accounts of Greenham and Kittisford, co. Som., 1335-1480.

An illuminated deed of Philip and Mary, with portraits.

Grant of Arms to Edw. Barker, 1580.

Copies by Ralph Starkey in 1595 of original charters relating to Cheshire.

Thirty-four Spanish charters, 12th-17th centt.

Twenty-six maps of English manors or estates, 1669-1810.

*From the Farnborough Fund.*

Italian cantatas by Scarlatti and others, 17th cent.

Proserpina Rapita, drama with music, by Antonio Ottoboni, 1713. 3 vols. *From the Farnborough Fund.*

Confitebor by Antonio Lotti.

An organ-book, 1724, containing anthems by Tallis and others.

Two operas by J. F. Lampe, *circ.* 1732.

Concerto Buffo by Wilhelm Bach, *autograph.*

Treatise on the construction of flutes, in the *autograph* of Theobald Boehm. *Presented by the executors of Christopher Welch, Esq.*

*Julius P. Gilson.*



## DEPARTMENT OF ORIENTAL PRINTED BOOKS AND MSS.

*Arrangement and Cataloguing.*—The number of the sheets of the Catalogue of Persian Printed Books sent to press in 1919 was 1.

The number of Titles written for the Catalogues is :—Arabic, 109 ; Assamese, 26 ; Bengali, 435 ; Burmese, 73 ; Chinese, 92 ; Gujarati, 404 ; Hebrew, 155 ; Hindi, 578 ; Hindustani, 178 ; Japanese, 39 ; Javanese, 4 ; Kachin, 5 ; Kanarese, 188 ; Karen, 21 ; Kashmiri, 15 ; Kond, 2 ; Kurdish, 3 ; Lahu, 3 ; Malay, 62 ; Malayalam, 67 ; Maltese, 2 ; Marathi, 284 ; Mardia, 2 ; Mundari, 8 ; Naga, 5 ; Oriya, 110 ; Pali, 45 ; Panjabi, 16 ; Persian, 1,203 ; Prakrit, 102 ; Sanskrit, 816 ; Santali, 11 ; Sindhi, 2 ; Sinhalese, 33 ; Syriac, 6 ; Talaing, 6 ; Tamil, 721 ; Telugu, 551 ; Tibetan, 39 ; Tulu, 3 ; Turkish, 11 ; Total, 6,453.

One thousand four hundred and thirty-four Chinese MSS. have been catalogued for the Hand-list of the Stein Collection.

Thirty-seven short descriptions of MSS. have been entered in the Descriptive List, the Register, and the Classed Inventory.

Twenty-five MSS. (4,832 folios) and one printed book (128 folios) have been folioed.

*Binding.*—The number of Printed Books and MSS. sent to the binders is :—Arabic, Persian, and Hindustani Books, 16 ; Armenian Books, 3 ; Chinese Books, 3 ; Coptic Books, 1 ; English Books, 1 ; Hebrew Books, 29 ; Javanese Books, 1 ; Malay Books, 1 ; Books in Sanskrit and other Indian languages, 189 ; Syriac Books, 1 ; Tibetan Books, 1 ; Turkish Books, 1 ; MSS., 314.

*Students.*—The number of visits of Students to the MS. Students' Room during the year is 888. The number of Oriental MSS. used by them is 2,403, and the number of Oriental Printed Books used in the Reading Room 3,386.

*Photography.*—Fifty-nine applications have been made to photograph books and MSS. in this Department.

*Additions.*—The number of volumes, etc., added to the collections of the Department during the year (exclusive of the Stein Collection) is 2,768, of which 2,361 are Printed Books and 407 are MSS.

Of the Printed Books, 57 were bought ; 2,059 were received under the India Copyright Act ; 99 were received under the Colonial Copyright Acts from Ceylon and Hongkong ; and 146 were presented. Of the MSS., 398 were bought and the remainder presented.

The MSS. are as follows :—

Arabic	-	-	-	-	-	298
Chinese	-	-	-	-	-	3
Hindustani	-	-	-	-	-	1
Kurdish	-	-	-	-	-	1
Pali	-	-	-	-	-	2
Persian	-	-	-	-	-	96
Persian and Turkish	-	-	-	-	-	1
Sanskrit	-	-	-	-	-	2
Shan	-	-	-	-	-	1
Sinhalese	-	-	-	-	-	1
Turkish	-	-	-	-	-	1
Total	-	-	-	-	-	407

The Stein Collection, comprising a portion of the MSS. brought home by Sir M. Aurel Stein, K.C.I.E., from his second expedition to Chinese Turkestan, consists of about 6,000 Chinese rolls and documents and a considerable number of documents and literary fragments in Prakrit, Sanskrit, and local languages.

The most important acquisitions are :—

*Arabic MSS.*—(1) A MS. on vellum, containing an apparently unknown Arabic version of the Acts of the Apostles, v. 2. to end, and of the Catholic Epistles. 9-10th century. 12°.

(2) *Mujmil al-lughah*, a lexicon by Ahmad b.al-Fāris al-Ḳazwīnī. 10th century (possibly older). Fol.

(3) *Janā al-jannatain*, a lexicon by Fakhr al-Dīn Abu al-Ma'ālī Muḥ.b.al-Mas'ūd al-Ḳassām. Copied A. H. 593 (A.D. 1197). 8°. No other copy seems to be on record.

(4) *Diwān* or poems of Ahmad b.Muḥ.Abu Bakr Nāsiḥ al-Dīn Arrajānī, Ahmad b.Muḥ.b.Fāḍil b.'Abd al-Khālīq al-Kātib, and al-Khalīl Muḥ.b.Zaid al-Khāziz. 12-13th century. 8°. Contents are partly unknown.

(5) *Aḳrābādīn* or pharmacopœia of Baghdad, by Abu al-Ḥasan Ḥibat Allāh b.Sa'id. Copied A.H. 625 (A.D. 1228). 8°. No other complete copy appears on record.

(6) *Kuwa al-adwiyah*, another pharmacopœia by the same author. Copied A.H. 654 (A.D. 1256). 8°. No other copy seems to be known.

(7) *Sharā'i' al-islām*, a standard manual of Shī'ah jurisprudence by Ja'far b.Muḥ.al-Hillī, in the author's handwriting, with marginal notes by another writer. Copied A.H. 662 (A.D. 1264). Extremely valuable.

(8) A cyclopædia of physics, ethics, and metaphysics, styled in the last section *Bayān al-ḥaḳḳ*, and wanting the end of pt. 1 and beginning of pt. 2. 13th century. Fol. Otherwise unknown.

(9) *Al-Mukhtār*, the *diwān* or poems of Ḳādī al-Sa'id Abu al-Ḳāsim Ḥibat Allāh b.Ḳādī al-Rashīd Abu al-Faḍl Ja'far ibn Sanā al-Mulk. 13th century. 8°. Very rare.

(10) *Sunan*, the Traditions of Muḥammad compiled by Abu Dā'ūd Sulaimān al-Sijistānī, in 10 *juz'*. 13th century. Fol.

(11) *Majāzāt al-Ḳur'ān*, an exposition of the metaphors and other figures of speech used in the Ḳur'ān, by al-Sharīf Ridā Muḥ.b.al-Ḥusain al-Mūsawī. 13th century. 12°. No copy seems to be recorded.

(12) *Ru'ūs al-masā'il*, a catechism on fundamentals of Islām. 13-14th century. 12°. Apparently otherwise unknown.

(13) *Lives of Muḥammad*, his relatives of the tribe of Ḳuraish, and others, by Muḥ.b.Sa'id b.'Alī ibn al-Ḥajjāj. Copied A.H. 728 (A.D. 1328). 4°. Apparently not known.

(14) *Zubdat al-fikrah*, a history of Islām down to A.D. 724, by al-Amīr Rukn al-Dīn Baibars al-Manṣūrī al-Dawādār. Vol. 3, from 42 to 121 A.H. 14th century. 8°. No other copy of vol. 3 seems to be on record.

(15) *Tahdīb al-kamāl*, being Ibn al-Najjār's *Kitāb al-kamāl*, biographies of Traditionists, revised and greatly augmented by al-Mizzī. Vol. 1. 14-15th century. 4°. Very scarce.

(16) *Dīwān* of Muḥ.ibn al-Ablah. Copied A.H. 881 (A.D. 1476). 8°. No other complete copy of this collection of poems seems to be known.

(17) *Maṭālib al-su'ul*, lives of descendants of Muḥammad. Copied A.H. 941 (A.D. 1534-5). 8°. No copy appears to be recorded.

(18) A history of the 'Abbāsī Caliphs from Hārūn al-Rashīd to Mutawakkil, by an anonymous Tunisian author; with appendices on the Governors of Tunis under the 'Abbāsīs, etc. 18th century. 4°. Not otherwise known.

(19) *Dīwān* or poems of Ghulām 'Alī Azād, styled Ḥassān i Hind. 18th century. 8°. Apparently not on record.

(20) *Al-Tirāz*, a lexicon by 'Alī Ṣadr al-Dīn al-Ḥusainī al-Ḥasanī. Copied A.H. 1277 (A.D. 1860-61). Fol. Apparently not otherwise known.

*Chinese MSS. and Books.*—(1) About 6,000 MSS. and prints of religious and secular literature, documents, etc., acquired by Sir M. Aurel Stein in the course of his second expedition to Chinese Turkestan.

*Persian MSS.*—(1) A work on Moslem theology and ethics, composed about 500 A.H. 13th century. 4°. Apparently otherwise unknown.

(2) *Kulliyāt* or *Dīwān*, the collected poems of Khvājū. Copied A.H. 970. 4°. Contains some poems of great rarity.

(3) *Kitāb al-bahīrah*, an encyclopædia of history, biography, etc., by Fuzūnī Astarābādī. Copied A.H. 1263 (A.D. 1847). Fol. Extremely rare.

(4) *Vakā'i*, a metrical history of Muḥammad, 'Alī, Fāṭimah, Ḥasan, Ḥusain, etc., by Rājī Kirmānī. Copied A.H. 1263 (A.D. 1847). Fol. Exceedingly rare.

(5) *Sī faṣl*, poems by 'Aṭṭār. Copied A.H. 1298 (A.D. 1881). 12°. Apparently not otherwise known.

(6) *Silsilah i salāṭin i 'uṣmāniyyah*, a history of the Ottoman Sultans from the foundation of the dynasty to 725 A.H., by Khair Ullāh Efendī. 19th century. 8°. Extremely rare.

*Persian and Turkish MS.*—(1) The *Maṣnavī* poem of Sultān Valad, a Persian exposition of his father Jalāl al-Dīn Rūmī's mystic poem *Maṣnavi i ma'navī* (including in pt. 1, which is usually styled *Rabāb-nāmah*, 156 verses in Seljuk Turkish). Copied A.H. 965 (A.D. 1558). 8°. Rare and valuable.

*Sanskrit MS.*—(1) *Bhāgavata-purāna*, written on a roll of thin Indian paper  $3\frac{7}{8}$  inches wide, richly illuminated and profusely illustrated. About 1780 A.D. *Bequeathed by Miss M. Winter (from the Hastings Papers).*

*L. D. Barnett.*

## DEPARTMENT OF PRINTS AND DRAWINGS.

I.—*Arrangement and Cataloguing, &c.*

*Arrangement.*—188 drawings and 2,088 prints recently acquired have been incorporated with the divisions of the collection to which they severally belong.

133 Dutch and Flemish drawings from the Malcolm collection have been placed with the drawings by the same artists that were previously in the collection. The Malcolm collection is thereby completely incorporated with the other drawings.

41 books of drawings and prints have been placed.

The etchings and engravings by Le Clerc, Picart and Ridinger have been re-arranged, after the addition of numerous specimens presented in 1917 by Lady Lucas.

A selection of engravings of the French school printed in colours has been mounted and arranged in ten solanders as the first instalment of a new series of select colour prints.

The work of mounting and lettering the Select Mezzotints of the Cheylesmore collection has been completed.

Aquatints of the Dutch, Flemish and German schools have been separated from etchings, as the first instalment of a new series of aquatints placed as a separate class.

The drawings by Dürer have been marked with the numbers of Lippmann's publication; the drawings of Rembrandt and his school with the numbers of the catalogue by Mr. A. M. Hind; and the etchings of Whistler with the numbers and dates of Mr. E. G. Kennedy's catalogue.

The work of re-arranging the engravings by Raimondi in the order of Bartsch has been begun.

*Catalogues and Indexes.*—Work has been resumed on the catalogue of Dutch and Flemish Drawings, and study of the drawings by Rubens for this purpose is in progress.

Work has been resumed on the catalogue of British engraved portraits, and the preparation of the fifth volume is in progress.

The work of indexing foreign portraits contained in books of prints has been continued.

The work of inserting the new references to case, shelf and number in the indexes of artists has been continued, and this has now been completely done with the exception of the German index. An index of painters and engravers represented in the Lucas collection has been completed.

*Exhibition.*—The exhibition gallery remained closed throughout the year.

*Registration.*—4,244 items have been entered in the Register of Acquisitions.

*Stamping and Mounting.*—4,498 drawings, prints, &c., recently acquired, have been impressed with the departmental stamp and references to the Register.

186 drawings have been mounted.

128 select colour prints of the French school have been mounted.

55 etchings by Sir Charles Holroyd, 38 woodcuts by L. Rodo, 9 etchings and lithographs by R. Schwabe, and other prints by modern artists in smaller numbers have been mounted.

Numerous prints and drawings have been mended and cleaned.

*Students.*—The total number of visitors admitted to the Print Room during the year ended December 31st, 1919, was 2,588.

*Photographing.*—142 applications were made for leave to photograph, and 744 photographs were taken.

## II.—*Acquisitions.*

The total number of prints, drawings, books, &c., acquired during the year was 3,237. The most important acquisition was that of a selection of fine and rare engravings and woodcuts of the Italian, German, Flemish and French Schools from the collection at Northwick Park, Worcestershire, formed in the first half of the 19th century by Lord Northwick. These are mentioned, with other acquisitions, under the various schools.

### ITALIAN SCHOOL.

#### *Drawings.*

Parentino, Bernardo. Composition in the style of an antique relief; captives seated beneath a trophy of arms, and Victory writing on a shield (a companion drawing, of similar subject, is in Christ Church Library, Oxford); pen and ink. *Presented by the late Sir Edward Poynter, Bart., P.R.A.*

Piazzetta, Giovanni Battista. Group of figures; black chalk. *Presented by A. G. B. Russell, Esq., Rouge Croix.*

#### *Engravings.*

Anonymous, 15th Century. A white horse rearing, and a draped female statute; with the initials F. A., probably not a signature. From the Sykes, Lloyd and Northwick collections. One other impression is known, at Rome.

Anonymous, Milanese School (after Zoan Andrea). Two upright panels of ornament, copies of B. xiii. 308, 27 and 309, 30. Northwick collection.

Barbari, Jacopo de. The Sacrifice to Priapus, B. 21. Northwick collection.

Brescia, Giovanni Antonio da. Trophy of arms, undescribed. Panel of ornament inscribed "Victoria Augusta," after Nicoletto da Modena, also undescribed, but Bartsch (xiii. 330, 22) describes a woodcut copy of this engraving.

Campagnola, Domenico. Martyrdom of St. Catherine, B. 6. Very fine impression. Sykes, Lloyd and Northwick collections.

Caraglio, Jacopo. The Rape of the Sabines, after Bandinelli, B. 63 ; the rare unfinished state, from the Spencer collection.

Modena, Nicoletto da. Neptune, B. 49. Sykes, Lloyd and Northwick collections.

Monogrammist H. F. E. Christ disputing with the Doctors, B. 2, dry-point ; very fine early impression. Buckingham and Northwick collections.

Montagna, Benedetto (after). Shepherd blowing a horn. Copy in reverse of B. 27. Northwick collection.

Raimondi, Carlo. Portrait of the engraver Toschi ; proof before letters. *Presented by Campbell Dodgson, Esq., C.B.E.*

Robetta, Christofano. St. Laurence, not described by Bartsch. Storck, Sykes, Lloyd and Northwick collections.

Uberti, Lucantonio degli. Virgin and Child between two Saints. Pass. v. 69, 67. Lloyd and Northwick collections.

#### *Etchings.*

Tiepolo, Giovanni Battista. 40 etchings, chiefly from the "Vari Capricci" and "Scherzi di Fantasia." The latter set was hitherto imperfectly represented in the department, which now possesses, with the addition of this gift, all of Tiepolo's etchings in at least one state. *Presented by C. H. Shannon, Esq., A.R.A.*

Tiepolo, Giovanni Domenico. 13 etchings, partly original, partly after the elder Tiepolo. *Presented by Charles Shannon, Esq., A.R.A.*

#### *Woodcuts.*

Andreani, Andrea. The Triumph of the Faith, after Titian ; large framed woodcut in eight sheets (first edition of this version of the subject) from the Poynter collection. *Presented by Messrs. P. & D. Colnaghi and Obach.*

Jacobus (Argentoratensis). The Madonna enthroned between St. Sebastian and St. Roch, after Benedetto Montagna. Large and exceedingly rare woodcut, of which there is another impression at Paris. Pass. v. 159, 58. Buckingham and Northwick collections.

Ruina, Gasparo. A battle, undescribed. Lloyd, Ottley and Northwick collections.

Vecellio, Cesare. The Doge and Signoria of Venice giving audience to an ambassador. Signed C. V. ; published by Ludovico Ziletti, 1575. Described by Nagler as being after Tintoretto. *Bequeathed by Sir Edward Poynter, Bart., P.R.A.*

#### *Prints arranged to illustrate the works of Masters.*

Tiepolo, Giovanni Battista. Christ falling under the weight of the cross. Engraved by Giuliano Giampiccoli. *Presented by Charles Shannon, Esq., A.R.A.*

## GERMAN SCHOOL.

*Drawings.*

Dürer, Albrecht. Christ as Man of Sorrows; pen and ink. From the Hebich and Locker-Lampson collections.

*Engravings.*

Anonymous, 15th century. Christ before Pilate, with the scourging and crowning with thorns in the background. Undescribed, but belonging to a Passion set mentioned by Lehrs in *Repertorium, für Kunstwissenschaft*, xiv. 207. Balmanno and Northwick collections.

Anonymous, in the manner of B. Beham. Small ornament print with two female torsos. Undescribed.

Anonymous "little master." Judgment of Paris. Undescribed.

Master E. S. Virgin and Child, Lehrs 67. Very fine impression of an engraving otherwise known only in the Albertina. SS. Philip and James, Lehrs 96. SS. Bartholomew and Matthew, Lehrs 98. St. Michael, Lehrs 152. All from the Northwick collection.

Master B. S. ("Barthel Schön.") Wild woman and child, undescribed. Buckingham and Northwick collections.

Meckenem, Israhel van. SS. Cosmas and Damian. B. 180. Very rare; fine impression of the first state. *Bequeathed by A. G. W. Murray, Esq.* The lovers, B. 181; woman spinning, B. 183; both from the Northwick collection.

Mey, Raphael de. The temptation of St. Anthony, after Schongauer. Northwick collection.

Five engravings by German artists of the 16th century known only by their monograms. From the Northwick collection.

*Etchings.*

J. E. Ridinger. Five of a series of large etchings of animals. Thienemann 187—189, 192, 194.

*Woodcuts.*

A wooden box ornamented with coloured German woodcuts of the early 16th century; a manner of applying such prints of which the Department has hitherto possessed no example. *Presented by V. Koch, Esq.*

Two original wood-blocks by Dürer: The Martyrdom of the 10,000 Christians, B. 117, and "Ercules," B. 127. *Presented by Junius S. Morgan, Esq.*

Anonymous, 15th century. The Mass of St. Gregory, coloured, with long xylographic text; undescribed, but Schreiber 1460, at Munich, is a copy of this, omitting many details. Northwick collection.



Anonymous, in the style of Dürer, early 16th century. The Lamentation for Christ, a very important undescribed woodcut in perfect preservation. Northwick collection.

Baldung, Hans. Christopher, Margrave of Baden, 1511. B. 59. Mariette and Northwick collections.

Baldung, Hans (after). Rare copy of a still rarer original woodcut of the arms of the Baldung family.

Baldung, Hans (wrongly attributed to). Christ as the Light of the World, Meyer's Künstler-Lexikon, II. 631, No. 43.

Beham, Hans Sebald. The Feast of Herodias, Pauli 832; the only known impression of the finished state with the address of Albrecht Glockendon. Northwick collection.

Burgkmair, Hans. The Emperor Maximilian, equestrian portrait, B. 32, printed in two colours. Northwick collection. Five of the Seven Virtues, B. 48-54, completing the set (modern impressions).

Cranach, Lucas (School of). Lions and hares.

Dürer, Albrecht (School of). The Sacred Monogram and four Saints, described "Der Titel Des Creutzs in drey sprach."

Schäufelein, Hans. A battle; portion of a large woodcut, B. 102.

Traut, Wolf. The Nativity, 1511, and twelve scenes from the Passion. Pass. III. 206, 265; the complete sheet.

Wechtlin, Hans. St. Jerome, undescribed.

#### SCHOOLS OF THE NETHERLANDS.

##### *Drawings.*

Anonymous, ca. 1540. The Rape of the Sabines; pen and ink with indigo wash.

Bloemen, J. F. van ("Orizzonte"). Nine landscape compositions introducing monuments of Ancient Rome; pen and ink. Presented by W. Barclay Squire, Esq., F.S.A., through the National Art-Collections Fund.

Dupont, Pieter. Study of a cart horse; charcoal.

Laer, Pieter van ("Bamboccio"). Turkey and ducks. Black chalk and Indian ink wash.

Rubens, Petrus Paulus. Study of an antique cameo; pen and bistre, signed—the drawing has been engraved.

Saftleven, Herman. View in Utrecht; red chalk and bistre wash.

Visscher, Nicolaes Jansz. Execution of the Gunpowder Plot conspirators; pen and bistre, with bistre wash; original sketch for the highly finished etching of the subject by Visscher.

##### *Engravings.*

Allaert Claesz. Ornament print in two compartments with the Virgin and Child and St. Anne, undescribed. St. Mary Magdalen, undescribed. Cleopatra, Aum. 104. Winged female figure with

sceptre, and Cupids. Aum. 118, second state. All from the Northwick collection.

Coornhert, Dirk V. Hercules and Cacus, 1554.

Voet, Alexander (published by). SS. Peter and Paul.

#### *Etchings.*

Bauer, Marius. An Oriental Pasha.

Bruycker, Jules de. Kermesse macabre en Flandre. *Presented by Campbell Dodgson, Esq., C.B.E.*

Dupont, Pieter. Eighteen original etchings (horses, oxen, landscape, architecture).

#### *Woodcuts.*

Cornelisz, Jacob. Two of the rare series of the Life of the Virgin; five of the round Passion (B. 5, 7-9, 11) in the early state with the dates; a late impression of B. 11 with border of fruit, &c., from the edition of 1651; St. John, undescribed, from a rare series of the Apostles; one of the series of Counts of Flanders, Pass. 122, with text at the foot.

Heylen, Gonzales van. Decorative design with bust of Apelles, after G. Maes, engraved for the artist's reception into the Guild of St. Luke, at Antwerp, 1694.

Jegher, Jan Cristoffel. Forty woodcuts after A. Sallaert, from a book published at Antwerp in 1649.

Various woodcutters. Nineteen woodcuts after A. Sallaert, from a book published in 1654 (proofs on thin paper), and a series of the four Evangelists, after the same.

All the above are from the Northwick collection.

Delstanche, Albert. Proofs on Japanese paper of twenty illustrations to C. de Coster's "Adventures of Tyl Ulenspiegel." *Presented by the Artist.*

### FRENCH SCHOOL.

#### *Drawings.*

Corot, Jean Baptiste Camille. Landscape with a figure gathering wood; black chalk (study for picture in the National Gallery, No. 2626, Salting Bequest). *Presented by H. Van den Bergh, Esq., through the National Art-Collections Fund.*

Greuze, Jean Baptiste. Group of three figures, two of whom are fighting with poniards; pen and ink and Indian ink wash, signed.

Robert, Nicolas. Six drawings of birds; black and red chalk.

#### *Engravings.*

Master C. C. (Corneille de Lyon?) The Last Judgment, R.-D. 6; very fine impression, from the Northwick collection.

Duvet, Jean. St. Peter and Moses, B. 9, R.-D. 19; very rare, from the Northwick collection.

Janinet, François. La baraque rustique, after Ostade, printed in colours.

Robert, Nicolas. Recueil d'Oyseaux les plus rares du parc de Versailles, 1676.

*Etchings.*

Degas, H. G. E. Loges d'actrices. *Presented by Frank Stoop, Esq.* Les Blanchisseuses. *Presented by C. Ricketts, Esq.* Au Louvre, Musée des Antiques.

*Woodcuts.*

Beltrand, Camille. Portraits of Gerard de Nerval and J. J. Rousseau, printed in colours. *Presented by the Artist.*

Chalandre, Fernand. Twenty-four small original woodcuts, views in Nevers and various subjects. *Presented by the Artist.*

Gusman, Pierre. Ten original woodcuts, of which three are printed in colours. *Presented by the Artist.*

Pissarro, Paul Emile. Eight original woodcuts (landscape, poultry, &c.), *Presented by the Artist.*

AMERICAN SCHOOL.

*Etchings.*

Benson, Frank W. Twenty original etchings (wild duck, other birds, portraits, book-plates). *Presented by the Artist.*

*Lithographs.*

Brown, Bolton. Thirty-seven original lithographs (figures, landscapes, &c.). *Presented by the Artist.*

Watson, Ernest. Portrait of Bolton Brown. *Presented by the Artist.*

FOREIGN ARTISTS RESIDENT IN ENGLAND.

*Drawings.*

Loutherbourg, P. J. de, R.A. (A sketch-book of 97 leaves, containing numerous views drawn on the Thames above London and at Althorp. This book was formerly attributed to Girtin, but is undoubtedly of earlier date, and there is strong internal evidence for Loutherbourg's authorship). *Presented by F. Treharne James, Esq.*

Roussel, Théodore. Five pen and ink and pencil drawings of Phaethon and the horses of the Sun, and a decorative design with stags, used in his etchings. *Presented by the Artist.*

*Engravings.*

Merigot, J., Colonna Square, Rome, in Carnival time, after La Chesnaye, 1804. Aquatint, coloured. *Presented by J. P. Heseltine, Esq.*

*Etchings.*

Legros, Alphonse. St. John, one of three impressions only. Ruine Romaine, first and third states.

Roussel, Théodore. A collection of 114 rare and specially selected proofs of etchings (figures, portraits, landscapes, ornamental frames, &c.), including nine trial proofs of the colour print "Dawn." *Partly purchased, partly presented by the Artist and by Campbell Dodgson, Esq., C.B.E.*

*Woodcuts.*

Urushibara, Y. A portfolio of woodcuts of Bruges, after F. Brangwyn, R.A., and "The Bridge," a single subject after the same, printed in colours.

*Prints arranged to illustrate the Works of Masters.*

Müller, J. S. Twelve views of the Castle of Herrenhausen, 1752, engraved by Pars.

## BRITISH SCHOOL.

*Drawings.*

Beardsley, A. "The Toilet of Salome"; pen and ink. *Bequeathed by the late Robert Ross, Esq., to the National Art-Collections Fund for the British Museum.*

Bone, M. Seventy-one drawings made as official artist on the Western Front; seven drawings of Munition Works; twenty-eight of Naval subjects and seventeen various and minor drawings. *Presented by H.M. Government.*

Constable, J., R.A. Studies of moor-hens rising from the water; oil colour on paper. Study of leaves; oil colour on paper. Study of leaves; oil colour on canvas. Study of flowers; oil colour on canvas. Three studies of water lilies; oil colour on paper. Sketch in a wood; black chalk on paper.

Charlton, W. H. Notre Dame, Grande Rue, Caudebec; black chalk. Vieilles maisons, Place Victor Hugo, Lisieux; black chalk. Coucher du Soleil; black chalk. Fishing boats, Concarneau; black and coloured chalks. *Presented by G. F. Charlton, Esq., through Armstrong College, Newcastle-upon-Tyne.*

Crealock, Maj. Gen., H. H., C.B., C.M.G. Twelve drawings of animals in chalk; pencil, pen and ink and water colour. *Presented by Miss Edith Price.*

Dadd, F. Two sketches for water colour drawings; water colours. *Presented by E. E. Leggatt, Esq.*

Dadd, R. "General View of Part of Port Stragglin"; water colours. *Bequeathed by the late Robert Ross, Esq., to the National Art-Collections Fund for the British Museum.* "The Crooked Path"; body colour on parchment.

Frith, W. P., R.A. Study for the figure of Pope in "Pope rejected by Lady Mary Wortley Montague"; black and white chalk on tinted paper.

Hayes, F. W., A.R.C.A. Landscape study in oils. *Presented by Gerald Hayes, Esq.*

Linnell, J. Portraits of Major Sutherland and of an unknown lady ; red, white and black chalk on tinted paper. *Presented by the Trustees of the National Portrait Gallery.*

McBey, J. A series of seventy-four drawings made as official artist with the Egyptian Expeditionary Force. They range in date from May 28th, 1917, to January 1919, and are executed in water colours and pen and ink. *Presented by H.M. Government.*

Patch, T. Bacchus and Silenus ; red chalk. *Presented by C. H. V. Bancalari, Esq.*

Phillip, J. Portrait sketch of Robert Dadd ; black and white chalk on grey paper. *Presented by E. E. Leggatt, Esq.*

Poynter, Sir E. J., Bart., P.R.A. Forty-seven drawings, a collection fairly representing all stages of his career. They include sketches for early woodcuts (4), studies for "Israel in Egypt" (4), a study for a mosaic of St. George in St. Stephen's Hall, Westminster, studies for "A Suppliant to Venus" (3), studies for the fresco of St. Stephen in St. Stephen's Church, S. Dulwich (3), studies for Ashanti War Medal (4), studies for "Atalanta's Race" (3), designs and studies for ewer with the story of Psyche (4), studies for numerous later works (12), and careful drawings of flowers and trees (9).

Skeaf, D. Ruins of St. Anthony's Chapel, Edinburgh ; water colours. Mill near Fascal, West Highlands ; water colours. *Presented by E. E. Leggatt, Esq.*

Stott, E., A.R.A. Child carrying a sheaf of corn ; pastel on brown paper. Landscape ; pastel on brown paper. *Presented by Miss A. Dinnage.* Study of a cart horse ; pastel on brown paper. Studies of hay waggons and horses ; black chalk and pastel on brown paper.

Sunderland, T. A view in the Lake District ; water colours. Wastwater ; water colours. Hunsrück, on the Rhine ; water colours.

Tarrant, C. A view of Charles Fort near Kinsale in Ireland, 1756 ; water colours. *Presented by J. C. Lyell, Esq.*

Vincent, G. Scene on the River Yare ; pencil. A cottage on the edge of an open space ; pencil. A cottage with stream and cattle ; pencil.

#### *Engravings.*

Blake, W. The twenty-two original copper plates of the engraved illustrations to the Book of Job. *Presented by H. Linnell, Esq.*

Cousins, S., R.A. Portrait of Mrs. Braddyll, after Sir J. Reynolds. Mezzotint, Whitman 25.

McArdell, J. The Tribute Money, after Rembrandt. Mezzotint, Goodwyn 215, fine early state.

Turner, J. M. W., R.A. Paestum. Original mezzotint, Rawlinson 799 b, touched proof. The Mew-Stone. Original

mezzotint, Rawlinson 804, unique trial proof. The Medway—Thunderstorm with Rainbow. Original mezzotint, Rawlinson 809a, unfinished, unique impression. *Presented by W. G. Rawlinson, Esq.*

*Etchings.*

Baskett, C. H., R.E. Eleven aquatints of landscape subjects. *Presented by Messrs. P. & D. Colnaghi and Obach.*

Belcher, G. Two ladies of Walham Avenue. Mrs. Harris of Jollop Yard. *Presented by the Artist.*

Bolingbroke, M. Three etchings of animals and landscape. *Presented by Miss E. P. McGhee.*

Bone, M. Shipbreakers, Genoa. Dry-point; one of two impressions of first state. *Presented by E. Peter Jones, Esq.*

Buchanan, Lt. Col. B. Two aquatints and two etchings of landscape. *Presented by the Artist.*

Buckler, J. Eight proofs in line of views of English Cathedrals subsequently aquatinted.

Detmold, M. & E. J. Portfolio of eight etchings of animals. *Presented by Campbell Dodgson, Esq., C.B.E.*

Drewitt, F. G. D., M.D. Three etchings. *Presented by the Artist.*

Geddes, A., A.R.A. View on a hill with trees and figures. Dodgson 28, undescribed early state.

George, Sir E., R.A. Twenty landscape and architectural etchings. *Presented by the Artist.*

Gosse, S. The Fiddler. *Presented by the Artist.*

Griggs, F. L. Barnack Church. *Presented by the Artist.* St. Botolph's Bridge, final state. *Presented by R. A. Walker, Esq.* St. Botolph's Bridge, second state. *Presented by Campbell Dodgson, Esq., C.B.E.*

Green, B. Two crayon etchings of Chelsea.

Holroyd, Sir C. Advertisement of the Monte Oliveto Maggiore set. Prayer. *Presented by Lady Holroyd.*

Hughes, M. K. Seven landscape etchings. *Presented by Miss Mary C. Hamilton.*

McBey, J. Seven etchings of subjects in Sinai and Palestine. *Presented by the Artist.*

Paton, F. Thirteen original etchings of animals. Forty etchings after other artists. *Presented by E. E. Leggatt, Esq.*

Pissarro, Orovida C. Fourteen etchings of animals (one in two states). *Presented by the Artist.*

Robins, W. P. Seven etchings of landscape, heads and an interior. *Presented by the Artist.* Ten landscape etchings. *Presented by Messrs. P. & D. Colnaghi and Obach.*

Robins, M. L. Five etchings of figures and heads. *Presented by W. P. Robins, Esq.*

Sickert, W. Eleven etchings. *Presented by the Artist.*

Strang, W., A.R.A. Portraits of J. B. Clarke, catalogue 46 and supplement 515, Austin Dobson, catalogue 238 and Emery Walker, catalogue supplement 473.

Walker, F. S. St. Paul's by Moonlight. *Presented by the Misses Walker.*

#### *Lithographs.*

Charlton, W. H. Five lithographs of North Shields. *Presented by G. F. Charlton, Esq., through Armstrong College, Newcastle-upon-Tyne.*

Nevinson, C. R. W. Wet Evening, Oxford Street. Le Port. *Presented by the Artist.*

Shannon, C. H., A.R.A. The Tyrant. *Presented by the Artist.*

#### *Woodcuts.*

Blake, W. Two trial proofs for illustrations to Ambrose Philips' Pastorals before the blocks were cut down, Russell 30 ii-ix. *Presented by H. Linnell, Esq.*

Burne-Jones, Sir E. Summer Snow. King Sigurd.

Gibbings, Capt. R. Eight woodcuts of landscape or towns. *Presented by the Artist.*

Poynter, Sir E. J., Bart., P.R.A. Seventeen proofs of woodcut illustrations to "Once a Week," &c. *Presented by the executors of Sir E. J. Poynter, Bart., P.R.A.*

Sandys, F. Seven proofs of illustrations to "Good Words" and "Once a Week."

#### *Prints arranged to illustrate the Works of Masters.*

Holmes, C. J. "In Wordsworth's Country." Lithograph in colour. *Presented by Campbell Dodgson, Esq., C.B.E.*

Hunt, W. Holman. The Lady of Shalott. Mezzotint by J. D. Miller. *Presented by Messrs. Arthur Tooth & Son.*

Leech, J. Three coloured lithographs published by Thos. Agnew, 1865.

Turner, J. M. W., R.A. Norham Castle, Rawlinson, 317. Unique impression of steel engraving by P. Heath, 1827. *Presented by W. G. Rawlinson, Esq.*

#### PORTRAITS.

The 246 English and 76 foreign portraits acquired during the year include a series of nine engraved by F. Holl, A.R.A., after G. Richmond, R.A. (*Presented by J. P. Heseltine, Esq.*), an anonymous mezzotint of Capt. John Elphinstone, R.N., an engraving of Charles Albert, King of Sardinia by P. Toschi after Horace Vernet, a lithograph of Leopold I. of Belgium as King designate of Greece, by F. Krüger, and a series of eleven lithographs of the Orléans family.

#### BOOK PLATES.

Three by E. D. French. *Presented by H. G. Weicker, Esq.*

Twenty-one by E. H. New. *Presented by the Artist.* A further three, *presented by Thomas Ogden, Esq.*

## COLLECTIONS AND SETS.

A series of forty-two reproductions of drawings by J. Constable, R.A., in the Victoria and Albert Museum.

A folio volume containing 605 proofs of etchings and aquatints by F. Rosaspina after drawings by F. Mazzuola (Parmigiano). A collection made by the artist himself and sold by him to Richard Ford.

A large volume containing 654 drawings, etchings, photographs and miscellanea by or connected with R. C. Lucas, by whom the collection was made. *Presented by Mrs. Henry Millstead through the National Art-Collections Fund.*

Six lithographs of the War by F. Brangwyn, R.A. *Presented by the Canadian War Memorials Office.*

Thirty-two lithographs of the Australian Imperial Force in France by W. Dyson. *Presented by the Australian Intelligence Department.*

Six lithographs by M. Bone, "On the Clyde." *Presented by the artist.*

Six colour reproductions of pictures representing Britain's Sea Power. *Presented by the Medici Modern Art Society, Ltd.*

## BOOKS OF PRINTS AND BOOKS OF REFERENCE.

Calvert, F. *Lessons on Landscape*, London, 1815.

Cust, L. *Eton College Portraits*.

Haelwegh, A. *Regum Daniae Icones*, Copenhagen, [1646].

Lavallée-Poussin, E. de. *Nouvelle Collection d' Arabesques propres à la décoration des appartements*. 40 engravings by Guyot.

Robson, G. F. *Scenery of the Grampian Mountains*, London, 1819. 41 aquatint plates.

Strang, W. *Catalogue of his etched work ; supplement, 1912*. Presented by Messrs. J. MacLehose & Son.

*Campbell Dodgson.*



## SUB-DEPARTMENT OF ORIENTAL PRINTS AND DRAWINGS.

I.—*Arrangement and Cataloguing, &c.*

The Chinese, Japanese, and Indian paintings, which had been removed for storage in the Post Office Tube, were brought back without injury at the beginning of the year and returned to their places in the collection.

The framed pictures in the Stein Collection have been labelled and arranged in the special cases designed for them.

The several collections of Chinese paintings, hitherto kept separate, have been incorporated in a single series, arranged according to period. The items have all been re-numbered. A similar task has been undertaken with regard to the Japanese paintings, the Morrison Collection having to be incorporated with the main collection. The paintings have been checked for this purpose, and the work is in process of being carried out. The prints after Japanese Masters have been re-arranged in portfolios.

Two books of reference and 35 prints, recently acquired, have been placed.

The subject-index to the Japanese collections has been completed.

A list has been made of the Chinese paintings arranged according to the new numbering. A finding-list has also been prepared, giving the correspondence between the new numbers and the old.

A list has been made of the Japanese paintings in the proposed new order of arrangement.

Corrections in the Index of Chinese Artists, rendered necessary by the new numbering, have been made.

Additions to the hand-lists of Japanese woodcuts, rendered necessary by new acquisitions, have been made.

A subject-index of the Stein Collection has been prepared, with cross-references from Sanskrit to Japanese names.

A study has been made of the paintings in the Stein Collection from the point of view of Buddhist iconography.

A list of the paintings and woodcuts in the Stein Collection has been prepared.

*Registration.*—Three hundred and sixty-nine items have been entered in the Register of Acquisitions.

*Stamping and Mounting.*—Three hundred and eight paintings, prints, &c., have been impressed with the departmental stamp and references to the Register.

Thirty-nine paintings and drawings from the Stein Collection have been mounted.

Two paintings from the Stein Collection have been framed.

One Chinese painting of the Sung period, recently acquired, has been remounted and repaired.

Five Chinese paintings have been cleaned, and four others backed and mounted.

One hundred and seventy-eight Japanese prints have been mounted on sunk mounts and lettered with the artists' names and references to Register and Catalogue.

One Indian painting has been mounted on a sunk mount.

## II.—*Acquisitions.*

At the beginning of the year the paintings, drawings, and woodcuts allotted to the Sub-department as a result of the partition of the Stein Collection between the Government of India and the Museum, were finally taken over and incorporated. The acquisition of this precious series of works of ancient Buddhist art enormously increases the value and importance of the collections in the Sub-department.

The total number of paintings, prints, &c., acquired during the year was 477, of which the following are the most important.

### THE STEIN COLLECTION.

*Frescoes.*—Twenty-one, mostly fragments from the Khadalik site. The most important frescoes are two compositions, representing monks and hermits, from Mingoi, and a standing Bodhisattva from Ferhad Beg.

*Paintings and Drawings on Silk, Paper or Linen.*—Two hundred and thirty-one. These are all part of the treasure discovered by Sir Aurel Stein in 1908 in the rock temple of The Thousand Buddhas at Tun-huang, on the western frontier of China. Several bear dates of the 9th and 10th centuries, and the great majority undoubtedly belong to the latter part of the T'ang dynasty. Apart from the Tun-huang paintings, almost nothing survives from the T'ang period, the grandest period of Chinese art. Many of these paintings show the local styles and mixed influences prevailing in the Central Asian regions; but others belong to the main tradition of Chinese Buddhist painting, and the finest of these are of singular beauty. One painting in distemper on linen is of the well-defined Tibetan type, and is possibly the most ancient specimen now existing. The collection includes also some Tibetan outline drawings, and part of a series of small paintings of Nepalese type.

From the point of view of subject these paintings, which throw new light on the history of Mahayana Buddhism, may be divided into four groups (1) Pictures of the Western Paradise, or Assemblages of Divine Beings, (2) Figures of Bodhisattvas, especially of Avalokitesvara or Kuan-yin, and of the Lokapalas, (3) Scenes from the Jatakas, or stories of the successive incarnations of the Buddha, of especial interest from the fact that Chinese costume and conventions are used throughout, affording a valuable sidelight on the secular art of the period; (4) Miscellaneous drawings; a man leading a camel and a man leading a horse; a study of human proportions; drawings of *mudras*, charms, &c.

*Woodcuts.*—Twenty-nine, including one dated with the year corresponding to 947 A.D. In some of these prints the same figure is stamped repeatedly from a single block. These are among the oldest woodcuts in the world.

### MISCELLANEOUS ACQUISITIONS.

#### CHINESE.

##### *Paintings.*

Chien Shun-chü (late 13th century), early copy after. Horsemen escorting a famous beauty, Wang Chao-chün, to the Court of the Emperor. A roll, painted in colours on silk.

Chiao Ping-chên. Record of an official tour of inspection, south of the River, in October, 1699. A long roll, in colours on silk.

Chüan-hu (17th century). Figures in landscape. Four small idyllic paintings. *Presented by Lieut.-Col. R. H. Whitwell.*

Tsai Han (18th century). Birds on a bough at evening. Kakemono on silk, in colours, by a lady artist greatly esteemed in her day.

Li Kên (18th century). An Arhat; after Wu Tao-tzū, the greatest of Chinese masters (8th century), whose work is only known through copies. Kakemono on silk, in colours.

##### *Woodcuts.*

The Money Dragon; and two sheets of illustrations to romances. Three broadsheets, printed in colours; probably late 18th century.

#### JAPANESE.

##### *Paintings.*

Sōami (15th century), attributed to. A leaping carp: ink painting on paper.

Ukiyo-yé School (17th century). Three youths. Two-fold screen, painted in colours on gold. An early work of the school, by a follower of Matabei.

##### *Woodcuts.*

Nichiren, attributed to. The god Indra. A large woodcut of primitive design, traditionally attributed to the famous Saint Nichiren, of the 13th century. *Presented by Prof. W. Bateson, F.R.S.*

Moronobu. Scene from the story of the Shiuten Dōji. Hand-coloured.

Harunobu. A Flower Seller. An early work, of unusual size and extreme rarity. *Presented by Prof. W. Bateson, F.R.S.*

Kiyomasu. Two Actors. Print in three colours, of great rarity.

Koriusai. Two Girls. Atsumori taking leave of his wife. *Hashira-kaké.*

Kiyonaga. A Child Calligraphist.

Toyoharu. A Water Festival.

Utamaro. A married Woman giving a Scroll to a Girl.

Hokusai. Four prints from the set of "Hundred Poets," Nos. 3, 19, 24 and 36. Girls admiring Cherry-blossom. *Large Surimono*. Men and Girls by a River. *Large Surimono*.

Hiroshige and Yeisen. Fushimi ; Ota ; Sekigahara ; Imasu ; Kashiwabara. Five prints from the Kisokaidō series.

#### INDIAN.

Mogul School. Painting. 17th century. An ascetic.

#### SIAMESE.

##### *Paintings.*

Buddha between two saints ; below, the stages of mortality. Divinities of the Zodiac ; below, a scene from legend. Buddha between two saints ; below, scenes from the Buddha legend. *Large* paintings on cotton, in colours and gold. Seventeenth century (?)

#### BOOKS OF REFERENCE.

Fenollosa, E. S. Epochs of Chinese and Japanese Art. *Presented by Laurence Binyon, Esq.*

Foucher, A. The Beginnings of Buddhist Art. *Presented by Laurence Binyon, Esq.*

Lange, R. Thesaurus Japonicus, Band II.

*Laurence Binyon.*

## DEPARTMENT OF EGYPTIAN AND ASSYRIAN ANTIQUITIES.

I.—*Arrangement, Cataloguing, &c.*

## EGYPTIAN ANTIQUITIES :—

Many thousands of bags of sand have been removed from the Egyptian Galleries, and the statues and other monuments have been replaced in their original positions in the Egyptian Galleries. All the Egyptian stelæ have been unpacked and replaced on the shelves, together with a number of recently acquired Nubian funerary slabs and memorial stones. The stelæ of the Graeco-Roman Period have been collected and grouped.

The hieroglyphic, hieratic and demotic papyri, which had been carefully packed inside the large stone sarcophagi, have been unpacked and replaced in the wall cases in the Carthaginian Basement, and an exhaustive examination has shown that none of them has suffered injury.

Three hundred and thirty-three cases of antiquities have been brought from the Postal Tube to the Museum, and the Rosetta Stone, and the choice monuments of the Ancient Empire have been replaced uninjured in the Egyptian Galleries.

All the mummies and coffins stored in the strong rooms in the Basement have been brought up to the First Northern Gallery, and arranged tentatively in the Wall Cases ready for the general rearrangement of the Gallery. As many of the dowels in the coffins had shrunk and fallen out, new dowels have been cut and inserted, and all cracks in the plaster casings have been stopped. During the rearrangement all the rectangular and anthropoid coffins acquired during the last ten or fifteen years have been incorporated.

The greater number of the objects acquired during the year have been cleaned, and repaired where necessary, in readiness for exhibition.

The damaged labels in the Egyptian Galleries have been repaired, and all numbers restored.

Twelve stelæ frames have been made ; several hundred feet of mahogany have been prepared for ebonizing ; thirty-eight wooden pedestals for coffins have been enlarged, and about forty new ones made. Twelve stone pedestals have been prepared and objects mounted on them. Eight cartonnage cases have been cleaned and repaired.

One hundred and eighty-three objects have been registered ; one hundred and eighty-nine labels have been drafted and painted, and numbers have been painted on about five hundred objects.

A set of eight coloured post cards with scenes and vignettes from the Book of the Dead have been published.

## ASSYRIAN ANTIQUITIES :—

Many thousands of bags of sand have been removed from the bulls, bas-reliefs and other sculptures, and the protective screens of steel plates and slag wool have been taken down in the Nimrud and Kuyunjik Galleries, and dismantled.

The bas-reliefs of Ashur-nasir-pal and of the Lion Hunt of Ashur-bani-pal have been rebuilt into the walls, and the slate and wooden framework and the glass replaced. The plinths have been gritted and cleaned and the labels restored. No bas-relief has suffered injury.

The Bronze Gates of Shalmaneser have been unpacked and replaced.

Two hundred and forty-three cases of tablets, cylinders, &c. have been unpacked and their contents brought up from the Basement to the rooms leading to the new extension.

Seventy-six thousand, three hundred and forty-six tablets (κ Collection, &c.) have been unpacked, and checked and replaced on their shelves. A few of the shellac joinings gave way, but otherwise no tablet suffered injury.

Fifteen Table-Cases have been brought up to the Second Northern Gallery and their contents replaced.

Eighty-six cases of Babylonian Antiquities, results of the Trustees' Excavations in Mesopotamia, have been unpacked, and their contents examined.

One hundred and ten vases, dishes, bowls, tablets, cylinders, &c. have been repaired.

Eight hundred and seventy-one tablets have been placed in glass-topped boxes lined with cotton wool.

Four thousand and thirty-six objects have been numbered.

One thousand and sixteen objects have been registered, and eight tablets and two texts have been copied.

*Students.*—About 2,300 visits have been made to the Department, chiefly by soldiers from Egypt and Mesopotamia, and the objects brought by them for examination have been described.

II.—*Acquisitions.*

## I.—EGYPTIAN :—

1. Fine white limestone ushabti figure of Ba-en-Rā meri Amen, or Menephtah, King of Egypt. About B.C. 1250.
2. Alabaster ushabti figure from the tomb of Rameses II. at Thebes. About B.C. 1300.
3. Stone ushabti figure with decorations in green colour. Archaic period. From Abydos.
4. Green glazed faïence ushabti figure of Tehuti-artas, son of Ant. From Dêr al-Bahari.
5. Bronze figure of An-hetep, a royal butler. Very fine work of the XXth dynasty.

- 6-10. Five blue glazed faïence ushabtiu figures of Pen-ta-urt, the scribe who wrote the description of the campaigns of Rameses II. About B.C. 1300.
- 11-15. Five flat figures, of unusual shape, of a priest of Amen; the hieroglyphs are cut in relief. From Thebes.
16. Portion of a bronze figure of a Queen, or lady of high rank, inlaid with gold. XVIIIth dynasty. B.C. 1500.
17. Bronze figure of "Horus of the Two Horizons," wearing plumes. Unique. XXth dynasty.
18. Faïence bead with the cartouche of Nubkaurā, *i.e.*, Amenemhat II. XIIth dynasty.
19. Blue faïence ball for children.
20. Ithyphallic mummied figure in the form of Osiris, from the newly-excavated temple of Osiris at Karnak.
21. Burnt brick mould for casting figures of Osiris. Saïte Period. Unique.
22. Alabaster unguent vase with the cartouche of Thothmes III. on the side and on the cover. B.C. 1500.
23. Bronze jar, or pitcher, with lotus-shaped handle.
24. Model of a group of the hieroglyphs for "life, stability, and power," for inlaying in a plaque or relief.
25. Model of the hieroglyph for "field" or "meadow," for inlaying.
26. Solid bronze head from the statue of a priest or high official. XIXth or XXth dynasty.
27. Opaque glass vessel from the tomb of Thothmes III. A rare subject. About B.C. 1500.
28. Bronze lamp, with the handle in the form of a mouse. Late period.
29. A bronze censer, with chain. Late period.
30. Blue glazed faïence figure of a priest.
31. Wooden figure of Osiris. XIXth dynasty.
32. Wooden figure of Amenhetep III. (B.C. 1450), with the attributes of Osiris.
33. Wooden figure of Rameses II. (B.C. 1300), with the attributes of Osiris.
- 34-39. Six large steatite scarabs bearing the cartouches of Amenhetep and Queen Ti. From the Sûdân.
40. Faïence pendant "heart" scarab, for laying on a mummy.
41. Reed flute with six holes, with metal band at each end.
42. Blue glazed faïence plaque with a head of Bes in relief. Fine colour. XXIIInd dynasty.
- 43-48. Six flint implements. Predynastic period.
- 49-52. A pair of shell bracelets and a pair of bone bracelets.
53. Stone model of the claw of an animal.
54. Massive stone mace-head, with inscription.
55. Black stone toilet box. XXIIInd dynasty.
56. Part of a large faïence ānkh, or symbol of "life," with the signs for "serenity" and "stability" superimposed. It

- was mounted on a staff and carried in religious processions. From the Temple of Tirhakah at Gebel Barkal.
57. Part of a similar object of fine green colour. From the same temple.
58. Red ware vase. Archaic period. From Abydos.
- 59, 60. Two bronze lamps. Late period.
61. Hard stone figure of a frog. Archaic period. From Abydos.
62. Figure of the Ba-bird, *i.e.*, Soul-bird, with outstretched wings. From the Sūdān.
63. Bronze figure of Rā, with disk. From a statue.
64. Portion of an alabaster statue of a prince or king.
65. End of a bronze bolt from a door, with the end in the form of a lion's head. XXVIth dynasty.
66. Bronze toilet box. XXth dynasty.
67. Plaques from foundation deposits of Thothmes IV. and Rameses II.
68. Part of an inscribed blue glazed plaque for inlaying. XXVIth dynasty.
69. Two stone figures inscribed with passages from the Book of the Dead.
- 70, 71. Terra-cotta figure and an object in basalt.
- 72-75. A carved ivory figure, two cylinder seals, and a "button" seal. Archaic period.
76. A gold ring with a sunk cartouche.
77. A gold ring inscribed with the legend Shai-nefer, *i.e.*, "good luck."
78. Porcelain bead of Seti I., glazed.
79. Porcelain bead decorated with an unusual pattern.
80. Porcelain bead decorated with *utchats*, &c.
81. Blue glazed faïence hawk of Horus.
82. Scarab inlaid with buds, &c. XIIth dynasty.
83. White stone head for inlaying in a "heart" scarab.
84. Scarab of Amenhetep III. and Ti.
85. Steatite plaque; obv. Boat of Rā; rev. lion.
86. Stone cover of a jar or mould for cakes.
87. Painted vase (*bügelkann*).
- 88-92. A group of objects of the late Roman and Christian Periods, *viz.*, terra-cotta lamp, three ivory objects, necklace with ornaments, crescents, bulls, &c.
- 93-98. Six fine large wooden combs, with hollow-work carvings, Coptic period.
- 99-102. A set of four bronze pillar-ornaments from a processional shrine. XXIIInd dynasty.
- 103-112. A collection of ten inscribed funerary stelæ of the Coptic Period (VIIIth-XIth century A.D.)
113. Large terra-cotta vase decorated with paintings of fish, gazelle, &c.
114. Large wheel-turned wine jar with hieratic inscriptions. XXth dynasty.



A group of objects in hard stone dating from the IVth to the XXth dynasty, viz. :—

115. A black granite altar. XVIIIth dynasty.
116. A red granite bowl dedicated to Thothmes III.
117. A large basalt libation bowl with four ears.
118. Black stone squatting-figure of Ser, a divine father and libationer of Amen.
119. Limestone figure of Mes-Ptah, a "real royal kinsman."
120. Limestone stele of Tataa. IVth dynasty.
121. Limestone stele for a whole family. XIIth dynasty.
122. Quartzite stele with funerary scenes on the obverse and reverse.

## II.—ASSYRIAN :—

- I. A large and miscellaneous collection of antiquities, chiefly of the Chaleolithic Period, from the Trustees' excavations in Babylonia.
- A. Antiquities excavated by Mr. H. R. Hall, Assistant Keeper in the Department :—

From UR :—

1. A collection of objects comprising stone implements, painted pottery, &c.
2. Portion of two stone portrait heads in the "Gudea" style. From the Palace of Dungi ; about B.C. 2500.
3. Four fragments of inscribed stone ; about B.C. 2500.
4. A good, typical collection of inscribed bricks of the kings Ur-Engur, Dangi, Bur-Sin II., Kurur-Mabuk, Nebuchadnezzar II. and Nabonidus from the Palace of E-Kharsag. B.C. 2400-550.
5. Inscribed stone tablet of Ur-Engur.
6. A group of blue glazed bricks from the temple tower.
7. Forty inscribed clay tablets, and 230 fragments of tablets containing legal and commercial and religious texts, which were written for priestly families who lived in the dwellings that were erected on the ruins of E-Kharsag, the Palace of Dungi. From the reign of Ashur-bani-pal (B.C. 668-626) to that of Xerxes (B.C. 480).
8. An Egyptian mould for scarabs, and a group of objects from the ruins of the temple tower. B.C. 600.
9. A group of rude clay figures of men and animals. B.C. 600.
10. 277 pottery vases and a large collection of fragments from graves of the VIIth-Vth centuries B.C.
11. A miscellaneous collection of bronze and iron rings, bracelets, pins, bead necklaces, and a cylinder-seal from the same graves.
12. Iron bit and remains of horse equipment, dagger and knife. VIIth-Vth centuries B.C.

13. Two silver pins from a grave of the late period.
14. Part of the brick tomb and the large pottery coffin from the same grave.
15. A group of pottery coffins, with human bones and a child buried in bowls.
16. Bronze lamp in the form of a lion. B.C. 700.

From ABU SHAHRÊN.

17. A collection of 739 implements, ornaments, &c., in flint, chert, crystal, obsidian, and other stones, found on the surface of the desert. Chaleolithic period.
18. A collection of 386 fragments of painted pottery; same period. Found on the surface of the desert. Same period.
19. A rude figure of a man in clay. Same period.
20. Fragment of a plaque of obsidian on which is cut the figure of a lion *passant*. Same period.
21. A collection of 190 fragmentary stone objects. Same period.
22. A collection of 142 pottery cones, sickles, whorls, &c. Same period.
23. A miscellaneous collection of 29 objects and 14 cups and vases of the early Sumerian period.
24. 28 inscribed bricks of Bur-Sin II., King of Ur, B.C. 2300.
25. Gold nail and pendant, copper nails in gold beads, and fragment of gold leaf. Sumerian period.
26. Stone beads of the Chaleolithic and Sumerian periods.

From TALL AL-'UBÊD.

27. 760 implements, ornaments, and other objects of flint, chert, crystal, obsidian, jasper, &c.
28. 95 small stone objects, &c.
29. 1,017 fragments of painted pottery, cones, sickles, whorls, &c.

The objects under Nos. 27—29 are of the same type and period as those from Abu Shahrên, and were all found on the surface of the desert.

30. 50 whole and fragmentary bowls, vases, &c., of the early Sumerian period.
31. Six plano-convex bricks from the temple of Damkina. Early Sumerian period.
32. 56 fragments of stone vases, architectural fragments, &c.
33. A series of black and red stone and mother-of-pearl tesserae from mosaic pillars.
34. 15 whole and fragmentary pottery flowers with petals made of stone and bitumen; and one bitumen flower.
35. Limestone torso of a male figure dedicated by Kur-lil, storekeeper of Erech, to the goddess Damkina. Period of Ur-Nina, or earlier; B.C. 3500.

36. Brown tufa figure of a squatting man with a fragmentary inscription on one shoulder. Period of Ur-Nina, about B.C. 3500.
37. Copper relief representing Imgig, the lion-headed eagle cognizance of Lagash, seizing two stags by their tails. Period of the supremacy of Lagash; before B.C. 3000.
38. Fragments of two small copper bulls; before B.C. 3000.
39. Gold horn of a bull overlaid on bitumen; before B.C. 3000.
40. Colossal head of a lion in bitumen, with red, white and black stone and shell eyes, tongue and teeth, and fragments of the copper mask; before B.C. 3000.
41. Fragments of three similar lions' heads.
42. Smaller lion's head.
43. Two bitumen panther heads, life size, with copper masks; eyes, teeth, &c., not inlaid.
44. Five birds' heads in copper.
45. A mass of copper fragments, pillars, pipes, &c.
46. Four bricks, one inscribed, from a building of Dungi.  
[Nos. 31—44 are all from the temple of Damkina.]

From TALL ABU SAKHÂRÎ near Tall al-'Ubêd.

47. Fragments of pottery and flints found on the surface of the desert.

From TALL AS-SÛLÊBÎYAH near Abu Shahrên.

48. Pottery and iron objects, beads, &c., from late graves.

From NUFAR (Nippur).

49. Brick of Ur-Ungur.  
Brick of Melishipak II.  
Glazed brick of the late period.

From BABYLON.

- Bronze pin with bird on head.
- Pottery stilt for baking vases in a kiln.
- Various small objects and a fragment of a brick of Nebuchadnezzar II.

B. Antiquities excavated by Mr. R. Campbell Thompson, M.A., at Abu Shahrên and Ur.

From ABU SHAHRÊN.

1. 2,000 implements of chert, flint, obsidian, &c.
2. About 500 rough stone hoe-blades and other implements.
3. 1,000 fragments of painted pottery. Chaleolithic period.
4. 119 pottery sickles, and fragments of sickles. Same period.
5. 200 pottery votive cones, nails, &c. Same period.
6. 15 Sumerian vases and bowls, from burials. Same period.
7. Miscellaneous vases and fragments.
8. 6 bricks of Bur-Sin II. B.C. 2300.

From UR.

1. A miscellaneous collection of stone implements, &c.
  2. A collection of pottery and miscellaneous objects from late graves.
- II.—1. A Babylonian contract tablet dated in the 3rd year of the reign of Cambyses.
2. A Babylonian contract tablet dated in the 5th year of Cyrus.
  3. A Babylonian contract tablet dated in the 19th year of Nebuchadnezzar II (?).
- III.—1. A large limestone memorial slab inscribed with a text in the Assyrian monumental character recording the conquest of the Kassite king Bibeia by Tukulti Ninib, king of Assyria, B.C. 1275, who deported his conquered foe to his capital, the city of Ashur (Kalah Sharkat).
- IV.—1. Bronze figure of the king Ur-Engur, king of Ur, about B.C. 2500, in the character of the priest who presented the basket of offerings to the goddess of the city.
2. Stone tablet with an inscription of Ur-Engur, mentioning the dedication of a temple to the goddess Beltis.
  3. A bronze mace head round which are coiled seven serpents; the heads of these project separately. About B.C. 2500.
  4. Portion of a bronze animal with illegible Babylonian inscription.
  5. Bronze implement or bolt bearing an inscription of Ur-Ningirsu (?).
  6. Bronze spear head.
- 7-10. Four bronze axe-heads with brackets supporting the blades.
11. Bronze axe-head with remains of the wooden handle. The back of the socket is ribbed, and each end of it is flanged. A rare specimen, B.C. 2300.
  12. Diorite jar for unguents. Nos. 1-12 are from Ur.
  13. Bronze lamp with broken handle.
  14. Babylonian duck-weight, uninscribed. Weight  $10\frac{3}{4}$  lbs. From Mukayyar (Ur.)
  15. Portion of a limestone boundary stone sculptured with astronomical and other emblems on one side. About B.C. 900.
- 16-33. A collection of very fine cylinder seals in marble, crystal, carnelian, basalt, lapis-lazuli, &c., of the period B.C. 2000-600. A few of them came from Shushtar.
34. Chalcedony pebble, with scene representing an adorer pouring out a libation to the king.
- 35-39. Four archaic stone stamps and a dark stone cylinder seal. From Shushtar.
40. Model of a sheep in schist or steatite. Early period.
  41. Black stone amulet inscribed with the names of several gods and goddesses as words of power.
  42. Pendant inscribed with the name of Ashur-etil-itani, son of Sennacherib, son of Sargon.

- 43-62. A miscellaneous collection of 22 portions of tablets and cases of tablets, many bearing very perfect impressions of cylinder seals. About B.C. 2000.
63. White limestone object with annules and herring-bone pattern ; perhaps a model of a turtle.
64. Silver bangle ; late period.
- 65-274. A collection of 210 "account tablets" from Jokha, the site of the ancient city of Umma. They are written in Sumerian and are dated not by regnal years of kings, but by events, and belong to the period about B.C. 2300. They were used by the Viceroy to record his various business transactions, the principal medium of which seems to have been copper.
- 275-686. A large and important collection, consisting of 412 inscribed tablets of the class which is now known as "Cappadocian," from Boghaz Keui. About 300 of them are letters concerning sums of money of lead and silver. The remainder are bonds for money, notes of loans, and documents of this kind ; all these are dated by eponyms (*limu*). The material used is quite different from the ordinary clay of Babylonia, and is red, or white, or black in colour. The writing resembles that in use about B.C. 2000, and is peculiar to "Cappadocian" tablets ; the ordinary shape is that of a "pillow" with a curved edge. The names of Ashur, Ishtar, Adad, Sin and Shamash appear in many of the names of the contracting parties.

*Presents.*

- I.—1. Ushabti figure of Maāt-Ka-Rā, *i.e.* Queen Hatshepsut. B.C. 1550.
2. Green glazed faïence ushabti figure. XXVIth dynasty.
3. Bronze Apis Bull. XXth dynasty.
- 4, 5. Two figures of animals in bronze.
- 6, 7. Two figures of the god Bes.
8. A glazed faïence ring.
9. Figure of Ptah-Seker-Asar.
- 10-40. A collection of thirty-one scarabs, beads, plaques, &c., in steatite.

*Presented by the Dowager Viscountess Wolseley.*

- II.— Portion of the cover of a large outer Egyptian coffin. XXVIth dynasty.

*Presented by Captain Arnold Palmer, R.A.*

- III.— Cast of the death-mask of Amen-hetep IV., King of Egypt about B.C. 1450.

*Presented by the Right Hon. the Earl of Carnarvon.*

- IV.— Blue faïence figure of Qebhsenuf, son of Horus, and a protector of the dead.

*Presented by Capt. A. French Brewster.*

- V.—A gold plaque on which are cut in hieroglyphs “Neter Tuat Shep-en-Upt,” *i.e.* the name and title of Shep-en Upt, high priestess of Amen-Râ at Thebes. About B.C. 740.  
*Presented by Mrs. Margaret Hole.*
- VI.—1. A marble Cippus of Horus, sculptured with figures of Isis and Horus; on the back is cut in hieroglyphs a series of magical texts resembling those found on the Metternich Stele. Ptolemaic Period. Found at Babylon.  
2. Large fragment of an unbaked clay Babylonian tablet written about B.C. 650. From Babylon.  
*Presented by Capt. E. Cuthbert Aston.*
- VII.—Cast of a Hittite inscription at Jarâbis.  
*Presented by Capt. J. Martin.*
- VIII.—Funerary stele with “Safaitic” inscription. From the Sawâd Desert.  
*Presented by Miss Gertrude Bell.*
- IX.—Wooden model of a mummy in a wooden coffin. XXth dynasty.  
*Presented by H. Sidney, Esq.*
- X.—Stone cylinder on which is cut a copy of an inscription of Nebuchadnezzar II. Modern imitation.  
*Presented by A. R. Pollard, Esq.*
- XI.—White marble kriophoros figure. From the ruins of the old city of Zubêr near Basrah.  
*Presented by Col. A. T. Wilson, C.S.I., C.M.G.*
- XII.—Light greenish-blue glazed faïence ushabti figure made for a priest of Khnemu. Saïte Period.  
*Presented by General G. W. Biddulph.*
- XIII.—Nubische Texte in Dialekte der Kunūzi by H. Schaefer, Berlin, 1917. *Presented by Lt.-Col. Wake, C.M.G.*
- XIV.—Survey of Egypt. Maps. Scale 1 : 100,000.
- |                     |                         |
|---------------------|-------------------------|
| 1. Tahta.           | 16. Faqus.              |
| 2. Sohag.           | 17. El-Faiyum.          |
| 3. Suez.            | 18. El-Fashn.           |
| 4. Cairo.           | 19. Beni Suef.          |
| 5. Ashmun.          | 20. Qatia.              |
| 6. Nag Hammadi.     | 21. Little Bitter Lake. |
| 7. Helwan.          | 22. Suez Bay.           |
| 8. Wadi en-Natrun.  | 23. Rosetta.            |
| 9. Bilbeis.         | 24. Fuwa.               |
| 10. Damanhur.       | 25. Baltim.             |
| 11. Alexandria.     | 26. Damietta.           |
| 12. Kafr ez-Zaiyat. | 27. Port Said.          |
| 13. Zifta.          | 28. Beni Mazar.         |
| 14. Ismailia.       | 29. Minya.              |
| 15. Dairut.         | 30. Asyut.              |

*Presented by the Egyptian Government.*

*E. A. Wallis Budge.*

## DEPARTMENT OF GREEK AND ROMAN ANTIQUITIES.

I.—*Arrangement.*

All the collections of the Department had been returned to the Museum from their places of safety by February 10th.

1. *The Sculpture Galleries.*—The removal of sandbags and other protections was begun immediately after the armistice, and the rooms were re-opened as soon as their condition allowed. The Nereid and Mausoleum Rooms were re-opened to the public on January 6th; the Phigaleian Room on January 27th; the three Græco-Roman Rooms during March and April. The Gallery of Casts and the Græco-Roman Basement were re-opened on May 27th. All sculptures in the round had been replaced throughout the Galleries by June 27th.

In the Elgin Room the protective covering was removed from the metopes in January. The frieze was brought back from the Post Office Tube and unpacked during February and March. The reconstruction was completed in October. The pedimental sculptures were brought back and replaced during May and June. The Elgin Room was repainted and completed in November.

Throughout the galleries the sculptures have been cleaned; they were moved in the Phigaleian Room, the Ephesus Room, and three Græco-Roman Rooms and Basement, to allow for the re-painting of the walls.

Archer's Picture of the Elgin Room in 1819 has been mounted in the Elgin Room. In the Cast Gallery the labels have been remounted. Six inscriptions have been mounted; and six sculptures from Salonica have been mounted and placed on exhibition in the Archaic Room. The store casts which during the war had been exhibited in lieu of the originals have been replaced and arranged in the Basements.

2. *The Upper Galleries.*—The Terracotta Room was re-opened on January 27th; The Exhibition of Greek and Roman Life on March 31st; the Gold Ornament Room on April 21st; the Bronze Room and Third and Fourth Vase Rooms on April 28th. In the First and Second Vase Rooms the vases were unpacked and stored in the wall cases pending the return of these rooms from occupation by the Registry of Friendly Societies. A temporary exhibition of typical vases of the First and Second Rooms has been installed in the Third Vase Room. The rings and gold ornaments have been rearranged, and the Franks collection has been incorporated in the general series. The Terracotta Room Annexe has been fitted with additional cupboards. The Exhibition of Greek and Roman Life has been rearranged in part, and revised.

Progress has been made with a Catalogue of Silver Plate and with a new edition of the Guide to the Exhibition of Greek and Roman Life. A Finding-list for the Gold Ornament Room has been compiled.

A large series of objects from the Museum of the British Salonica Force has been unpacked, cleaned and repaired for exhibition. Two hundred and four gold rings have been mounted and casts have been taken of nineteen gems. One hundred and forty-three vases, forty terracottas, nineteen bronzes, two ivory, six porcelain, one lead, two amber and two gold objects have been cleaned and repaired. One thousand two hundred and forty-four objects were numbered and two hundred and fifty-four registered. Three hundred and one labels were written and twenty printed.

The number of visits to the Departmental Library and Students' Room for purposes of research was 368; there were 746 other visits to the staff for enquiry or on departmental business, and 552 attendances of students of art and architecture in the Sculpture Galleries.

## II.—Acquisitions.

### I.—Sculpture in stone or marble.

1. Marble female head in high relief. Ht. .305 m. From Cyrene.
2. Marble head of man with closed eyes. Ht. .1 m. From Seville.

*Nos. 1 and 2 presented by Mrs. Fitzroy Lyon.*

3. Marble fragment of slab xxxvi. of the north side of the Frieze of the Parthenon, containing the head and body of the rider No. 110 and the head of the horse No. 111. Ht. .46 m. Cf. *Journal of R.I.B.A.*, 22nd Nov., 1902, and *Times* of 15th July, 1919. Found in a rockery at Colne Park, Essex. *Presented by J. J. Dumville-Butterell, Esq.*
4. Marble statue of draped woman of 4th century type; the head has been inserted and is now missing. Ht. 1.05 m. Found at Zangliveri in Macedonia.
5. Marble sepulchral stele, dedicated by Arescusa to her husband, with male and female busts enclosed in a frame. Ht. 1.28 m. Found by the Leinster Regiment in trenches S.E. of Aivasil.
6. Marble sepulchral stele of Alfidius Secundus, with a relief of four draped standing figures; below this a relief of horse and groom. Ht. 1.185 m. Found by the Wiltshire Regiment in the trenches S.E. of Laina.
7. Fragment of relief; draped standing figures and boy holding horse. L. .49 m.
8. Colossal head, surface much worn. Ht. .45 m.
9. Lower part of draped female statuette. Ht. .64 m. *Nos. 4-9 collected and presented by the British Salonica Force, with the sanction of the Greek Government.*

### II.—Gems and Glass.

10. Chalcedony scarabaeoid, with intaglio design of Victory in a two-horse chariot. Found at Garma, near Jajarm, in North Persia.



11. Gold ring with sard intaglio : Achilles dragging the body of Hector round the walls of Troy. *Presented by L. A. Lawrence, Esq.*
12. Turquoise cameo : portrait of Tiberius, of fine quality. Found by an English soldier among rubbish at Canopus.
13. Steatite lenticular gem with intaglio design of horned goat. *Presented by C. A. Lembessis, Esq.*
14. Fragments of Roman window glass, from the Saalburg. *Presented by Capt. E. G. Spencer-Churchill.*

### III.—*Ivory and Bone.*

15. Base of a stag's horn, probably forming the head of a staff, worked in the form of a bearded head. The eyes have been inlaid with ivory eye-ball and black pupil. From Crete ; a work of the Mycenæan period. *Presented by Capt. E. J. Forsdyke and Capt. F. N. Pryce.*

### IV.—*Gold and Silver.*

16. Gold pendant in the form of a lion's head, surmounted by a double palmette. From Acarnania.
17. Gold necklace of plain and poppy-shaped beads. From Acarnania.
18. Silver-gilt statuette of Jupiter seated, half-draped, wreathed, and holding a thunderbolt. Almost certainly belonging to the great find of silver statuettes made at Mâcon on 1st March, 1760, from which eight other statuettes passed through the Payne Knight collection into the Museum in 1824. See De Caylus, *Recueil*, vii., p. 243. Ht. .072 m.

### V.—*Lead.*

19. Head of a bearded man. Ht. .045 m.

### VI.—*Bronze.*

20. Helmet parade mask, of Roman Imperial date. The surface, except the hair, has been covered with a coat of white metal. Width .275 m. Acquired at Aintab by Major C. L. Woolley.
21. Corinthian helmet, of fine workmanship, with palmette and tongue pattern. Ht. .238 m. From Karaburun. *Presented by the British Salonica Force.*
22. Two handled cup with fluted sides, of the Hellenistic period, from Causica. *Similarly acquired.*
23. A large number of other bronze or iron objects from tombs near Salonica, similarly acquired, including two shield bosses ; spear heads, swords, &c. ; fibulæ of the Hallstatt spiral and other types ; pins, beads, rings and armlets.
24. Statuette of a gladiator in armour, with arm raised appealing for a decision. Ht. .135 m. Gréau Sale, 1884, lot 264. Weber Sale, lot 185.

25. Statuette of Cerberus with heads of lion, panther and dog. Gréau Sale, 1884, lot 850. Weber Sale, lot 184.
26. Statuette of a Boar, inscribed with a dedication by Myrtine to the Theos Sabazios.
27. Statuette of a winged Gryphon.
28. Statuette of a female Faun carrying a child.
29. Plaque with design of a Gryphon. (Nos. 26-29 Weber Sale, lot 231).
30. Fragment of relief; Achilles dipped in the Styx by his mother and Achilles delivered by Peleus to Chiron. Castellani Sale, 1884, lot 283. Weber Sale, lot 172a. Cf. *Bull. d. Com. Arch. Com.*, 1877, Plates XI, XII, XIII.

#### VII.—Pottery.

31. Cypriote Bronze-age vase with decoration of incised lines. *Presented by Mrs. Broadwood.*
32. Attic kylix with the otherwise unknown signature 'Archeneides.' Van Branteghem and Weber Collections.
33. Attic red-figured kantharos, with designs of a woman spinning and a woman holding an alabastron. Weber Sale, lot 276.
34. Calene phiale with reliefs from the Odyssey: the Sirens, Scylla, the Phæacian ship, Odysseus and Argus. Found at Corneto (Tarquinii). *Bull. d. Inst.*, 1867, p. 129, and *Ann. d. Inst.*, 1875, Tav. N. *Presented by F. Parkes Weber, Esq., M.D.*
35. A fragment of a mould for Arretine ware with design of dancing girls, and a series of fragments of Roman pottery with relief decoration and pottery stamps. From the C. E. Norton collection.
36. A large series of vases and sherds from tombs in Macedonia, comprising various prehistoric wares, including a restored vase and many fragments of incised ware, and Thessalian painted wares; painted pottery of the Mycenæan and Geometric periods; a pyxis of Corinthian style with three female busts in relief; a kothon of black-figure style; sherds of Attic red-figure fabric; a jug of the Hellenistic period with gilt design of a wreath; and many unpainted vases, mainly of Roman date. Also the miscellaneous contents of the tombs including implements in stone or bone, glass, metal, &c. *Collected and presented by the British Salonica Force, with the sanction of the Greek Government.*

#### VIII.—Terracotta.

37. Tanagra statuette of a girl holding a fan. *Presented by the late Dowager Viscountess Wolseley.*
38. Statuette of Artemis with deer. From Corinth. Weber Sale, lot 115. C. Lecuyer, *Terres Cuites Ant.*, pl. B; Winter, *Typen*, III. 2, p. 163, No. 3.

39. Group in relief of two women, one playing on pipes, the other on a lyre. Weber Sale, lot 117.
40. Statuette of a girl playing on a stringed instrument. Weber Sale, lot 117.

IX.—*Casts and Reproductions.*

41. Model of an Etruscan tomb in cork.
42. Cast of the face of horseman No. 30 of South side of the Frieze of the Parthenon (Acropolis Museum, No. 4865).  
*Presented by M. A. Keramopoulos, Acropolis Museum, Athens.*

*A. H. Smith.*

DEPARTMENT OF BRITISH AND MEDIEVAL ANTIQUITIES AND  
ETHNOGRAPHY.

1. *Arrangement, Cataloguing, &c.*

*Prehistoric Room.*—The exhibition drawers have been overhauled and a number of additions made.

*Iron Age Gallery.*—The arrangement of the collections illustrating the Early and Later Iron Ages was completed and the gallery opened to the public in January, 1919.

*Room of Roman Britain.*—The exhibition drawers have been overhauled and fresh labels added.

*King Edward VII. Gallery (Ground floor).*—The re-arrangement of the Mediæval and of the Ceramic collections, which had been packed and removed for safety, is in progress; the English and Italian pottery and the foreign porcelain have been arranged, and a temporary arrangement of the Chinese porcelain made.

*Christian Room, and Buddhist Room.*—The arrangement in exhibition cases of the early Christian collections, and of those illustrating Buddhism, has been completed, and these rooms were opened to the public in April, 1919. A number of fresh labels have been prepared for the latter collection.

*Room of Indian Religions.*—Some re-arrangement of the Gandhara sculptures has been made, and a number of fresh labels provided for these and for the Jain sculptures. The room was opened to the public in January, 1919.

*Asiatic Saloon.*—The arrangement of the Chinese and Japanese collections and of oriental metal work has been completed; the Stein collections from Chinese Turkestan have been placed in exhibition cases, and a temporary exhibition of Buddhist scrolls was arranged for the Conference of the Asiatic Societies of the Allied Nations.

Accommodation is also provided for an ethnographical collection from Uganda, deposited by His Majesty the King. The room was re-opened to the public in January, 1919.

*Plaque Room.*—The arrangement and labelling of the plaquettes has been completed, and the room opened to the public early in 1919.

*Ethnographical Gallery.*—The gallery was re-opened to the public in February, 1919. A temporary arrangement of a portion of the Mexican and Peruvian Antiquities has been made in the Asiatic section. The ivory carvings from Benin, the Hawaiian feather cloaks, and the Fijian pottery, which had been removed for safety, have been re-exhibited; type cases illustrating primitive currency and methods of making fire have been arranged and labelled for demonstration by Museum Lecturers, and a number of additions made to the exhibits in the African section.

*Basement.*—A complete re-arrangement of the Ethnographical collections stored in the basement is in progress. The unpacking of the collections placed in cubes and removed for safety has been completed. The Sturge collection of stone implements has been transported, partly unpacked, and stored.

*Registration, &c.*—The registration of current acquisitions has been continued and 1,626 objects have been added including ethnographical specimens. A slip catalogue of the Harland gift of salt-glaze pottery has been made. Numbers have been painted on 1,772 specimens, and 428 permanent labels written. Objects have been mounted to the number of 771, as well as a large number of rings and ring-impressions; 105 mounting boards have been papered, a number of case fittings lined with cloth, and 545 printed and typewritten labels bordered; 20 photographs have been taken, and 48 photographic prints made. A large number of ethnographical specimens have been examined, cleaned, and remounted.

An index of the photographs and of the ethnographical documents is in progress, two volumes of the register have been indexed, and the card-catalogue of the departmental library continued.

A number of stucco figures of the Stein collection has been mounted on specially prepared stands, the model of a Chinese house has been reconstructed, and a special case prepared for the exhibition of the jade terrapin from Northern India.

The arrangement and labelling of the collections illustrating Oriental religions have been greatly facilitated by the assistance of Mr. Longworth Dames, and Mr. Oscar Raphael has given much time to the arrangement of the Ceramic collection.

Two lectures have been delivered in the Iron Age Gallery, and one to the Geologists' Association.

*Students.*—804 students and visitors have been received in the Department.

## 2.—Acquisitions.

### (1) *Prehistoric and Early British Antiquities* :—

(a) *Stone Age.*—Series of worked flints from the Middle Glacial gravel (below the Chalky Boulder-clay) in a sand-pit north of Ipswich, described in *Journal of Royal Anthropological Institute*, xlix, 74; and a series of flint implements showing the transition from rostro-carinate to hand-axe form. *Presented by J. Reid Moir, Esq.*

Large flint palæolithic hand-axe from Pokesdown, Hants. *Presented by W. M. Newton, Esq.*

Implement of rare form, found 6 feet down in gravel between Pokesdown and Boscombe stations, Hants. *Presented by Dr. T. G. Longstaff.*

Seven palæoliths from gravel at Botwell, Middlesex; two cones of Aurignac type from Suffolk, and selected specimens from various sites in England. *Presented by G. Buscall Fox, Esq.*

Two white palæoliths from gravel-pit at Dunbridge, Hants., described in *Archæologia*, lxiii, 138, fig. 32, and in *Proceedings of the Society of Antiquaries*, xxiv, 114. Presented by William Dale, Esq., F.S.A.

Patinated celt with traces of polish, from a pit at Heacham, Norfolk; described in *Proc. Soc. Antiq.*, xxxi, 54. Presented by B. Lowerison, Esq.

Series of patinated flints from below Avebury Down, Wilts; described in *Proc. Soc. Antiq.*, xxxi, 78. Presented by Rev. H. G. O. Kendall, F.S.A.

Series of flint arrowheads, &c. from the Cotswold Hills. Presented by Col. F. Cardew.

Selection from specimens found at Penmaenmawr, Carnarvonshire, on working site described in *Journ. R. Anthropol. Inst.* vol. xlix. Presented by S. H. Warren, Esq. F.G.S.

Two pottery spoons of the neolithic period, found at Hassocks, Sussex; described in *Proc. Soc. Antiq.*, xxxi, 175. Presented by J. E. Couchman, Esq., F.S.A.

(b) *Bronze Age*.—Bronze blade of narrow leaf form, found at Nanmor, near Beddgelert, Carnarvonshire; described in *Proc. Soc. Antiq.*, xxx, 175. Presented by Capt. G. H. Higson.

Bronze oval razor, perforated, from the Thames at Putney. Presented by Capt. John Ball.

(c) *Early Iron Age*.—Four portions of bronze bridle-bits from Carneddau Hengwm, Merionethshire. Presented by Mrs. Charles Williams.

Bronze bow of early Italian brooch with traces of iron, said to be from York. Presented by Capt. J. Ball.

(d) *Foreign*.—Twenty stone implements from gravel and surface, found by the donor in South Africa. Described in *Journ. R. Anthropol. Inst.*, xlv, 79. Presented by Major E. R. Collins, D.S.O.

Eleven drift-type implements, and ten small black implements from gravel at Taungs, Cape Province, collected by the donor. Presented by Rev. Neville Jones.

Series of diorite implements of palæolithic types, found on surface of De Put farm, 42 miles S.W. of Bloemfontein, by the donor's son. Presented by M. Levisseur, Esq.

Selection from an Egyptian collection of flint implements. Presented by Montagu Porph, Esq.

Flint tortoise-core found on the plateau above river at Uqbah, near Ramadi, Mesopotamia, by Major A. G. Lyell (the donor's son). Presented by J. C. Lyell, Esq.

Flint flake with "battered back," found one mile west of Rafa, Palestine. Presented by the Hon. W. Lindsay.

Series of chalcedony cores, &c., from Wadgaon, Nira Valley, Poona District, Bombay Presidency. Presented by G. Keatinge, Esq., I.C.S.

Large stone implement from Taunghu, Lower Burma, and two smaller implements from the Southern Shan States. *Presented by W. A. Robertson, Esq.*

Part of diorite celt, found at Kwang-ning, Manchuria. *Presented by Rev. William Hunter.*

Implements of stone and crystal from the northern (Tamil) district of Ceylon. *Presented by Principal C. Hartley.*

Series of flint flakes from Dépt. Eure, France. *Presented by M. Léon Coutil, Hon. F.S.A.*

Bronze sickle from Villacarrillo, Jaen, Spain (from Greenwell Collection). *Presented by Horace Sandars, Esq., F.S.A.*

(2).—*The Sturge Bequest.*

By the death of Dr. Allen Sturge, M.V.O., on 27th March, 1919, the finest private collection of stone implements in existence passed by bequest to this Department. When packed, the collection, including the exhibition and storage cases that formed part of the Bequest, weighed about 25 tons, and was conveyed by road from Icklingham Hall, Suffolk, during the summer.

The north-west angle of Suffolk is abundantly represented by specimens excavated from clay and gravel or more frequently picked up on the surface, to a large extent by Dr. and Mrs. Sturge; and the series from Warren Hill, High Lodge and Elveden are of the highest importance. Hundreds of Drift implements come from gravel pits in the Thames valley near Dawley (Hayes, Middlesex) and quantities from other well-known sites, such as Swanscombe, Farnham, Dunbridge, Southampton, Savernake Forest, Bedford and Broom. A large quantity had been acquired from Mr. Worthington Smith, mostly found in north-east London; and other collections made by Canon Greenwell, and Messrs. Greenhill, Allen Brown, Simeon Fenton, Robert Elliot, Bryce Wright and Thomas Bateman were incorporated.

The foreign section is also very rich, the entire contents of many French caves having been obtained from M. Reverdi. Chief among such specimens is a Solutré blade from the hoard found at Volgu in the Dépt.-Saône-et-Loire; and the French Drift and neolithic series are well selected. Scandinavia, Western and Southern Europe are adequately represented, and there is a large collection from the Swiss lake-dwellings. An ample Egyptian series contains some of the best flint work known, and there are hundreds of excellent examples from America, South and East Africa, and Madras. A summary description in French of the whole collection was printed for the meeting of the International Congress of Anthropology and Prehistoric Archæology which met at Monaco in 1906.

The unpacking and arrangement of the collection are hindered by want of space, owing to continued occupation by a Government Department; and even after the existing cases have been filled,

many new exhibition cases suitable for the public gallery, and sufficient space to accommodate them, must be provided, before the public can obtain access to this remarkable bequest.

(3.) *Anglo-Saxon and Foreign Teutonic.*

Anglian cinerary urn, and a bronze Viking barrel-padlock key, both found near Icklingham, Suffolk. *Presented by Mrs. Sturge.*

(4.) *Mediæval and Later.*

(a) *British.*—The Breadalbane penannular brooch, found probably in Scotland; a fine example of Irish (Scotic) work dating about 780 A.D. of silver with gold filigree and glass inlay, and two discs of trumpet-scrolls on the back; described in *Proc. Soc. Antiq.*, xxxii. *Presented by Sir John Ramsden, Bart.*

Top of a large bronze censer, originally gilt, dating about 1200. *Bequeathed by Robert John Steggles, Esq.*

Leaden seal-matrix, 12th century. *Presented by Sir Hercules Read, P.S.A.*

Embroidery panel of *opus anglicanum*, with scenes from the life of the Virgin, 13th century. *Bequeathed by Condesa de Valencia de Don Juan.*

Ivory diptychs and panels, 14th century.

Copper censer in Romanesque style, and copper incense boat.

Bronze prong in case, late 15th or 16th century, from Colchester. *Presented by W. G. W. Lake, Esq.*

Bronze seal-matrix, 16th century, and leaden pound weight with portcullis (badge of Henry VII). *Presented by Mrs. Sturge.*

Shell cameo with female bust, gold watch by Le Roy, another with enamelled case, and three gold chains. *Bequeathed by Miss A. M. Newton.*

(b) *Foreign.*—Iron arrowhead, probably for a cross-bow, found in the citadel of Aleppo. *Presented by Mrs. Clifford Bax.*

Bronze and iron arrowheads, and a leaf-shaped bronze blade, from Jerusalem. *Presented by Major Paget.*

Brass seal-matrix of the High Court, Republic of Swaziland. *Presented by C. B. Jones, Esq.*

Two large shells finely carved in cameo with figure-subjects; Neapolitan, 19th century. *Presented by the Dowager Countess Brassey.*

(5) *Ceramic and Glass Collections.*

(a) *Oriental Wares.*—Stone-ware vessel said to be of the Han dynasty. *Presented by Professor Bateson, F.R.S.*

Chinese pottery vase, with figures of animals in relief, probably 6th century. *Presented by C. T. Loo, Esq.*

Chinese pottery figure of a lady, believed to date from the 6th century. *Presented by Julius Spier, Esq.*

Celadon cup, Sung dynasty.



Chinese pottery vase with black glaze, probably 14th century. *Presented by Sir Hercules Read, P.S.A.*

Two Chinese porcelain plates painted in blue with the crest of the donor's family, and another painted in colour with the arms and crest of the same, made in 1731, with photographs of the original invoices. *Presented by C. R. Peers, Esq., Sec. S.A.*

Reddish brown pottery vase with traces of blue ground and two figures of horses in relief, from Sampsunte, near Trebizond. *Presented by M. C. A. Lambressis.*

Pottery tile with inlaid design on black ground, from Kazi Main, site of old Baghdad, destroyed in 1259. *Presented by Brig.-Gen. Pope Hennessy.*

(b) *Continental.*—Italian maiolica vase with bust of Giulio Romano on side, and scroll bearing his name, early 16th century. *Bequeathed by Elton Bechely Ede, Esq.*

(c) *English.*—Three Wedgwood oval medallion portraits. *Bequeathed by Condesa de Valencia de Don Juan.*

Pottery reliquary (?) in the shape of a high saddle, mediæval. *Presented by Capt. F. Corner, R.A.M.C.*

A valuable addition has been made to the collection of English pottery by Mr. Bryan T. Harland's gift of 120 selected pieces of Staffordshire salt-glaze. This ware, which is perhaps the most original of our native earthenwares, was inadequately represented in the Museum; but it can now be studied here in all its known types. The addition comprises some rare figures, a good series of white and some admirable coloured examples, including a number of inscribed and dated pieces.

(d) *Glass.*—Pigment bottle of the Arab period from Palestine. *Presented by Mrs. C. H. Evans.*

Fifteen specimens of bottles, &c., from a Roman tomb in Cyprus. *Presented by Mrs. Broadwood.*

#### (6.) *Collection illustrating various Religions.*

(a) *Christianity.*—A large series of Coptic antiquities excavated at Wadi Sarga near Assiût in the winter of 1913-14, including a mural painting with the "Three Children of Babylon" in the fiery furnace, examples of architectural sculpture, ostraka, pottery and various small objects. *Presented by the Committee of the Byzantine Research and Publication Fund.*

A pottery lamp inscribed in Greek characters, from Elephantine Island, Assuan. *Presented by the Dowager Viscountess Wolseley.*

A stone slab of the 12th century with carved decoration on both sides, said to come from a church at Miafarkin, N.E. of Diarbekr, Kurdistan.

(b) *Buddhism.*—An alabaster seated Jain figure found in a well in Shahpura, Rajputana. *Presented by Col. J. Biddulph.*

A large bronze seated figure of Buddha, from Burma.

(c) *Brahmanism*.—A number of Hindu religious figurines in cast bronze, and a silver incense spoon from Ceylon. *Presented by Col. F. H. Ward.*

An alabaster head and a bronze hand-bell with anthropomorphic handle, from India. *Presented anonymously.*

(7.) *Oriental and Ethnographical.*

*Asia*.—Two bronze lamps and a pair of bronze horns worn by trotting bullocks in Madras, from India; carved ivory comb from Ceylon; and an ivory merchant's seal and set of porcelain gambling-house tokens, from Siam. *Presented by Col. F. H. Ward.*

Seven ancient seals and intaglios inscribed in various characters, from India and Persia. *Presented by Col. H. E. Deane.*

A magic triangular copper plate engraved in Devanagari characters, from India. *Presented by Miss Burgess.*

A bronze chape with design of birds and floral scrolls in relief, of mediæval Persian workmanship, found in the ruins of old Cairo. *Presented by G. D. Hornblower, Esq.*

A bronze bowl and cover of mediæval Korean work, found in a grave. *Presented by Prof. W. Bateson, F.R.S.*

A bronze seated figure, 16th century, from Java. *Presented by Miss Bieber.*

A football with stand and case as used by the Japanese aristocracy, and a piece of batik cloth, dyed with Chinese designs, from Java. *Presented by Dr. Hildburgh, F.S.A.*

A silk banner presented to Col. Charles Ellis by the Chinese government in 1870, in recognition of his humanity in saving the lives of the Chinese City Guard. *Presented by Mrs. Pembroke Stevens.*

A series of painted wooden figures, worshipped by the boat-living community of Southern China.

An ethnographical series from the Veddas, Ceylon. *Presented by Prof. C. G. Seligman F.R.S.*

A number of weapons, helmets, and other objects from the Naga tribes, Assam. *Presented by Major J. Hardcastle.*

Six woven and embroidered shoulder bags from the Kachin tribes, Upper Burma. *Presented by L. Lacy Langley, Esq.*

A bow and staff from Ceylon, a powder flask from Tibet, and a pipe and other objects from the Naga of Assam. *Presented by A. W. Fuller, Esq.*

A fire-piston of buffalo horn from the Kachin, Upper Burma. *Presented by H. W. L. Way, Esq.*

A blow-gun and bamboo quiver containing darts, from the Sakai of Perak, Malay States. *Presented by Mrs. A. W. Franklin.*

A number of models of houses, wooden figures, textiles, and other objects from Burma.

*Africa*.—A number of weapons, paddles and other objects from various parts of Africa. *Presented by A. W. Fuller, Esq.*

An ethnographical series from the Mwimbe tribe, Kenya Province, British East Africa. *Presented by W. Allen, Esq.*

A number of ethnographical objects from South of Lake Albert and from Ruwenzori, Uganda. *Presented by Lieut-Col. E. M. Jack.*

An otter-skin tobacco pouch from the Wa-Tusi of Ruanda, East Africa. *Presented by Capt. T. L. Phillips, M.C.*

A number of weapons and other objects from Togoland. *Presented by Capt. C. H. Armitage.*

A series of stone implements of neolithic type from Zaria Province, Northern Nigeria. *Presented by Montagu Porch, Esq.*

A network "juju" dress from Ikom, Cross River, Nigeria. *Presented by W. H. Whitehead, Esq.*

A wooden statuette of a male native, from the neighbourhood of Lagos, Nigeria. *Presented by Louis C. G. Clarke, Esq., F.S.A.*

A pair of wooden dancing masks, probably from Nigeria. *Presented by Dr. F. Corner.*

A wooden standing figure of a Zulu, from South Africa. *Presented by Henry A. Pegram, Esq. A.R.A.*

A number of head-dresses of native regiments, beerstrainers, and clay models from the Matabili, Cape Province.

*Oceania.*—A series of spears from the Northern Territory and West Australia, and a carved double head from Easter Island. *Presented by A. W. Fuller, Esq.*

A prepared skull from the Augusta River district, New Guinea. *Presented by C. Stewart Mackay, Esq.*

An important ethnographical series including a number of prepared skulls, from the Augusta River region, New Guinea.

A jade "tiki" from New Zealand. *Presented by the Dowager Viscountess Wolseley.*

Two small carved figures of modern workmanship, from Easter Island. *Presented by Fleet Surgeon W. S. H. Sequeira.*

A fine carved figure of the god "Oro" from Rarotonga, Hervey Islands.

*America.*—A number of pottery vessels and other objects from ancient graves, Peru. *Presented by A. W. Fuller, Esq.*

Three pieces of stone sculpture from Costa Rica, and two pottery vases. *Presented by Mrs. A. M. Church.*

A fine collection of South American "maté's" (Paraguay—tea-vessels) showing evolution from the simple gourd form, and three harpoon heads from Tierra del Fuego. *Presented by Col. F. H. Ward.*

A series of textiles, pottery, and copper ornaments from ancient graves at Nasca, Peru. *Collected by Dr. H. O. Forbes, F.R.S.*

The contents of two Indian graves and a totemic figure, from the Queen Charlotte Islands, together with a Chilkat cloak from the North West Coast.

A Chilkat cloak with inwoven totemic designs.

## CHRISTY COLLECTION.

During the year the Trustees have acquired by donation the following objects, which have been transferred to the Trustees of the British Museum :—

(1.) *Ethnography of Asia.*

A scroll picture of Buddhist divinities from China, and an amuletic necklace of carnelian arrowheads, probably Syrian. *Presented by Sir Hercules Read, P.S.A.*

A chain mail shirt obtained at the Tartar bazaar in Tiflis. *Presented by Major J. J. Darlow.*

A pottery reliquary cover, found on the surface near Amplur Pak Bong, Lampun District, Upper Siam. *Presented by A. L. Queripel, Esq.*

A double skull hand-drum, used in Lamaistic ritual, Tibet. *Presented by Mrs. Herbert Godsal.*

Three photographic negatives of a Dyak man wearing an ornament called "ampallang," Borneo. *Presented by Dr. C. L. Sansom, C.M.G.*

(2.) *Ethnography of Africa.*

A series of obsidian flaked implements from British East Africa. *Presented by C. W. Hobley, Esq., C.M.G.*

Two shields and a number of spears from the Wa-Kinyikiusa, Lake Nyassa. *Presented by T. A. V. Best, Esq.*

Two ceremonial masks worn by boys after initiation, from the Zombo country, lower Congo. *Presented by the Baptist Missionary Society.*

A number of conventional iron arrow-heads used as currency by the bush people of the Abajali District, Southern Nigeria. *Presented by the Director of the Bank of British West Africa.*

A fetish of shells and hair bound with string, probably from West Africa. *Presented by Mrs. Flecknoe.*

A wooden carved figure representing a man emerging from a serpent's mouth, from West Africa. *Presented by Capt. P. L. O. Guy.*

A seated female figure carved in black wood, from Mendiland, Sierra Leone. *Presented by Capt. Keith Henderson.*

A white metal cup from Zanzibar. *Presented by T. B. Clarke-Thornhill, Esq.*

A carved wooden cup from the Kasai River, Congo. *Presented by Louis G. C. Clarke, Esq., F.S.A.*

(3.) *Ethnography of Oceania.*

An ethnographical series from British New Guinea. *Presented by Capt. F. R. Barton, C.M.G.*

Two spears with shell and feather ornament, from New Britain. *Presented by A. E. Ridsdale, Esq.*

Two painted wooden clubs from the Santa Cruz Islands. *Presented by Alfred Fowler, Esq.*

An appliance for catching devil-fish, made of the claw of a devil-fish, from Ysabel, Solomon Islands. *Presented by J. Edge-Partington, Esq.*

A wooden hook for catching "lavenga," from Ontong Java, Solomon Islands. *Presented by C. M. Woodford, Esq., C.M.G.*

Two featherwork bags from the Maori, New Zealand. *Presented by Mrs. Frank Morley.*

A wooden adze-handle of exceptional length, from New Zealand. *Presented by A. D. Passmore, Esq.*

A woven belt from the Caroline Islands. *Presented by Mrs. Greg.*

#### (4.) *Antiquities and Ethnography of America.*

A carved stone pendant, a stone arrow-head, a finger ring, a copper spatula with spherical handle in openwork design, representing fighting warriors and lizards, and other objects, from graves at Ancon, Peru. *Presented by Louis C. G. Clarke, Esq., F.S.A.*

A carved ivory fragment in the form of a lion's head, found on the inter-Andean plateau near Cuzco, Peru. *Presented by Dr. H. O. Forbes, F.R.S.*

A number of stone arrow-heads from Vancouver, British Columbia. *Presented by Lieut.-Col. C. E. Cardew.*

A shrunk human head from the Jivaro Indians, Ecuador. *Presented by E. G. Drexel, Esq.*

An embroidered leather band, from the Eskimo. *Presented by Mrs. Greg.*

A "corvo," or fighting knife, in a leather sheath, from Chile. *Presented by Dr. Olegario Olivares.*

#### (5.) *Ethnography of Europe.*

A woollen costume consisting of cap, cloak, and trousers, from the neighbourhood of Boris Gleb, Russian Lapland. *Presented by Miss Noel.*

In addition to the above donations, the Christy Trustees have acquired by purchase a pre-Columbian carved wooden stool, found in a cave in the Bahama Islands, in about the year 1820.

#### *Permanent Loans.*

The following additions have been made to the Collections permanently deposited in the Department:—

A ceremonial dress and silver-gilt ornaments, presented to H.M. the Queen by the Royal Embassy from Abyssinia. *Deposited by H.M. the Queen.*

A number of robes, and head-dresses, and a state sword, forming a conqueror's equipment, presented to H.M. the King by the Royal Embassy from Abyssinia. *Deposited by H.M. the King.*

An ethnographical series from Uganda, presented to H.M. the King by H.H. the King of Uganda. *Deposited by H.M. the King.*

A series of ivory ornaments and charms presented to H.M. the King by the chief of the Ondonga tribe, Ovamboland, S.W. Africa. *Deposited by H.M. the King.*

Several pieces of Oriental armour. *Transferred from the Royal United Service Institution.*

*Charles H. Read.*

## DEPARTMENT OF COINS AND MEDALS.

I.—*Registration and Arrangement.*1.—*Greek Series.*

918 coins recently acquired have been weighed and registered and 1,333 incorporated, while 104 casts and electrotypes have been incorporated in the collection of casts, &c., of coins not in the Museum. Various collections of coins offered for purchase or donation have been examined and selections made, notably from the well-known collection of the late Sir Hermann Weber. All the coin trays in the Greek series have been re-labelled with running numbers and the labels of the cabinets containing them have been re-written so as to correspond with their contents. The series of early electrum coins has been transferred into glazed trays of the new pattern. The bibliography has been kept up to date.

2.—*Roman Series.*

438 coins recently acquired have been registered and 504 incorporated, while a considerable number of coins hitherto classed as “duplicates” or “miscellaneous” have been re-examined, and some of them have been found worthy of incorporation in the regular series. The collection of casts and electrotypes of coins not in the British Museum has been re-arranged throughout and important additions made. Collections offered for purchase or donation have been examined and selections made. The collections of forgeries and of barbarous imitations of the Imperial Series have been re-arranged, while the coinage of the reign of Septimius Severus has been re-classified chronologically and according to mints. A beginning has also been made with the re-classification of the issues of the later third century. The bibliography has been kept up to date.

3.—*British and Colonial Series.*

4,446 coins have been registered and 3,538 incorporated, the large totals being due to the recent accession of the Morgan-Evans Collection of Anglo-Saxon and English coins, of the Evans Collection of early British coins and of the Graham Collection of English coins. Collections offered for purchase or donation have been examined and selections made.

4.—*Modern and Medieval Series.*

1,446 coins have been registered and 2,977 incorporated (including the Dewick bequest). Various collections offered for purchase or donation have been examined and selections made. The Italian medals of the fifteenth century have been re-arranged and re-labelled and the German and other War Medals have been re-classified according to subjects.

5.—*Oriental Series.*

469 coins have been registered and 549 have been incorporated, while duplicates and unclassified miscellaneous have been re-examined and a certain number inserted in the general series. Several parcels of coins offered for purchase or donation have been examined and selections made. The series of the Moghul Emperors has been revised, certain rectifications made and many additional heading cards added.

II.—*Publications.*1.—*Catalogue of Greek Coins.*

*Coins of Arabia, Mesopotamia, &c.*, by G. F. Hill. The text of the portions relating to Nabataea, Roman Arabia, Mesopotamia, Ancient Persia and Persis has been revised and the introduction written to that relating to Elymais.

*Coins of Cyrenaica, &c.*, by E. S. G. Robinson.

Work has been resumed on the catalogue of this series.

2. *Catalogue of Roman Coins.*

*Coins of the Early Empire, Augustus to Vitellius*, by H. Mattingly.

The coins have been arranged and described as far as the end of the reign of Claudius.

3. *Catalogue of Oriental Coins.*

*Ancient Indian Coins*, by J. Allan.

Work has been resumed on the Catalogue of this series.

III.—*Acquisitions.*

The total number of coins and medals added to the Department during the year 1919 was 6,301, of which 602 were of gold, 3,328 of silver, 1,905 of bronze, and 466 of other metals. The average of the preceding ten years was 2,406.

The following table shows the numbers of the new acquisitions classified according to the several series to which they belong :—

Class.	Gold.	Silver.	Bronze.	Other Metals.	Total.
Greek ... ..	507	854	694	21	2,076
Roman ... ..	13	364	111	1	489
British and Colonial ... ..	22	1,150	530	25	1,727
Mediæval and Modern ... ..	36	788	494	412	1,730
Oriental ... ..	24	172	76	6	278
Chinese ... ..	—	—	—	1	1
Totals ... ..	602	3,328	1,905	466	6,301

Of the above 5,249 were presented, viz. 525 of gold, 2,682 of silver, 1,592 of bronze, and 450 of other metals.



The following is a list of benefactors to the Department of Coins and Medals during the past year :—

H.M. the Queen ; H.I.H. the Prince Napoleon ; Admiral the Marquess of Milford Haven ; the Marquess of Lansdowne ; the Deputy Master of the Royal Mint ; the Deputy Master of the Royal Mint, Ottawa ; the Bihar and Orissa Coin Committee, Patna ; the Bombay Branch of the Royal Asiatic Society ; the Egypt Exploration Fund ; the National Art Collections Fund ; the Air Force Administration ; the Joan of Arc Statue Committee ; the United Grand Lodge of England ; the St. Paul's Royal Arch Chapter, Boston, Mass. ; More Adey, Esq. ; Captain Amundsen ; Shirley Atchley, Esq. ; the late Colonel W. F. Badgley ; Oswald N. Bakewell, Esq. ; A. H. Baldwin, Esq. ; F. Pierrepont Barnard, Esq., D. Litt. ; Mrs. M. Blake ; S. M. G. Box, Esq. ; Edwin Bradnam, Esq. ; Major P. W. Browne ; Major J. P. Bushe-Fox ; J. T. Chell, Esq. ; John Copland, Esq. ; M. F. Crooy ; H. R. Crosthwaite, Esq., C.I.E. ; Captain S. Culverwell ; Glenn H. Curtiss, Esq. ; Colonel H. E. Deane, I.M.S. ; the late Rev. E. S. Dewick ; Rev. R. H. Dickson ; K. Dingwall, Esq. ; Campbell Dodgson, Esq., C.B.E. ; Edmund Dulac, Esq. ; S. M. Edwardes, Esq., C.S.I., C.V.O. ; General Sir Raleigh Egerton ; Sir Arthur Evans, F.R.S. ; G. Eumorfopoulos, Esq. ; Miss Helen Farquhar ; L. T. Ford, Esq. ; Heer M. Frankenhuis ; G. H. Gabb, Esq. ; Henry Garside, Esq. ; the Gas Light & Coke Company ; Stephen Gaselee, Esq. ; Rev. L. Goodenough ; Lt.-Col. C. L. Graham ; T. H. B. Graham, Esq. ; Sir Evelyn Grant Duff, K.C.M.G. ; William Gordon Gray, Esq. ; Mrs. H. Grogan ; H. M. Hake, Esq. ; H. R. Hall, Esq. ; Lt. Herbert Hart ; G. F. Hill, Esq. ; Sir Henry H. Howorth, K.C.I.E. ; Miss C. A. Hutton ; T. Jennings, Esq. ; Louis Keen, Esq. ; F. C. Kelly, Esq. ; L/Cpl. P. Lanauze ; L. A. Lawrence, Esq. ; Capt. W. H. Lee-Warner ; W. Earle Leigh, Esq. ; Miss Lidgett ; the Hon. W. Lindsay ; Dr. August von Loehr ; the London Stereoscopic Co. ; Staff-Sgt. R. Longstaff ; Miss Lyon ; George Macdonald, Esq., C.B. ; W. Marchant, Esq. ; P. J. Marks, Esq. ; Colonel A. Masters ; H. Mattingly, Esq. ; J. Mavrogordato, Esq. ; J. G. Milne, Esq. ; C. Minter, Esq. ; A. T. Monck-Mason, Esq. ; the Mond Nickel Co. ; Prof. J. L. Myres ; H. Nelson Wright, Esq. ; Henry E. Parkes, Esq. ; Lt. C. E. S. Palmer, R.N.V.R. ; Colonel A. G. Phear, A.M.S. ; Mandeville B. Phillips, Esq. ; T. Poska, Esq. ; Executors of the late Sir Edward Poynter, P.R.A. ; Sir Hercules Read, P.S.A. ; A. P. Ready, Esq. ; R. D. Roberts, Esq. ; E. S. G. Robinson, Esq. ; Maurice Rosenheim, Esq. ; Lady Rumbold, (representing the British Section, Berne Bread Bureau) ; Mrs. Ernest Schuster ; Edward Shepherd, Esq. ; Messrs. Spink & Son ; Maurice Stack, Esq. ; Henry Symonds, Esq. ; Lt.-Col. the Hon. M. G. Talbot ; Miss E. M. Thompson ; P. Thorburn, Esq. ; J. E. A. Titley, Esq. ; J. Toubkin, Esq. ; H. C. W. Tucker, Esq. ; W. H. Valentine, Esq. ; Henry Van den Bergh, Esq. ; Dr. Gordon Ward ; Captain A. W. T. Webb ; Dr. F. Parkes Weber ; Mr. J. Wilcke ; Howland Wood, Esq. ; W. H. Woodward, Esq. ; A. H. S. Yeames, Esq. ; Philip Ziegler, Esq.

IV.—*Remarkable Coins and Medals.*

The year has been remarkable both for the quality and for the number of acquisitions. The bequest of the Dewick Collection, consisting chiefly of mediæval Continental coins; the gifts by Sir Arthur Evans of the collection of Early British and other Celtic coins formed by his father, Sir John Evans; and by Mr. T. H. B. Graham of his collection of English silver and copper; and above all the purchase, with the help of a special grant of £10,000, and of subscriptions from the National Art Collections Fund and a number of private sources, of a selection of the most important Greek coins from the Sir Hermann Weber Collection, are the chief features in the year's record.

1. *Greek Series.*

The acquisitions from the Weber Collection by donation or purchase are 34 gold or electrum, 204 silver and 37 bronze coins of all parts of the Greek world, and of all periods from the seventh century B.C. to the third century of our era. Some of the most important among them are the following:—

*Catana and Gela in Sicily.* Two rare fifth-century tetradrachms, of unusual type. *Presented by W. H. Woodward, Esq.*

*Himera in Sicily.* Silver tetradrachm of the second quarter of the fifth century; *obv.* Pelops in his car; *rev.* the nymph Himera—a remarkable study of the archaic draped female figure. Of this coin only one other specimen is known, in the Prince of Waldeck's collection.

Silver didrachm of the same period. *Obv.* Horseman alighting. *Rev.* Nymph Himera sacrificing, with the masculine inscription *Soter*. Similar to the only other published specimen, which is at Berlin.

*Mende in Thrace.* A unique silver tetradrachm of the fifth century; *type*: the ass of Dionysus.

*Thracian Chersonese (Gallipoli).* Silver stater of about 500 B.C. *Obv.* Lion with reverted head. *Rev.* Head of Athena. One of the five recorded specimens of the earliest issues of the Chersonese.

*Lyceius, King of Paeonia (about 359-340 B.C.).* A rare silver tetradrachm; *obv.* male portrait (?) head; *rev.* Heracles and the lion. *Presented by Dr. F. Parkes Weber.*

*Edones of Macedonia.*—Silver octodrachm of King Geta, about 500 B.C. *Obv.* Herdsman leading two oxen. *Rev.* The king's name. The best preserved specimen extant of a very rare coin.

*Thebes.*—Silver stater of the sixth century B.C. *Type*: Boeotian shield. The only known specimen of the stater of this period.

*Thespieae in Boeotia.*—A silver stater of the early fourth century; *obv.* Boeotian shield; *rev.* head of Aphrodite, with a crescent in front. *Presented by Mrs. Ernest Schuster.*

*Euboea.*—Silver tetradrachm of the sixth century B.C. (sometimes attributed to Olynthus). *Type*: quadriga to front. The

only known specimen of this denomination. Together with a drachm of the same series (type : horseman to front).

*Elis.*—Two silver staters of the period 400–365 B.C. ; *obv.* head of Hera ; *rev.* eagle. On the second, the eagle stands on a ram's head. Both are rare varieties. *Presented by Henry Van den Bergh, Esq., and George Eumorfopoulos, Esq., respectively.*

*Delos.*—Two early silver staters, of about 500 B.C. *Type* : Lyre, with letter  $\Delta$  above. The only two known specimens of this coinage.

*Chersonesus in Crete.*—Silver stater of the fourth century B.C. ; *obv.* Nymph's head ; *rev.* Heracles wielding his club. The only known specimen of the stater of fine style, other issues being by inferior engravers.

*Cyzicus.*—Four fine electrum staters of the fifth-fourth centuries, with the types of a lion breaking a sword, a lioness, an eagle, and the head of Perseus.

*Lampsacus in Mysia.*—Five gold staters of the fourth century, with the types of Victory sacrificing a ram, head of Hera, head of Dionysus, head of Hecate, and head of a nymph. The first two are unique, and all five are among the most precious of Greek coins.

*Smyrna.*—A unique stater (*obv.* head of Apollo, *rev.* lyre), proving that the city, which was hitherto supposed to have lain in ruins from 585 B.C. to the Hellenistic period, was restored about 400 B.C., the date of the coin.

*Cnidus in Caria.*—A silver tetradrachm of the early third century B.C. ; *obv.* head of Aphrodite ; *rev.* forepart of a lion, with the magistrate's name Telesiphron. The finest known tetradrachm of the period. *Presented by the National Art Collections Fund.*

*Barca in Cyrenaica.*—A silver tetradrachm of the fourth century B.C. ; *obv.* Silphium plant ; *rev.* head of Zeus Ammon. *Presented by Mrs. Ernest Schuster.*

Other Greek coins acquired during the year :—

A rare silver fourth-century stater of Velia in S. Italy ; *obv.* head of Athena, with hippocamp on helmet ; *rev.* lion prowling ; symbol, trident. *Presented by Stanley Robinson, Esq.*

A fine didrachm of Thurium in S. Italy of the end of the fifth century, having the artist's initial A on the haunch of the bull which forms the reverse type.

A rare fifth century silver tetradrachm of Messana in Sicily, with the sequence letter *p* on the reverse.

An electrum  $\frac{1}{3}$  stater of the Milesian Standard, of the 7th cent. B.C., found at Calymnos. *Presented by Prof. J. L. Myres.*

34 silver coins of Sinope, of the end of the fifth and beginning of the fourth century B.C., from a find.

A rare fourth century silver stater of Aspendus in Pamphylia, with the usual types of a slinger and a pair of wrestlers, and the additional inscription in the Pamphylian alphabet : Menetys Elypsa.

An unpublished silver fifth century half-drachm of Cyrene with the types of a swan's head and a Gorgon's mask.

## 2. Roman and Byzantine Series.

An unpublished denarius of the period of the Civil Wars, A.D. 68: *obv.* BONI EVENTVS Bust r.; *rev.* VIRTVS Virtus standing l.

A rare denarius of Vitellius with *rev.* L VITELLIUS COS III CENSOR. Vitellius the Elder seated l.

A sestertius of Marcus Aurelius, of exceptional size and weight and fine style; *rev.* CONCORD AVGVSTOR TR P XVI COS III S C Marcus Aurelius and L. Verus clasping hands.

An unpublished aureus of Septimius Severus with *rev.* LEG VIII AVG TRP COS; Eagle between Standards. (Hitherto the only legion certainly known to be represented in gold was the LEG XIII MARTIALIS VICTRIX.)

A rare denarius of Septimius Severus with *rev.* VOTA SVSCEPTA XX Septimius and Caracalla sacrificing at an altar: behind them a flute-player.

A rare solidus of Theodosius II with *rev.* FELICITER NVBTHS Marriage group, commemorating the marriage of Valentinian III and Eudoxia.

A fine solidus of the Empress Galla Placidia, of the Mint of Ravenna; *rev.* SALVS REIPVBLICAE. Victory seated r. Presented by the late Rev. E. S. Dewick

## 3. British and Colonial Series.

The collection of early British and other Celtic coins, formed by Sir John Evans has long been famous. It was offered to the nation by his son, Sir Arthur Evans, without conditions, but with the suggestion that any duplicates not required should be handed over to the Ashmolean Museum, and any still remaining duplicates exchanged for other coins required by the British Museum. The coins which have accordingly been retained by the Museum are 1453 in number (468 gold, 571 silver and 414 bronze). Some idea of the extent to which the Museum Collection has been enriched may be gathered from the fact that the series of Cunobelinus (Cymbeline) has been increased from 20 gold, 12 silver and 28 bronze to 50 gold, 24 silver and 91 bronze. The scientific value of the collection consists not merely in the rarities in which it abounds, but in the care with which the provenance of the coins (often the only guide to their attribution) has been recorded.

The British series of a later date, from the Commonwealth onwards, has also been greatly improved, both in quality and quantity, by Mr. T. H. B. Graham's gift of his collection of English silver, copper, bronze and tin (1,462 in number). The collection is nearly complete for these metals, and, when combined with the main collection, will leave very few gaps to be filled.

## 4. Mediæval and Modern Series.

Fine specimens of the chaise d'or of Philip VI. and the mouton d'or of Jean I. of France; the fourteenth century sequin of the Roman Senate; the Annunciation ducat of Charles II. d'Anjou as

King of Naples (1285-1309); portrait coins of Ludovico II., Marquis of Saluzzo (1475-1504) and Ferdinand I. of Naples (1458-94), and a series of gold ducats of the Popes and of various German mints, and other coins, 597 in all. *From the Dewick Bequest.*

A number of Mexican Revolutionary Coins, viz., a 5 centavos, 1914, struck at Durango; a 2 centavos, no date, struck at Parral; a cast silver peso of Sinaloa; five silver and eight copper coins of Oaxaca; a dollar struck by Calixto at Cuencame; and a peso of Tasco, 1915. *Presented by Howland Wood, Esq., of New York.*

A series of 348 modern coins in various metals of European states. *Presented by Henry Garside, Esq.*

A collection of 117 paper notes issued by German towns during the War. *Presented by Heer M. Frankenhuis.*

### 5. Oriental Series.

Two silver coins of the Sassanian king Khusru II. *Presented by L. A. Lawrence, Esq., F.S.A.*

A series of 45 silver coins with Sassanian types struck by the early Arab conquerors of Persia. *Presented by M. J. de Morgan.*

A silver coin of an Arab governor of Persia. *Presented by Sir Evelyn Grant Duff, K.C.M.G.*

A very rare gold dinar of the Seljuk Alp Arslan struck at Baghdad in 461 A.H. *Presented by Sir Evelyn Grant Duff, K.C.M.G.*

A rare bronze coin of the Othmanli Sulaiman I struck at Damascus in 968 A.H. *Presented by the Hon. W. Lindsay.*

Three silver coins of the Sultan of Tarim. *Presented by Capt. W. H. Lee-Warner.*

Two silver and 2 bronze coins of the Imam of San'a. *Presented by O. N. Bakewell, Esq.*

A gold Meshhed pilgrim's token and a silver kran of Muzaffar al-Din, Shah of Persia. *Presented by Sir Evelyn Grant Duff, K.C.M.G.*

A very rare bronze coin of the Indo-Greek king Archebius; another of Kadphises and two silver White Hun coins with Sassanian types. *Presented by Lt.-Col. H. E. Dean, I.M.S.*

A unique gold tanka of Shihab al-Din Omar 715 A.H. and a series of silver tankas of other sultans of Delhi; a very rare gold tanka of Ghiyas Shah of Malwa 862 A.H.; a unique gold muhur of Akbar, Urdu Zafar Karin 985 A.H.; rare muhurs of Akbar, Jaunpur 979 and Dehli 972 A.H.; of Shah Jahan, Agra 1047 A.H. and Burhampur 1050 A.H.; and a series of Moghul rupees, all from the Thornhill collection.

Seventy Indian coins, gold, silver and bronze of Vijayanagara, the Moghul Empire, the Western Satraps, and the modern native states of Baroda, Indore and Kacch. *Presented by S. M. Edwardes, Esq., C.S.I., C.V.O.*

A series of 58 coins, including rare silver coins of the Moghul Empire, and of the kings of Oudh, Indore, Baroda and Garhwal. *Presented by the late Colonel W. F. Badgley.*

Two gold pagodas of Krishna Raja of Mysore. *Presented by the Bombay Branch of the Royal Asiatic Society.*

#### 6. Medals.

A specimen in silver of the medal by Sir W. Goscombe John, R.A., commemorating the investiture of H.R.H. the Prince of Wales at Carnarvon in 1914. *Presented by Her Majesty the Queen.*

Three very rare cast bronze Italian Renaissance medals, viz. the Sultan Mohammad II, by Bertoldo di Giovanni (about 1481), a very fine specimen of the artist's only signed medal; Clemente and Giuliano della Rovere, by Giovanni Candida (between 1493 and 1497); and Cornelia Siciliana, by Pastorino (about 1540-50). *Presented by Henry Van den Bergh, Esq., through the National Art Collections Fund.*

Eight lead Italian Renaissance medals, seven by Pastorino and one by Domenico Poggini. *Presented by Sir Hercules Read, P.S.A.*

A rare bronze medal of the Genoese Admiral, Giovan Andrea Doria, 1599.

A rare gold medal of the death of Gustavus Adolphus, 1632.

Four bronze castings of medals by Sir Edward Poynter, and an electrotype of his Cambridge Prince Consort Prize Medal. *Presented by the Executors of the late Sir Edward Poynter.*

Original model of the medal by Mr. Edmund Dulac, representing the return of the German Fury "nach Hause," in parody of the German medal "nach Paris, 1914." *Presented by the artist.*

Bronze medallion of the landing on V Beach from the "River Clyde," by E. Carter Preston and G. H. Tyson Smith. *Presented anonymously.*

Silver medal of the Peace, by E. Carter Preston. *Presented by the United Grand Lodge of England.*

A collection of 347 German medals relating to the Great War, including a number by L. Gies. *Presented by Heer M. Frankenhuis.*

Bronze medal struck in anticipation of the expected entry of the German troops into Paris in 1914. *Presented by Captain Amundsen.*

Bronze medal of Cardinal Mercier, by J. Jourdain. *Presented by M. Fernand Crooy.*

Bronze medal of the dedication of the Joan of Arc Park on 6th January, 1919. This medal was brought to England by R 34. *Presented by the Joan of Arc Statue Committee.*

Bronze medal of the trans-Atlantic flight of N.C.4. *Presented by Glenn H. Curtiss, Esq.*

#### V.—Students and Visitors.

The number of visits made to the Department of Coins and Medals during the year 1919 was 2,424. The average for the last ten years before the closing of the Exhibition was 3,854. The Department was in working order by 1st January, 1919, but in July the Exhibition was dismantled with a view to fitting the new Exhibition Room and has since remained closed.

*G. F. Hill.*

## BRITISH MUSEUM (NATURAL HISTORY).

STATEMENT of PROGRESS made in the ARRANGEMENT and DESCRIPTION of the COLLECTIONS, and ACCOUNT of OBJECTS added to them, in the year 1919.

## GENERAL PROGRESS.

*Visitors, &c.*

The total number of visitors to the Natural History Museum during 1919 was 455,736, as compared with 422,805 in 1918. This is the largest total since 1913, the year before the war, when the number was 486,320. The attendance on Sunday afternoons was 56,673, as against 46,109 in the previous year. The average daily attendance for all open days was 1,255; for week-days, 1,286; and for Sunday afternoons, 1,090.

The number of persons who attended the demonstrations of the Official Guide during the year was 12,236. His services were placed at the disposal of the officers and men of the Indian Contingent attending the Peace Celebrations, many parties being conducted by him on special tours round the Museum. Parties from the R.A.F. Armament School, Uxbridge, from the United States troops in London at that time, and from various Welfare Associations, Military Hospitals, &c., also availed themselves of his guidance on special tours.

All the exhibition galleries have been re-opened to the public daily, on week-days; but, owing to the increased cost for constables for warding them, the Botanical Gallery and some of the back galleries closed during the war have not been re-opened on Sundays.

The exhibition cases of British Nesting Birds and British Mammals have been restored to their proper positions in the Bird Gallery and Western Pavilion, and the collection of shells has been re-arranged in the Shell Gallery.

*Representation of the Museum on Committees, &c.*

Dr. G. T. Prior, F.R.S., has been nominated to represent the Museum on the Chemical Industries Committee and the Miscellaneous Committee of the Imperial Mineral Resources Bureau.

Dr. F. A. Bather, F.R.S., Assistant Keeper of Geology, has been appointed to serve on a special Committee of the Museums Association to consider a proposal of the Ministry of Reconstruction to transfer the control of municipal Museums to the local education authority.

Mr. M. A. C. Hinton was delegated by the Trustees to represent the Museum at the 30th Congress of the Royal Sanitary Institute, held at Newcastle-upon-Tyne in July.

*Swiney Lectures.*

Dr. J. D. Falconer, Swiney Lecturer for 1919, gave a course of lectures in the Lecture Theatre of the Imperial College of Science on "The Geology and Mineral Resources of the British Possessions in Africa." The total attendance for the course was 1,290, or, on an average, 108 persons per lecture.

The Trustees have accepted Dr. Falconer's suggestion to take "The Modelling of the Earth's Crust" as the subject of his next course of lectures under this foundation to be given in November and December, 1920.

*Marine Boring Animals.*

An exhibit of Marine Boring Animals has been placed in the Central Hall, and a Guide, forming No. 10 of the Economic Series, has been prepared to explain it.

*Godman Memorial.*

A National Committee has been formed to establish a memorial to the late Mr. F. D. Godman, F.R.S., a Trustee of the British Museum and a most generous benefactor of the Zoological and Entomological Departments, who enriched during his lifetime the Entomological collections by many thousands of specimens. The Committee propose to place in the Museum a bronze medallion portrait of Mr. Godman and his coadjutor in his scientific work, the late Mr. Osbert Salvin, F.R.S.

In memory of her husband, Dame Alice Godman, D.B.E., has endowed a Trust with a sum of £5,000 to form a Godman Exploration Fund, with the object of providing means for collecting specimens for the Natural History Museum by way of exploration.

*Antarctic Whales.*

Further papers have been received from the Colonial Office, the Governor of the Falkland Islands, and the High Commissioners for Australia, New Zealand, and the Union of South Africa on the subject of Whaling operations in South Georgia, the South Shetlands, and other southern localities.

A detailed report on southern whaling, including analyses of the statistics received, has been prepared by Dr. Harmer, and sent in full to the Colonial Office, attention being specially called to the necessity for the immediate protection of the Humpback and probably of the Right Whale. Whaling operations in sub-Antarctic waters commenced at the end of 1904, the Humpback constituting over 90 per cent. of the total catch during the early days of the industry. This species of whale has now become, after no more than fifteen years, an unimportant constituent, and perhaps a vanishing quantity, the great majority of the whales at present being captured belonging to two other species, the Fin Whale and the Blue Whale. Although these are still obtained in large numbers, there are already signs which may indicate the probability of a



serious falling off in their numbers in the near future ; and the security of the whales and of the whaling industry gives rise to much anxiety. The oil obtainable from whales was shown to be a national asset of vital importance during the War, and the necessity of avoiding over-production leading to the extermination of the whales is admitted by all those who know the facts. The urgency of the question has been recognised by the Trustees, who have made representations to the Colonial Office on the importance of taking action, including international action if necessary, in order to prevent an undue depletion of the stock of whales.

The Falkland Islands Committee, on which the Museum was represented by the Director of the Natural History Departments, has completed its labours, and has prepared a Report, which was signed by all its members. This report contains the recommendation that an expedition should be equipped and maintained for a period of years, for the purpose of investigating whaling and other problems in southern waters, with the view of obtaining scientific evidence on which protective measures could be based. This recommendation has received the full support of the Trustees.

#### *Sealing in the Falkland Islands.*

A report was received through the Governor of the Falkland Islands and the Colonial Office on the sealing operations in that Dependency for the season ending 30th September, 1918, the results showing a slight decrease in the total catch on that for the preceding year. The Colonial Office has been asked to encourage the delivery of satisfactory annual reports, and to be on the look-out for oversealing—special emphasis being laid on the importance of maintaining a Seal Reserve for the permanent protection of these animals.

#### *Reindeer in South Georgia.*

Further information has been received with regard to the progress of the experiment of the acclimatization of reindeer in South Georgia. A herd of 70 animals was observed in the early part of 1919, mostly full-grown and in excellent condition. This news is specially interesting in view of a serious accident which took place in August, 1918, when 17 reindeer were lost by falling over a precipice.

With regard to the destructive effect said to be produced by sheep on the native "tussac" grass, it has been found that when sheep have been grazing the grass dies off for about three years, and is then capable of re-establishing itself only from seed. The grass will not spring up again from the roots even when left to itself. This result is not produced by the grazing of reindeer or goats.

#### *Protection of Animals.*

Further papers (ordinances, regulations, &c.) with reference to the protection of animals in the Dominions and various British Colonies and Dependencies have been received from the Colonial

Office. The papers cover a wide range, dealing with Australia, Nigeria, Quebec, Yukon Territory, New Brunswick, and British Honduras. The Acts passed seem to indicate the existence of a real desire to protect such species as are not economically injurious, and the Trustees have informed the Colonial Office that they view with interest and sympathy the efforts made for the preservation of the native fauna in the Dominions and Colonies.

#### *Other Investigations.*

At the request of the Army Medical Department, Mr. C. T. Regan, F.R.S., Assistant Keeper of Zoology, visited the Isle of Sheppey in order to inspect the marshes, and gave advice with regard to the introduction of fishes which would eat mosquito larvæ.

Mr. Regan acted as Secretary to the Fisheries Committee of the British Science Guild, and prepared a memorandum on scientific work in relation to fisheries. This was adopted by the Guild and sent by them to the Government Departments concerned.

An inquiry was received from the Director of Army Contracts, Ministry of Munitions, as to the nature and origin of beetles and maggots found in large quantities in condemned bacon received in Egypt from Australia. A reply was sent to the effect that the beetles in question comprised two species which occurred in both countries, and were in fact cosmopolitan in their distribution; and that therefore it was not possible to say where the bacon had become infested.

Advice has been asked by a firm of engineers, and given, in connection with trouble caused by the growth of mussels on the inner surface of pipes carrying sea-water. The matter was immediately concerned with the erection of a large electricity-supply powerhouse near Edinburgh.

An inquiry from the Commonwealth of Australia as to the kinds of fish which could be properly described as "Sardines" without infringing the Merchandise Marks Act having been referred to the Museum by the Board of Agriculture and Fisheries, the Board were informed that in the opinion of the Museum, in this country the term Sardine is restricted to *Sardina pilchardus*, of the Atlantic and Mediterranean, a fish known as the Sardine in its immature condition and as the Pilchard when adult.

#### *Bequests.*

A pair of splendid Buffalo horns, said to be of record length, have been bequeathed to the Museum by the late Mr. Arthur Forbes, C.S.I., subject to the condition that the horns might remain in the custody of his son, Barré Cassels Forbes, during his life-time.

A collection of drawings of Algae, comprising 1,796 sheets, representing not only the British flora but many foreign species, has been bequeathed to the Museum by the late Prof. G. S. West, of Birmingham University.

The mounted specimens received during the year from the Trustees of the Rowland Ward Bequest include examples of a fine specimen of the Lado race of the White Rhinoceros, a Tibetan Argali from Ladak, and a Reedbuck from N.E. Rhodesia.

#### *Presents.*

Lt.-Colonel G. P. Cosens has generously placed a sum of money at the disposal of the Museum for continuing the work of collecting in ex-German East Africa (now Tanganyika Territory) commenced in the previous year out of funds provided by Lord Swaythling.

The total number of presents received during the year by the several departments of the Museum was 1,712. Many of these comprised large numbers of individual specimens.

The gifts of special interest or value were unusually numerous and important. The most noteworthy was the great collection of big game trophies of the late Captain F. C. Selous, D.S.O., the famous African hunter, explorer and naturalist, presented by his widow, Mrs. Selous.

This collection consists of 550 specimens of a very high average standard of size and perfection. Prominent among the specimens are the following mounted heads:—

6 Moose, 10 Wapiti, 18 Caribou, 3 Giraffes, 8 Kudu, 6 Buffaloes, 11 Eland, 13 Waterbuck, 30 Hartebeest, 10 Tiang, 4 Bontebok, 6 Zebra, 7 Gerenuk, 18 Impala, 20 Gemsbuck, 3 Situtunga, 4 Lesser Kudu, 22 Dik-diks, 16 Sable Antelope, 10 Roan Antelope, and 18 Grant's Gazelle.

The collection also contains some fine skulls and horns of the Black and White Rhinoceros, a pair of large Elephant tusks, and mounted specimens of the following:—

an African Lion and Leopard, a Sable Antelope, a Roan Antelope, a Serval Cat, 19 Dik-diks, and 2 Colobus Monkeys.

In addition there is a fine series of 18 Lion skins and a representative collection of mounted heads of the smaller African Antelopes, such as Duikers, Oribis, Reedbucks and Bushbucks.

A catalogue of the sporting trophies will be prepared for publication, and the specimens will be kept together as a single collection for a period of twenty years.

Mrs. Selous' generous gift to the nation also included the very fine collection of Birds' eggs formed by her husband, every clutch in which was collected by himself and bears his labels in his own handwriting.

By Deed of Gift Mr. E. Dukinfield Jones has made over to the Museum his valuable collection of Brazilian Lepidoptera, consisting of nearly 20,000 specimens of which 300 are types, contained in 3 cabinets and 239 boxes, the only conditions imposed being that the collection be kept intact during his life-time and that he be permitted to have access to it for purposes of study, &c.

Among the other gifts of special importance may be mentioned those from :—

- Mr. J. C. Dollman—The collections of insects made by his son, the late Hereward C. Dollman. The two cabinets containing the collection of Lepidoptera from North-Western Rhodesia will be kept separate as a whole for a period of fifteen years.
- The Governor of the Falkland Islands—A zoological collection, including parts of whales and a Weddell's Seal, made by Mr. A. G. Bennett at Deception Island, South Shetlands.
- Mrs. Brewitt-Taylor—A collection of butterflies of the genus *Parnassius* formed by her husband, the late Major R. Brewitt-Taylor.
- Mrs. May F. Ogilvie—The valuable collection of British Birds, consisting of 1,789 skins, made by her husband, the late F. M. Ogilvie, formerly surgeon at the Oxford Eye Hospital.
- M. Fernand Lataste—A large and valuable collection of mammals, reptiles, and batrachians, forming the basis of the descriptive work produced by him from 1875 to 1890.
- Mr. Gregory M. Mathews—A collection of 318 birds from Norfolk and Lord Howe Islands.
- Mr. Robert P. Page—A fine mounted specimen of a King Salmon, weighing 62 lbs., caught by him by rod and line in the Campbell River, British Columbia.
- Mr. H. C. Robinson and Mr. C. Boden Kloss—An important series of specimens representing the vertebrate fauna of the Oriental region, collected in South Annam and Cochin China.
- Mrs. E. S. Gregory—Her herbarium of British plants.
- Mr. F. C. Adams—A fine collection of British Diptera, together with the two mahogany cabinets in which the specimens are contained.
- Major S. S. Flower—The skull and horns of a Black-faced Highland Ram, bred on the Glencasley Estate, Sutherland; also a number of manuscripts, scientific papers, &c., of his father, the late Sir William Flower, K.C.B.

#### *Addo Bush Elephants.*

The Trustees are in communication with the Government of the Union of South Africa with a view to obtaining for the Museum a male and female specimen (hide and skeleton) from the herd of Elephants in the Addo Bush, near Port Elizabeth, almost the last survivors of the South African Elephant, the extermination of which for economic reasons has been decided on by the Cape Provincial Council.

#### *Expeditions.*

The following collecting expeditions, for the benefit of the Museum, were arranged:—

- (a) Capt. Guy Shortridge—in Rhodesia.

- (b) Mr. W. J. Potter—a zoological exploration of ex-German New Guinea and New Britain.
- (c) Mr. Willoughby P. Lowe—a zoological exploration of the West Coast of Africa.
- (d) Mr. H. C. Robinson, Director of the Federated Malay States Museums—assistance in a collecting expedition to the mountains of North Luzon and Mindoro, Philippine Islands.

#### *Purchases.*

The grant-in-aid for Purchases has been restored to the pre-war amount, namely, 6,500*l.*

The principal purchases made during the year include the skull and tusks of an African male elephant shot by Major C. Christy in the Belgian Congo; seven complete skeletons of gorillas; 158 bird-skins from the Canary Islands and Cape Verde Archipelago (Bannerman collection); a collection of isopod crustaceans, including many type specimens; an exceptionally fine specimen of a large vase-shaped sponge, from Greece; types of marine, land and fresh-water mollusca; 3,532 British specimens of minute parasitic Hymenoptera of the family Mymaridæ, collected by the late C. O. Waterhouse, I.S.O.; 5,000 specimens of Rhynchota and Coleoptera, including 250 types, being the ninth instalment of the Distant collection of insects; a collection of 93 microscope-slides taken from successive levels in the shallow seam of coal in Staffordshire, with 67 mounted micro-photographs of the same; fossil corals and brachiopods from the carboniferous limestone of Britain and Belgium collected by the late Dr. Arthur Vaughan; vertebrate fossils from the collection of the late W. E. Balston; various minerals, including specimens of copper and uranium ores from the Congo; scheelite (in large crystals) from Arizona; slices of a meteoric iron found in 1894 at Sams Valley, Jackson Co., Oregon, U.S.A.; a meteoric stone, weighing 2,797 grams, found near Plainview, Hale Co., Texas, in 1913; and a number of botanical specimens, including ferns from New Zealand and the South Sea Islands, and 1,094 flowering plants and ferns from Central Paraguay.

#### *Lantern Slides.*

Series of lantern-slides illustrating protective coloration and economic zoology have been acquired, the negatives being the property of the Trustees. These are frequently lent to approved persons for lecture purposes.

#### *Exchanges and Gifts of Duplicates.*

Exchanges and gifts of duplicate specimens have been made with various institutions and persons.

Permission has been given to Lord William Percy to store temporarily in the Museum, at his own risk, nine cabinets of his collection of ducks.

*Publications.*

The following new works on natural history have been published during the year :—

British Antarctic ("Terra Nova") Expedition, 1910.  
Natural History Report. Zoology. Vol. v., No. 2.  
Coelenterata, Pt. II. Madreporaria. (a) On *Favia Conferta*, Verrill, with notes on other Atlantic species of *Favia*. By G. Matthai, M.A. Pp. 69—96 : 2 text-figures, 4 plates. 4to. 9s.

Report on Cetacea stranded on the British coasts, No. 6.  
Cetacea stranded during 1918. By S. F. Harmer, sc.D.,  
F.R.S. Pp. 24 : 2 text-figures and 1 map. 4to. 3s. 6d.

Studies on Acari. No. 1. The Genus *Demodex*, Owen.  
By S. Hirst. Pp. (vi.) 44 ; 13 plates, 4 text-figures.  
Roy. 8vo. 10s.

Economic Series :—

No. 9.—Birds beneficial to Agriculture. By F. W.  
Frohawk. Pp. vi., 47 : 22 plates. 8vo. 2s.

No. 10.—Marine Boring Animals injurious to submerged  
structures. By W. T. Calman, D.Sc. Pp. 34 : 21  
text-figures. 8vo. 1s.

New editions have been issued of the following Guide-books and pamphlets :—

Guide to the Exhibited Series of Insects. Third edition.  
Pp. v., 65 : 62 text and full-page illustrations. 8vo. 2s.

Guide to the Gallery of Birds. Pt. II. Nesting series of  
British Birds. Third Edition. Pp. 62 : 4 plates. 4to.  
1s.

Guide to the British Mycetozoa. Fourth edition. Pp. 62 :  
52 text-figures. 8vo. 1s.

Special Guide No. 7.—Guide to the Specimens and En-  
larged Models of Insects and Ticks . . . illustrating their  
importance in the spread of Disease. Second edition.  
Pp. 46 : 14 text-figures. 8vo. 1s.

Instructions for Collectors :—

No. 1.—Mammals. Fifth edition. Pp. 8 : 4 text-figures.  
8vo. 6d.

No. 4.—Insects. Sixth edition. Pp. 12 : Text illust.  
8vo. 6d.

No. 5.—Diptera (Two-winged Flies). Fourth edition.  
Pp. 16 : Text illust. 8vo. 6d.

No. 6.—Mosquitoes (Culicidæ). Fourth edition. Pp.  
8 : 1 plate. 8vo. 6d.

The undermentioned works are in preparation :—

"Terra Nova" Antarctic Report. Further sections, inclu-  
ding Birds, by Percy R. Lowe, O.B.E. ; Ostracoda, by

- R. W. D. Burney ; Pteropoda, by Miss A. L. Massy ;  
 Anatomy of Pelecypoda, by R. H. Burne ; Amphineura  
 and Heteropoda, by T. J. Evans ; Larvæ of Echinoderma,  
 by Prof. E. W. MacBride, F.R.S. ; Sponges, Antarctic, by  
 R. Kirkpatrick, Non-Antarctic, by Prof. A. Dendy.  
 Monograph of Lacertidæ, by G. A. Boulenger, F.R.S.  
 Catalogue of Moths, Supplement, Vol. ii., by Sir G. F.  
 Hampson, Bart.  
 Handbook of British Culicidæ (Mosquitoes), by W. D.  
 Lang, SC.D.

*Demonstrations.*

With the sanction of the Trustees, a series of five demonstrations on the subject of Vertebrate Animals was given at the Museum by Mr. W. S. Rowntree, B.S.C., F.L.S., on Saturday afternoons, fortnightly, during the Lent term, under arrangements made by the University of London Extension Board.

GENERAL LIBRARY.

The additions to the General Library during the year have been :—

By purchase	-	92 volumes.			
By transference					
from other					
Departments	-	2 volumes.			
By donation	-	431 volumes, 17 maps, and 23 photographs.			
Total	-	<u>525</u>	<u>17</u>	<u>23</u>	

All the volumes and maps have been catalogued, press-marked and put in their places, while 310 volumes have been bound in 194, and 2 have been repaired.

The extent of the collection on the 31st of December, 1919, was 47,758 volumes, 5,948 maps, and 1,105 photographs (not including those in the Owen collection of drawings, &c.).

The accessions to the Departmental Libraries have also been catalogued as they came in, and duplicate transcripts of the titles have been returned with the books.

Altogether 1,943 title-slips have been written, 138 re-written, and 2,381 revised (independently of those prepared for printing).

There are now, on a rough estimate, 105,127 volumes (exclusive of continuations and minor separata) and 6,289 maps in the whole building.

The number of visits paid to the General Library during the year 1919 by Students and others (irrespective of the Staff and persons to whom the use of a key is granted) was 1,418.

Donations have been received from a great number of Museums, Academies, and other corporate bodies, as well as from personal donors.

The printing of the Supplement to the Library Catalogue has been continued, title-slips to the end of "FYS" have now been set up in type and printed off as far as "FOUR," and the first three sheets of the "Addenda and Corrigena" have been also printed off.

#### INDEX OF THE GENERA AND SPECIES OF ANIMALS.

During the past three years considerable progress has been made with this Index, under Mr. C. Davies Sherborn's charge, and some 90,000 references have been added to the manuscript. The letter "T" of authors has now been reached. The manuscript has been continuously and extensively consulted by the staff and by students, whilst many enquiries have been answered by Mr. Sherborn in correspondence, which has been greatly increased owing to the many practical uses to which natural science is now applied, necessitating accurate nomenclature of the animals referred to.

Further publication by Mr. Sherborn of bibliographic data has not been necessary during the past year; but a large draught has been made upon his manuscript by Mr. Gregory Mathews and Mr. Tom Iredale for their "Birds of Australia" and "Mollusca of Australia."

#### INDEX MUSEUM AND MORPHOLOGICAL COLLECTIONS.

From the Summer of 1917 to the Spring of 1919, the Index Museum suffered an entire depletion of its staff, owing to the exigencies of Military Service or service in connection with the war. During this time, however, two table-cases containing exhibits and diagrams dealing with the subject of Food Economy, and showing the nutritive values of foods derived from Plants and Animals, respectively, were placed in the Central Hall. The work entailed in connection with these two cases was done by the Museum Lecturer and Guide, Mr. J. H. Leonard. At this time also, the Army Biscuit Enquiry case—the result of research work by Mr. J. H. Durrant (Entomological Department) and Col. W. O. Beveridge, R.A.M.C.—was re-exhibited at the special request of the War Office.

February, 1919, saw the return of one member of the Index Museum staff, and immediate steps were taken to inspect all the spirit preparations in the Bays of the Central Hall that might have suffered evaporation or damage during the five years of war. Of these, 200 jars containing specimens and dissections were re-spirited, and, in several cases, repairs and re-sealings were also carried out. A valuable collection of specimens showing several species of the Pterobranch *Cephalodiscus*, obtained by the "Terra Nova" Antarctic Expedition, was also transferred for more careful preservation from the original storage-jars to cylindrical museum-jars, and was re-spirited. Attention was then given to the Mammalian Dentition case in Bay I of the Hall, and three small skulls of Insectivores, needed to complete the series, were prepared, and placed on exhibition.



Of the progress of Index Museum work for the current year (1919), the following is a summary :—A model of the Human Body Louse (*Pediculus humanus*), enlarged 100 diameters, has been placed on exhibition in the Pathogenic Insect case in the Central Hall. This model is of special interest, as the late war has shown the Louse to be the disseminating agent of Trench Fever, as well as of Typhus, and of European Relapsing Fever. It is intended to add to the case other enlarged models of the adult mouth-parts, and of the eggs and larva respectively.

A general dissection of a young Porpoise (*Phocæna phocæna*), showing the skeleton and viscera *in situ*, also the relationship of the urinogenital organs to the vestigial pelvic bones, has been made for Bay II of the Index Museum ; and an additional exhibit has been added to the Mimicry Case in the form of the egg-cocoons of a Scale Insect (*Naiacoccus serpentinus*), which closely resemble the droppings of birds.

Much time and thought has been given to the completion of details for an index case dealing with the elements of structure in Vertebrates generally, which is intended to form one of four table-cases as an introductory series to Animals, Plants, and Rocks.

All labels for this case are now in the printer's hands, and certain additional preparations and drawings have been made ; so that it is hoped that very shortly the final fitting up can be done, and the case be duly exhibited in the Central Hall.

The necessary work of re-camphoring all cases in charge of the Index Museum has been undertaken.

*Sidney F. Harmer,*  
Director.

British Museum (Natural History),  
1 April, 1920.

## DEPARTMENT OF ZOOLOGY.

## I.—Arrangement and Conservation.

## MAMMALIA.

*Mammal Galleries.*

No special alterations in the arrangement of the Mammal Galleries have been made during the year; and work has been confined in the main to the installation of new specimens, and the re-writing and printing of such labels as required modification in order to bring them up to date.

The additions to the exhibited series in the Mammal Galleries and Corridors include many specimens presented by the Rowland Ward Trustees, among them:—In the Primates: an Indian Langur Monkey (*Pithecus entellus*), a Guereza (*Colobus abyssinicus*), a Miritiba Howling Monkey (*Alouatta ululata*), a Capuchin (*Cebus apella*), a Lion Marmoset (*Leontocebus rosalia*), a Sifaka (*Propithecus deckeni*), and a small-toothed Lemur (*Lepidolemur microdon*). In the Chiroptera: three interesting additions, a Philippine Fruit Bat (*Acerodon jubatus*), an East Australian Fruit Bat (*Pteropus poliocephalus*), and a Javelin Vampire Bat (*Phyllostoma hastatum*). In the Carnivora: a Bay Lynx (*Felis* [*Lynx*] *rufa*), a Fishing Cat (*Felis viverrina*), a Striped Hyæna (*Hyæna striata schillingsi*), a Kit Fox (*Vulpes velox*), a Chinese Fox (*Vulpes hoole*), an adult and young Venezuelan Fox (*Cerdocyon aquilus*), a Crab-eating Raccoon (*Procyon cancrivora*), a Stoat (*Mustela erminea stabilis*), an East Himalayan Paguma (*Paguma grayi*), a Nepal Manoori (*Paradoxurus strictus*), a Panama Kinkajou (*Potos flavus megalotus*), a Coati (*Nasua narica*), a Marsh Mongoose (*Mungos paludinosus*), and an adult and young specimen of the Merida Skunk (*Conepatus mapurito*). In the Rodentia: a Russian Dormouse (*Dryomys nitidula*), two British Bank Voles (*Evotomys glareolus britannicus*), a Field Vole (*Microtus agrestis*), a Tree Porcupine (*Coendou pruinus*), and a group of Harvest Mice (*Micromys minutus*), adult, young, and nest. In the Ungulata: a Northern White Rhinoceros (*Rhinoceros simus cottoni*) from the Lado Enclave, a very important addition; also a fine specimen of Hodgson's Argali (*Ovis ammon hodgsoni*), a Merida Brocket (*Mazama bricenii*), and a Reed Buck (*Cervicapra arundinum*). In the Edentata: a Two-toed Sloth (*Choloepus didactylus*), and a Three-toed Sloth (*Bradypus tridactylus*). In the Marsupialia and Monotremata: two specimens of Cuscus (*Phalanger maculatus*), and a Spiny Anteater (*Echidna aculeata*).

Other additions to the Mammal Galleries include the mounted heads of two Red Deer (*Cervus elaphus scoticus*) from New Zealand, presented by Miss A. Blewitt; a newly born calf of the European Bison (*Bos bonasus*), presented by the Zoological Society of London; and two skulls of the Pamir Argali (*Ovis ammon poli*) belonging to the collection of the late Mr. A. O. Hume, c.B., presented by Mrs. Ross Scott.

The young Malay Elephant has been removed temporarily from the Central Hall, where it was unprotected from dust, to one of the Giraffe cases in the Eastern Corridor on the first floor.

*Whale Room.*—To the series of Cetacean casts have been added paddles of the North Atlantic Right Whale (*Balaena glacialis*) and of a Killer Whale (*Orcinus orca*), showing the paddles both before and after dissection; and the cast of a White-sided Dolphin (*Lagenorhynchus acutus*). A model of Cuvier's Beaked Whale (*Ziphius cavirostris*) was presented by Mr. A. H. Bishop.

*Study Series.*—During the earlier months of the year preparations were made for the return of the part of the collection which had been carried to Exeter for safety during the war. The removal from Exeter to London took place in April. Much material stored temporarily in special places of safety within the Museum was also brought out and unpacked.

The disturbances due to the war have necessitated re-arrangement of the whole collection. This work was proceeded with continuously throughout the months April to December, and complete order has now been restored in all groups other than the Marsupials.

It is desirable to save "type" specimens from all unnecessary wear and tear. Therefore, during the work of re-arrangement, all the types of the smaller species have been extracted from the general collection and they have been placed in certain cabinets now reserved exclusively for the accommodation of types.

The numerous accessions received during the year have been punctually dealt with; and the usual work of skull preparation, re-making of skins (when necessary), labelling, registering, and incorporating in the collection has been performed.

The thanks of the Trustees are due to the large number of voluntary workers whose combined efforts have rendered possible the performance of so much work by this section of the department during the past year. Among these volunteers may be mentioned Mr. R. C. Wroughton, Mr. T. B. Fry, Miss W. M. Davidson, Major R. E. Cheesman, Captain Kershaw, Mr. Hugh Smith, Mr. Larkin, the Hon. Ivor Montague, Miss C. Janson, Miss Owen, and Miss Stevens.

In addition to his work in connexion with the Mammal Survey of India by the Bombay Natural History Society, Mr. Wroughton, with the assistance of Mr. Fry and Miss Davidson, has been engaged upon the preparation of a list of the types in the collection. Major Cheesman has given invaluable help in working out the large collections received from Persia and Mesopotamia. Capt. Kershaw and the Hon. Ivor Montague have given much assistance in connexion with African mammals.

A number of casts of Cetacean heads, paddles and valves of the spiracle have been made. The arrangement of the skeletons has been rendered difficult by the want of sufficient cabinet-accommodation.

*Abnormalities and hybrids.*—To this series have been added the mounted head of a cross between a male Wapiti (*Cervus canadensis*)

and a female Red Deer (*Cervus elaphus scoticus*); and two pairs of cast antlers belonging to the same animal, born at Craig Lodge, Dalmally, Scotland, all presented by Walter Jones, Esq.

#### AVES.

The cabinets containing the collections of birds and eggs have now been moved from the Bird Gallery, where they had been placed for greater safety during the war. They have been reinstated in the Bird Room, and the groups of the Nesting Series have been re-transferred from the Shell Gallery to the Bird Gallery.

The most important addition to the Bird Gallery was a mounted female of the Northern Ostrich (*Struthio camelus*) presented by the Rowland Ward Trustees.

Owing to the greatly increased growth of the collection of bird skins and the consequent congestion in the cabinets, it has been found necessary to add a further portion of the Shell Gallery to the Bird Room. This measure provides space for about forty extra cabinets, which are now urgently required owing to the excessive amount of crowding of the specimens. This lack of space is not only very detrimental to the skins but it renders it impossible to arrange the collection so as to bring it into line with recent advances in ornithological work.

During the year the study collection has been consulted by the following visitors, who have been occupied in systematic work on various groups:—Mr. H. F. Witherby, Major R. E. Cheesman, Mr. H. Kirke Swann, Capt. H. Lynes, R.N., Mr. C. Mackworth Praed, Mr. E. C. Stuart Baker, Mr. G. M. Mathews, Dr. E. Hartert, Mr. W. L. Sclater, Lord Rothschild, F.R.S., Mr. T. Iredale, Miss Annie Jackson, Dr. F. M. Chapman of New York, and Francis Harper of Washington, D.C.

The following artists, engaged in preparing drawings for forthcoming works, have also made use of the collection:—Mr. G. E. Lodge, Major H. Jones, Mr. H. Grönvold, and Mr. Roland Green.

#### DOMESTICATED ANIMALS.

The additions by presentation to the series of Domesticated Animals include the following:—The skull and horns of a Black-faced Highland Ram from the Glencasley Estate, Sutherland, presented by Major S. S. Flower; three interesting Domestic Rats, including a specimen showing the "Dutch-headed" marking, presented by H. C. Brooke, Esq.; the mounted head of a Bloodhound Champion "Colonel of Brighton," presented by the late Commander J. Haggerston; a plaster cast of the skull of "Kilburn Duke," Champion Bull Dog, presented by Messrs. Rowland Ward, Ltd.; and the head of an Indian Fighting Ram (Barwal Breed) presented by the Zoological Society of London.

#### REPTILIA AND BATRACHIA.

All the accessions have been registered and incorporated, with the exception of a large and important collection presented by Mons. F. Lataste.

## PISCES.

In the Spirit Building the bottles of specimens that formerly covered the table-cases have not been brought back in view of the fact that they will again have to be removed if the proposed extension of the iron gallery is carried out; other specimens are now accumulating on the table-cases, and it is urgently necessary that some steps be taken to relieve the congestion. The work of replenishing the collection with spirit has been carried on.

The most notable addition to the Exhibition Gallery is a large King Salmon (*Oncorhynchus quinnat*) from British Columbia, presented by Robert Page, Esq. The taxidermist has been principally engaged in preparing casts and models from specimens in the spirit collection.

## TUNICATA.

193 bottles of Plankton (including pelagic Tunicata) collected by the "Discovery" and "Terra Nova" Antarctic Expeditions have been sent to Prof. W. Garstang for determination and report.

## PTEROBRANCHIA.

Additional specimens have been exhibited and the whole series, comprising 12 specimens, has been re-labelled in a uniform manner.

## MOLLUSCA.

The cases of shells which were removed to the Bird Gallery during the war have been replaced in the Shell Gallery. Owing to part of the latter having been added to the Bird Room, certain exhibition cases have been dispensed with and some of the cabinets have been placed in the Coral Gallery immediately south of the Shell Gallery. As the systematic arrangement of the series of cases was thus interfered with, a key to the exhibited collection has been prepared for the guidance of students.

The study series of several genera has been re-arranged and some attention paid to the exhibited specimens.

The collection of microscopical preparations has been re-arranged and a card-index prepared. The examination, registration and incorporation of accessions received during the war have been continued and are now practically completed, special attention having been given to collections from South Georgia, Madagascar, Peru and W. Africa. The study of the Opisthobranchiata obtained by the "Terra Nova" Antarctic Expedition has been continued, and some time has been devoted to the distribution of other parts of the Molluscan collection formed by that expedition among specialists for study and report, and to the registration of parts of the collection already worked out. The anatomy and distribution of British Hydrobiidae have been studied in connection with the discovery of parthenogenesis in *Pa'udestrina jenkinsi*, and accounts of the anatomy and habits of the latter have been prepared.

The deposition of eggs and the care of eggs and young in the Mollusca have been studied with a view to preparing an exhibit for the gallery.

Features of the year's work reflecting post-war conditions have been the numerous consultations of the Assistant in charge of the collection by persons anxious to dispose of conchological collections and by medical officers engaged in the study of Bilharziosis.

Lieut.-Col. H. H. Godwin-Austen, F.R.S., has continued his work upon the arrangement of the Blanford and Godwin-Austen collections; and the Department is indebted to Mr. J. R. le B. Tomlin for working out and reporting upon a collection from Anguilla.

#### MYRIOPODA AND ARACHNIDA.

Special attention was again given to the forms of Arachnida injurious to domesticated animals and to vegetation. The English species of "Red Spiders" (*Tetranychus* and *Paratetranychus*) injurious to various plants and trees were collected and determined, and a paper on the group prepared for publication. The spirit collection has been almost entirely respired, and fresh naphthalene was placed in the drawers containing the dry collection.

#### CRUSTACEA AND PYCNOGONIDA.

All the accessions received during the year have been incorporated, and some progress has been made with the registration of the Norman collection. A little preliminary work has been done towards the arrangement of the Budde-Lund collection.

#### ECHINODERMA.

A great deal of time has been devoted to remounting and respiring the exhibited collection of Echinoderms.

Valuable specimens removed from the gallery, for protection during the war, have been returned.

The Starfish gallery has been repainted, and the brackets containing the exhibited series of Stalked Crinoids have been renovated.

#### WORMS.

With the help of Dr. Cognetti de Martiis and Mr. W. A. Harding, all the Oligochaetes and Leeches received during the year have been determined and incorporated.

Specimens of the exhibited series of worms have, when necessary, been remounted.

The case referring to the Miners' Worm Disease has been overhauled, and the specimens remounted.

The slide-collection of Cestodes, which is constantly growing, has been transferred to certain cabinets which formerly contained part of the Norman collection (Crustacea). This allows room for additional species to be placed in systematic order as required.

The crowded condition of the cupboards in the Spirit Building now makes it practically impossible to deal satisfactorily with the arrangement of additions to the spirit collections.

#### POLYZOA.

The exhibited series of Polyzoa has been removed from the Shell Gallery to the Coral Gallery, and re-arrangement of the specimens is being carried out.

#### HYDROZOA.

Several important collections have been labelled, registered, and incorporated. The bottles of the Norman collection of Hydroida have been replenished with spirit. Upwards of 600 microscopic slides of Hydroida have been prepared, to facilitate the examination of specimens. A scheme has been designed and adopted for the better preservation of the dried Hydroida. The large accumulations of unnamed Hydroida have been worked at, and numbers of very interesting species, which were hitherto not known to be represented in the collections, have been brought to light.

The sorting and determination of the Hydroida of the British Antarctic ("Terra Nova") Expedition, 1910, have been carried on.

#### PORIFERA.

The acquisition and exhibition of a large and very fine cup-shaped example of *Spongia officinalis*, var. *lamella*, led to the re-arrangement of the exhibited series of Horny Sponges.

The restoration of type collections, important specimens and exhibited specimens, which had been removed to places of safety during the war, was completed at the beginning of the year.

### II.—*Duplicates and Exchanges.*

#### (a) *Duplicates.*

Duplicates have been distributed to museums, scientific institutions, and individuals as follows:—

*Miscellaneous.*—Incorporated Froebel Educational Institute; Dundonald School, Wimbledon.

*Mammalia.*—Buenos Aires Museum.

*Aves.*—Oxford University Museum.

*Mollusca.*—Oxford University Museum; Mr. F. B. Jennings; Col. A. J. Peile, R.A.

*Crustacea.*—Prof. C. Chilton.

*Coelenterata.*—Public Library, Museum, and Art Gallery, Worthing.

(b) *Exchanges.*

Exchanges have been made with the following museums and individuals :—

*Mammalia.*—Museo Civico, Genova ; Castle Museum, Norwich ; Muséum d'Histoire Naturelle, Paris ; Congo Museum, Tervueren ; Frère Apollinaris-Maria, Bogotá.

*Aves.*—Major A. Brooks ; Lord William Percy ; Dr. L. C. Sanford.

*Reptilia.*— } Dr. T. Barbour ; Frère Apollinaris-Maria ; Dr.  
*Batrachia.*— } Malcolm Smith.

*Pisces.*—Indian Museum, Calcutta ; Muséum d'Histoire Naturelle, Paris.

*Crustacea.*— }  
*Pycnogonida.*— } Prof. E. L. Bouvier ; Dr. W. M. Tattersall.

*Polyzoa.*—Dr. R. S. Bassler.

*Porifera.*—National Museum, Dublin.

III.—*Departmental Library.*

The acquisitions to the Library of the Departments of Zoology and Entomology, including the Walsingham Library, during the year, obtained by purchase, presentation and exchange, consist of 58 separate works and pamphlets in 113 volumes, and 1,567 parts of periodicals and works in progress.

The work of collating, stamping, press-marking, and entering all additions in the Catalogue has been performed as usual.

The Museum Clerk in the Library, with the aid and supervision of an Assistant, has checked all the entries of Zoological works in the portion of the General Catalogue of Books which has been printed during the year.

The following donations are worthy of special mention :—  
Mathews, G. M., "The Birds of Australia," Vol. VII., part 5, presented by G. M. Mathews, Esq. ; Oberthür, Ch., "Études de Lépidoptérologie comparée," Fasc. XVI., presented by M. Ch. Oberthür ; MS. note-books, pencil-sketches, and water-colour drawings, made by the late Sir W. H. Flower, K.C.B., F.R.S., formerly Director, and a collection of Zoological pamphlets by various authors, bound in 48 volumes, presented by Major S. S. Flower.

The following is a list of Donors to the Departmental Library during the year 1919 :—

Agricultural Research Institute, Pusa, Behar, British India.

American Museum of Natural History.

Avicultural Society.

Bergen Museum.

Board of Agriculture and Fisheries.

British Ornithologists' Union.

British Waterworks Association.



- Bureau of Fisheries, Department of Commerce, Washington, U.S.A.  
 Bureau of Science, Manila.  
 Caziot, Cmdt.  
 Champion, G.C.  
 Commonwealth of Australia, Department of Trade and Customs.  
 Conchological Society of Great Britain and Ireland.  
 Conseil permanent International pour l'Exploration de la Mer.  
 Cooper Ornithological Club, California.  
 Deinse, A. B. Van.  
 Departement van Landbouw, Nijverheid en Handel; Buitenzorg,  
   Java.  
 Department of Agriculture, Federated Malay States.  
 Department of Agriculture, India.  
 Department of Agriculture, Madras.  
 Department of Agriculture, Industries and Commerce, Wellington,  
   New Zealand.  
 Department of Agriculture, New South Wales.  
 Department of Agriculture, Ottawa, Canada.  
 Department of Agriculture, Union of South Africa.  
 Department of Agriculture, Victoria, Australia.  
 Department of Agriculture, Washington, D.C., U.S.A.  
 Department of Agriculture, Wisconsin.  
 Department of Fisheries, Natal.  
 Distant, W. L.  
 Domaniewski, J.  
 Donald, C. H.  
 Eecke, R. van.  
 Entomological Society of London.  
 Entomological Society of Nova Scotia.  
 Entomological Society of Ontario, Canada.  
 Escomel, Dr. E. E.  
 Fernald, H. T.  
*Field*, Editor of.  
 Flower, Major S. S.  
 Foreign Bird Club.  
 Godman, Dame Alice, D.B.E.  
 Hamlyn, J. D.  
 Hampson, Sir G. F., Bart.  
 Herdman, Prof. W. A., C.B.E., For. Sec. R.S.  
 Imperial Bureau of Entomology.  
 Imperial Department of Agriculture, Bridgetown, Barbados.  
 Indian Museum, Calcutta.  
 Indian Research Fund Association, Simla, India.  
 Janet, Ch.  
 Janini, R. J.  
 Junta para Ampliacion de Estudios, Madrid.  
 Jurriaanse, J. H.  
 Kansas State Agricultural College.  
 Kennard, A. S.  
 Kommissionen for Havundersogelser, København.

- Kunz, G. F.  
 Laboratorio di Zoologia Generale e Agraria della R. Scuola d'Agricoltura in Portici.
- Lansdowne, Marquess of, K.G.  
 Linnean Society of London.
- Lord, C. E.
- Mathews, G. M.
- Miyake, T.
- Moore, A.
- Morice, Rev. F. D.  
 Museum of Comparative Zoölogy, Harvard College, Cambridge, Mass.
- Navás, R. P. Longinos.
- Nederlandsche Entomologische Vereeniging.
- New York State College of Agriculture, Ithaca, N.Y.
- Norske Hvalfangerforening, Sandefjord, Norway.
- Oberthür, Ch.
- Öhara Instituts für landwirtschaftliche Forschungen in Kuraschiki, Provinz Okayama, Japan.
- Pavlovic, Prof. P. S.  
 Port Elizabeth Museum, The Director of
- Ritchie, Dr. J.  
 Rockefeller Foundation, New York.
- Royal Microscopical Society.
- Royal Society for the Protection of Birds.
- Royaume de Belgique, Ministère des Colonies.
- Secretary of State for India.
- Sclater, W. L.
- Sherborn, C. D.
- Shufeldt, Dr. R. W.  
 Société Entomologique de France.
- Stationery Office.
- Swann, H. Kirke  
 Tropical Diseases Bureau, London.
- Turner, R. E.
- Universidade de Lisboa.
- University of Montana.
- University of Wyoming, Agricultural Experiment Station.
- Wintle, W. J.
- Woodward, B. B.  
 Zoological Museum, Copenhagen.
- Zoological Society of London.
- Zoological Society of New York.
- Zoological Society of Philadelphia.

#### IV.—*Publications.*

In addition to the official Catalogues and other volumes published by the Trustees (see pp. 84-85), various reports and descriptive papers have been prepared in connexion with the different

branches of the collection; and have been published for the most part in scientific journals.

For the convenience of reference the following list is appended:—

**Mammalia.**

By **OLDFIELD THOMAS, F.R.S.** :—

- “On some small Mammals from Catamarca.” *Ann. Mag. Nat. Hist.* (9), iii., p. 115.
- “The White-toothed Shrew of Palestine.” *Ib.*, p. 32.
- “On small Mammals collected by Sr. E. Budin in North-Western Patagonia.” *Ib.*, p. 199.
- “Two new Argentine species of *Akodon*.” *Ib.*, p. 213.
- “Notes on Gerbils referred to the genus *Meriones*, with descriptions of new species and sub-species.” *Ib.*, p. 263.
- “On small Mammals from Otro Cerro, Catamarca, collected by Sr. E. Budin.” *Ib.*, p. 489.
- “Two new Gerbils from Sinai.” *Ib.*, p. 559.
- “On a small Collection of Mammals from Lumbo, Mozambique.” *Ann. Mag. Nat. Hist.* (9), iv., p. 29.
- “A new species of *Euneomys* from Patagonia.” *Ib.*, p. 127.
- “List of Mammals from the Highlands of Jujuy, North Argentina, collected by Sr. E. Budin.” *Ib.*, p. 128.
- “Two new Rodents from Tartagal, Salta, North Argentina.” *Ib.*, p. 154.
- “The method of taking the Incisive Index in Rodents.” *Ib.*, p. 289.
- “The Types of the Mammals described by M. Fernand Lataste.” *Ib.*, p. 350.
- “A Synopsis of the True Mice found within the Indian Empire.” *Journ. Bombay Nat. Hist. Soc.*, xxvi., p. 417.
- “A new species of *Nesokia* from Mesopotamia.” *Ib.*, p. 422.
- “Note on the genus *Cheliones*.” *Ib.*, p. 705.
- “Some new Mammals from Mesopotamia.” *Ib.*, p. 745.

By **MARTIN A. C. HINTON** :—

- “Report on the House Rats of India, Burma and Ceylon.” *Journ. Bombay Nat. Hist. Soc.*, xxvi., pp. 59, 384 and 716.
- “The Zoology of Rats and Mice, with special reference to the future control of the Rat population.” *Journ. Royal San. Inst.*, xl., p. 44.
- “Notes on the genus *Cricetomys*, with descriptions of four new forms.” *Ann. Mag. Nat. Hist.* (9), iv., p. 282.
- “The Field Mouse of Foula.” *Scottish Nat.*, 1919, p. 177.

By **R. C. WROUGHTON** :—

- “Summary of the Results from the Indian Mammal Survey of the Bombay Natural History Society.” *Journ. Bombay Nat. Hist. Soc.*, xxvi., pp. 338, 776.
- “Change of coat in the Common Palm-Squirrel—an appeal.” *Ib.*, p. 727.
- “On the genus *Tadarida* (Wrinkle-lip Bats).” *Ib.*, p. 731.

By R. C. WROUGHTON and Miss W. M. DAVIDSON :—

“Two new forms of the ‘*Funambulus tristriatus*’ group.” *Ib.*, p. 728.

**Aves.**

By C. CHUBB :—

“Descriptions of one new species and one new sub-species of South American Birds.” *Bull. B.O.C.*, xxxix., p. 51.

“A new Genus and five new sub-species of South American Birds.” *Ib.*, p. 59.

“New South American forms.” *Ib.*, p. 70.

“A new species from British Guiana.” *Ib.*, p. 78.

“Exhibition of the first British killed example of the Needle-tailed Swift.” *Ib.*, p. 90.

“A new species from British Guiana.” *Ib.*, p. 90.

“Notes on the family Dendrocolaptidae, with suggestions for its division.” *Ann. Mag. Nat. Hist.* (9), iii, 1919, p. 273.

“New forms of South American Birds.” *Op. cit.*, iv., 1919, p. 301.

“Notes on collections of birds in the British Museum from Ecuador, Peru, Bolivia and Argentina.” Part I, “Tinamidae-Rallidae,” *Ibis*, 1919, p. 1. Part II, p. 256.

**Reptilia and Batrachia.**

By G. A. BOULENGER, F.R.S. :—

“On the Madagascar Frogs of the genus *Mantidactylus*. P.Z.S. 1918, p. 257.

“Descriptions of two new Lizards and a new Frog from the Andes of Colombia.” *Op. cit.*, 1919, p. 79.

“A List of the Snakes of West Africa, from Mauritania to the French Congo.” *Ib.*, p. 267.

“A List of the Snakes of North Africa.” *Ib.*, p. 299.

“Synopsis of the American species of *Rana*.” *Ann. Mag. Nat. Hist.* (9), iii., p. 408.

“On the genus *Lepidobatrachus*, Budgett.” *Ib.*, p. 531.

“Description of a new Dyscophid Frog from Yunnan.” *Ib.*, p. 548.

“On a new variety of *Acanthodactylus boskianus*, Daud., from the Euphrates.” *Ib.*, p. 549.

“On *Rana ornatissima*, Bocage, and *R. ruddi*, Blgr.” *Tr. R. Soc. S. Afr.* viii., p. 33.

“On a new Lizard of the genus *Latastia* from Southern Rhodesia.” *Ib.*, p. 39.

“Descriptions of three new Batrachians from the Garo Hills, Assam.” *Rec. Ind. Mus.* xvi., p. 207.

“An interesting Addition to the Batrachian Fauna of Kashmir (*Aelurophryne mammata*).” *Ib.*, p. 469.

“Un cas d'évolution ontogénique à rebours chez un Léopard africain (*Eremias lugubris*, A. Smith).” *C.R.Ac. Sci. Paris*, clxviii., p. 78.

- “Un cas intéressant de dimorphisme sexuel chez un Serpent africain (*Bothrolycus ater*, Günther).” *Ib.*, p. 666.
- “Sur le genre *Sphaosaurus*, Rhynchocéphalien du Kimberidgien de Cerin,” *Op. cit.*, clxix., p. 605.
- “Batraciens et Reptiles recueillis par le Dr. C. Christy au Congo belge dans les districts de Stanleyville, Haut-Uelé et Ituri en 1912-1914.” *Rev. Zool. Afr.* vii., p. 1.
- “Descriptions d’un Ophidien et d’un Batracien nouveaux du Congo.” *Ib.*, p. 186.
- “Sur les Lézards du genre *Acanthodactylus*, Wiegmann.” *Bull. Soc. Zool. France*, xliii., p. 143.
- “Sur l’*Agama tournevillei*, Lataste, du Sahara algérien.” *Op. cit.*, xlv., p. 111.
- “Le Lézard vert de la Péninsule ibérique, ses variations et sa distribution.” *Bol. Soc. Espan. Hist. Nat.*, xix., p. 59.
- “Sur le *Pelobates wilsoni* Boscá.” *Ib.*, p. 293.

### Pisces.

By G. A. BOULENGER, F.R.S. :—

- “On a collection of Fishes from Lake Tanganyika, with descriptions of three new species.” *P.Z.S.* 1919, p. 17.
- “On some new Fishes from near the West Coast of Lake Tanganyika.” *Ib.*, p. 399.
- “A List of the Freshwater Fishes of Sierra Leone.” *Ann. Mag. Nat. Hist.* (9), iv., p. 34.
- “L’évolution est-elle réversible? Considérations au sujet de certains Poissons.” *C. R. Ac. Sci. Paris*, clxviii., p. 41.
- “La distribution en Afrique des Barbeaux du sous-genre *Labeobarbus*.” *Op. cit.*, clxix., p. 1016.
- “Descriptions de Poissons nouveaux du Congo.” *Rev. Zool. Afr.*, vii., p. 158.

By C. TATE REGAN, F.R.S. :—

- “Note on *Chaudhuri* *caudata*, a Teleostean Fish of the order Opisthomi.” *Ann. Mag. Nat. Hist.* (9), iii., p. 198.
- “Fishes from Durban, Natal, collected by Messrs. H. W. Bell Marley and Romer Robinson.” *Ann. Durban Museum*, ii. (4), p. 197.

### Mollusca.

By A. H. COOKE, Sc.D. :—

- “The Radula of *Thais*, *Drupa* . . . and allied genera.” *Proc. Malac. Soc.*, xiii., 1919, p. 91.

### Arachnida.

By A. S. HIRST :—

- “Two new Parasitic Mites (*Myocoptes hintoni* and *Psoroptes natalensis*.” *Ann. Mag. Nat. Hist.* (9), iii., p. 524.

**Crustacea.**

By W. T. CALMAN, D.Sc. :—

- “Cumacea and Phyllocarida.” Australasian Antarctic Expedition Scientific Reports, Series C., Vol. V., part 6.  
 “On Barnacles of the Genus *Megalasma* from Deep-sea Telegraph Cables.” *Ann. Mag. Nat. Hist.* (9), iv., p. 361.

**Platyhelminthes and Nemathelminthes.**

By H. A. BAYLES, M.A. :—

- “A remarkable *Cysticercus* from a rare Dolphin.” *Ann. Mag. Nat. Hist.* (9), iii., p. 417.  
 “Some new Entozoa from Birds in Uganda.” *Ib.*, p. 457.  
 “A collection of Entozoa, chiefly from Birds, from the Murman Coast.” *Ib.*, p. 501.  
 “A new species of the Nematode genus *Crossocephalus* from the Rhinoceros.” *Ib.*, p. 94.  
 “On a curious Malformation in *Taenia saginata*.” *Op. cit.* (9), iv., p. 114.  
 “*Crossophorus collaris*, Hemprich and Ehrenberg, a little-known Nematode Parasite of the Hyrax.” *Ib.*, p. 343.  
 “On two new Species of the Cestode genus *Oochoristica* from Lizards.” *Parasitology*, xi., p. 405.

V.—*Acquisitions.\****MAMMALIA.**

The accessions during the past year have been both numerous and important. Chief among them is the Lataste collection, most generously presented by M. Fernand Lataste. This great collection contains about 1,500 mammals, mostly from Europe, North Africa, and South America; and it formed the basis of M. Lataste's well-known researches in mammalogy. Of the total number received, about 1,000 specimens, including the types of 21 species and subspecies described by M. Lataste, have now been registered and incorporated in the collection.

Another important accession is the large collection of heads, horns, stuffed specimens and skins of Big Game, formed by the late Captain F. C. Selous, D.S.O., and presented to the Museum by his widow. Although naturally African game-mammals predominate in this collection, it contains specimens from other regions, including many fine heads of Moose and Caribou from North America.

Special attention may be drawn to the following acquisitions, arranged in geographical order :—

**Europe.**

8 Sousliks (*Citellus citellus*) from Salonika; presented by Lieut. Cecil Worssam.

\* A table showing the number of specimens ad led during the year 1919 is given on page 112.

60 small mammals from Switzerland ; presented by the Hon. N. Charles Rothschild.

A Souslik (*Citellus citellus*) from Macedonia, collected by the late Lieut. P. D. Montague ; presented by Mrs. Montague.

Mounted head of a Norwegian Elk ; presented by Col. Pitt-Taylor.

12 Bank Voles (*Ecotomys caesarius*) from St. Aubins, Jersey ; presented by E. Hollis, Esq.

A semi-albino Water Shrew from the River Chelmer ; presented by A. Brazier, Esq.

Tooth of a Sperm Whale (*Physeter catodon*) ; presented by Walter Bonwick, Esq.

Tooth of a Sperm Whale (*Physeter catodon*) with diseased fang, from Norway ; presented by Johan Rasmussen, Esq.

Tooth of a Sowerby's Whale (*Mesoplodon bidens*) from Moray Firth ; presented by W. Taylor, Esq.

Tympanic bone of a Sibbald's Rorqual (*Balaenoptera musculus*) from Colonsay Island ; presented by Philip Mair, Esq.

Parts of Cetacea stranded on the British Coasts during 1919, and particularly :—

Common Porpoises (*Phocaena phocaena*) from Suffolk, Kent, and Lincolnshire.

Common Dolphin (*Delphinus delphis*) from Co. Cork.

White-sided Dolphin (*Lagenorhynchus acutus*) from the Shetland Islands.

Risso's Grampus (*Grampus griseus*) from the River Forth.

Lesser Rorquals (*Balaenoptera acutorostrata*) from Kincardine and Durham.

Common Rorqual (*B. physalus*) from Pembroke.

Presented by the Board of Trade.

Head of a European Bison Calf (*Bos bonasus*) ; presented by the Zoological Society.

A Human skull "from the old Whitechapel burial ground" ; presented by C. T. Holloway, Esq.

Skeleton of a Siamese Cat ; presented by W. K. Taunton, Esq.

Thirteen Eskimo puppy skins ; presented by the Sabellum Trading Company.

Cast of the skull of a Bull-dog "Kilburn Duke" ; presented by Messrs. Rowland Ward, Ltd.

Skeletons of Bull-dogs "Rowland Queenie" and "Rowland Rex" ; presented by Mrs. F. R. Griffiths.

### Asia.

26 small mammals from Asia Minor, collected by the donors during their captivity after the fall of Kut ; presented by Capt. W. W. A. Phillips and Capt. F. J. Patmore.

3 voles of the sub-genus *Arbusticola* from Tiflis ; presented by Dr. Shidlovsky.

29 mammals from Palestine ; presented by Major Maurice Portal.

36 small mammals from N.W. Persia ; presented by Capt. P. A. Buxton.

A Fox from the River Tigris; presented by Major Cuthbert Christy.

18 Desert Gerbils (*Cheliones hurrianae*) from Gujerat, Kathiawar and Sind, and the types of a new Hedgehog, a new Gerbil, and two new Bats from Mesopotamia; presented by the Bombay Natural History Society.

150 mammals from the Deccan and the Nilgiri Hills, India, including the types of two new Squirrels; collected and presented by Capt. P. H. Gosse, R.A.M.C.

146 small mammals collected in Baluchistan and Persia by Col. E. J. Hotson; presented by the Bombay Natural History Society.

Head of a Swamp Deer (*Rucervus duvaucelii*) with horns approaching the record in length; presented by J. S. C. Davis, Esq.

20 mammals from Siam; presented by T. H. Lyle, Esq.

An Isabelline Bear (*Ursus arctos isabellinus*) from Kashmir, which lived for many years in the gardens of the Zoological Society; presented by Mrs. Whatman.

118 small and 43 larger mammals from Korinchi, Sumatra; presented by Herbert C. Robinson and C. Boden Kloss, Esqrs.

11 skulls of *Babirusa* from Taliaboe Island; presented by W. Frost, Esq.

21 small mammals from China, including a new species of *Tadarida*; collected and presented by J. D. La Touche, Esq.

2 Shrews and a Vole from Bering Island; presented by Lord Rothschild, F.R.S.

## Africa.

41 small mammals from Sinai and Egypt, including the types of two new Gerbils; presented by the Egyptian Zoological Service.

A Shrew and a Mouse from the White Nile; presented by the Rev. A. Shaw.

A Barbary Ape (*Macaca sylvana*) and a Fox (*Vulpes atlantica*) from the Atlas Mountains; collected and presented by Capt. H. Lynes, R.N., C.B., C.M.G.

Skull of a Leopard and skin of a Clawless Otter from Abyssinia; presented by C. A. Willis, Esq.

An Anomalure (*Anomalurus beecrofti*) from Sierra Leone; presented by Gilbert Blaine, Esq.

2 Jumping Hares (*Pedetes*) from Bihé, Angola; presented by E. Sanders, Esq.

Horns and a piece of skin of a Sitatunga (*Limnotragus gratus*) from Sofnyama Creek, R. Gambia; presented by E. Hopkinson, Esq.

Skins of four Monkeys from the Upper St. Paul's River, Liberia; presented by Sir A. Sharpe.

Mounted specimen of a rare Antelope (*Cephalophus anchietae*) from the Cavaka River, Benguella, Angola; presented by G. W. Penrice, Esq.

6 mammals from the Gold Coast and Nigeria; collected and presented by Major C. H. Armitage, C.M.G., D.S.O.



13 small mammals from the Ja River, South Cameroons, collected by Mr. G. L. Bates ; purchased.

The type of *Deomys ferrugineus* from the Lower Congo ; received in exchange.

164 small mammals from the Ituri Forest and Welle Basin, Upper Congo, collected by Major C. Christy ; presented by the Congo Museum, Tervueren.

4 small mammals from the Upper Congo, collected by Major C. Christy, ; received in exchange.

Skull with large tusks of an African Elephant from the Upper Congo, collected by Major C. Christy ; purchased.

*Potamogale velox* from the Congo ; presented by George S. Young, Esq.

35 small mammals from Inkongo, Sankuru, South Congo, collected by Mr. H. Wilson ; purchased.

16 small mammals from British East Africa ; presented by Dr. V. G. L. van Someren.

4 mammals from the Mabira Forest, Uganda ; presented by Dr. V. G. L. van Someren.

A Shrew (*Crocidura*) from Uganda ; presented by Dr. R. van Someren.

6 small mammals and a Duiker from German East Africa ; collected and presented by Major C. H. B. Grant.

6 skins of a rare Duiker (*Cephalophus spadix*) from Magamba Woods, Usambara ; presented by A. C. Hollis, Esq.

Skin of a rare Duiker (*Cephalophus spadix*) from Magamba Woods, Usambara ; presented by Major H. C. Stiebel.

A rare Duiker (*Cephalophus harveyi*), with photographs of a living specimen, from Usambara ; presented by Sir H. A. Byatt, K.C.M.G.

Skin of a young lion from German East Africa ; presented by Major A. L. Cooper.

Skin of a new-born Kudu (*Strepsiceros strepsiceros*) from Lake Baringo, British East Africa ; presented by Dr. Lyon Falkener.

Skins and skulls of two antelopes (*Cephalophus grimmii* and *Nesotragus livingstonianus*) from Chiromo, South Nyasaland ; presented by A. O. Hodgson, Esq.

An unusually pale-coloured leopard from Rhodesia ; presented by Dr. Walter Fisher.

A Bat (*Chaerephon limbatus*) from Zanzibar ; presented by Commander Smart, R.N.

6 mammals from Zanzibar and Pemba, including two specimens of the new Zanzibar Duiker (*Cephalophus adersi*) ; presented by Dr. W. M. Aders.

32 mammals collected by Mr. H. H. Swinny in the Island of Zanzibar, including a rare monkey (*Colobus kirki*) and a new *Crictomys* ; presented by Colonel G. P. Cosens.

9 small mammals from Pondoland ; collected and presented by H. H. Swinny, Esq.

14 gorilla skeletons from the French Congo ; purchased.

A foetus of the Fin-whale (*Balaenoptera physalus*) from Saldanha Bay ; presented by Dr. J. D. F. Gilchrist.

#### America, North.

An Arctic Fox, an Arctic Hare, and a Lemming brought home from Parry's expedition to the North-west of Baffin's Bay, 1818, by Midshipman Joseph Nias, of H.M.S. Alexander ; presented by Miss Caroline Nias.

7 mammals collected by Sir A. H. Markham, K.C.B., in Grant Land and Grinnell Land during the voyage of H.M.S. Alert, 1875-1876 ; presented by Lady Markham.

Head of an Elk (*Alces alces americanus*) from Nova Scotia ; presented by Lady Inglis.

6 Bats from Goleta, California ; presented by W. S. M. D'Urban, Esq.

#### America, South.

3 Agoutis from British Guiana ; purchased.

6 mammals from Bogotà ; received in exchange.

10 rodents from Santa Cruz and Bolivia, including the type of *Euneomys dabbeni* ; presented by the Buenos Aires Museum.

The following specimens collected by Sr. S. Budin :—

68 mammals from Patagonia, including the types of two new species ;

62 small mammals from Otro Cerro, Catamarca, including the types of 8 new species.

6 small mammals from Jujuy and 8 from Salta, North Argentina.

78 small mammals from Abrapampa and 44 from Jujuy, North Argentina ; presented by Oldfield Thomas, Esq., F.R.S.

The head of a Javiro Indian from Amazonian Peru ; presented by E. Kanthack, Esq.

#### Australasia.

50 Bats from New Caledonia, collected by the late Lieut. P. D. Montague ; presented by Mrs. Montague.

A native Mouse (*Pseudomys (Thetomys) gracilicauda*) from Queensland ; presented by H. Batchelor, Esq.

An immature skull of Cuvier's Beaked Whale (*Ziphius cavirostris*) from New Zealand ; purchased.

#### AVES.

The acquisitions number twelve thousand three hundred and ninety-four. Of these the most noteworthy are as follows :—

#### Europe.

12 birds, 99 nests and 7,010 eggs, collected by the late Capt. F. C. Selous, D.S.O. ; presented by Mrs. F. C. Selous.

1,759 British birds, collected by the late Mr. Fergus Menteith Ogilvie ; presented by Mrs. Menteith Ogilvie.

53 birds from Somersetshire ; collected and presented by Robin Kemp, Esq.

116 nests, chiefly from Spain and the British Islands ; presented by Capt. H. Lynes, R.N., C.B., C.M.G.

#### Asia.

265 birds from the Deccan, Southern India ; presented by Capt. P. H. Gosse, R.A.M.C.

100 birds from Palestine ; collected and presented by Colonel R. Meinertzhagen.

12 birds from North-east Siberia ; received in exchange from Lord William Percy.

139 birds from Java ; collected and presented by Herbert C. Robinson, Esq.

525 birds from Annam ; collected and presented by Herbert C. Robinson and C. Boden Kloss, Esqrs.

44 nests and 510 eggs from North China ; collected and presented by J. D. La Touche, Esq.

13 birds from Java ; presented by Mrs. Chaplin.

#### Africa.

31 birds from Somaliland, including the type specimen of *Columba olivæ* ; collected and presented by Geoffrey F. Archer, Esq.

118 birds from the Bahr-el-Ghazal district ; presented by Major C. Christy.

163 birds from the Canary Islands, collected by D. A. Bannerman, Esq. ; purchased.

253 birds from the Belgian Congo, including the type specimen of *Crateropus tenebrosus claudæi* ; presented by the Tervueren Museum.

92 birds from the Sudan ; presented by H. H. King, Esq.

A mounted female of the Northern Ostrich (*Struthio camelus* Linn.) from north-west Africa ; presented by the Trustees of the Rowland Ward Bequest.

26 specimens from East Africa ; presented by Major C. H. B. Grant.

The type specimens of *Serinus sharpei* from Lake Naivasha and *Chlorophoneus andaryæ* from Uganda ; presented by Sir Frederick Jackson, K.C.M.G., C.B.

211 birds from the Middle Atlas Mountains ; collected and presented by Capt. H. Lynes, R.N., C.B., C.M.G.

95 eggs from the Canary Islands ; collected and presented by D. A. Bannerman, Esq.

#### America.

10 birds from the North-west of Baffins Bay, collected by Midshipman J. Nias during the Parry Expedition, 1818 ; presented by Lady Nias.

8 birds, including recently described new forms, from San Domingo ; received in exchange from Dr. Leonard C. Sanford.

30 birds from Arctic America, collected by Admiral Sir A. H. Markham, K.C.B., during the voyage of H.M.S. "Alert," 1875-76; presented by Lady Markham.

102 birds from Jamaica; presented by Mrs. Harvey.

9 birds from Queen Charlotte Islands, British Columbia, including species which had been *desiderata* to the collection; received in exchange from Major Allan Brooks.

85 eggs from the Falkland Islands; presented by Mrs. Julia Cobb.

#### Australasia.

318 birds from Lord Howe and Norfolk Islands; presented by Gregory M. Mathews, Esq.

#### REPTILIA.

312 specimens were added to the collection, 272 by presentation, 40 by exchange.

The following deserve notice:—

#### Europe.

4 snakes from Salonica. Presented by Capt. J. Waterston.

#### Asia.

16 Reptiles from Sinai and Palestine. Presented by Major E. E. Austen, D.S.O.

38 Reptiles from Mesopotamia, including a snake, *Naja morgani*, new to the collection; presented by the Bombay Natural History Society.

34 Reptiles from Mesopotamia, including a remarkable Lizard, *Acanthodactylus boskianus*, var. *euphraticus*; presented by Dr. C. L. Boulenger.

11 Reptiles from Mesopotamia; presented by Major C. Christy.

5 Reptiles from Mesopotamia; presented by Capt. P. A. Buxton.

3 Lizards from the South Coast of the Caspian Sea; presented by Capt. P. A. Buxton.

31 Reptiles from Persia and Baluchistan, including a Viper, *Pseudocerastes persicus*, new to the collection, and the type of a new Snake, *Contia condoni*; presented by the Bombay Natural History Society.

A rare Tortoise, *Testudo impressa*, and 7 specimens of a little-known Sea Snake, *Hydrophis brookii*, from Siam; presented by Dr. Malcolm Smith.

#### Africa.

59 specimens selected from the collection made by Major C. Christy for the Belgian Government in the Belgian Congo, including examples of a Chameleon, *Rhampholeon boulengeri*, new to the collection; presented by the Congo Museum, Tervueren.

11 specimens from the Belgian Congo, including a Lizard, *Bedriagaia tropidophilis*, new to the collection, and the type of a new Snake, *Glauconia kafubi*; presented by the Congo Museum, Tervueren.

Co-types of two new Lizards, *Eremias garambensis* and *Mabuia sudanensis*, and of two new Chameleons, *Chameleon etiennei* and *C. ituriensis*; presented by the American Museum of Natural History, New York.

14 specimens from the West Coast of Lake Tanganyika; presented by Mons. G. Dhont-De Bie.

#### America.

An example of a new Alligator Terrapin, *Chelydra osceola*, and a Lizard, *Sceloporus cookii*, new to the collection, from Florida; received in exchange from the Museum of Comparative Zoölogy, Cambridge, U.S.A.

A remarkably large skin of a Rattlesnake, *Crotalus durissus*, from Florida; presented by Mrs. Vans Corbett.

An Amphisbæna, *Cadra palirostrata*, from Cuba, new to the collection; received in exchange from the Museum of Comparative Zoölogy, Cambridge, U.S.A.

31 Reptiles from the Andes of Colombia, including types of two new Lizards, *Anolis apollinaris* and *Proctoporus bogotensis*; received in exchange from Bro. Apollinaris-Maria.

#### BATRACHIA.

The accessions numbered 194, of which 139 were presented and 55 received in exchange.

The following deserve special mention:—

#### Asia.

A rare Frog, type of a new genus, *Aelurophryne mammata*, from the Ladak Valley, Kashmir; presented by Dr. C. L. Boulenger.

The type of a new Frog of the genus *Nyctibatrachus*, from the Coorg Forest, India; presented by C. R. Narayan Rao, Esq.

5 Frogs from Siam, including the type of a new species, *Rana cubitalis*; presented by Dr. Malcolm Smith.

#### Africa.

44 specimens selected from the collection made by Major C. Christy for the Belgian Government in the Belgian Congo, including types of 3 new species, *Rana christyi*, *Phrynobatrachus discodactylus*, *Arthroleptis dendrobates*; presented by the Congo Museum, Tervueren.

27 Frogs from the West Coast of Lake Tanganyika; presented by Mons. G. Dhont-De Bie.

The type of a new Frog (*Plethodontohyla tuberijera*) from Madagascar; presented by the Hon. P. A. Methuen.

#### America.

30 specimens from North America, including four Salamanders (*Plethodon metcalfi*, *P. jordani*, *P. dorsalis*, and *Spelerpes melanopleura*) new to the collection; received in exchange from the Museum of Comparative Zoölogy, Cambridge, U.S.A.

9 specimens from North America, including a Salamander (*Plethodon yonahlossa*) new to the collection; presented by the American Museum of Natural History.

The type specimens of two Frogs (*Lepidobatrachus asper* and *L. lewis*) from Paraguay; received in exchange from the University Museum of Zoology, Cambridge.

16 specimens from the Andes of Colombia, including a Frog (*Hylodes affinis*) new to the collection, and the type of a new species (*Hylaxalus granuliventris*); received in exchange from Bro. Apollinaris-Maria.

#### PISCES.

The accessions number 830; 775 presented, 6 purchased, and 49 received in exchange.

The following deserve special mention:—

A very large Roach (*Rutilus rutilus*) from Saffron Walden; presented by H. T. Sheringham, Esq.

48 Fishes from Africa, including several co-types; received in exchange from the Paris Museum.

8 Fishes from the Shari River, including the types of two new species (*Barbus baudoni* and *Andersonia pellegrini*); presented by Mons. A. Baudon.

18 Fishes from Sierra Leone; presented by A. F. Wingate, Esq.

24 Fishes from the Congo, including the types of four new species (*Barbus uellensis*, *Amphilius maesii*, *A. opisthophthalmus*, and *Allabenchelys manyanga*); presented by the Congo Museum, Tervueren.

319 Fishes from the Congo, collected by Major C. Christy, including the types of a number of new species; presented by the Congo Museum, Tervueren.

34 Fishes from Dar-es-Salaam; presented by J. Pomeroy, Esq.

92 Fishes from the Coast of Natal, including the types of seven new species (*Apogon polylepis*, *Diagramma chubbi*, *Iso natalensis*, *Callionymus marleyi*, *Amblyapistus marleyi*, *Plagusia robinsoni*, and *Tetrodon pleurospilus*); collected and presented by H. W. Bell Marley, Esq., and Romer Robinson, Esq.

Co-types of a Gobioid Fish (*Eleotris legendrii*) from Madagascar; presented by Dr. J. Legendre.

8 Fishes of the genus *Discognathus*, including co-types of *D. phryne*, *D. elegans*, and *D. adiscus*, from India and Baluchistan; presented by the Indian Museum, Calcutta.

18 Cyprinoid Fishes from Mysore, co-types of five new species (*Discognathus bicornutus*, *D. platycephalus*, *D. brevimentalis*, *Botia striata*, and *Nemachilichthys sbiomogensis*), described by the donor; presented by Prof. C. R. Narayan Rao.

A King Salmon (*Oncorhynchus quinnat*) from British Columbia, weight 62 lbs.; presented by Robert Page, Esq.

2 specimens of a Lamprey (*Ichthyomyzon fossor*) new to the collection, from Michigan; presented by Dr. A. G. Ruthven.

6 Fishes from British Guiana; purchased.

A salmon (*Salmo salar*), weight 7 lbs., from New Zealand; presented by H. T. Sheringham, Esq.

## MOLLUSCA.

The total number of specimens received during the year is 1,968. Of these 1,637 were presented, 107 purchased, and 224 obtained by the "Terra Nova" Expedition. The most noteworthy accessions are enumerated below:—

**From various Localities.**

One hundred and twenty-five microscopical preparations of Lamellibranch anatomy, nineteen preparations and eighty specimens of Cephalopoda, obtained by the "Terra Nova."

Sixty-seven specimens (including ten types) of Nudibranchs; presented (with the concurrence of the original owners) by T. J. Evans, Esq.

63 types of marine, fresh-water, and land Mollusca; purchased.

**Europe.**

25 examples of *Paludestrina jenkinsi* from Randers Fjord, Denmark; presented by Dr. A. C. Johansen.

3 microscopical preparations of a parthenogenetic *Paludestrina jenkinsi* from Elstree, Herts; presented by Dr. A. E. Boycott, F.R.S.

21 shells of *Buccinum undatum* and *Fusus antiquus* shewing teratological resemblance to shells of other genera, from various British localities; presented by the Rev. G. Henslow.

9 microscopical preparations and 7 complete examples of *Cocculina galeola* from the Irish Atlantic Slope; presented by the Department of Agriculture and Technical Instruction for Ireland.

71 Fresh-water Mollusca from North Russia; presented by Surgeon-Lieut. R. Buddle, R.N.

**Asia.**

14 Land Mollusca from North Persia; presented by Capt. P. A. Buxton.

96 Land and Fresh-water Mollusca from Palestine; presented by Major E. E. Austen, D.S.O.

A figured specimen of *Haliotis japonica* from Japan; presented by H. C. Fulton, Esq.

10 shells of land Gastropoda from Penang and Torres Straits; presented by Dr. R. F. Scharff.

5 Nudibranchs from the Andaman Islands; presented by the Director of the Zoological Survey of India.

86 shells of Gastropoda and Lamellibranchiata from alluvium at Nasiriyah, Mesopotamia; presented by Capt. R. W. Hingston.

9 shells of *Septaria*, *Theodoxus*, and *Melania* from the Soela Archipelago, all bearing the egg-capsules of *Theodoxus pulligera*; presented by G. C. Robson, Esq.

**Africa.**

4 shells (3 types and 1 co-type) of Gastropoda from South Africa; presented by Major M. Connolly.

168 Land shells from Algeria; presented by Lord Rothschild, F.R.S.

**America.**

11 shells of *Planorbis antrosus* from various localities ; presented by Prof. H. A. Pilsbry.

2 shells (co-types) of *Brachypodella nidicostatus* from Venezuela ; presented by G. C. Spence, Esq.

**MYRIOPODA.**

The additions number 55 specimens, none of which are of special importance.

**PROTOTRACHEATA.**

The only specimens added during the year are examples of *Typhloperipatus williamsoni*, collected by the Abor Expedition ; presented by the Indian Museum, Calcutta.

**ARACHNIDA.**

The accessions number 635, the following being of special interest :—

230 specimens of “ Red Spiders ” (*Tetranychus* and *Paratetranychus*), including the types of 3 new species, from various English plants and trees ; presented by A. S. Hirst, Esq.

69 specimens of Arachnida (mostly Ixodidæ) from various localities ; presented by the Imperial Bureau of Entomology.

34 Arachnida from South Palestine ; presented by Major E. E. Austen, D.S.O.

Specimens of an alleged poisonous spider (*Lathrodictus mactans*, var.) from Arequipa, Peru ; presented by the Wellcome Bureau of Scientific Research.

**CRUSTACEA.**

The most important addition made during the year was a collection of Marine and Terrestrial Isopoda containing 543 specimens, including types of five recently described species and many species new to the collection ; purchased.

The other additions number 453, and include :—

126 specimens of Indian Crustacea, being nearly all co-types of recently described species ; presented by the Director of the Zoological Survey of India.

42 specimens of marine Boring Crustacea from Australia and New Zealand ; presented by Prof. C. Chilton.

37 specimens of Crustacea taken from Deep-sea Telegraph Cables ; presented by the Eastern and Associated Telegraph Companies.

41 Crustacea from various localities ; presented by the Imperial Bureau of Entomology.

16 Crustacea from Africa ; presented by Monsieur E. Dhont-de Bie.

6 Co-types of a species of boring Isopod from Florida ; presented by the U.S. National Museum, Washington.

3 additional specimens of the very rare and remarkable *Bathynella natans* from Basle ; presented by Dr. P. A. Chappuis.



16 specimens of freshwater and terrestrial Crustacea from Sinai and Palestine ; presented by Major E. E. Austen, D.S.O.

4 Mysidacea from the Yorkshire Coast ; presented by W. P. Pycraft, Esq.

4 Crustacea from Dar-es-Salaam ; presented by Commander Smart, R.N.

15 specimens of the Fairy shrimp (*Chirocephalus diaphanus*) from Buckinghamshire ; presented by Chas. Oldham, Esq., and by J. F. G. Seltman, Esq.

91 specimens of freshwater and terrestrial Crustacea (including the holotype of a new species) from Mesopotamia ; presented by Capt. C. L. Boulenger.

4 Crustacea from Basra ; presented by Major C. Christy.

5 specimens of a parasitic Crustacean from the Transvaal ; presented by the Hon. P. A. Methuen.

#### ECHINODERMA.

8 specimens collected in the China Sea, including 2 specimens of a Stalked Crinoid (*Metacrinus interruptus*) ; presented by the Eastern and Associated Telegraph Companies.

#### WORMS.

Among the earthworms attention should be called to *Dichogaster stuhlmanni*, from the Sudan ; presented by Major S. S. Flower ; and to a luminous species, *Chilota algoensis*, from Table Mountain ; presented Dr. J. D. F. Gilchrist.

A collection of 73 Polychaetes, etc., determined and presented by H. A. Baylis, Esq.

An interesting collection of 14 British Leeches ; presented by W. N. Blair, Esq.

The total number of specimens of parasitic worms registered during the year was 570. Among these the following were the more important additions to the collection :—

A considerable number of Entozoa, chiefly from birds (including 5 new species), from the Murman Coast, collected and presented by Dr. E. A. Cockayne.

A collection of Entozoa from birds, chiefly new species, from Uganda, collected by Mr. C. C. Gowdey, and presented by the Imperial Bureau of Entomology.

Co-types of the parasitic Turbellarian, *Avagina incola*, from Scotland ; presented by Dr. R. T. Leiper.

Examples of 7 species of parasitic worms (including type specimens of 4 species) from India ; presented by Lt.-Col. Clayton Lane, I.M.S.

A very remarkable specimen of *Taenia saginata* (from a patient in London), showing a hitherto undescribed malformation of the segments ; presented by Dr. W. T. Hillier.

Various collections of parasitic worms from Africa and from South America ; presented by the Imperial Bureau of Entomology.

## BRACHIOPODA.

The total number of specimens received during the year is 211, of which 12 were presented and 199 obtained by the "Terra Nova."

## HYDROZOA.

The most important addition is a collection of microscopic slides of Hydroida, mostly co-types, representing 50 species; *presented by W. M. Bale, Esq.*

## Summary of the Acquisitions in the Department of Zoology during 1919.

		Donations.	Purchases.	Exchanges.	Totals.
Mammalia	General Collection ...	2,014	66	11	2,091
	Osteological Collection:—				
	Anthropology ...	2	—	—	2
	Cetacea ... ..	13	—	—	13
Aves	Skins ... ..	4,170	210	29	4,409
	Eggs ... ..	7,720	—	—	7,720
	Nests ... ..	265	—	—	265
	Skeletons ... ..	—	—	—	—
Domesticated Animals ... ..	24	—	—	24	
Reptilia ... ..	272	—	40	312	
Batrachia ... ..	139	—	55	194	
Pisces ... ..	775	6	49	830	
Tunicata ... ..	7	—	—	7	
Pterobranchia ... ..	3	—	—	3	
Mollusca ... ..	1,861	107	—	1,968	
Myriopoda ... ..	55	—	—	55	
Prototracheata ... ..	3	—	—	3	
Arachnida ... ..	635	—	—	635	
Crustacea ... ..	452	544	—	996	
Pycnogonida ... ..	—	—	—	—	
Echinoderma ... ..	13	—	—	13	
Worms	{ Chaetopoda, etc. ... ..	93	—	—	93
	{ Parasitic Worms ... ..	570	—	—	570
Brachiopoda ... ..	211	—	—	211	
Polyzoa ... ..	57	—	—	57	
Anthozoa ... ..	18	—	—	18	
Hydrozoa ... ..	162	—	—	162	
Porifera ... ..	21	1	5	27	
Protozoa ... ..	8	—	—	8	
Totals ... ..		19,563	934	189	20,686

The following donors\* presented specimens to the Department of Zoology during the year 1919:—

Adams, F. C.

Archer, G. F.

Adams, Lionel

Armitage, Major C. H., C.M.G.,

Aders, Dr. W. M.

D.S.O.

Aldous, Lieut. F. G.

Austen, Major E. E., D.S.O.

\* A list of donors of books, etc., is given on pp. 94—96, under the heading "Departmental Library."

- Bale, W. M.  
 Bannerman, D. A.  
 Baring, The Hon. C.  
 Batchelor, H.  
 Bateson, Prof. W., F.R.S.  
 Baylis, H. A.  
 Beck, R.  
 Bennett, A. G.  
 Bishop, A. H.  
 Blair, W. N.  
 Blewitt, Miss A.  
 Blyth, Capt. W. B.  
 Board of Trade  
 Bombay Natural History Society  
 Bonwick, W.  
 Boulenger, Dr. C. L.  
 Boulenger, G. A., F.R.S.  
 Box, H. E.  
 Boycott, Dr. A. E., F.R.S.  
 Branwhite, Lieut. H.  
 Brazier, A.  
 Brooke, H. C.  
 Brown, G. F.  
 Brown, Horace  
 Bryan, B.  
 Bryden, H. A.  
 Buchanan, Capt. A.  
 Buddle, Surg.-Lieut. R., R.N.  
 Buenos Aires Museum  
 Buxton, Capt. P. A., R.A.M.C.  
 Byatt, Sir H. A., K.C.M.G.  
 Calcutta, Indian Museum  
 Carter, C. S.  
 Chabanaud, P.  
 Chaplin, Mrs.  
 Chapman, S.  
 Chappuis, P. A.  
 Cheesman, Major R. E.  
 Cheeseman, Miss  
 Chilton, Prof. C.  
 Christy, Major C.  
 Cleland, Dr. J. Burton  
 Cobb, Mrs. J.  
 Cockayne, Dr. E. A.  
 Connolly, Major M.  
 Cooper, Major A. L.  
 Cooper, Brig.-Gen. R.  
 Corbett, Mrs. Vans  
 Cosens, Col. G. P.  
 Dale, G. H.  
 Dalton, Messrs. W. & Son  
 Davis, J. S. C.  
 Denny, Prof. A.  
 Department of Agriculture and  
 Technical Instruction for  
 Ireland  
 Dhont de Bie, G.  
 Dick, W.  
 Digby, B.  
 Drayton, E. E.  
 D'Urban, W. M. S.  
 Dymes, T. A.  
 Edinburgh, Royal (Dick) Veteri-  
 nary College  
 Egyptian Zoological Service  
 Evans, T. J.  
 Falkener, Dr. Lyon  
 Fisher, Dr. Walter  
 Flower, Major S. S.  
 Forbes, Dr. H. O.  
 Frohawk, F. W.  
 Frost, W.  
 Fulton, H. C.  
 Gibbs, Miss  
 Gilchrist, Dr. J. D. F.  
 Gosse, Capt. P. H., R.A.M.C.  
 Gowdey, C. C.  
 Graham, Major C.  
 Grant, Major C. H. B.  
 Gregory, A. G.  
 Griffiths, Mrs. F. R.  
 Haggerston (the late), Com-  
 mander T.  
 Harmer, Dr. S. F., F.R.S.  
 Harvey, Mrs.  
 Henslow, Rev. G.  
 Heron-Allen, E., F.R.S.  
 Hillier, Dr. W. T.  
 Hinde, Mrs.  
 Hingston, Capt. R. W.  
 Hodgson, A. O.  
 Holland, Col. T. C. B.  
 Hollis, A. C.  
 Hollis, E.  
 Holloway, C. T.  
 Hopkinson, E.  
 Hurrell, H. E.  
 Imperial Bureau of Entomology  
 Inglis, Lady  
 Jackson, Sir Frederick, K.C.M.G.

- Jackson, J. W.  
 Jäderholm, Dr. E.  
 Jobson, W. P.  
 Johansen, Dr. A. C.  
 Johnson, W. B.  
 Jones, Walter  
 Kanthack, E.  
 Kemp, Robin  
 King, H. H.  
 Kirkpatrick, R.  
 Kloss, C. Boden  
 Kuala Lumpur, Federated Malay  
   States Museum  
 Kürsteiner, C. W.  
 Laing, Miss E.  
 Lane, Lieut.-Col. Clayton, I.M.S.  
 Lang, Dr. W. D.  
 Lataste, Fernand  
 La Touche, J. D.  
 Legendre, Dr. J.  
 Leiper, Dr. R. T.  
 Lynes, Capt. Hubert, R.N.  
 Lyle, T. H.  
 Mackworth-Praed, C.  
 Mair, P.  
 Markham, Lady  
 Marley, H. W. Bell  
 Martin, Prof. A.  
 Mathews, G. M.  
 Meinertzhagen, Col. R.  
 Methuen, Hon. P. A.  
 Montague, Mrs.  
 Morton, W.  
 Muir, F.  
 Munt, H.  
 New York, American Museum of  
   Natural History  
 Nias, Miss Caroline  
 Nias, Lady  
 Ogilvie, Mrs. F. Menteith  
 Oldham, C.  
 Oliver, A. M.  
 Paré, Robert  
 Patmore, Capt. F. J.  
 Penrice, G. W.  
 Percival, A. Blayney  
 Percy, Lord William  
 Phisalix, Mme. M.  
 Phillips, Capt. W. W. A.  
 Pilsbry, Dr. H. A.  
 Pitt-Taylor, Colonel  
 Pomeroy, J.  
 Power, Bro. G. H.  
 Portal, Major Maurice  
 Pycraft, W. P.  
 Quick, Dr. H. E.  
 Rao, Prof. C. R. Narayan  
 Rasmussen, Capt. J.  
 Renouf, L. P. W.  
 Ritchie, Dr. J.  
 Robinson, H. C.  
 Robinson, Romer  
 Robson, G. C.  
 Rothschild, Hon. N. Charles  
 Rothschild, Lord, F.R.S.  
 Ruthven, Dr. A. G.  
 Sabellum Trading Company  
 Sanders, E.  
 Scharff, Dr. R. F.  
 Scott, Mrs. Ross  
 Selous, Mrs. F. C.  
 Seltman, J. F. G.  
 Sendall, Lady  
 Sharpe, Sir A., K.C.M.G.  
 Shaw, Rev. A.  
 Sheringham, H. T.  
 Sheppard, T.  
 Shidlovsky, Dr.  
 Shroff, K. D.  
 Smart, Commander, R.N.  
 Smedley, A. S. Marsden  
 Smith, A.  
 Smith, Dr. H. Hammond  
 Smith, Dr. Malcolm  
 Someren, Dr. R. van  
 Someren, Dr. V. G. L. van  
 Spence, G. C.  
 Stallard, G.  
 Sterki, Dr. V.  
 Stevenson-Hamilton, Major  
 Stiebel, Major H. C.  
 Swinny, H. H.  
 Taylor, F.  
 Taylor, Capt. F. W.  
 Taylor, J. W.  
 Taylor, W. T.  
 Taunton, W. K.  
 Telegraph Companies, Eastern  
   and Associated  
 Tervueren, Congo Museum

Thomas, Oldfield, F.R.S.	Wellcome Bureau of Scientific
Thompson, H.	Research
Thompson, Major W. A.	Wells, F. E.
Thomson, R. M.	Willis, C. A.
Totton, Capt. A. K., M.C.	Whatman, Mrs.
Walton, Mrs.	Whyte, Capt. H. W.
Ward Bequest, Trustees of the	Woodward, B. B.
Rowland	Woolward, Miss F.
Ward, Rowland, Ltd.	Worssam, Lieut. Cecil
Waterston, Capt. J.	Young, G. S.
Washington, D.C., National	Zoological Society of London
Museum	Zoological Survey of India

## VI.—*Economic Zoology.*

### I. MAMMALIA.

The Falkland Islands Committee, on which the Museum was represented by the Keeper, has completed its labours. The Report, which deals specially with the Whaling problem and the protection of Elephant Seals, is ready for publication.

Whaling and Sealing operations in the Southern Hemisphere, particularly off South Georgia, the South Shetlands and South Africa, have continued to receive much attention, and have formed the subject of frequent communications with the Colonial Office. The acclimatization of animals, and specially the Reindeer, in South Georgia, has also given rise to a good deal of correspondence with the same Government Department.

The protection of Mammals in various parts of the world has received consideration. The threatened extermination of the Elephants in the Addo Bush near Port Elizabeth—practically the last remnant of the elephants of Cape Colony—has led to the passage of a number of letters between the Museum and various writers.

During 1919, rats and mice, in relation to the public health and general economics, have again received much attention. Information and advice have been given in response to requests received from many public bodies and private individuals. In July Mr. M. A. C. Hinton, as the delegate of the Museum, attended the Congress of the Royal Sanitary Institute at Newcastle-upon-Tyne, where the rat and mouse problem was discussed from various points of view.

### II. AVES.

The protection of Birds in British Colonies and Protectorates has continued to be the subject of communications with the Colonial Office.

The special exhibit of Birds Beneficial to Agriculture has been completed and a guide-book has been issued.

### III. PISCES.

Throughout the year Mr. Regan has served on the Freshwater Fish Committee, and he also acted as secretary of a committee

formed by the British Science Guild to consider scientific research in relation to fisheries. At the request of the R.A.M.C. officer in charge of Anti-Malaria work at Sheppey, Mr. Regan went to Sheppey on March 5th to inspect the marshes and advise with regard to fishes that eat mosquito larvæ.

In connexion with enquiries from the Colonial Office as to poisonous Fishes in the West Indies, arrangements have been made for Mr. P. Lechmere Guppy to collect for the Museum, in order that fishes reputed poisonous may be accurately determined.

#### IV. MOLLUSCA.

Advice has been given on the following subjects:—Choking of water-mains carrying sea-water, by mussels in a large power-station at Portobello, N.B.

Means of determining Mollusca that are recognised as intermediate hosts of *Bilharzia* (many enquiries). Determination of Mollusca suspected of transmitting *Fasciola hepatica* (Liver Fluke) in North Rhodesia and of *Bilharzia* on the Gold Coast.

Determination of Mollusca habitually eaten by Australian and New Zealand food-fishes.

Following on an enquiry from the Chief Engineer of the Metropolitan Water Board, investigations were made on the subject of the "*Dreissensia*" nuisance in waterworks, on remedial measures, and on means of prevention. The fresh water mollusc *Dreissensia polymorpha* frequently gives rise to serious trouble in waterworks by causing obstruction in the supply-system, and by pollution due to death and decay of the animals. The area of distribution of this prolific mollusc has been extending during the last fifty years, and the trouble arising from its presence in waterworks may tend to increase rather than diminish unless due precautions are taken.

#### V. ARACHNIDA.

1. Mites from domestic animals, especially poultry, determined for the United States Bureau of Agriculture.

2. A mite (*Actineda vitis*) feeding on aphides, especially woolly aphid, determined.

3. An alleged poisonous spider (*Lathrodectus mactans*, var.) named for the Wellcome Bureau of Scientific Research.

4. A species of "Red Spider" (*Paratetranychus simplex*) damaging date-palms in Mesopotamia, described.

5. "Red Spiders" injurious to peaches, vines, etc., named for a correspondent.

6. A species of mite of the genus *Tarsonemus*, supposed to damage ferns, determined.

#### VI. CRUSTACEA.

The Assistant in charge of Crustacea has been largely occupied with the study of Marine Boring Animals (including Mollusca and Worms as well as Crustacea) submitted for examination by the Committee of the Institution of Civil Engineers on the Deterioration

of Structures exposed to Sea-action. An exhibit illustrative of this subject has been arranged in one of the cases in the Central Hall ; and a pamphlet, forming No. 10 of the "Economic Series," has been published.

#### VII. PLATYHELMINTHES AND NEMATHELMINTHES.

On numerous occasions parasitic worms inhabiting man or other animals have been named for correspondents, and more particularly at the request of the Imperial Bureau of Entomology, for correspondents abroad.

Enquiries on the subject of parasitic worms have also been answered for the Queen's Hospital for Children, Hackney, and for the Infant Welfare Centre, Southall, as well as enquiries from private correspondents.

#### VIII. HYDROZOA.

On the question of the "Sea Moss" Fishery a correspondence has passed between a member of the Trade and the Museum, with a view to expanding the industry in home waters.

#### IX. PORIFERA.

Enquiries concerning the economics of Sponge-cultivation in the West Indies (Bahamas, Turks Islands, and Virgin Isles) were made, and samples of commercial sponges were named and reported on from the point of view of their suitability for exploitation.

#### VII.—*Students and Visitors.*

The number of visits paid to the Zoological Department during the year 1919 by Students and other persons requiring assistance or information amounted to 7,459. This number includes the visits paid by Students holding tickets entitling them to do special work in the Exhibition Galleries.

In the 10 previous years the numbers were as follows. From 1909 to 1912 inclusive the present Department of Entomology was included in the Department of Zoology :—

5,553	in the year	1918.
6,314	„	1917.
7,018	„	1916.
8,020	„	1915.
9,235	„	1914.
9,982	„	1913.
12,564	„	1912.
12,175	„	1911.
12,443	„	1910.
11,461	„	1909.

*Sidney F. Harmer.*

## DEPARTMENT OF ENTOMOLOGY.

I. *Arrangements and Conservation.*

*Exhibition Series.*—The revision of the series of economic specimens exhibited in the North Hall has been continued and an exhibit dealing with lac and wax has been added. Owing to the evaporation of the spirit, several of the jars containing preparations in spirit have had to be refilled, and where necessary re-sealed; 52 jars in the economic series and 22 in the Insect gallery have thus been dealt with.

*Study Series.*—The Department is, as in former years, greatly indebted for the assistance of voluntary workers in the identification of species and in the arrangement of certain parts of the collections. During the course of the year the members of the staff absent on War Service returned to duty at varying intervals and the arrangement and incorporation of specimens in the sections for which they are severally responsible much more nearly approach pre-war conditions.

In the **Coleoptera** the expansion and re-arrangement of the Carabidæ have been continued, Mr. H. E. Andrewes having, as on many former occasions, rendered valuable help in the determination and description of new species of Oriental genera. The greater part of the Central American (Godman-Salvin) Collection has been incorporated. The large collection of Hawaiian Ptinidæ formed and named by Dr. Perkins has been incorporated. The re-arrangement of the Endomychidæ has been completed and many new genera and species described. Many species of Melolonthidæ, including various important pests of crops have been worked out and described. The Brenthidæ of Madagascar have been sent for determination to M. Pouillaude. The re-arrangement of the Phytophaga has been continued, the Cryptocephalinæ having been completed, and the Halticinæ begun, all types of the latter having been incorporated. Mr. G. E. Bryant has again generously placed his services at the disposal of the Department for this purpose. The family Pythidæ has been revised and new genera and species described, and revisions of various genera, including *Cestrinus*, *Cissites*, *Palæstra*, &c., have been prepared. The extensive collection of Heteromera made and presented by Mr. G. E. Bryant has been determined and in great part incorporated, as has a part of the Nevinson Collection and numerous smaller collections from various regions, particularly from M. Vitalis de Salvaza from Indo-China, and from Prof. C. F. Baker, from the Philippine Islands. Mr. G. C. Champion has continued work on the Malacodermata, and re-arranged and incorporated material in those groups which he has studied.

In the **Lepidoptera** Rhopalocera the re-arrangement of the Hesperidæ has been continued and all accessions, especially the



Godman-Salvin Collection, incorporated. A certain amount of work of the same kind has been done on the Erycinidæ. Miscellaneous collections, small and large, have been worked out and incorporated; in this connection mention may be made of the Wickham, Godfrey, Avinoff, Rybot, Phillips, and Selous collections, while a final selection has been made from the papered specimens of the Neave Collection for setting. In addition the arrangement of the duplicate collections has been overhauled, named and made more accessible, while a systematic card catalogue and index has been started for the Hesperidæ.

In the Heterocera the Catalogue of Lepidoptera Phalænæ Supplement, Volume II, has been passed through the press (except the indices). In the Catalogue of Noctuidæ work has been continued on the sub-family Hypeninæ, while in the Pyralidæ the classification of the Anerastianæ has been continued and is approaching completion.

In the Tineina the determination and arrangement of unincorporated material belonging to various families has been continued, the whole of the Dodd Collection from Queensland has been mounted up and types and typical specimens have been identified and labelled. A great part of the Doubleday Collection has also been transferred to the standard Museum Cabinets.

In the Diptera a large number of Nematocera, chiefly British, have been mounted and labelled. The collection of British Culicidæ has been expanded, recent accessions being incorporated, and the same has been done with a large part of the British Chironomidæ, while numerous collections of mosquitoes from various sources, have been determined. A handbook of the British Mosquitoes is on its way through the press. The undetermined Psychodidæ have been lent to M. Á. Tonnoir, of Brussels, and the African Tipulidæ to Mr. C. P. Alexander, of Urbana, Illinois. The Tabanidæ of Palestine have been worked out, described, and incorporated; the Tabanidæ of the Percy Sladen Trust Expedition to the Western Indian Ocean have been similarly dealt with. Dipterous material from various localities has been determined and incorporated. Large series of Tropical African Tachinidæ and Orthalidæ, have also been incorporated, while, preparatory to a revision of the Museum Pamphlet, "The House-Fly as a Danger to Health," for a new edition, the *Musca domestica* group in the General collection of Diptera has been worked at; previous determinations were revised, and much fresh material determined and incorporated.

The undermentioned Museum Pamphlets were revised and the revisions seen through the press.

"Special Guide No. 7. Guide to the Specimens and Enlarged Models of Insects and Ticks exhibited in the Central Hall, illustrating their importance in the Spread of Disease." (2nd edition).

"Instructions for Collectors, No. 5—Diptera (Two-Winged Flies.)" (4th edition).

"Instructions for Collectors, No. 6—Culicidæ."

In the **Hymenoptera** Mr. R. E. Turner has again devoted his whole time to the work of the Department, and has continued his re-arrangement of the Braconidæ. Numerous collections have been determined and incorporated, in especial collections from Upper Mekong, Palestine, and Tonkin, while the Australian Ichneumonidæ belonging to the genus *Labium*, have been revised. The Rev. F. D. Morice has continued the re-arrangement of the Tenthredinidæ, all the African species now being incorporated, and the whole group arranged according to the "Genera Insectorum." Mr. J. Waterston has continued his work on the Chalcididæ.

In the **Rhynchota** large additions of Heteroptera and Homoptera from Indo-China, India, and New Caledonia, and Cicadidæ from the Belgian Congo Region and British Central Africa, have been identified, incorporated, and described when new. The incorporation of the Distant Collection has been continued and brought nearly to completion. Large additions have also been made to the collections of Aphidæ and Coccidæ, and the re-arrangement of the latter group begun.

In the **Neuroptera** and **Orthoptera** many identifications have been made and types compared, for enquirers.

#### IMPERIAL BUREAU OF ENTOMOLOGY.

The work of the Imperial Bureau of Entomology has continued, as in past years, to be carried on to a great extent in the Entomological Department, and with considerable advantage to both. With the return to normal conditions after the war, the need of additional space to afford sufficient accommodation for the staffs of both the Imperial Bureau and the Department of Entomology, has again become very pressing.

#### II. *Duplicates and Exchanges.*

##### (a). *Duplicates.*

Duplicates have been presented to the following institution:—The Royal Scottish Museum. Duplicates have also been presented to the following gentlemen, who have rendered service by naming specimens:—Mr. H. E. Andrewes; Dr. Malcolm Cameron; Dr. R. Jeannel; Lieut. R. Ley; and Col. Winn Sampson.

##### (b). *Exchanges.*

Exchanges have been made with the following museum and individuals:—The Museum of Comparative Zoology, Cambridge; and with Mr. G. Arnold; M. G. Babault; M. A. Boucomont; M. A. Bourgoïn; Mr. P. Preston Clark; Dr. F. H. Gravely; M. Maurice Pic; Lord Rothschild; and Mr. W. R. Sherrin.

III. *Departmental Library.*

As the Library has continued to be worked in conjunction with that of the Zoological Department, particulars in reference to it will be found included under the corresponding head, in the return made by the Keeper of Zoology.

IV. *Publications.*

In addition to the official publications issued by the Trustees (see pp. 84, 85), the following papers have been published in connection with the different branches of the collection.

By G. J. Arrow:—"A remarkable new Ball-rolling Beetle (Fam. Scarabæidæ)."—Ann. and Mag. Nat. Hist. (9) iii, pp. 433-435.

"Systematic Notes on a few Melolonthine Coleoptera."—*Ib.* (9) iv, pp. 21-29.

"Notes on Ruteline Coleoptera and Descriptions of a few New Species in the British Museum."—*Ib.*, pp. 379-385.

By K. G. Blair:—"Coleoptera Heteromera, collected in Korinchi, West Sumatra, by Messrs. H. C. Robinson and C. Boden Kloss."—Jour. Fed. Malay States Museums, viii.

"Synonymic Note."—Ent. Mon. Mag. (3) v, pp. 101-103.

"Notes on the Pythidæ, with descriptions of New Species."—*Ib.*, pp. 112-124.

"Some Notes on *Cetonia aurata*."—*Ib.*, pp. 200-203.

By G. C. Champion:—"Notes on various Species of the Genus *Chalchas*, Blanch."—Ent. Mon. Mag. (3) v, pp. 1-3.

"The Malacoderm Genera *Prionocerus* and *Idgia*, and their Sexual Characters [Coleoptera]."—Ann. and Mag. Nat. Hist. (9) iii, pp. 325-372.

"Notes on the African and Asiatic Species of *Melyris*, Fab. (sensu lato), with an account of their Sexual Characters."—*Ib.* (9) iv, pp. 157-219.

By Sir G. F. Hampson:—"A Classification of the *Ægeriadae* of the Oriental and *Æthiopian* Regions."—Nov. Zool. xxvi, pp. 46-119.

"Descriptions of new Pyralidæ of the Families Crambinæ and Siginae."—Ann. and Mag. Nat. Hist. (9) iii, pp. 275-292; 437-475; 533-547; *Ib.* (9), iv, pp. 53-68; 137-154; 305-326.

By F. W. Edwards:—"Diptera collected in Korinchi, West Sumatra, by Messrs. H. C. Robinson, and C. Boden Kloss"—Jour. Fed. Malay States Museum, viii.

"A note on the Egg-burster of Eucephalous Fly-larvæ"—Ann. and Mag. Nat. Hist. (9) iii, p. 372—"Some Parthenogenetic Chironomidæ"—*Ib.* (9) iii, p. 222.

"The Larva and Pupa of *Tæniorhynchus richiardii* Fic."—Ent. Mon. Mag. (3) v, p. 83—"A new British Heteropezine Fly"—*Ib.*, p. 103.

"*Gnophomyia tripudians*, Bergr., a new British Fly"—*Ib.*, p. 176.

By E. E. Austen :—"Anti-Mosquito Measures in Palestine, during the Campaigns of 1917-1918."—*Trans. Soc. Trop. Med. and Hygiene* xiii, 1919, pp. 47-60.

By W. L. Distant :—"The Heteroptera of Indo-China."—*The Entomologist*, Jan., July, Sept. 1919.

"Description of a New Genus and Species of Cicadidæ."—*Ann. and Mag. Nat. Hist.* (9) iii, p. 43.

"On a New Species of Heteroptera, Fam. Pyrrhocoridae."—*Ib.*, p. 218.

"Ethiopian Heteroptera (Reduviidæ)."—*Ib.*, p. 466.

"British Indian Reduviidæ."—*Ib.* (9) iv, p. 71.

"Cicadidæ from Tropical Africa."—*Ib.*, p. 136.

"Ethiopian Cicadidæ."—*Rev. Zoolog. African*, vii, p. 155.

"A New Lygæid Bug found amongst Stored Rice in Java."—*Bull. Ent. Research* x, p. 41.

By R. E. Turner :—"On the Hymenoptera collected in New Caledonia by P. W. Montague in 1914."—*Ann. and Mag. Nat. Hist.* (9) iii, pp. 229-239.

"Notes on Fossorial Hymenoptera, XXXVII. On some Sphecinae in the British Museum."—*Ib.*, pp. 393-397. "XXXVIII. On New Ethiopian Species."—*Ib.*, (9) iv, pp. 44-50. "XXXIX. New Sphecoidea collected in Palestine by Major E. E. Austen."—*Ib.*, pp. 69-70.

"New Australian Diplopterous Hymenoptera."—*Ib.* (9) iii, pp. 398-399.

"On Indo-Chinese Hymenoptera collected by R. Vitalis de Salvaza."—*Ib.*, pp. 425-433, 483-487. *Ib.* (9) iv, 385-395.

"Notes on the Ichneumonidæ in the British Museum."—*Ib.* (9) iii, pp. 550-558. *Ib.* (9) iv, pp. 36-44.

By the Rev. F. D. Morice :—"Notes on Australian Sawflies, especially the "Authors' Types," and other specimens in the British Museum Natural History and the Hope Collection of the Oxford University Museum, with diagnostic Synopses of the Genera and Species, and photographs illustrating their structural characters."—*Trans. Ent. Soc.*, London, 1919, pp. 247-333.

#### V.—Acquisitions.

The number of specimens added to the Insect Collection during the year is 154,244, made up as shown in the following table :—

	Donations.	Purchases.	Exchanges.	Totals.
Coleoptera ... ..	73,540	1,000	293	74,833
Lepidoptera ... ..	32,004	—	221	32,225
Hymenoptera ... ..	7,526	3,532	33	11,091
Diptera ... ..	20,187	—	—	20,187
Rhynchota ... ..	5,968	4,000	105	10,073
Orthoptera ... ..	500	—	—	500
Neuroptera ... ..	200	—	—	200
Other Orders ... ..	532	—	—	532
Larvæ, Pupæ, &c. ... ..	4,603	—	—	4,603
Totals ...	145,060	8,532	652	154,244

The most important of these accessions are the following:—

**From various localities.**

52,749 Insects, comprising 4,801 Lepidoptera, and 47,298 Coleoptera, from Britain and Rhodesia, collected by the late Mr. Hereward C. Dollman; *presented by J. C. Dollman, Esq.*

19,000 Lepidoptera, chiefly from Brazil; *presented by E. Dukinfield-Jones, Esq.*

16,975 specimens, mainly Coleoptera, chiefly Oriental and Australian; *presented by G. E. Bryant, Esq.*

9,158 specimens of various orders; *presented by the Imperial Bureau of Entomology.*

4,284 Hymenoptera, being the collection of the late Dr. Harold Swale; *presented by Mrs. Harold Swale.*

1,313 specimens of various orders, chiefly from Britain and Algeria; *presented by Lord Rothschild.*

492 specimens, mainly Lepidoptera, chiefly from the Cameroons; *presented by Capt. F. H. FitzRoy.*

156 specimens of various orders; *presented by Capt. H. W. Whyte.*

The ninth instalment of the Distant Collection, containing 4,000 specimens of Rhynchota, and 1,000 Coleoptera.

The Waterhouse Collection of Mymaridæ (Hymenoptera) containing 3,532 specimens.

**From Europe.**

9,382 British insects, chiefly Diptera; *presented by F. C. Adams, Esq.*

4,282 British Diptera; *presented by F. W. Edwards, Esq.*

3,463 British Homoptera, set, named, and systematically arranged; *presented by W. West, Esq.*

350 Lepidoptera from Macedonia; *presented by W. Blanchard, Esq.*

249 specimens of British Insects; *presented by G. C. Champion, Esq.*

190 British Diptera; *presented by W. R. Ogilvie-Grant, Esq.*

162 European Coleoptera; *presented by Dr. R. Jeannel.*

**From Asia.**

2,109 specimens of various orders collected in Palestine and Mt. Sinai by the donor; *presented by Major E. E. Austen, D.S.O.*

1,417 specimens of various orders from Mesopotamia; *presented by Mrs. R. Brewitt-Taylor.*

634 Lepidoptera from Asia Minor; *presented by Capt. W. W. A. Phillips.*

501 Coleoptera from Borneo, Singapore, and Philippine Islands; *presented by Prof. C. F. Baker.*

447 Lepidoptera from Asia Minor; *presented by Major N. V. L. Rybot, D.S.O.*

188 Coleoptera from Sikkim; *presented by H. Stevens, Esq.*

162 specimens of various orders from Syria and Palestine ;  
presented by Col. E. P. Sewell, C.M.G., D.S.O., R.A.M.C.

#### From Africa.

538 Lepidoptera from the Gold Coast ; presented by Capt. J. W. G. Saunders.

251 specimens of various orders from Nigeria ; presented by Lady Strathcona.

230 Coleoptera from Uganda ; presented by Prof. E. B. Poulton.

#### From Australasia.

266 specimens of various orders from New Zealand ; presented by A. E. Brookes, Esq.

260 Coleoptera from Australia, Norfolk Island, and Lord Howe Island ; presented by the S. Australian Museum.

### VI.—Economic Entomology.

Enquiries on matters of importance from an economic point of view have continued to come in and in increasing numbers. Signs are evident that as the public become more fully aware of the facilities that are provided for them, this side of museum work will become increasingly important. The homeland and the colonies and possessions have taken advantage of these facilities. During the year the instructions for the collection of mosquitoes have been revised, and the pamphlet dealing with the Housefly has been in great part re-written, while work in connection with the investigation of insect pests of grain (Royal Society War Committee) has been continued.

Amongst the subjects on which information or advice has been sought and as far as possible given, the following may be mentioned :—

#### COLEOPTERA.

- (1) *Heterobostrychus aequalis* Waterh. : larvæ burrowing in the sides of a wooden box.
- (2) *Lyctus brunneus* causing frequent damage to furniture.
- (3) *Anobium striatum* damaging antique furniture, and other species of *Anobium* boring in wood—numerous enquiries.
- (4) *Carpophilus hemipterus* Cr. breeding in dates in a grocer's shop.
- (5) *Ptinus tectus* Boield, infesting a grocer's shop. The source of infestation was traced to dog biscuits.
- (6) *Sitodrepa panicea*, breeding freely in dry soup preparations.
- (7) *Mezium affine* breeding in macaroni.
- (8) *Dermestes vulpinus* F., and *Necrobia rufipes* De G., damaging wrappings of goods from the Argentine, and then the goods themselves.
- (9) *Ptinus seepunctatus* Pz., damaging lead on the roof of a house.

- (10) *Tetropium gabrieli*, perforating lead lined wooden vats.
- (11) Wireworms.
- (12) *Phyllopertha horticola* L., constituting a plague in several parts of the country.
- (13) *Apoderus coryli* Oliv., rendering the leaves of Hazel trees unsightly in a garden suburb.
- (14) *Psylliodes affinis* injuring potato leaves.
- (15) *Hylastes palliatus* Gyll., and *Tomicus laricis* Fabr., damaging Scots pine.
- (16) *Xyleborus saxeseni* Ratz., and *Platypus cylindrus* Fabr., boring in Chestnut trees.
- (17) *Anthrenus pimpinellæ* Fabr., larvæ attacking the long cloth upholstery of a motor car and ruining it.

## LEPIDOPTERA.

- (18) *Hepialus lupulinus* caterpillars feeding on the roots of Iris and other garden plants.
- (19) *Lycia hirtaria*—caterpillars in very large numbers in various districts in and near London.
- (20) Caterpillars of *Clisiocampa neustria* Linn., and *Hybernia defoliaria*, damaging Cherry trees.
- (21) *Tortrix viridana*: complaints as to the damage to Oak trees caused by the caterpillars of this moth received from all over the country.
- (22) Larvæ of *Borkhausenia pseudospretella* Stn., found in bedding.
- (23) Clothes moths—the usual yearly budget.

## HYMENOPTERA.

- (24) *Pteromalus deplanatus* Nees. A very large amount of correspondence has been entailed through the annoyance which this insect causes by its presence in great numbers in houses during the winter.
- (25) *Cremastogaster gerbonensis* Emery, doing very great damage to cocoa plantations in West Africa.
- (26) *Phymatocera aterrima*—larvæ seriously injuring the leaves of Solomon's Seal.
- (27) *Sirex gigas*, *S. cyaneus*, and *S. noctilio*: Numerous enquiries regarding these species have been dealt with.
- (28) Bees and bee-culture—literature on the subject.

## OTHER ORDERS.

- (29) A species of Thrips has been causing very great damage to cocoa plantations in Uganda.
- (30) *Aspidiotus destructor* Sign., devastating the foliage of cocconut palms in Belgian Congo.
- (31) *Chlorita flavescens* seriously injuring the leaves of apple trees in different districts.
- (32) *Myzus ribis* and *Schizoneura fodiens* damaging currants in a large garden.

- (33) *Phorodon humuli* Schr. information as to the effect of weather on its multiplication.
- (34) Cockroaches—methods of extermination—the usual bulky correspondence.
- (35) *Linognathus piliferus* (Burm.), a louse infesting a dog.

## MISCELLANEOUS.

- (36) The common names in French and Spanish of certain insects of economic importance—for trade catalogues.
- (37) Lepidopterous larvæ in sauce.
- (38) Corks of champagne bottles being damaged.
- (39) Locusts, their control in Borneo and elsewhere.
- (40) The pollination of Scarlet Runners by humble bees.
- (41) The parasites of the furniture beetle and the possibility of introducing them into New Zealand.
- (42) Shellac, methods of production, habits and life history of the Lac Insect (two enquiries).
- (43) Sericulture, its possibility of introduction into Britain, &c.
- (44) Insects in drinking water as an index of its contamination.
- (45) Mites on pear and walnut trees.

VII.—*Students and Visitors.*

The number of visits paid to the department during the year by students and other persons seeking information or assistance was 3,306.

*C. J. Gahan.*



## DEPARTMENT OF GEOLOGY.

I.—*Arrangement and Conservation.*

*Mammalia* (Galleries 1 and 2).—The unexhibited collection of Primates and Carnivora in the drawers of table-cases 2, 2a, has been arranged and labelled to incorporate recent acquisitions.

The rostra of Ziphioid whales have been arranged and labelled in pier-case 4.

Number of specimens of *Mammalia* registered, 27.

*Aves* (Gallery 2).—Bones of birds from a cavern near Chudleigh, Devon, have been labelled and incorporated.

Number of specimens of *Aves* registered, 41.

*Reptilia and Batrachia* (Galleries 3, 4, 5, 11).—The arrangement and labelling of the Anomodontia exhibited in wall-case 10 have been completed.

A large collection of Chelonian remains from Mauritius has been labelled and incorporated, and a slip-catalogue of the whole collection of Chelonia has been prepared.

The large skeleton of *Ichthyosaurus platyodon*, from the Lias of Stockton, has been repaired and so far as possible freed from decaying pyrites.

Number of specimens of *Reptilia and Batrachia* registered, 241.

*Pisces* (Gallery 6).—Wall-cases 1, 2, containing Elasmobranchii, have been renovated, with many new labels, and several skulls of *Hybodus*, from the Wealden of Sussex, have been added to the exhibited collection.

The collection of Palaeozoic Elasmobranchii has been revised and partly re-labelled, and the specimens exhibited in the table-cases 2, 3, 4 have been re-arranged.

Various Tertiary Fishes and Jurassic Fishes from Australia have been labelled and incorporated.

The preparation of the fish-remains in drawers, to reduce the specimens in size, is still in progress.

Number of specimens of *Pisces* registered, 229.

*Mollusca* (Galleries 7 and 8, and Workroom).—The determination of the Eocene Mollusca from Nigeria has been continued, and various small collections of Tertiary and Cretaceous Mollusca from other localities, offered as gifts, have been reported on.

Tertiary Lamellibranchia and Gastropoda from Egypt have been labelled and incorporated.

Triassic Ammonites from Bosnia have been arranged and prepared for study.

The Cephalopoda registered, labelled and incorporated, include : Carboniferous Nautiloids and Permian Ammonoids from Malay Peninsula (Scrivenor coll.); a Carboniferous Goniatic, *Glyphioceras diadema*, from Belgium, figured by A. Vaughan, 1915, Quart. Journ. Geol. Soc., vol. lxxi, pl. v., f. 6 (Vaughan coll.); Liassic

Ammonites from Somerset (Möckler coll.), and from Dorset described and figured by A. E. Trueman, 1919, Q.J.G.S., vol. lxxv (W. D. Lang coll.); Upper Jurassic Ammonoids from the Balearic Islands (D. M. A. Bate coll.); Cretaceous Ammonoids and Nautiloids from Aston Rowant, Oxon. (Withers coll.); a Cretaceous Nautiloid from Egypt (Dudgeon coll.); Eocene Nautili from Essex (Hazzledine Warren coll.); Miocene Nautiloids from Malta (J. C. Walton coll.).

A Triassic Ammonite, *Discophyllites cf. ebneri*, from New Zealand, described by C. T. Trechmann, 1917, Quart. Journ. Geol. Soc., vol. lxxiii, p. 184, pl. xvii, fig. 7, (Trechmann coll.); and a Nautilus from the Chalk Rock of Aston Rowant, have been mounted and exhibited in wall-cases 12 and 2.

Number of Mollusca registered:—Cephalopoda, 294; Gastropoda, 779; Lamellibranchia, 616. Total, 1,689.

*Arthropoda* (Gallery 8 and Workroom).—The acquisitions registered, labelled, and incorporated include Lower Silurian Ostracods from Horderley, Salop (Bather coll.); Silurian *Anatifopsis* from Otisville, N.Y.; Coal Measures Xiphosura and other arthropods from Rochdale, Lancs. (Sutcliffe coll.); Cretaceous crabs from Dakota (Over coll.); Decapods from the London Clay of Essex (Hazzledine Warren coll.).

The registration of the Insects in Amber and Gum Copal, transferred from the Zoological Dept., has been completed. The Insects from Gurnet Bay have been partly re-arranged as their study progresses.

Insects from the Carboniferous, Rhaetic, and Lower Eocene, and the fossil Millipedes, have been checked and re-registered where necessary, in connection with loans to specialists for determination. An insect wing, the type of *Hypermegethes northumbriae*, Bolton, (Eltringham don.), and the type-specimens of the Xiphosura, *Euproöps amia* and *Belinurus trechmanni*, have been placed on exhibition.

Additions have been made to the exhibited series of Cirripedia and of Cambrian Trilobites.

The slip-catalogues of exhibited specimens, of amber insects, of new genera, and of various additions, have been continued.

Number of specimens of Arthropoda registered, 595.

*Echinoderma* (Gallery 8).—The acquisitions registered, labelled, and incorporated include squeezes of Ordovician Cystids from Girvan; Cystids from the Devonian of Virginia (Greger coll.); Carboniferous Crinoids from the Morrow Group of Oklahoma, and the Chouteau Limestone and Fern Glen formation of Missouri (Greger coll.); Eugeniocrinids from the Portlandian of Stramberg (Trechmann coll.); *Balanocrinus* from the London Clay of Essex (Hazzledine Warren coll.); Blastoids from the Morrow Group of Oklahoma and the Burlington Limestone of Illinois (Greger coll.); Asteroids from the Devonian of Bundenbach and North Devon; Jurassic Echinoids from various European localities (T. Wright

coll.); a large series of *Collyrites* and other Echinoids from the Oxford Clay of St. Ives (Jesson coll.); Echinoids from the Cretaceous of Eastern England (Bower coll.); *Fibularia* from the Eocene of Nigeria, described by H. L. Hawkins (Kitson coll.); Echinoids from the Lenham beds, described by R. B. Newton (Prestwich and Wallas colls.).

The slip-catalogues of specimens studied or exhibited, of all genera and species of other classes, have been continued.

Number of specimens of Echinoderma registered :—Echinoidea, 394 ; Asteroidea, 11 ; Crinoidea, 300 ; Blastoidea, 31 ; Cystoidea, 206 ; Total, 942.

*Annelida* (Gallery 8 and Workroom).—Specimens of “*Terebella cancellata*” from the Eocene near St. Omer (Lowe coll.), and the Chalk Rock near Aston Rowant (Withers coll.), have been labelled and incorporated.

Number of Annelida registered, 15.

*Brachiopoda* (Gallery 8 and Workroom).—The collection of Carboniferous Brachiopoda has been revised and rearranged, and a new selection has been arranged for exhibition, with printed labels, in table-case 18.

Number of specimens of Brachiopoda registered, 176.

*Polyzoa* (Gallery 8 and Workroom).—Progress has been made with determining and cataloguing the Cretaceous Polyzoa.

Number of specimens of Polyzoa registered, 82.

*Anthozoa and Hydrozoa* (Gallery 10 and Workroom).—Carboniferous Corals from the A. Vaughan collection have been registered, labelled, and incorporated.

Number of specimens of Anthozoa and Hydrozoa registered, 47.

*Porifera and Protozoa* (Gallery 10).—Specimens from the G. J. Hinde collection have been registered, labelled, and incorporated.

Number of specimens of Porifera and Protozoa registered, 116.

*Plantæ* (Gallery 10).—Cretaceous plants from Dakota, U.S.A., and Tertiary plants from the Arctic regions have been examined, labelled, and incorporated in the collection.

Sections have been made of fossil wood from Kerguelen Island for study and determination.

A selection of the Antarctic fossil plants has been exhibited, with printed labels, in wall-case 14. An exhibition of Arctic Tertiary plants has been planned in wall-case 10, which has been re-fitted.

Number of specimens of Plantæ registered, 667.

*Rock-specimens and Tracks* (Gallery 11).—The unexhibited specimens of rocks and tracks have been arranged in drawers, and a slip-catalogue of the collection has been made.

Number of specimens of rocks and tracks registered, 131.

II.—*Duplicates and Exchanges.*

Duplicate fossils have been presented to the Geological Museum, University of Liverpool, and to the University Museum, Oxford.

Exchanges of duplicate fossils and plaster casts have been made with the Zoological Museum, University of Cambridge, and with Mr. W. H. Over, University of South Dakota, U.S.A.

III.—*Departmental Library.*

The additions to the Library which have been registered, stamped, catalogued, and press-marked, comprise 132 new works and pamphlets, of which 21 were purchased and 111 presented; 316 parts of serials in progress, of which 107 were purchased, 168 presented, and 41 obtained through H.M. Stationery Office. 36 sheets of maps were acquired, 4 by purchase and 32 presented. 18 photographs were presented and 100 purchased. 7 original drawings were presented and 3 volumes of manuscript were purchased. 15 volumes and pamphlets were obtained by transfer from other Departments.

106 volumes have been bound, press-marked and returned to the shelves. 675 geological maps have been mounted on linen and 72 pamphlets have been put into covers.

1,449 visits were made to the Library by students and others.

The following is a list of personal donors to the Library:—

Bather, Dr. F. A.	Lang, Dr. W. D.
Bell, Prof. J.	Newton, R. Bullen, Esq.
Broom, Dr. R.	Osborn, Prof. H. F.
Butler, Mrs.	Pontier, G., Esq.
Clarke, Dr. W. E.	Pratt, Joseph H., Esq.
Dibley, G. E., Esq.	Rendle, Dr. A. B.
Ellis, Dr. David.	Richardson, L., Esq.
Etheridge, R., Esq., Jun.	Schuchert, Prof. C.
Falconer, Dr. J. D.	Scott, Dr. D. H.
Faura-y-Sans, Dr. M.	Sherborn, C. Davies, Esq.
Flower, Capt. S.	Springer, Frank, Esq.
Gregory, Prof. J. W.	Stefanescu, Prof. S.
Hayashi, Prof. T.	Stopes, Dr. M. C.
Henderson, Dr. J.	Thomas, H. H., Esq.
Hughes, G. R., Esq.	Tomlin, J. R., Esq.
Hutton, Miss H. Mary.	Windhausen, Dr. A.
Jackson, J. Wilfrid, Esq.	Wintle, W. J., Esq.
Jongmans, Dr. W. J.	Woodward, Dr. A. S.
Keith, Sydney, Esq., F.R.P.S.	Woodward, B. B., Esq.
Kennard, A. S., Esq.	Woolnough, Dr. W. G.
Kilgour, W. Archer, Esq.	

IV.—*Publications.*

The MS. of the third volume of the Catalogue of Cretaceous Polyzoa has been completed, and progress has been made with the Supplement to the Catalogue of Fossil Fishes.

Apart from the official publications of the Trustees, the following descriptive papers dealing with different parts of the collection have been contributed to scientific journals during 1919 :—

By Dr. A. S. WOODWARD.

1. Notes on the Fish-remains from the Pickwell Down Sandstones. *Geol. Mag.* (6), vol. 6, pp. 102, 103.
2. On two new Elasmobranch Fishes (*Crossorhinus jurassicus*, sp. nov., and *Protospinax annectans*, gen. et sp. nov.) from the Upper Jurassic Lithographic Stone of Bavaria. *Proc. Zool. Soc.* 1918 (1919), pp. 231-235, pl. i.
3. The Fossil Fishes of the English Wealden and Purbeck Formations. Part iii, pp. 105-148, pls. xxi-xxvi. *Palaeont. Soc.*

By Dr. F. A. BATHER.

1. Notes on Yunnan Cystidea, part iii. *Geol. Mag.* (6), vol. vi, pp. 71-77, 110-115, pl. iii, pp. 255, 262, pl. vi, pp. 318-325.
2. *Cupressocrinus gibber*, n. sp., du Dévonien supérieur de Belgique. *Bull. Soc. Belge Géol.*, etc., vol. xxviii, pp. 129-136.
3. The antiquity of parasitic disease. *Geol. Mag.* (6) vol. vi, pp. 276, 277.
4. The distribution of "*Terebella*" *cancellata*. *Ibid.*, p. 466.

By Mr. R. B. NEWTON.

1. On *Raetomya*, a new genus of Pelecypoda, from the Tertiary rocks of Egypt and Southern Nigeria. *Proc. Malac. Soc.* vol. xiii, pp. 79-84, pl. i.
2. On a sandstone cast of *Aturia aturi* (Basterot), from the Miocene of Western Australia. *Proc. Malac. Soc.*, vol. xiii, pp. 160-167, pls. v, vi.

By Dr. W. D. LANG.

1. The Kelestominæ: a Sub-family of Cretaceous Cribrimorph Polyzoa. *Quart. Journ. Geol. Soc.*, vol. lxxiv, pp. 204-220.
2. The Evolution of Ammonites. *Proc. Geol. Assoc.*, vol. xxx, pp. 49-65.
3. Old Age and Extinction in Fossils. *Ibid.*, pp. 102-113.

By Dr. B. PETRONIEVICS.

1. Note on the Pectoral Fin of *Eusthenopteron*. *Ann. Mag. Nat. Hist.* (9) vol. ii, pp. 471-476.

By Prof. T. D. A. COCKERELL.

1. The Oldest Mosquitoes. *Nature*, vol. ciii, p. 44.
2. Insects in Burmese Amber. *Entomologist*, vol. lii, pp. 193-195, 241-243.

By Mr. H. BEKKER.

1. New Bryozoa from the Kuckers Stage in Estonia. *Ann. Mag. Nat. Hist.* (9) vol. iv, pp. 327-335, pl. vii.

## V.—Acquisitions.

## A.—By Donation.

*Mammalia*.—A Sirenian tooth from the Eocene. Mokattam quarries, Cairo. *G. Foster Smith, Esq.*

Three plaster casts of the dentition of *Hyopotamus*, from the Oligocene of Hempstead, I. of Wight. *C. Forster Cooper, Esq.*

Natural cast of the brain of *Antilope melonii*; portion of mandible of *Ovis ammon*; mandibular rami of *Myolagus sardus*; plaster casts of lower molar and premolar and the third right lower molar of *Ophthalmomegas lamormarae*, descr. and figd. by the donor in his work, *Matér. Hist. Zool. et Palaeont. Isles Corse et Sardaigne*, fasc. v (1914), p. 77, pl. ii, fig. 4; all from a Pleistocene breccia at Cape Figari, Sardinia. *Mons. E. G. Dehaut.*

Portions of mandible and limb-bone of *Elephas*, and two portions of mandible of *Rhinoceros*, from a sandy deposit at Kandahar, Afghanistan. *Lieut.-Gen. H. H. Lyster, C.B., V.C.*

Tooth of *Elephas* from the marsh Karigeul, near Andremedi, about 30 m. N.E. of Salonica. *Capt. H. St. J. Kenny.*

Portion of human mandible from the black mud in the Bor district, Sudan. *Major J. Stevenson-Hamilton.*

*Reptilia*.—A photograph of *Iguanodon*-footprint from the Wealden of Bexhill. *I. C. Thompson Esq.*

Two *Chelonia* from the London Clay of Essex. *S. Hazzledine Warren, Esq., F.G.S.*

Chelonian bone from the Barton Clay. *H. Eliot Walton, Esq.*

One *Chelonia ovata* from the Oligocene of Canton Glarus, Switzerland, descr. and figd. by A. Wettstein, *Fisch-fauna Tert. Glarnerschief.*; *Mem. Soc. Palaeont. Suisse*, 1886, p. 93, pl. viii., fig. 7. *Bequeathed by the Revd. F. St. John Thackeray, M.A., F.G.S., per Miss Thackeray.*

Portions of skull, mandible and scutes of a Crocodile found by the donor at Tel-el-Ahmar, Sinai. *Mr. P. Stammwitz.*

*Pisces*.—Fourteen fish-remains collected by the donor from the Pickwell Down Sandstones, Woolacombe Bay, N. Devon; noticed by the donor and A. S. Woodward, *Geol. Mag.*, 1919, pp. 100-103. *Inkerman Rogers, Esq., F.G.S.*

Four Elasmobranch teeth from the Carboniferous Limestone of the North of England. *Prof. E. J. Garwood, F.R.S.*

Eight teeth of Lamnidæ from the Kentish Upper Greensand and Chalk; six teeth of Lamnidæ from the Woolwich and Reading Beds of Essex; sixty teeth of Lamnidæ and other fish-remains from the London Clay of Essex. *S. Hazzledine Warren, Esq., F.G.S.*

Two fish-remains from the Eocene, Mokattam quarries, Cairo. *G. Foster Smith, Esq.*

Ten Selachian teeth, five other fish-remains and a new Chimæroid mandibular tooth from the Barton Clay, Barton, Hants. *H. Eliot Walton, Esq.*

Two slabs of fossil herrings from a diatomaceous deposit of Tertiary age, 4 miles S. of Lompoc, Santa Barbara Co., California. *F. L. Bosqui, Esq.*

*Mollusca*.—Two Lamellibranchs from the base of the Llandoverly, near Hill End Farm, Horderley, Salop; and one Tentaculite from the top of the Wenlock shale, Lincoln Hill, Ironbridge, Salop. *Dr. F. A. Bather, F.R.S.*

Twelve Lamellibranchs from the Coal Measures (Low-Main Seam), near Newcastle-on-Tyne. *S. Hazzledine Warren, Esq., F.G.S.*

Three Molluscs from Upper Carboniferous Ironstone nodules, Coseley, Staffs. *S. Priest, Esq., F.G.S.*

An Ammonite (*Discophyllites*) from the Trias of Mount Heslington, Nelson, New Zealand, descr. and figd. by the donor in Quart. Journ. Geol. Soc., vol. lxxiii (1918), p. 184. pl. xvii, fig. 7. *Dr. C. T. Trechmann, F.G.S.*

Twenty Ammonites, two Nautili and five Belemnites from the Lias of Somerset. *F. J. Mockler, Esq.*

Eleven Ammonites from the Charmouth Lias, namely, two *Coroniceras*; *Oxyotoceras* and *Cymbites* figured in the donor's paper, Proc. Geol. Assoc. vol. xxx, p. 108, fig. 20 (1919); the type-specimen of *Ægoceras dardalicosta*; a paratype specimen of *Liparoceras obtusinodum*; and five other Ammonites collected by the donor and figured by A. E. Trueman, Quart. Journ. Geol. Soc., vol. lxxiv (1919), pl. xxii, fig. 4, pl. xxiii, figs. 3, 4, and text-figures 5, 6 and 13; and a specimen of *Deroceras hispinigerum*, of which the suture-line is figured by S. S. Buckman, Quart. Journ. Geol. Soc. vol. lxxii (1918), p. 294. *Dr. W. D. Lang, F.G.S.*

Body-chamber of Ammonite (*Ægoceras latacosta*), showing malformation of shell due to injury of the soft parts, obtained by the donor from the Lower Lias, Stonebarrow Cliff, Charmouth, Dorset. *Dr. W. T. Calman.*

One *Pholadomya* from the Kimmeridge Clay (a derived fossil), Cottenham, Cambs. *T. H. Sherborn, Esq.*

Mollusca from the Jurassic of central Arabia. *H. St. J. B. Philby, Esq., C.I.E., I.C.S.*

Eight portions of Jurassic Ammonites and two Cretaceous Lamellibranchs from Peru. *W. F. H. Rosenberg, Esq.*

An Ammonite (*Simbirskites*) from the Tealby Limestone, North Willingham, Lincs. *Prof. P. F. Kendall, F.G.S.*

Two specimens of *Belemnites minimus* from the Red Chalk, Millington Springs, near Pocklington. *Revd. C. R. Bower.*

A Hippurite and four Ammonites from the Upper Greensand and Chalk of Kent. *S. Hazzledine Warren, Esq., F.G.S.*

Seven Belemnites from the Cenomanian of Lüneberg, Hanover. *F. J. Mockler, Esq.*

One *Nautilus* from the Chalk Rock of Aston Rowant, Oxon. *T. H. Withers, Esq., F.G.S.*

Seven Lamellibranchs (*Corbicula*, &c.) from the Upper Cretaceous (Fox Hills Group), Monarch, Alta., Canada. *Mr. William E. Cutler, F.G.S.*

Twelve opalised fossils (mostly Molluscs) from the Upper Cretaceous of New South Wales, descr. and figd., R. B. Newton, Proc. Malac. Soc. London, vol. xi (1915), p. 217, pl. vi. *Bequeathed by the Revd. F. St. John Thackeray, M.A., F.G.S., per Miss Thackeray.*

Twenty imprints of Lamellibranchs, apparently Cretaceous and probably collected in India by R. B. Foote, being the collection of the late Lieut. Henry N. Lechler. *S. H. W. Foote, Esq.*

A hundred and thirty fossils (Mollusca, Echinoidea, &c.) from the Cretaceous and Tertiary rocks of Persia. *Lieut. B. K. N. Wyllie, R.E., F.G.S.*

Two Nautili and two Lamellibranchs from the London Clay of Essex. *S. Hazzledine Warren, Esq., F.G.S.*

Five valves of *Ostrea multicostrata* associated with Nummulites from the Lower Eocene of Locre, S.W. of Ypres, Flanders. *W. Campbell Smith, Esq., M.C., F.G.S.*

A valve of *Ostrea* from the Barton Clay. *H. Eliot Walton, Esq.*

An ostreiform shell from the Eocene, Mokattam quarries, Cairo. *G. Foster Smith, Esq.*

Two chambers of a fossil Nautiloid from the Kharga Oasis, Egypt. *Master John R. N. C. Dudgeon.*

Four specimens of *Aturia* from the Miocene of Malta. *Lieut. J. C. Walton.*

Mollusca from the Upper Pliocene or Pleistocene deposits of Taranto, Italy. *James Wright, Esq.*

One *Cardium* from the Miocene of Jamacia. *Miss Agnes Crum-Ewing.*

Tertiary Mollusca from near Jask, Persian Gulf. *Lieut. B. K. N. Wyllie, R.E., F.G.S., and Lieut. J. V. Harrison, R.E.*

A piece of Tertiary rock with remains of a small species of *Cardita* from between Bushire and Rushire, Persian Gulf. *Mr. G. Galsdon.*

Eight Molluscan shells from a Pleistocene deposit at Cape Figari, Sardinia. *Monsieur E. G. Dehaut.*

About three hundred Upper Tertiary and Recent Gastropoda labelled by the donor to illustrate his Monograph of the Pliocene Mollusca of Great Britain, vol. i. *F. W. Harmer, Esq., M.A., F.G.S.*

About fifty Mollusca collected by the donor from a raised beach in Peru. *Dr. H. O. Forbes.*

*Arthropoda*.—Fourteen Ostracods (*Leperditia*) from the base of the Llandoverly near Hill End Farm, Horderley, Salop; and six Ostracoda and one Trilobite from the top of the Wenlock Shale, Lincoln Hill, Ironbridge, Salop. *Dr. F. A. Bather, F.R.S.*

Nine specimens of the supposed Arthropod (*Anatipopsis wardelli*) from the Silurian, Longwood Shales, of Shawangunk Mts., Otisville, New York. *Director of the State Museum, New York.*



Twenty-seven Arthropods from the Upper Carboniferous, Ironstone nodules, Coseley, Staffs. *S. Priest, Esq., F.G.S.*

Two squeezes of the type-specimen of the Carboniferous Blattoid Insect, *Etoblattina peachi*. *Herbert Bolton, Esq., M.Sc., F.G.S.*

The type-specimen of *Hypermegethes northumbriae* (H. Bolton, Quart. Journ. Geol. Soc., vol. lxxii, 1917, p. 55, pl. iv, figs. 2, 3, text-fig. 5), an insect-wing from the Coal Measures, Crawcrook, Co. Durham. *William Eltringham, Esq.*

Nine Decapod Crustacea from the London Clay of Essex. *S. Hazzledine Warren, Esq., F.G.S.*

Two Cirripede valves (*Scalpellum* sp.), from the Barton Clay. *H. Eliot Walton, Esq.*

An enlarged photograph of *Culex winchesteri*, Cockerell, from the Eocene of Colorado. *Prof. T. D. A. Cockerell.*

Twenty specimens of red amber (Burmite) from the Miocene Clay in Burma, containing the types of fossil insects described by Prof. T. D. A. Cockerell, in "Psyche" (1917) and "Annals Entomol. Soc. America" (1917). *Rodway C. J. Swinhoe, Esq.*

Tertiary Cirripedes from near Jask, Persian Gulf. *Lieut. B. K. N. Wyllie, R.E., F.G.S., and Lieut. J. V. Harrison, R.E.*

A *Balanus* obtained by the donor from a Raised Beach in Peru. *Dr. H. O. Forbes.*

*Echinoderma*.—A specimen of Crinoid-conglomerate from a fissure in the *Leptena*-kalk of Kalholn, Dalecarlia, Sweden. *Herr Orvar Isberg.*

A Crinoid (*Cyathocrinus*) from the Wenlock Limestone of Much Wenlock. *Miss Doris Rose Hole.*

Two Crinoids from the top of the Wenlock Shale, Lincoln Hill, Ironbridge, Salop. *Dr. F. A. Bather, F.R.S.*

Four fragments and one microscope-section of a Carboniferous Crinoidal rock. *Revd. G. Warren.*

A hundred and thirteen Crinoids and twenty-one Blastoids from the Carboniferous of Oklahoma, U.S.A.; seventeen Crinoids from the Carboniferous of Missouri; eighty-nine Crinoids from the Carboniferous of Texas; ten Blastoids from the Carboniferous of Illinois; and three Cystids from the Lower Devonian of Virginia. *Mr. Darling K. Greger.*

A hundred and sixty-four Crinoids from the Portlandian of Stramberg. *Dr. C. T. Trechmann, F.G.S.*

Echinoidea from the Jurassic of Central Arabia. *H. St. J. B. Philby, Esq., C.I.E., I.C.S.*

Two masses of Chert filled with Echinoids (*Cardiaster* and *Epiaster*) from the Upper Greensand, Charmouth. *A. B. Hann, Esq.*

Three Crinoids (*Marsupites* and *Uintacrinus*) from the Chalk of the South Coast. *C. D. Sherborn, Esq., F.G.S.*

Seventeen specimens of *Micraster* arranged to show evolution through zones of the English Chalk. *T. H. Withers, Esq., F.G.S.*

A rare form of *Echinocorys scutatus* from the Chalk of Chipstead, Surrey. *William Wright, Esq., F.G.S.*

The stem of a Crinoid (*Balanocrinus*) from the London Clay at Baker Street Station. *Miss L. M. Devonshire.*

Fifty-eight Crinoid-stems and one Echinoid radiole from the London Clay of Essex. *S. Hazzledine Warren, Esq., F.G.S.*

An Ophiuroid ossicle from the Barton Clay. *H. Eliot Walton, Esq.*

A specimen of *Cidaris* from the Miocene of Malta. *Lieut. J. C. Walton.*

Echinoids from the Tertiary of Jask, Persian Gulf. *Lieut. B. K. N. Wyllie, R.F., F.G.S., and Lieut. J. V. Harrison, R.F.*

*Annelida*.—Borings of *Teredo* from the Bracklesham Beds, Selsey, Sussex. *Edward Heron-Allen, Esq., F.R.S.*

*Brachiopoda*.—Eight Brachiopods from the top of the Wenlock Shale, Lincoln Hill, Ironbridge, Salop. *Dr. F. A. Bather, F.R.S.*

Sixty Brachiopods from the Carboniferous Limestone of the North of England. *Prof. E. J. Garwood, F.R.S.*

Nineteen characteristic Brachiopods from the Carboniferous Limestone of the Bristol district. *Prof. S. H. Reynolds, Sc.D., F.G.S.*

A piece of siliceous rock containing Brachiopods (*Productus* and *Spirifer*) of Carboniferous age, from the bed of the river Dwina, about 200 miles S. of Archangel, Russia. *Private K. A. T. Westerberg.*

Brachiopoda from the Jurassic of Central Arabia. *H. St. J. B. Philby, Esq., C.I.E., I.C.S.*

*Polyzoa*.—Eleven Ordovician Polyzoa from Esthonia. *H. Bekker, Esq.*

Fifteen Polyzoa from the top of the Wenlock Shale, Lincoln Hill, Ironbridge, Salop. *Dr. F. A. Bather, F.R.S.*

Polyzoa from the Jurassic of Central Arabia. *H. St. J. B. Philby, Esq., C.I.E., I.C.S.*

Sixty Chalk Polyzoa from Surrey and Sussex. *C. T. A. Gaster, Esq.*

Six Polyzoa from the Upper Chalk of Kent. *G. E. Dibley, Esq., F.G.S.*

*Anthozoa* and *Hydrozoa*.—Twenty-eight Corals and two Hydrozoa from the top of the Wenlock Shale, Lincoln Hill, Ironbridge, Shropshire. *Dr. F. A. Bather, F.R.S.*

Two specimens of the Carboniferous Coral *Cryptophyllum hibernicum*, one being in six serial sections. *R. G. Carruthers, Esq., F.G.S.*

Corals from the Jurassic of Central Arabia. *H. St. J. B. Philby, Esq., C.I.E., I.C.S.*

A Tertiary *Graphularia*. *Rev. Donald Miller, D.D.*

A Coral obtained by the donor on his journey across Northern Arabia from Koweit to Suez (Geogr. Journ., vol. xlv, p. 96, 1914). *Captain W. H. T. Shakespear.*

Corals from the Upper Pliocene or Pleistocene of Taranto, Italy. *James Wright, Esq.*

*Porifera*.—A sponge (*Plocoscyphia*) from the Chalk Rock, Aston Rowant, Oxon. *T. H. Withers, Esq., F.G.S.*

*Protozoa*.—A piece of Nummulitic Limestone, from Menton, France. *F. Ross Thomson, Esq.*

A Foraminifer (*Schwagerina*) infilled with asphalt, obtained by the late Upfield Green at Batraci in Samara, Russia. *C. D. Sherborn, Esq., F.G.S.*

*Plantæ*.—Thirteen specimens illustrating eight species of the supposed Algæ—*Collenia, Greysonia, Newlandia, Camasia, Gallatina* and *Copperia*—from the Algonkian (Pre-Cambrian) rocks of Montana, described by Dr. C. D. Walcott, Smithsonian Miscellaneous Coll., vol. lxiv, no. 2 (1914). *The United States National Museum.*

Four Plants collected by the late Prof. H. G. Seeley in the Ordovician of Esthonia. *Mrs. H. G. Seeley.*

A leaf-scar of *Bothrodendron punctatum*, from the Carboniferous Pennant Grit, Chewton Mendip. *W. T. Hanman, Esq., and A. T. Warren, Esq., M.A.*

A plaster cast of the Stigmarian, *Dictyophloios minor*, Foerste, from the Carboniferous (Chester Group) of Pope Co., Illinois, U.S.A. *Dr. Aug. F. Foerste.*

Four plants from the Carboniferous, Ironstone Nodules, Coscley, Staffs. *S. Priest, Esq., F.G.S.*

An impression in coal of *Megaphyton*. *H. Burch, Esq.*

Eighteen plants with six invertebrate fossils from the Upper Coal Measures of Ssu-Tao-Chang Mine,  $1\frac{1}{2}$  degrees E. of Mukden, Manchuria; collected by G. T. Holloway, Esq. *H. A. Allen, Esq., F.G.S.*

Forty plants from the Coal Measures (Low-Main Seam) near Newcastle-on-Tyne. *S. Hazzledine Warren, Esq., F.G.S.*

Two micro-sections of *Bennettites maximus* from the Lower Greensand, Shanklin, I. of Wight, made from the type-specimen, and described by Dr. Marie Stopes in Phil. Trans., 1918. *The Director of the Geological Survey.*

One *Nipadites* from the Eocene, Mokattam quarries, Cairo. *G. Foster Smith, Esq.*

Nullipores from the Upper Pliocene or Pleistocene of Taranto, Italy. *James Wright, Esq.*

A specimen of peat from Peru. *W. F. H. Rosenberg, Esq.*

*Tracks*.—A slab with tracks (*Climatichnites*), four specimens illustrating wind-action, and two fragments of limestone, obtained by the donor on his journey across Northern Arabia from Koweit to Suez (Geogr. Journ., vol. xlv, p. 96; 1914). *Capt. W. H. T. Shakespear.*

*Rock-specimens*.—Three dreikanten from the Bunter Sandstone of Nottingham. *Robert I'Anson, Esq.*

Six micro-slides of flints from the Wallich collection. *The Royal Microscopical Society.*

Seventy micro-slides chiefly of flints from the Wallich collection. *E. Heron-Allen, Esq., F.R.S., and A. Earland, Esq.*

Eighty-six wind-faceted pebbles and one weathered rock-surface from the Eastern Desert, Egypt. *F. W. Moon, Esq., B.E., F.G.S.*

Two pitted pebbles and ten faceted wind-worn pebbles from Bir Mabeuik, Sinai. *Major N. V. L. Rybot.*

Five specimens of soundings from Kingston, Jamaica, taken after the great earthquake of Jan. 14th, 1907. *Capt. John A. Rupert Jones.*

#### B.—By Purchase.

Plaster casts of a fossil human skull from Talgai, Darling Downs, Queensland, described by Prof. S. A. Smith, *Phil. Trans.*, 1918.

Skull of *Potamotherium* and six small mammalian jaws from the Miocene of France.

Jaw of *Epanorthus* and five jaws of allied genera from the Santa Cruz Formation of Patagonia.

Skulls of the two Labyrinthodonts, *Capitosaurus*, from the Trias of Germany, and *Cochleosaurus*, from the Permian of Bohemia.

Three microscope-sections of jaws of the shark, *Sphenacanthus hylodoides*, from the Coal Measures of Shore, Lancashire.

About fifty fossils from the Wealden and Cretaceous of Sussex, and from the Rhaetic of Linksfield, Elgin, collected by the late Major Lambart Brickenden.

About 50 fossil Invertebrata from the Chalk Rock of Aston Rowant, Oxon.

Twenty-five fossil Corals and Brachiopods, and thirty-five microscope-sections of fossil Corals, from the Carboniferous Limestone, deser. and figd. by the late Dr. Arthur Vaughan.

Twenty-nine vertical and sixty-nine horizontal microscope-sections of the Shallow Seam of coal, South Staffordshire, with sixty-seven micro-photographs of the same (J. Lomax).

#### C.—By Exchange.

A collection of about 500 Chelonian remains, with a few Lacertilian remains, from superficial deposits in Mauritius, obtained by Thirioux, Sauzier, and the Newtons, partly described by Günther (Gigantic Land Tortoises), Gadow (*Trans. Zool. Soc.*), and Haddon (*Trans. Linn. Soc.*): University Museum of Zoology, Cambridge.

Six specimens of the crab, *Dakoticancer overana*, from Upper Cretaceous, S. Dakota, U.S.A.

The total accessions during 1919 are as follows:—

	Donations.	Purchases.	Exchanges.	Total.
Vertebrata	132	67	500	699
Invertebrata	1730	126	6	1862
Plantæ	86	93	—	179
Rocks	189	—	—	189
	<hr/> 2137	<hr/> 286	<hr/> 506	<hr/> 2929

The total number of specimens registered is 4998.

VI.—*Students and Visitors.*

The number of visits paid to the Department by students and other persons for the purpose of consultation or study during 1919 was 4,648.

VII.—*Lectures and Demonstrations.*

Seven parties were received in the Galleries of the Department of Geology, and demonstrations were given as follows:—

Jan. 18th—Geologists' Association (27 members): Dr. Woodward.

Feb. 1st—Battersea Field Club (13 members): Dr. Woodward.

Feb. 8th—Students' Association of North London (8 members):  
Dr. Woodward.

Feb. 8th—Geologists' Association (35 members): Dr. Lang.

Feb. 22nd—S.W. Polytechnic Geological Field Club (24 members):  
Dr. Woodward.

Nov. 1st—Wimbledon Natural History Society (11 members):  
Dr. Bather.

Dec. 13th—St. Peter's Church, Cranley Gardens (28 members):  
Dr. Lang.

*Arthur Smith Woodward.*

## DEPARTMENT OF MINERALOGY.

I.—*Arrangement.*

The Church Collection of Precious Stones has been re-arranged and placed in an exhibition case under the archway leading to the Pavilion, and a special electric light has been provided for the over-head illumination of the stones. The Bible-Minerals case has at the same time been removed from its former position in the Pavilion and placed under the archway, opposite the Church Collection case, and is similarly illuminated.

The large series of topaz and beryl and the smaller neighbouring species (andalusite, kyanite, fibrolite, allophane, pilolite, halloysite, &c.) have been re-arranged in the case-tops and in the drawers, the specimens of each species being brought together into one case (instead of breaking across the centre of the gallery), and the arrangement has been made topographical as far as is consistent with the effective display of the specimens. Many of the single isolated smaller crystals have been removed from the pedestals, labelled, and placed in the drawers.

The specimens of spodumene, tremolite, and actinolite have been re-arranged in the case-tops.

Rock specimens have been transferred from the Gallery to the Rock room.

Forty-two boxes of mineral and rock specimens have been received, unpacked, and examined, and forty-eight boxes have been packed and despatched.

II.—*Registration, Indexing, and Cataloguing.*

All the specimens of minerals, rocks, and meteorites acquired during the year have been registered, numbered, provided with permanent labels, and incorporated in the collection. In this connection many specimens have been examined and determined and localities checked.

The preparation of the slip-catalogues of the mineral specimens in the collection, species by species, and of permanent labels giving all available information for each specimen, has been continued for the Divisions of the Oxides and Carbonates. In this connection permanent labels have been written, checked, and placed with the specimens of thorite, rutile, anatase, brookite, baddeleyite, melanophlogite, cristobalite, tridymite, chalybite, rhodochrosite, calamine, chessylite, and malachite; the permanent labels which had already been written for the species cassiterite have been placed with the specimens; the writing of labels for the large group including quartz, chalcedony, and agate, has been in progress; and slips and labels have been written for the specimens of limonite not included in the main Collection.

The minerals of the Geological Society's collection have been all provided with permanent labels and incorporated in the General Collection.

Papers relating to the large round table of antique marbles have been placed together in a drawer specially constructed under the table, and a label has been printed and framed for the table.

A scheme has been considered for a complete and detailed topographical index of all the localities represented in the mineral collection.

An alphabetical list of rock names represented in the collections has been compiled, and a copy has been placed for public use in the Gallery.

The topographical index of the rock-collections has been brought up to date.

Letters received during 1918 have been arranged for reference.

### III.—*Preparation.*

155 micro-sections of minerals, meteorites, and rocks have been prepared; three meteorites have been cut; and six pieces of meteoric iron have been polished for etching.

### IV.—*Investigation.*

A crystallographical investigation of the series of crystals of lead and copper minerals from Red Gill, Cumberland, and Leadhills, Lanarkshire, in the Trechmann Collection has been in progress, and many crystals of linarite and caledonite have been measured.

The crystalline form and physical characters of the new Spanish mineral villamaninite have been determined, and a description has been written.

The crystallographic constants of other apparently new minerals have been determined, viz., a blue copper-zinc phosphate from Rhodesia and a uranium-lead silicate from the Belgian Congo.

Artificially-produced crystals of tin arsenide have been measured and described; and in this connection a study has been made of the question of curvature in crystals, a general account of which has been prepared.

New crystal-forms have been determined on calcite, pyrites, and epidote, and these have been described and figured.

Specimens collected and presented by F. N. Ashcroft from Derbyshire, Cumberland, and Renfrewshire have been examined and determined.

Among other species which have been examined for purposes of identification or other reasons may be mentioned stibnite and bournonite from Spain, scorodite from Cornwall, tarbuttite and hopeite from Rhodesia, allophane from British Columbia, and fibrolite from Scotland.

The investigation of the metamorphic rocks represented in the collections of the "Terra Nova" Antarctic Expedition has been in

progress, and descriptions have been written of the cordierite- and sillimanite-gneisses, epidote-rocks, graphitic and mica-schists, and some of the gneisses.

Rock-specimens collected by Captain Lynes in Morocco have been examined.

In the Chemical Laboratory complete quantitative analyses have been made of the meteorites Adare and Mt. Ayliff, and quantitative determinations have been made of the amount and composition of the nickeliferous iron in the meteorites Ensisheim, Felix, Hendersonville, and Simondium. Many minerals, including specimens of tinstone from Nigeria, have been qualitatively analysed.

#### V.—*Departmental Library.*

*Cataloguing and Press-marking.*—All the accessions, including 395 plates, have been catalogued and stamped; 686 volumes have been pressmarked or re-pressmarked.

Proofs of the General Library Catalogue (Supplement) have been read and checked against the slip-catalogue in the Department.

*Accessions.*—28 volumes of separate works, 12 parts of continuations, 24 periodicals (in 311 volumes and parts), 53 memoirs and pamphlets, and 58 mining and survey reports have been added to the Library.

*Binding.*—75 volumes have been bound.

#### VI.—*Publications.*

A new edition of the Student's Index to the Collection of Minerals has been prepared for press.

The following papers relating to specimens in the Collection have been published in the Mineralogical Magazine and Journal of the Mineralogical Society, 1919, vol. xviii:—

A method for the quick determination of the approximate amount and composition of the nickeliferous iron in Meteorites, and its application to seventeen meteoric stones: by G. T. Prior (xviii, p. 349).

Mineralogical characters of Turite (= turgite) and some other iron-ores from Nova Scotia: by L. J. Spencer (xviii, p. 339).

Eighth list of new mineral names; L. J. Spencer (xviii, p. 373).

On Sartorite and the problem of its crystal-form: G. F. Herbert Smith and R. H. Solly (xviii, p. 259).

On the use of the gnomonic projection in the calculation of crystals: G. F. Herbert Smith (xviii, p. 317).

Semseyite from Dumfriesshire. With a chemical analysis by G. T. Prior: G. F. Herbert Smith (xviii, p. 354).

A Students' Goniometer: G. F. Herbert Smith (xviii, p. 366).

A lead-grey fibrous mineral from the Binn valley, Switzerland. With a Chemical Analysis by G. T. Prior: R. H. Solly.



*Acquisitions.*

759 specimens have been acquired, namely :—

311 minerals (including crystallized furnace products), 16 meteorites (and casts), and 432 rocks.

Exchanges of specimens have been arranged with the Field Museum of Natural History at Chicago, the United States National Museum at Washington, Dr. J. E. Stead, F.R.S., of Middlesbrough, and Monsieur H. Buttgenbach, of Brussels.

The following names added to the Museum List were previously not represented by specimens in the collection :—

Cornetite, crestmoreite, ektropite, ferrierite, katoptrite, margarosanite, ponite, riversideite, stevensite, villamaninite; also the following from crystallized furnace products :—Hilgenstockite, silico-carnotite, steadite, vogtite.

The specimens acquired by presentation (arranged alphabetically according to donors) and by exchange, and a selection of the more important obtained by purchase are as follows :—

*Minerals.**By Presentation.*

A further selection from the donor's collection of zeolites, namely, 14 specimens representing five localities in Bohemia and 12 specimens from West Paterson, New Jersey. A series of 72 selected specimens collected by the donor in 1919 in Derbyshire, Cumberland, and Dumfriesshire, including fluor, calcite, dolomite, barytes, greenockite, calamine, cerussite, pyromorphite, wolframite, scheelite, pilolite, hausmannite, &c. A large specimen of analcite from County Antrim. A crystal of hacked quartz from North Wales. Various American specimens, including margarosanite, crestmoreite, and riversideite (three species new to the collection), powellite from Utah, pyrites crystals from Colorado, and, as part presentation, a fine group of large crystals of scheelite from Arizona. Also a fine crystal of apatite from Ontario, leucite with melanite from Rome, and pyrites crystals from Japan : *by F. N. Ashcroft, Esq.*

Fluor from Derbyshire, collected by the donor : *Miss E. M. Ashcroft.*

Coal from Thessaly, Greece : *by the University of Athens.*

Magnesite from near Bulawayo, Rhodesia : *by A. V. Ballhatchet, Esq.*

Fibroferrite from Cyprus : *by C. E. Barrs, Esq.*

Wolframite with scheelite, molybdenite, &c., from Zinba mine, Tavoy district, Burma : *by J. Morrow Campbell, Esq.*

Chromite from New Caledonia, Baluchistan, and Rhodesia : *by the Chrome Company, Ltd.*

Gahnite and chrysocolla from Broken Hill, New South Wales : *by Arthur Combe, Esq.*

Psittacinite from Belgian Congo : *by H. Cookson, Esq.*

Artificial minerals (cristobalite, fayalite, rhodonite, apatite, spinel, willemite, vogtite, silico-carnotite, hilgenstockite, steadite, &c.) from furnace slags : *by Allan B. Dick, Esq.*

Coal from Yampupata mine, Bolivia : *by A. L. Dun, Esq.*

Fibrolite from Clattering Bridge, Kincardineshire : *by W. Duncan, Esq.*

Siliceous sinter and micaceous hæmatite from Lustleigh, Devonshire : *by A. B. Edge, Esq.*

Ferrierite, a new species, from British Columbia : *by Dr. W. F. Ferrier.*

Geikielite crystal from Ceylon : *by Sir L. Fletcher, F.R.S.*

Retinite in coal from Alger, Wyoming : *by Thomas French, Esq.*

Lepidolite, a transparent pale-lilac cleavage slab, from Western Australia : *by Rev. J. M. Gordon.*

Dioptase on malachite from Bwana M'Kubwa, North-West Rhodesia ; faceted hæmatite from Crowgarth mine, Cleator Moor, Cumberland : *by Albert G. F. Gregory, Esq.*

Artificial anorthic metasilicate of iron, calcium, manganese, and magnesium (vogtite) from acid steel-furnace slag : *by A. F. Hallimond, Esq.*

Native copper and anthophyllite in serpentine from the Lizard, Cornwall : *by Arnold G. Hansard, Esq.*

Pyrites with graphite from Ceylon : *by Messrs. Henderson & Co.*

Tourmaline, a large crystal, from Minas Geraes, Brazil : *by Lieut.-Commander B. D. Holberton, R.N.*

Demantoid with fibrous enclosures : *by E. Hopkins, Esq.*

Chalcedony nodule enclosing water (enhydros) : *by Miss M. V. Jessup.*

Cassiterite in pegmatite, spodumene, &c., from Winnebah district, Gold Coast, West Africa : *by W. H. Kenny, Esq.*

Tarbuttite, a large isolated crystal, from Broken Hill, North-West Rhodesia : *by F. P. Mennell, Esq.*

Muscovite in serpentine from Rumania : *by Prof. G. Murgoci.*

Cassiterite, compact, white, from Bolivia : *by Dr. Richard Pearce.*

Corundum from Palmeitfontein farm, Zoutpansberg district, Transvaal : *by Dr. A. W. Rogers, F.R.S.*

Witherite from Ushaw Moor Colliery, Durham ; stibnite from Co. Monaghan ; tetrahedrite from Co. Galway : *by Arthur Russell, Esq.*

Villamaninite, a new species from Villamanin, Spain ; rutile (var. nigrine), two large water-worn crystals from Brazil : *by Dr. W. R. Schoeller.*

Euxenite crystals from Titi, Negri Sembilan, Federated Malay States : *by J. B. Scrivenor, Esq.*

Apatite crystals from basic slag : *by Dr. J. E. Stead, F.R.S.*

Calcite with barytes, and dolomite with fluor, from Force Crag mine, Braithwaite, Cumberland : *by H. T. Stretton, Esq.*

Asphaltum from Homs, Syria : *by Corpl. J. S. M. Thomson, A.I.F.*

Cubes of blende from Lerui'n Kano ; magnetic cassiterite, orange-yellow cassiterite, rutile, wolframite, columbite, wood-tin, and cadmium sulphide, all from Northern Nigeria ; and scorodite from Devonshire : *by A. Stanley Williams, Esq.*

Mica, cut sheets, from Aidin, Asia Minor : *by Mrs. Wilson.*

Hornblende from Welwitsch, Damaraland, South Africa : *by W. C. Worsdell, Esq.*

*By Exchange :*

Three specimens of the new species cornetite from the Belgian Congo.

Cut and polished samples of an artificial tin-arsenic-antimony alloy showing curious crystalline growths with the form of spherical shells.

*By Purchase :*

A series of copper and uranium ores from Katanga, Congo, including fine specimens of plancheite, diopside, malachite, chrysocolla, &c., and an undetermined uranium-lead silicate.

A series of tin, bismuth, and other ores from Bolivia, including a fine group of blende crystals, wolframite, chalybite crystals, bournonite, &c.

A series of specimens from Madagascar including good crystals of columbite, monazite, ampingabeite, and citrine.

A series of specimens from the asbestos mines of Val Malenco, Lombardy, including artinite, andradite, and uvarovite.

Diopside, a fine group of crystals, and achtaragdite from Siberia. Wollastonite, as large crystals, and erubescite from Mexico.

Ektropite, katoprite (two new species), and margarosanite and allactite from Sweden.

Anthophyllite, actinolite, pyromorphite, limonite, and a specimen showing cone-in-cone structure, from Scotch localities.

Sphene with axinite from Cornwall.

Fluor, cerussite, quartz, calcite, scheelite from the north of England.

Wolframite, native copper, and tourmaline in quartz from Rhodesia.

Cassiterite from Swaziland, South Africa, a group of crystals, and a transparent deep brown specimen faceted as a gem-stone.

Tourmaline, a large crystal from Hazaribagh, Bengal.

Cristobalite from California ; manganosite and a fine large crystal of franklinite from New Jersey ; a fine group of large crystals of scheelite (part presentation by F. N. Ashcroft, Esq.) and connellite from Arizona ; tellurium and pyrites from Colorado.

Realgar from China.

*Rocks.**By Presentation :*

15 specimens collected by the donor in Fifeshire, Edinburghshire and Renfrewshire : *by F. N. Ashcroft, Esq.*

11 specimens collected by the donor in the Canary Islands and Cape Verde Islands : *by David A. Bannerman, Esq.*

A large mass of plumasite, containing crystals of corundum, from Bandolier Kop, Transvaal : *by Messrs. A. W. Collett and Snerting.*

Felsite from Avoca, Co. Wicklow : *by H. F. Collins, Esq.*

A small collection of rocks and ores from the copper mines of Montecatini, Tuscany : *by Col. D. H. Colnaghi.*

A series of 140 specimens collected by Mr. Franklin White in 1919 in Madagascar from the graphite deposits and in a traverse across the island to the oil-bearing district in the east : *by Edmund Davis, Esq.*

Australites from Charlotte Water, Northern Territory, South Australia : *by J. Halliday, Esq.*

A series of polished specimens of serpentine from the Lizard, Cornwall : *by Arnold G. Hansard, Esq.*

A series of 120 specimens collected by the donor in 1911 in Mozambique, East Africa, and described by him : *by Dr. Arthur Holmes.*

4 specimens from the Winnebah district, Gold Coast, West Africa : *by W. H. Kenny, Esq.*

A small lot collected by the donor in 1919 in the Lesser Atlas, Morocco : *by Capt. H. Lynes, R.N.*

Specimens from Karakoram Himalayas, collected by the late Capt. Cosmo Grant Peterkin, surveyor on the Bullock Workman Expedition, 1911-12 : *by Miss K. M. Grant Peterkin.*

"Toadstones" and altered limestone collected by the donor from near Matlock, Derbyshire, 1919 : *by Dr. G. T. Prior, F.R.S.*

A series of 7 specimens collected by the donor in 1914 in the islands of the Grecian Archipelago : *by Arthur Russell, Esq.*

Leucite-tephrite from Trebizond, Asia Minor : *by Dr. Felix Oswald.*

A series of 30 specimens collected by the donor in 1913-14 from the neighbourhood of the Nairobi-Mombasa Railway and from Mt. Elgon, British East Africa : *by E. Starey, Esq.*

A series of 5 specimens collected by the donor at Solwezi, Kasempa district, Northern Rhodesia : *by Guy A. Taylor, Esq.*

A series of 40 specimens collected by the donors in 1911-12 in the eastern Karakoram Mtns., Himalayas, and described by W. Campbell Smith in their book, 1917 : *by Mrs. F. Bullock Workman and Dr. W. Hunter Workman.*

*By Purchase :*

Garnet-hornblende-felspar rock from Val Malenco, Lombardy.

*Meteorites.**By Presentation :*

*Appley Bridge*, Wigan, Lancashire, fragments weighing **3** grams of the 33 lb. mass which fell on 13 October, 1914 : *by the Municipal School of Technology, Manchester.*

Pseudo-meteorite from Nyasaland : *by Major F. B. Pearce.*

*By Exchange :*

*Felia*, Perry Co., Alabama, a partly crusted fragment weighing **37** grams of the stone which fell on May 15, 1900.

*Hendersonville*, Henderson County, North Carolina, a slice weighing **132** grams of the stone found in 1901. (Probably fell about 1876).

*Mount Vernon*, Christian Co., Kentucky, a polished slice weighing **1,250** grams of the stony iron found about 1870.

*Plainview*, Hale Co., Texas, a crusted fragment weighing **35** grams of one of the stones found in 1917.

*San Emigdio Mountains*, San Bernardino Co., California, several fragments weighing together **33** grams of the stone known in 1887.

*Scott City*, Scott Co., Kansas, a crusted slice weighing **130** grams of the stone found in 1911.

*Yanhuítlan*, Oaxaca, Mexico, an etched slice weighing **305** grams of the iron known before 1825.

*By Purchase :*

*Blithfield*, Renfrew Co., Ontario, Canada, cast of the stone found in 1910.

*Kilbourn*, Columbia Co., Wisconsin, fragments weighing altogether **1** gram of the stone which fell on June 16, 1911.

*Mount Edith*, Ashburton, Western Australia, a slice weighing **145** grams of the iron found in 1913 ; also a cast of the whole mass.

*Plainview*, Hale Co., Texas, a complete stone weighing **2,793** grams found in 1917.

*Sams Valley*, Jackson Co., Oregon, U.S.A., a slice weighing **94** grams of the iron found in 1894.

*Skookum Gulch*, Bonanza Creek, Klondike, Yukon, Canada, a slice weighing **362½** grams of the iron found in 1905 at a depth of **65** feet in auriferous gravel of Pliocene age.

VIII.—*Donations of Duplicates.*

Duplicate specimens of minerals have been given to the Red Cross Camp at Netley, Hants, the Canonbury Church Schools, and mineral ores from Peru and gold-quartz from Australia to the Geological Department of the Imperial College of Science and Technology.

9 duplicate Meteorite casts have been given to the Public Library, Museum, and Art Gallery of South Australia, Adelaide, and fragments of various silver, copper, and lead minerals to the Department of Scientific Research and Experiment of the Admiralty.

IX.—*Demonstrations.*

A demonstration on Meteorites was given to the Geological Association.

X.—*Students and Visitors.*

The number of visits recorded as made to the Department for purposes of consultation or study is 915. Many specimens of minerals and rocks have been determined for visitors and correspondents.

*G. T. Prior.*

## DEPARTMENT OF BOTANY.

I.—*Arrangement and Conservation.*

During the past year 13,475 specimens have been incorporated with the Herbarium. This number includes 12,825 Flowering Plants, 270 Mosses, 80 Hepatics, 134 Lichens, 4 Algae, and 162 Fungi.

The restoration to the Herbarium and Library of types and other specimens and volumes of unique interest which had been removed from the Department for greater security during the War, has occupied part of the time of the Staff; the type-specimens have been indicated by a special label, and the opportunity was taken for some work of revision and rearrangement. The large series of specimens from the Hortus Cliffortianus have been correlated with the published volume by Linnaeus of the same title, and re-arranged.

*Flowering Plants.*—Collections acquired during the year have been mounted and incorporated wholly or in part; and also outstanding specimens of various collections from Australia, and generally, in various families, especially Commelinaceæ, Araceæ, Cyperaceæ, Gramineæ, Anonaceæ, Myrsinaceæ, Urticaceæ, and Cupuliferæ. Work of revision and re-arrangement has been done in various families and genera. The European Herbarium of the late R. P. Murray has been partly incorporated. The collection of hand-specimens of woods used in commerce has been re-arranged, and progress has been made in making and fitting trays in the cabinets of the general collection of woods, for the better arrangement of the specimens for consultation.

*Cryptogams.*—Work preliminary to incorporation has been done in the various groups, progress has been made with the sorting and selection of the Stirton collection of Lichens, and with the determination and classification of unnamed British Lichens.

*Exhibition Series.*—The several series in the Public Gallery have been maintained, and additions have been made in various families. The family Cornaceæ has been re-arranged. British and cultivated specimens have been collected and prepared for exhibition.

*Catalogues and Guides.*—The preparation of Volume IV of the *Flora of Jamaica* by Mr. Fawcett and Dr. Rendle has been completed and in great part printed, a new edition of the Guide to the *Mycetozoa* has been prepared and published, and progress has been made with the preparation of a new edition of the *List of British Seed Plants and Ferns*.

II.—*Investigation.*

Collections have been investigated and determined from the following localities and collectors:—Archangel, Bouches de Rhône (Lowe), Malta, Macedonia (Blackett, Ramsbottom and others),

Palestine (White), Sinai (Stammwitz), Mesopotamia (Whitehead), Annam (Kloss), New Guinea (White), Cameroons and Nigeria (Bates), Rhodesia (Eyles), Belgian Congo (Vanderyst and others), Brazil (Moss) and New Caledonia (Compton).

Work of investigation has been done in the genera *Acacia*, *Allophyllus*, *Baphia*, *Dombeya*, *Erodium*, *Vellozia*, and in other genera of various families especially Euphorbiaceæ, Rubiaceæ, Compositæ, Acanthaceæ, and in genera from the Balkan Peninsula. Also in various families and genera of Mosses, Red Seaweeds, Fungi and Lichens. Various fungi of economic importance have been investigated. Numerous small collections have been determined for students and collectors.

In connection with the work done in the Department specimens have been generously lent by the Government of Jamaica, the Director of the Royal Gardens, Kew, of the Herbarium of the Museum d' Histoire Naturelle, Paris, of the Jardin Botanique de l'Etat, Brussels, and of the Naturhistoriska Riks-Museum at Stockholm, the Regius Keeper of Botany, Edinburgh, and the Curator of the Bristol Museum.

Material has been lent for determination and critical study as follows:—263 specimens of British Lichens to Mr. Thomas Hebden; 15 specimens of *Potamogeton* from various localities to Mr. Arthur Bennett; 10 species of *Baphia* from tropical Africa to Mr. L. V. Lester-Garland; 118 specimens of *Quercus* from Malaya to Mr. J. S. Gamble; and 47 Mosses from Uganda and Rhodesia to Mr. H. N. Dixon.

### III.—*Departmental Library.*

1. *Arrangement, Cataloguing, and Pressmarking.* The registering, stamping, and cataloguing of additions to the library and other routine work has been carried out. Departmental assistance in connection with the Official Catalogue of the Library has been continued. A new press has been placed in the Cryptogamic Herbarium.

2. *Accessions.* 18 volumes and 23 pamphlets were acquired by donation and 56 volumes and 3 pamphlets by purchase, in all 74 volumes and 26 pamphlets; these numbers include 14 volumes of periodicals in parts presented and 38 volumes of periodicals in parts purchased, in all 52 volumes of periodicals. The following is a list of the principal donors:—

Kolonial Institut, Amsterdam.	Director, Royal Botanic Gardens,
Prof. L. H. Bailey.	Calcutta.
R. T. Baker, Esq.	Director, Gray Herbarium, Cam-
Lady Barkly.	bridge, Mass.
Dr. F. A. Bather, F.R.S.	Mademoiselle A. Camus.
Royal Botanical Society, Bel-	Director, Field Museum, Chicago.
gium.	Director, Botanical Museum,
Dr. Georg Bitter.	University of Copenhagen.
James Britten, Esq.	Parke, Davis & Co., Detroit, Mich.



- M. T. Dawe, Esq.**  
 Director of Botanical School,  
 Trinity College, Dublin.
- Regius Keeper, Royal Botanic  
 Garden, Edinburgh.**
- W. Fawcett, Esq.**  
 Dr. Hassler.
- Dr. Bunzo Hayata.**  
**Dr. Augustine Henry.**  
**Dr. Marshall A. Howe.**  
 Royal Horticultural Society.  
 Director, University of Illinois.  
 Secretary of State for India.  
 Director, Board of Agriculture,  
 India.
- Director, Dept. van Landouw in-  
 verheid en Handel Buitenzorg  
 (Java).**
- Director, Royal Botanic Gardens,  
 Kew.**
- Secretary, Kew Guild.**  
**Prof. Henri Lecomte.**  
**Dr. Bernt Lynge, Kristiania.**  
**C. C. Lacaita, Esq.**  
 Director, Rijks Herbarium,  
 Leiden.
- Linnean Society, London.**  
**C. G. Lloyd, Esq.**  
**J. H. Maiden, Esq. F.R.S.**
- Elmer D. Merrill, Esq.**  
 Editor, Philippine Agricultural  
 Review, Manila.
- Director, Missouri Botanic Gar-  
 den, St. Louis.**
- H. W. Monckton, Esq.**  
**Spencer Moore, Esq.**  
 Nederlandsche Botanische Ver-  
 eeniging.
- L. H. Newman, Esq.**  
 Director, Agricultural Research  
 Institute, Pusa.
- Dr. E. Reys Prosper.**  
**Dr. A. B. Rendle, F.R.S.**  
 Director Jardin Botánico, Rio de  
 Janeiro.
- Director, Botanic Gardens, Singa-  
 pore.**
- Botanical Institute, Tokyo.**  
**Tokyo Botanical Society.**  
 Director, Department of Agricul-  
 ture, Union of South Africa.
- Director, Botaniska Institutionen,  
 Upsala.**
- Director, U.S. National Museum,  
 Washington.**
- Watson Botanical Exchange Club.**  
**Director, Botanic Garden and  
 Museum, Zurich.**

The donations also include 2 watercolour drawings of *Cypripedium papuanum* Ridl., presented by Hon. Charles Rothschild and 70 plates of plants, presented by Miss Tissart.

The following have been acquired by purchase—44 coloured plates from Curtis's Botanical Magazine and 13 drawings of British Plants by Miss B. Corfe.

3. *Binding.* 75 volumes have been bound and others repaired.

Indexes have been prepared to a number of bound volumes of original drawings, and of manuscript, and to several printed books.

#### IV.—*Publications.*

(1) *Issued by the Trustees.*—Guide to the British Mycetozoa. Edition 4. By Miss G. Lister.

(2) *Issued by the permission of the Trustees.*—Notes on Jamaica Plants; *Euphorbiaceæ*. By Dr. Rendle and Mr. W. Fawcett. (*Journal of Botany.*)

The African species of *Allophyllus*. By Mr. E. G. Baker. (*Journal of Botany.*)

*Barbarea rivularis* in Britain. By Messrs. A. B. Jackson and A. J. Wilmott. (Journal of Botany.)

Rubiaceæ Batesianæ. By Dr. Wernham. (Journal of Botany.)

The genus *Manettia*. By Dr. Wernham. (Journal of Botany.)

Alabastra diversa, Parts XXX. and XXXI. By Mr. Spencer Moore. (Journal of Botany.)

(3) *By Students of the Collections other than Members of the Staff.*—The Cryptogams of Andrew's Herbarium. By Mr. G. S. Boulger. (Journal of Botany.)

Madeira Flowers. By Mr. James Britten. (Journal of Botany.)

Miscellanea Bryologica IV. By Mr. H. N. Dixon. (Journal of Botany.)

Notes on *Lychnothamnus*. By Mr. J. Groves. (Journal of Botany.)

A Revision of some critical species of *Echium*. By Mr. C. C. Lacaïta. (Journal of the Linnean Society.)

Notes on British Euphrasiæ I. By Mr. H. W. Pugsley. (Journal of Botany.)

A Revision of the genera *Fumaria* and *Rupicapnos*. By Mr. H. W. Pugsley. (Journal of the Linnean Society.)

A hybrid Stachys. By Mr. C. E. Salmon. (Journal of Botany.)

#### V.—Acquisitions.

##### (1) *By Donation.*

Additions to the British Herbarium have been received from the following donors:—W. C. Barton, Esq., 148 Phanerogams; Mrs. C. J. Godfrey, 4 Volumes of plants, being the herbarium of Rev. W. Bingley, author of "A Tour Round North Wales" (1800); Mrs. E. S. Gregory, Herbarium, containing 3,600 sheets; Miss L. Lyle, 12 Algæ; Rev. E. S. Marshall, 70 Phanerogams; W. C. Newton, Esq., 3 Phanerogams; C. E. Salmon, Esq., 14 Phanerogams; W. R. Sherrin, Esq., 2 specimens of Mosses; J. W. White, Esq., 116 Phanerogams; and single specimens from Col. M. J. Godfery; C. P. Hurst, Esq.; Rev. W. Johnson; H. H. Knight, Esq.; and C. C. Lacaïta, Esq.

The following donations have been made to the General Herbarium:—

##### Europe.

W. S. Goodhew, Esq., 52 Phanerogams from Archangel district; D. Grantham, Esq., 160 Phanerogams from Archangel; C. C. Lacaïta, Esq., 9 Phanerogams from Italy; Capt. P. R. Lowe, 49 Phanerogams from Rognac, Bouches du Rhone, and 95 Phanerogams from Fieri, Val Challant; C. E. Salmon, Esq., 6 Phanerogams from France; J. W. White, Esq., 195 Phanerogams chiefly from the Balearic Isles and the Pyrenees.

**Asia.**

Lt. F. G. Aldous, 54 Phanerogams from Syria ; Prof. L. H. Bailey, 3 species of Chinese grasses ; Miss G. E. Benham, 125 specimens from Kashmir, India ; The Director, Botanic Gardens, Brisbane, 47 species of Papuan Rubiaceæ and 30 specimens of Papuan Acanthaceæ ; Rev. Preb. H. E. Fox, 719 Phanerogams and 47 Cryptogams from Japan ; C. Boden Kloss, Esq., 257 Phanerogams and 4 Cryptogams from South Annam ; C. C. Lacaita, Esq., 661 Phanerogams and 276 Ferns from Sikkim, India ; Lt. P. Stammwitz, 56 Phanerogams from Sinai Desert ; Lt.-Col. M. F. White, I.M.S., 137 specimens from Palestine ; H. Whitehead, Esq., 14 Phanerogams from Mesopotamia.

**Africa.**

G. L. Bates, Esq., 253 Phanerogams from Bitye, Cameroons ; R. A. Dummer, Esq., 114 Phanerogams and 77 Cryptogams from Uganda ; F. Eyles, Esq., 364 Phanerogams and 55 Cryptogams from Rhodesia ; Capt. H. Lynes, R.N., 79 Specimens from Azrou, Middle Atlys ; Ven. Archdeacon Rogers, 72 Phanerogams from Tropical and South Africa ; Mrs. C. Shinn, 72 Phanerogams from Nyasaland.

**Australasia.**

H. N. Dixon, Esq., Sample of Diatomaceous earth from New Zealand and one Lichen from Fiji ; Mrs. Alfred Fowler, small collection of Hawaiian Ferns ; Miss L. S. Gibbs, 137 Phanerogams and 7 Cryptogams from Tasmania.

**America.**

Mrs. Bendix Koppel, 6 Volumes of A. Lindig's New Granada Ferns and 1 Volume of Mosses ; Capt. P. R. Lowe, 1 Volume of Dominica Ferns ; Rev. E. S. Marshall, 109 Phanerogams and 6 Cryptogams from Quebec Province, Canada, collected by Brother Victorin ; Rev. A. Miles Moss, 35 Phanerogams from Para, Brazil ; A. E. Persand, Esq., 13 Fungi and 1 Lichen from Demerara ; and single specimens from Miss M. Xavier de Bibadh Kosha and M. L. Fernald.

**Cultivated Plants.**

E. A. Bowles, Esq., 14 species of *Galanthus* and 1 *Crocus* ; Hon. N. C. Rothschild, 3 species of Orchids and 78 species and varieties of *Iris* ; Douglas Robertson, Esq., Fasciated inflorescence of *Lilium Henryi* with photos.

**General.**

Lady Barkly, 4,100 Ferns, Foreign and British ; Miss Biddulph, 2 specimens of double Coconut ; E. B. Evans, Esq., 3 sections of stem of Chestnut (showing wound healing) ; Prof. A. Henry, 9 species of *Platanus* ; H. W. Archer Kilgour, Esq., 2 pieces of petrified Conifer wood and photos ; Major C. F. Krabbe, Stem bearing "Wooden Roses" from Brazil ; the late Prof. G. S.

West, 1,475 sheets of original drawings of British and Foreign Freshwater Algæ and 30 packets of original drawings illustrating his scientific papers.

(2) *By Purchase.*

**British Isles.**

The Botanical Exchange Club (through W. C. Barton), 176 Phanerogams ; D. McArdle, Esq., 152 Mosses and 302 Hepatics.

**Europe.**

C. Mereschkovsky, 235 Lichens from Switzerland, including Fasc. I-IV, Nos. 1-129, Lichenes Ticinenses ; F. Petrak, 375 specimens Fungi from Bohemia and Moravia.

**Africa.**

J. Gossweiler, 1,272 Phanerogams and 483 Cryptogams from Portuguese Congo and Angola.

**America.**

Dr. E. Hassler, 1,047 Phanerogams and 47 Cryptogams from Paraguay ; T. O. Weigel, 121 Phanerogams and 79 Cryptogams from Bolivia, collected by Dr. O. Buchtien.

**Australasia.**

Mrs. Hodges, 200 Ferns from New Zealand and South Sea Islands, collected by Surgeon W. Fasken.

(3) *By Exchange of Duplicates.*

Prof. F. J. Lewis, University of Alberta, Edmonton South, Canada, 100 specimens of Canadian plants ; Director, Universitetets Bot. Museum, Copenhagen, 612 Danish plants and 52 Mexican plants ; Director, Museu Goeldi, Para, Brazil, 229 specimens from Para ; Curator, Gray Herbarium, Cambridge, Mass., 200 specimens Cent. II, III, Pl. Exsicc. Grayanæ, 597 specimens, including 50 Cryptogams from Newfoundland, and 48 specimens from Labrador ; Dr. Merrill, Bureau of Science, Manila, Philippine Islands, 400 specimens ; Dr. N. L. Britton, Bot. Gardens, New York, 285 West Indian plants ; Chief, Division of Botany, Pretoria, 27 South African plants and 32 South African species of Aloe ; Director, Bot. Gardens, Singapore, 153 Malayan plants ; Director, Botanic Gardens, Sydney, 87 Australian plants ; Curator, U.S. National Museum, Washington, 161 specimens from New Mexico, Surinam, &c., 468 specimens from Mexico, and 286 Cryptogams ; Director, Botanisches Museum, Zurich, 531 South African plants, and 6 European plants.

VI.—*Students and Visitors.*

The number of visits to the Department for consultation and research was 3,170.

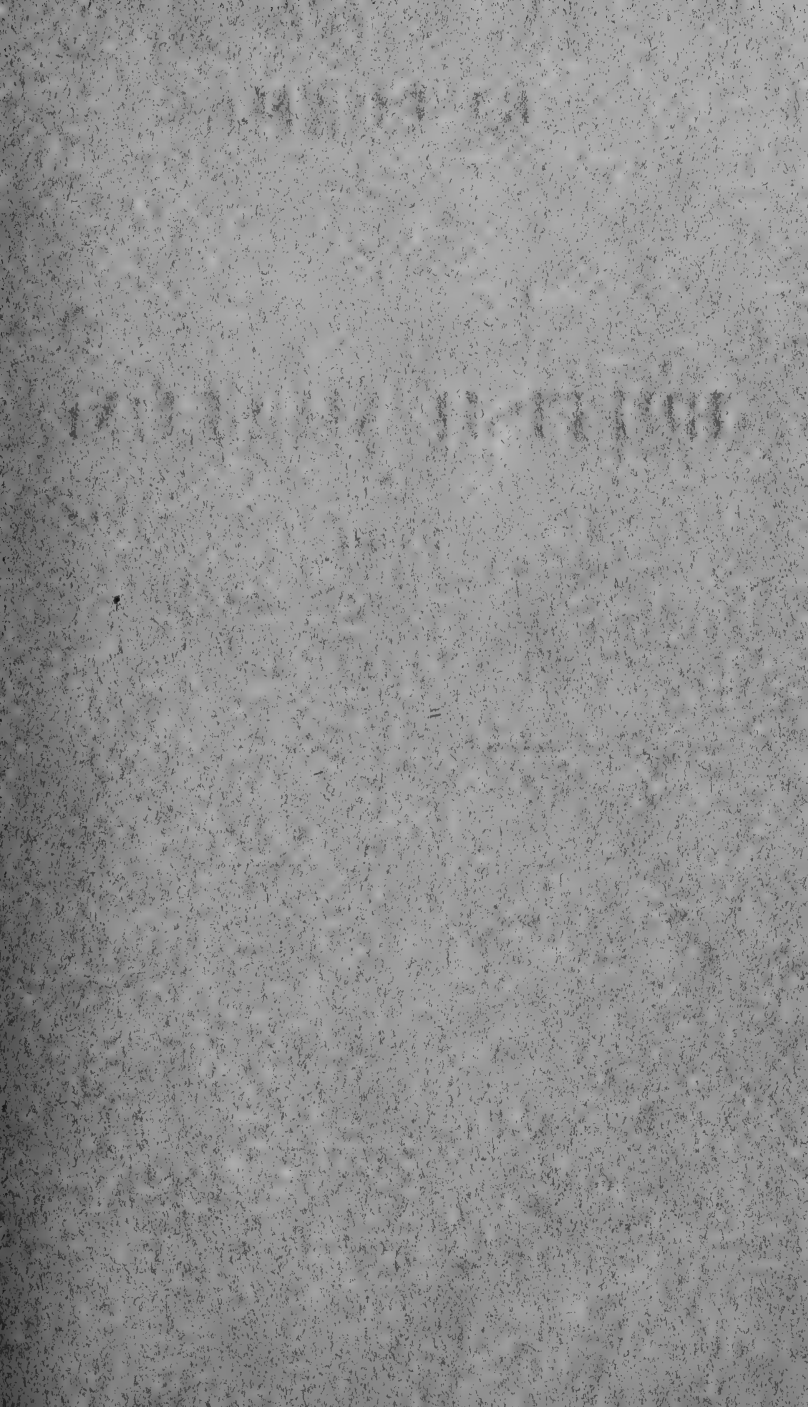
VII.—*Demonstrations.*

Demonstrations on the collections have been given by Dr. Rendle to members of the Quekett Microscopical Club, of the Selborne Society, of the Lambeth Field Club, and of the Walthamstow Natural History Society.

*A. B. Rendle.*







# RETURN.

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## BRITISH MUSEUM.

1920.

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*Ordered, by The House of Commons, to be Printed,  
21 July 1920.*

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LONDON:  
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RETURN.



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BRITISH MUSEUM.

1921.

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*Ordered, by The House of Commons, to be Printed,*  
27 July, 1921.

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---

1921.



# BRITISH MUSEUM.

---



RETURN to an Order of the Honourable The House of Commons,  
dated 10 March 1921; for,

COPY "of Account of the INCOME and EXPENDITURE of  
the BRITISH MUSEUM (SPECIAL TRUST FUNDS) for  
the Year ending the 31st day of March 1921; and  
RETURN of the Number of PERSONS admitted to  
visit the MUSEUM and the BRITISH MUSEUM  
(NATURAL HISTORY) in each Year from 1915 to  
1920, both Years inclusive; together with a  
STATEMENT of the PROGRESS made in the ARRANGE-  
MENT and DESCRIPTION of the COLLECTIONS, and  
an ACCOUNT of OBJECTS added to them in the  
Year 1920."

---

Treasury Chambers,  
27 July, 1921.

}

HILTON YOUNG.

---

(*Mr. Herbert Fisher.*)

---

*Ordered, by The House of Commons, to be Printed,*  
27 July, 1921.

---

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I.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the BRIDGEWATER FUND, from the 1st April 1920 to the 31st March 1921.

	CASH.	STOCK, 2½% Consols.
	£ s. d.	£ s. d.
To BALANCES on the 1st April, 1920 ... ..	200 10 7	13,659 3 2
„ DIVIDENDS received on £13,659 3s. 2d. Stock in 2½ per cent. Consols, bequeathed by the Earl of Bridgewater, viz.:		
On the 5th April, 1920 ... ..	£85 7 4	
„ 5th July, 1920 ... ..	85 7 4	
„ 5th October, 1920 ... ..	85 7 4	
„ 5th January, 1921 ... ..	85 7 4	
	341 9 4	
„ RENT OF A REAL ESTATE, Whitchurch, bequeathed by the Earl of Bridgewater (less charges) ...	23 7 6	
	£565 7 5	£13,659 3 2
	CASH.	STOCK, 2½% Consols.
	£ s. d.	£ s. d.
By One Year's SALARY of the Egerton Librarian ...	175 0 0	
„ AMOUNT expended in purchase of Manuscripts ...	50 0 0	
„ BALANCES ON THE 31ST MARCH, 1921, carried to Account for 1921-1922 ... ..	340 7 5	13,659 3 2
	£565 7 5	£13,659 3 2

II.—AN ACCOUNT of the RECEIPTS AND EXPENDITURE of the FARNBOROUGH FUND, from the 1st April 1920 to the 31st March 1921.

	CASH.	STOCK, 2½% Consols.
	£ s. d.	£ s. d.
To BALANCES on the 1st April, 1920 ... ..	35 12 1	2,879 10 7
„ DIVIDENDS received on £2,879 10s. 7d. Stock in 2½ per cent. Consols, bequeathed by Lord Farnborough, viz.:		
On the 5th April, 1920 ... ..	£17 19 11	
„ 5th July, 1920 ... ..	17 19 11	
„ 5th October, 1920 ... ..	17 19 11	
„ 5th January, 1921 ... ..	17 19 11	
	71 19 8	
	107 11 9	£2,879 10 7
	CASH.	STOCK, 2½% Consols.
	£ s. d.	£ s. d.
By AMOUNT expended in purchase of Manuscripts ...	52 10 0	
„ BALANCES ON THE 31ST MARCH, 1921, carried to Account for 1921-1922 ... ..	55 1 9	2,879 10 7
	£107 11 9	£2,879 10 7

III.—AN ACCOUNT of the RECEIPTS and EXPENDITURE  
of the SWINEY FUND, from the 1st April 1920 to the 31st March 1921.

	CASH.	STOCK, 2½% Consols.
	£ s. d.	£ s. d.
To BALANCES on the 1st April, 1920 ... ..	9 11 1	5,744 0 8
„ DIVIDENDS received on £5,744 0s. 8d. Stock in 2½ per cent. Consols, bequeathed by Dr. George Swiney, for Lectures on Geology, viz.:		
On the 5th April, 1920 ... £35 18 0	35 18 0	
„ 5th July, 1920 ... 35 18 0	35 18 0	
„ 5th October, 1920 ... 35 18 0	35 18 0	
„ 5th January, 1921 ... 35 18 0	35 18 0	
	143 12 0	
	£153 3 1	£5,744 0 8
	CASH.	STOCK, 2½% Consols.
	£ s. d.	£ s. d.
By AMOUNT paid to Dr. J. D. Falconer, for Lectures on Geology in 1920 ... ..	140 0 0	
„ BALANCES ON THE 31ST MARCH, 1921, carried to Account for 1921-1922 ... ..	13 3 1	5,744 0 8
	153 3 1	5,744 0 8
	£153 3 1	£5,744 0 8

IV.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of  
the BIRCH FUND, from the 1st April 1920 to the 31st March 1921.

	CASH.	STOCK, 2½% Consols.
	£ s. d.	£ s. d.
To BALANCE on the 1st April, 1920 ... ..	—	565 3 9
„ DIVIDENDS received on £565 3s. 9d. Stock in 2½ per cent. Consols, bequeathed by Dr. Birch in 1766, for the three Under Librarians of the British Museum, viz. :-		
On the 5th April, 1920 ... £3 10 8	3 10 8	
„ 5th July, 1920 ... 3 10 8	3 10 8	
„ 5th October, 1920 ... 3 10 8	3 10 8	
„ 5th January, 1921 ... 3 10 8	3 10 8	
	14 2 8	
	£14 2 8	£565 3 9
	CASH.	STOCK, 2½% Consols.
	£ s. d.	£ s. d.
By LEGACY paid to the three Under Librarians of the British Museum, whose offices existed in 1766, viz., the Keepers of the Departments of Printed Books, Manuscripts, and Natural History ...	14 2 8	
„ BALANCE ON THE 31ST MARCH, 1921, carried to Account for 1921-1922 ... ..	—	565 3 9
	14 2 8	565 3 9
	£14 2 8	£565 3 9

V.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the bequest of the late MR. CHARLES DRURY EDWARD FORTNUM, from the 1st April 1920 to the 31st March 1921.

	CASH.			STOCK, 5% War Loan.		
	£	s.	d.	£	s.	d.
To BALANCES on the 1st April, 1920 ... ..	118	11	1	2,100	0	0
„ Net Proceeds of Sale of £1,307 9s. 7d. 5% War Loan Stock ... ..	1,130	0	0			
„ INTEREST on War Loan ... ..	105	0	0			
	<u>£1,353 11 1</u>			<u>£2,100 0 0</u>		

	CASH.			STOCK, 5% War Loan.		
	£	s.	d.	£	s.	d.
By Stock sold as above ... ..	—			1,307	9	7
„ Amount expended in aid of the Parliamentary Vote, 1920-1921 ... ..	1,350	0	0			
„ BALANCES ON THE 31ST MARCH, 1921, carried to Account for 1921-1922 ... ..	3	11	1	792	10	5
	<u>£1,353 11 1</u>			<u>£2,100 0 0</u>		

VI.—AN ACCOUNT of the RECEIPTS and EXPENDITURE of the CARCHEMISH EXCAVATIONS FUND, from the 1st April 1920 to the 31st March 1921.

	CASH.		
	£	s.	d.
To BALANCE on the 1st April, 1920 ... ..			534 11 10
„ DONATION (further anonymous contribution) ... ..			4,000 0 0
	<u>£4,534 11 10</u>		

	CASH.		
	£	s.	d.
By EXPENDITURE on Excavations ... ..			3,525 8 6
„ BALANCE on the 31st March, 1921, carried to Account for 1921-1922 ... ..			1,009 3 4
	<u>£4,534 11 10</u>		

VII.—AN ACCOUNT of the RECEIPTS AND EXPENDITURE of the bequest of the late MR. HENRY LOUIS FLORENCE, from the 1st April 1920 to the 31st March 1921.

	CASH.			STOCK. 5% War Loan.		
	£	s.	d.	£	s.	d.
To BALANCES on the 1st April, 1920 ... ..	45	0	6	1,052	12	6
„ INTEREST on 5% War Loan, 1920-21 ... ..	52	12	6			
	<hr/>			<hr/>		
	£97	13	0	£1,052	12	6
	<hr/>			<hr/>		

	CASH.			STOCK. 5% War Loan.		
	£	s.	d.	£	s.	d.
By AMOUNT expended in purchase of Prints and Drawings ... ..	84	17	7			
„ BALANCES ON THE 31ST MARCH, 1921, carried to Account for 1921-1922 ... ..	12	15	5	1,052	12	6
	<hr/>			<hr/>		
	£97	13	0	£1,052	12	6
	<hr/>			<hr/>		

VIII.—AN ACCOUNT of the JOHN A. ROEBLING FUND, from the 1st April 1920 to the 31st March 1921.

	CASH.			STOCK. 5% War Loan.		
	£	s.	d.	£	s.	d.
To BALANCE ON THE 1ST APRIL, 1920 ... ..	52	9	6	1,049	8	10
„ INTEREST on War Loan ... ..	52	9	6			
	<hr/>			<hr/>		
	£104	19	0	£1,049	8	10
	<hr/>			<hr/>		

	CASH.			STOCK. 5% War Loan.		
	£	s.	d.	£	s.	d.
By BALANCES ON THE 31ST MARCH, 1921, carried to Account for 1921-1922 ... ..	104	19	0	1,049	8	10
	<hr/>			<hr/>		
	£104	19	0	£1,049	8	10
	<hr/>			<hr/>		

1st April, 1921.

FREDERIC G. KENYON,  
Director and Principal Librarian.



IX.—NUMBER of PERSONS ADMITTED to VISIT the BRITISH MUSEUM and the BRITISH MUSEUM (NATURAL HISTORY).

A.—PERSONS ADMITTED TO VIEW THE GENERAL COLLECTIONS IN THE BRITISH MUSEUM in each year from 1915 to 1920, both Years inclusive.

	1915.		1916.		1917.	1918.	1919.		1920.	
	Week-day.	Sunday.	Week-day.	Sunday.			Week-day. (Closed Sunday.)	Week-day. (Closed Sunday.)	Week-day.	Sunday.
January	60,764	4,224	56,474	4,148		Galleries Closed Jan.—July.	50,346	64,829	—	
February	52,415	3,779	38,579	3,532			39,239	53,065	—	
March	57,858	5,435					54,314	55,420	—	
April	71,772	5,314				Temporary Exhibition. Week-day.	74,698	86,391	—	
May	54,556	4,859					56,143	61,449	—	
June	49,615	3,341					50,635	57,586	—	
July	58,825	4,011	Galleries Closed.		Galleries Closed.		55,990	84,649	—	
August	64,374	5,545					75,735	105,460	—	
September	49,759	4,076					63,930	80,173	—	
October	55,005	5,126					54,227	68,902	—	
November	49,569	3,844					57,731	58,618	4,818	
December	55,488	3,537					58,661	67,261	2,862	
Total Number of Persons admitted to view the General Collections.	680,000	53,091	95,053	7,680		150,442	691,650	843,803	7,680	
	733,091		102,733					851,483		

## NUMBER OF VISITS OF STUDENTS TO PARTICULAR DEPARTMENTS.

	1915.	1916.	1917.	1918.	1919.	1920.
To the Reading Room ... ..	178,410	134,501	121,538	114,543	130,198	147,145
" Newspaper Room ... ..	12,650	9,461	9,108	10,890	10,407	10,880
" Map Room ... ..	380	142	170	188	260	317
" Department of Manuscripts ... ..	7,781	5,713	5,483	4,621	6,013	7,340
" Department of Oriental Printed Books and Manuscripts.	2,705	817	691	826	888	1,926
" Print Room ... ..	5,781	2,063	1,254	777	2,588	*5,439
" Egyptian and Assyrian Department ... ..	1,700	500	—	—	2,300	2,500
" Greek and Roman Department ... ..	1,201	517	219	—	368	1,809
" Galleries of Sculpture ... ..	1,798	249	—	—	552	1,272
" British and Mediæval Department ... ..	1,488	746	486	576	804	1,213
" Coin and Medal Room ... ..	2,150	377	—	—	2,424	2,533
Total ... ..	216,044	155,086	138,949	132,421	156,802	182,374

\* The Print Room was re-opened from 3rd August.

The British Museum, Bloomsbury (including the Departments of Printed Books and Maps, Manuscripts, Oriental Printed Books and Manuscripts, Prints and Drawings, Egyptian and Assyrian Antiquities, Greek and Roman Antiquities, British and Mediæval Antiquities and Ethnography, and Coins and Medals), is open free to the public on week-days (except on Good Friday and Christmas Day and days of Public Fast or Thanksgiving) from 10 a.m. to 6 p.m.

But after 4 p.m. in January, February, November, December, and after 5 p.m. in March and October, some only of the Galleries remain open, viz. :—

On Mondays, Wednesdays, and Fridays.	{ Exhibitions of Manuscripts and Printed Books ; Prehistoric, British, Anglo-Saxon, Oriental, Religious and Ethnographical Collections ; Fourth, Fifth and Sixth Egyptian Rooms ; Assyrian and Babylonian Rooms ; Glass, China, and Mediæval Collections.
On Tuesdays, Thursdays, and Saturdays.	{ Egyptian, Assyrian, Greek and Roman Collec- tions ; Prehistoric, Terra-cotta, Gold Ornament, Greek and Roman Life, Bronze and Vase Rooms ; Mummy Rooms ; Prints and Drawings Exhibition Gallery.

The Museum is open also on Sunday afternoons—

From 2 to 4 p.m. in January, February, November, December.

„ 2 to 5 p.m. in March and October.

„ 2 to 6 p.m. April to September, inclusive.

The Reading Room is open to Students from 9 a.m. to 6 p.m., the Newspaper Room and Manuscript Students' Room from 10 a.m. to 5 p.m., on every week-day except Good Friday, Christmas Day, and the first four week-days in March and September.

British Museum, }  
1st April, 1921. }

*Frederic G. Kenyon,*  
Director and Principal Librarian.

B.—PERSONS ADMITTED TO VIEW THE COLLECTIONS IN THE BRITISH MUSEUM (NATURAL HISTORY), CROMWELL ROAD, in each YEAR from 1915 to 1920, inclusive.

	1915.		1916.		1917.		1918.		1919.		1920.	
	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.
January	29,458	3,177	30,632	4,001	30,594	2,578	32,056	2,723	33,715	3,628	30,823	3,763
February	25,599	3,759	26,948	3,301	25,452	3,046	26,245	3,193	25,989	3,912	28,439	5,647
March	29,933	4,266	28,614	3,386	30,165	4,020	29,022	4,268	32,270	6,843	32,363	4,911
April	42,600	4,380	32,024	4,301	44,284	5,880	38,064	3,896	48,131	4,577	61,832	6,624
May	32,483	4,655	28,854	3,161	31,785	4,106	31,695	3,784	29,719	4,721	33,090	6,023
June	27,666	3,340	31,165	3,808	28,304	4,122	27,034	4,780	34,216	5,311	29,880	6,118
July	33,687	3,791	27,792	4,091	28,981	4,742	33,588	4,252	32,452	5,676	43,423	5,622
August	46,712	6,068	33,006	3,902	42,316	4,284	40,681	4,037	40,965	5,989	66,408	6,890
September	27,972	3,886	28,993	3,913	27,705	4,849	26,768	6,300	28,548	4,600	33,595	6,131
October	30,358	4,678	33,228	4,238	29,377	3,296	30,991	3,567	31,363	3,829	34,780	7,411
November	27,523	3,241	29,368	2,479	30,026	2,753	27,426	2,416	28,174	4,076	32,015	3,735
December	31,181	3,168	28,635	2,833	27,671	2,792	33,126	2,893	33,521	3,511	35,622	2,556
Total Number of Persons admitted to view the Natural History Collections (including students)	385,172	48,409	359,259	43,414	376,660	46,408	376,696	46,109	399,063	56,673	462,270	65,431
	433,581		402,673		423,128		422,805		455,736		527,701	

NUMBER OF VISITS TO PARTICULAR DEPARTMENTS for the purpose of Study.

	1915.		1916.		1917.		1918.		1919.		1920.	
	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.	Week-day.	Sunday.
Zoology (including Art Students)	...	8,020	7,018	6,314	5,553	7,459	8,973					
Entomology	...	3,354	3,149	2,909	3,277	3,306	4,088					
Geology	...	2,531	3,000	3,623	3,214	4,648	4,920					
Mineralogy†	...	510	354	404	461	915	625					
Botany	...	3,226	3,303	2,751	2,657	3,170	3,443					
Total	...	17,641	16,824	16,001	15,162	19,498	22,049					

† Study series directly accessible to the public, and so labelled as to render reference to the staff almost unnecessary, have been arranged in this Department.

The Exhibition Galleries of the British Museum (Natural History), Cromwell Road, South Kensington, including the Departments of Zoology, Entomology, Geology and Palæontology, Mineralogy, and Botany, are open to the public, free daily, except Good Friday and Christmas Day, and days of Public Fast or Thanksgiving.

The Hours of Admission are as under:—

On WEEK-DAYS, throughout the year from 10 a.m., in

January and February	...	...	...	...	to 5	p.m.
March	...	...	...	...	„ 5.30	„
April to September	...	...	...	...	„ 6	„
October, November and December	...	...	...	...	„ 5	„

On SUNDAYS, in

January	...	...	...	...	from 2	to 4	p.m.
February 1st to 14th	...	...	...	...	„ 2	„ 4.30	„
„ 15th to end	...	...	...	...	„ 2	„ 5	„
March	...	...	...	...	„ 2	„ 5.30	„
April	...	...	...	...	„ 2	„ 6	„
May to August	...	...	...	...	„ 2.30	„ 7	„
September	...	...	...	...	„ 2	„ 6	„
October	...	...	...	...	„ 2	„ 5	„
November and December	...	...	...	...	„ 2	„ 4	„

Persons are admitted to study in these Departments every week-day from 10 till 4 o'clock.

On Sundays the following galleries are open, namely:—Central Hall, North Hall, Bird Gallery, Mammal Galleries (including Whale Room), Fossil Mammal Gallery, Fossil Reptile Gallery, and Mineral Gallery.

British Museum (Natural History),  
1st April, 1921.

} *Sidney F. Harmer,*  
} Director of the Natural  
} History Departments.

## X.—GENERAL PROGRESS AT THE MUSEUM, BLOOMSBURY.

The evacuation of the Museum by the Departments installed in some of the galleries during the war was completed in the course of the first months of 1920. The Medical Research Committee quitted the Sub-ground Floor of King Edward the Seventh's Galleries on February 6th, and the Registry of Friendly Societies completed their removal from the galleries belonging to the Departments of Prints and Drawings and Egyptian and Assyrian Antiquities on March 20th. The work of cleaning these galleries and replacing the collections in them was taken in hand at once. The three Mummy Rooms were reopened to the public on May 24th, the Phœnician and Himyaritic Rooms on June 21st, the Fourth Egyptian Room, the exhibition gallery of Prints and Drawings and half the Gallery of Ceramics and Mediæval Collections on July 15th, the Babylonian Room on July 31st, the Students' Room of the Department of Prints and Drawings on August 3rd, and the Fifth and Sixth Egyptian Rooms on December 6th. At the end of the year the only portions of the Museum remaining unopened were two small rooms of the Egyptian and Assyrian Department, and half the Ground Floor Gallery in King Edward the Seventh's Galleries, in which the collections of Oriental Ceramics, Glass, and a portion of the Mediæval collections were being installed.

Sunday opening of the galleries was resumed on November 7th.

The total number of visitors to the Museum was 851,483, composed of 843,803 on week-days and 7,680 on the Sundays in November and December. The figure for week-days is considerably higher than in any previous year except 1913, and is more than 150,000 in excess of the total for 1919 (691,650), when, however, the galleries were only gradually reopening in the course of the year. On the other hand the number of readers visiting the Reading Room has not yet reached the pre-war standard. The total of 147,145, though an increase on the 130,198 of 1919, is lower than the figure for 1915, while before the war, ever since the beginning of the century, the total invariably exceeded 200,000 (except when the Room was closed for cleaning), and in 1913 reached 243,659. Students visiting other Departments amounted to 35,229, about double the number in 1919 (when, however, several of the Students' Rooms were not open), and only a little less than in 1915. Had the Print Room been open throughout the year the 1915 total would no doubt have been exceeded.

The parties of the Guide Lecturers were well attended. Exact figures cannot be given, since visitors join or leave the parties in the course of the lectures, but the approximate figure is 35,670.

The number of separate objects incorporated in the several Departments during 1920 is as follows:—

## Printed Books:

Books and Pamphlets	-	-	-	-	-	29,397
Serials and Parts of Volumes	.	-	-	-	-	83,447
Maps and Atlases	-	-	-	-	-	1,812

Printed Books—*continued*—

Music - - - - -	10,843
Newspapers (single numbers) - - - - -	282,692
Miscellaneous - - - - -	1,852
Manuscripts and Seals - - - - -	460
Oriental Printed Books and MSS. - - - - -	1,890
Prints and Drawings - - - - -	4,773
"          "    (Oriental) - - - - -	878
Egyptian and Assyrian Antiquities - - - - -	2,347
Greek and Roman Antiquities - - - - -	66
British and Mediæval Antiquities - - - - -	1,614
Coins and Medals - - - - -	7,919
	<hr/>
Total - - - - -	429,990

Of the total increase of 96,000, nearly the whole is accounted for by an increase of 81,500 in the number of newspapers, but most Departments show increases except the Department of Egyptian and Assyrian Antiquities.

Among the accessions described in the Departmental reports that follow, a few of the most notable may be mentioned here. The Department of Printed Books made considerable acquisitions of early English and Spanish books—two branches of bibliographical research to which considerable attention is now being paid. The Department of MSS. acquired at the Yates Thompson sale a very valuable and early illuminated Life of St. Cuthbert, written at Durham at the end of the 12th century; and it received a gift of special interest in the volume of Middle English verse presented by a group of teachers of English in America, as a mark of their sympathy with England during the war, and of the assistance which they had derived from the British Museum.

In the Department of Prints and Drawings the most important single accessions were the album of drawings by a North Italian artist (formerly supposed to be Mantegna), presented by Lord Rosebery, and the very early portrait of Yoritomo, the first Shogun of Japan.

The Department of Egyptian and Assyrian Antiquities acquired a very fine papyrus roll, nearly 60 feet in length, containing a late recension of the Book of the Dead, in a fuller form than in any other known manuscript. The Department of Greek and Roman Antiquities received by bequest from Lord Astor a most attractive half-length bronze statue of a young priestess, which was at one time stated, but without authority, to be a portrait of Drusilla, Caligula's sister, and to have been dredged up from Lake Nemi. The Department also acquired a particularly fine rock crystal gem, formerly in the Cockerell collection; and it was fortunate in securing several interesting Greek vases.

The Department of British and Mediæval Antiquities was enriched by a specially interesting gift, Mr. G. Eumoropoulos (a frequent and munificent benefactor of the Museum) having elected to commemorate the completion of forty years' service by

the Keeper, Sir Hercules Read, by presenting to the Museum a rare and beautiful example of Chün stoneware, of which the existing specimens are few in number and proportionately valuable. Another addition to the Chinese collections was a wooden statue, more than life-size, of a Bodhisatva with remains of the original paint and gilding, dating probably from the 12th century. This was obtained through the good offices of the National Art Collections Fund and other friends.

The Department of Coins and Medals secured a further portion of the Weber collection of Greek Coins, but the most interesting accessions were two single pieces; one being an example (only six others are known) of the silver decadrachm supposed to have been struck at Athens in commemoration of the victory over Persia, while the other is the second known example of the Crown of the Rose, struck by Henry VIII., but withdrawn after two months.

Publications issued during 1920:—

Guide to the Department of Greek and Roman Antiquities in the British Museum. Fifth edition, with illustrations, maps and plans. 8vo. 2s. 6d.

A Guide to the Exhibition illustrating Greek and Roman Life. Second Edition. 8vo. 2s. 6d.

How to Observe in Archæology. Suggestions for travellers in the Near and Middle East. 8vo. 2s. 6d.

Grains and Grammes. A Table of Equivalents for the use of Numismatists. 8vo. 3s.

Rules for compiling the Catalogues in the Department of Printed Books in the British Museum. 8vo. 2s. 6d.

Chinese Pottery Statue of a Lohan. 7 pp. text, with coloured plate. 4to. 1s.

Guide to the Antiquities of the Bronze Age in the Department of British and Mediæval Antiquities. Second Edition, with 10 plates and 195 illustrations. 8vo. 2s. 6d.

Summary Guide to the Exhibition Galleries of the British Museum. Fourth Edition. With plans and illustrations. 8vo. 4d.

The Book of the Dead. Monograph by Sir E. A. W. Budge. 8vo. 1s. 6d.

The Babylonian Story of the Deluge and the Epic of Gilgamesh. With an account of the Royal Libraries of Nineveh. With 18 illustrations. 8vo. 1s. 6d.

Hittite Texts in the Cuneiform Character from Tablets in the British Museum. 50 plates. Foolscap folio. 15s.

Cuneiform Texts from Babylonian Tablets in the British Museum. Part XXX. 50 plates. Foolscap folio. 12s.

Guide to an Exhibition of Japanese Colour-Prints (from the end of the 17th century to 1858). 8vo. 6d.

*Frederic G. Kenyon,*

Director and Principal Librarian.

British Museum,

1st April, 1921.



XI.—PROGRESS made in the ARRANGEMENT AND DESCRIPTION OF THE COLLECTIONS AND ACCOUNT OF OBJECTS ADDED TO THEM in the year 1920 (Bloomsbury).

DEPARTMENT OF PRINTED BOOKS.

I. *Arrangement.*—The works added to the collection during the past year have, as far as possible, been placed on the shelves of the Library according to the system of classification adopted in the Museum.

The press-marks, indicating their respective localities, have been marked on the inside and affixed to the back of each volume.

The total number of these press-marks amounts to 64,735; in addition to which 36,092 press-marks have been altered on books and in the catalogues, in consequence of changes and re-arrangements carried out in the Library; 34,364 labels have been affixed to books and volumes of newspapers, and 48,389 obliterated labels been renewed.

The number of stamps impressed upon articles received is 406,456.

10,885 presses of books have been dusted in the course of the year.

II. *Cataloguing.*—46,957 titles have been written for the General Catalogue and for the Catalogue of Maps and Music.

*Printing.*—34,450 titles and index-slips for the General, and 1,428 for the Map, Catalogue have been printed during the year.

*Incorporation.—General Catalogue.*—32,998 title-slips and index-slips have been incorporated into each of the three copies of the Catalogue. This has rendered it necessary, in order to maintain as far as possible the alphabetical arrangement, to re-arrange 54,723 title-slips and index-slips in each copy and to add to each copy 461 new leaves.

*Map Catalogue.*—2,017 titles have been written for this Catalogue, and 1,734 title-slips have been incorporated into each of three copies of it. This has rendered it necessary to re-arrange 2,691 title-slips in each copy and to add to each copy 21 new leaves.

*Music Catalogue.*—8,096 titles have been written for this catalogue; 30,294 title-slips have been relaid on 2,207 new leaves.

*Shelf Catalogue.*—For this catalogue, in which the title-slips, mounted on cards, are arranged in order of press-marks, 23,364 have been so mounted and 27,880 have been incorporated in their proper order.

*Special Catalogues.*—Work has been continued on the *Catalogue of Books printed in the XVth Century* and progress made with the Venetian Presses, which will occupy Part V.

A short-title catalogue of Spanish Books to the end of the XVIIth century has also been prepared.

III.—*Binding*.—The number of volumes and sets of volumes sent to be bound in the course of the year was 12,186, including 4,512 volumes of newspapers. In consequence of the frequent adoption of the plan of binding two or more volumes in one, the number of volumes returned was 9,738. In addition, 1,989 volumes have been repaired in the binders' shops.

Besides this, the following binding work has been done in the Library itself:—4,173 volumes have been repaired, 8,761 cleaned and polished and 4,608 volumes bound in a light style of binding.

The following maps, etc., have also been bound or mounted during the year:—13 atlases and 14 volumes of the 25-inch Ordnance Survey have been bound; in addition, 395 general maps, in 957 sheets, have been mounted on linen, 10 maps, in 186 sheets, mounted on cards, and 147 Admiralty Charts mounted on linen.

49,490 numbers of Colonial newspapers have been made up into 1,095 parcels and the parcels tied up and labelled.

109 volumes of the General Catalogue have been broken up and rebound, and 10 volumes of the Music Catalogue.

IV.—*Reading Room Service*.—The number of volumes replaced in the General Library after use in the Reading Room was 481,475; in the King's Library, 14,364; in the Grenville Library, 2,140; in the Map Room, 3,566; in the presses in which books are kept from day to day for the use of readers, 659,246; and in the Oriental Department, 1,910; making a total of 1,162,701 volumes supplied to readers during the year, exclusive of those to which the readers have personal access on the shelves of the Reading Room. The number of readers during the year was 147,145, giving an average of 484 daily—the room having been open on 304 days.

*Newspaper Room*.—The number of readers during the year was 10,880, giving a daily average of 36—the room having been open on 304 days. The number of volumes replaced after use was 49,492, giving a daily average of 163, not reckoning volumes taken from the shelves by the readers themselves. In addition, 1,372 country newspapers were brought up to the Library from the Repository at Hendon for the use of readers.

*Map Room*.—317 students were admitted to the Map Room.

*Photography*.—There were 296 applications for leave to photograph from books in the Library and 787 volumes were supplied for this purpose.

V. *Accessions*.—*General Library*.—29,397 complete volumes and pamphlets have been added to the General Library during the year. Of these, 7,818 were presented, 14,501 received by Copyright, 687 by Colonial Copyright, 1,133 by International Exchange, and 5,858 acquired by purchase.

83,447 parts or volumes of serial publications and of works in progress have been added to the General Library. Of these, 6,435

were presented, 53,463 received by Copyright, 601 by Colonial Copyright, 1,647 by International Exchange, and 21,301 acquired by purchase.

*Maps.*—59 atlases, 178 parts of atlases, and 1,575 maps in 3,991 sheets have been added to the collection during the year. Of these, 15 atlases, 24 parts and 976 maps were presented; 27 atlases, 81 parts of atlases and 482 maps received by Copyright; 13 atlases and 18 maps by Colonial Copyright; 2 parts of atlases and 1 map by International Exchange; and 4 atlases, 69 parts of atlases and 976 maps acquired by purchase.

*Music.*—10,843 musical publications have been added to the collection during the year. Of these, 1 book was presented, 9,890 books and 1,251 parts received by Copyright, 774 books by Colonial Copyright, and 178 books and 128 parts acquired by purchase.

*Newspapers.*—The number of newspapers published in the United Kingdom and received under the provisions of the Copyright Act during the year was 3,079, comprising 204,665 single numbers. Of these newspapers, 1,141 were published in London and its suburbs, 1,439 in other parts of England and Wales, 284 in Scotland, and 215 in Ireland. 39 sets, comprising 11,422 single numbers, were received by Colonial Copyright; 1 set, comprising 434 single numbers, by International Exchange; 353 sets, comprising 50,116 single numbers, have been presented; and 90 sets, comprising 16,055 single numbers, acquired by purchase.

*Miscellaneous.*—1,852 articles not included in the foregoing paragraphs have been received, consisting of single sheets, photographs and postage stamps.

#### *Acquisitions of Special Interest.*

The following is a list of the most important and interesting books, maps and music, acquired by presentation or purchase during the year:—

##### *Books printed in the 15th century.*

Mapheus Vegius, *Carmen de morte Astyanactis*. Robertus de Fano and Bernardinus de Bergamo, Cagli, 1475. The first book printed at Cagli, and a very rare tract.

S. Francis of Assisi, Fioretti. Giovanni Lionardo Longo, Vicenza, 1476. The first edition of the Fioretti and the first known product of Longo's press.

Augustinus Datus, *Eloquentiæ præcepta*. Leonardus [Pachel] and Henricus [Scinzenzeler], Milan, 1478. The only book known to have been produced by this partnership.

Zeichen der falschen Gulden. [Anton Sorg, Augsburg, about 1480.] A placard, with woodcuts of base coin in circulation. No sheet of this kind was previously represented in the Museum collection.

Psalterium cum canticis. Bartholomæus Ghotan, Magdeburg, 1481. A fine copy of one of two dated books known to belong to this press, both of which are very rare. *Presented by Major George Anson.*

Heinrich Müntzinger, *Das Pater noster mit der Gloss*, etc. Anton Sorg, Augsburg, 1482. A rare collection of devotional tracts and a good specimen of Augsburg vernacular printing.

Diogenes Laertius, *Vita de' filosofi*. Jacobus Caroli and Petrus Honofrii, Florence, 1489. The work done by these printers jointly was not previously represented in the Museum collection, and specimens of it rarely occur.

Year Books, 1 and 3-8, Edward IV. [Richard Pynson, London, about 1492 and 1495.] Of most of these seven Year Books only one other copy is known to exist. The first is a variant issue of an edition already represented in the Museum.

*Officium pro festo Visitationis B. V. Mariæ*. [Richard Pynson, London, about 1492.] An apparently hitherto unrecorded product of Pynson's press. *Presented by Major George Anson*.

*Votiuale Missarum*. Valentin Fernandez, Lisbon, 1496. The only known copy of this service book, the existence of which had not previously been recorded.

*English Books of the 16th and 17th centuries.*

The *Kalendar of Shyppars*. Antoine Vêrard, Paris, 1503. A Scots translation of the "*Kalendrier des bergers*," with fine woodcuts. Only two other copies are known, one of which, like the present, is imperfect.

*Terentii Comædiæ a Guidone Iuuenale illustratæ*. Josse Bade, Paris, for Wynkyn de Worde, Michael Morin and Joannes Brachius, London, 1504. The only book known to have been printed for De Worde in conjunction with these two partners. *Presented by Major George Anson*.

Nicholas Udall, *Floures for Latine Spekyng* selected oute of Terence. T. Berthelet, London, 1533. The first edition.

Sir Geoffrey Fenton, *Monophylo*. W. Seres, London, 1572.

R. S. [Robert Smythe], *Straunge, lamentable and tragicall Hystories*. H. Jackson, London, 1577.

The *Mirror of Princely Deedes and Knighthood*, translated by M. T. [Margaret Tyler]. T. East, London [1578]. The first part only.

John Lyly, *Euphues and his England*. T. East for G. Cawood, London, 1580. Belonging to one or other of the first three editions. *Presented by S. R. Christie-Miller, Esq.*

Thomas Howell *His Deuises*, London, 1581. Wanting the title and two following leaves. Only one perfect copy is known.

Arthur of Little Britaine [translated by Lord Berners]. T. East, London [1582].

Palmerin d'Oliva, turned into English by Anthony Munday. The first part. I. Charlewood for W. Wright, London, 1588. The first edition.

Claude Colet, *The famous Historie of Palladine of England*, translated by Anthony Munday. E. Alde for J. Perin, London, 1588.

*The History of Palmendos*, translated by Anthony Munday. I. C. for S. Watson, London, 1589.

H. R. [Henry Roberts], *A Defiance to Fortune proclaimed by Andrugio*. I. Proctor, London, 1590.

Henry Barrow, *A brief Discoverie of the false Church*. [Dort?], 1590.

Etienne de Maison Neuve, *Gerileon of England*, translated by Anthony Munday. C. Burbie, London, 1592.

Barnaby Rich, *The Adventures of Brusanus, Prince of Hungaria*. T. Adames, London, 1592.

*The first Book of Primaleon of Greece*. C. Burby, London, 1595.

Henry Roberts, *Pheander, the Mayden-Knight*. T. Creede, London, 1595. The only known copy.

Richard Johnson, *the second Part of the History of the Seauen Champions of Christendome*. C. Burbie, London, 1597.

*Heroicall Adventures of the Knight of the Sea, Prince Oceander*. W. Leake, London, 1600.

William Browne, *Britannia's Pastorals*. T. Snodham for G. Norton, London, 16[13]–16. The first part is of the rare first issue, afterwards freely altered by the author and reprinted for publication with the second part.

Sir Richard Beling, *A sixth Booke to the Countesse of Pembroke's Arcadia*. Society of Stationers, Dublin, 1624.

John Cameron, *A Tract of the Sovereigne Judge of Controversies*. W. Turner for H. Curteine, Oxford, 1628. *Presented by Falconer Madan, Esq.*

*The Famous History of George, Lord Fauconbridge*. I. B. for J. Wright, London, 1635.

T. D. [Thomas Deloney], *The Gentle Craft*. The first part. R. Bird, London, 1637. Believed to be unique.

Thomas Godwin, *Romanæ historiæ anthologia*. L. Lichfield for H. Crypps, Oxford, 1638. *Presented by Falconer Madan, Esq.*

John Prideaux, Bishop of Worcester, *Tabulæ ad grammatica græca introductoriæ*. L. Lichfield for E. Pearse and T. Allam, Oxford, 1639. *Presented by Falconer Madan, Esq.*

*The Noble Birth and Gallant Atchievements of Robin Hood*. T. Vere and W. Gilbertson, London, 1662. *Presented by S. R. Christie-Miller, Esq.*

[Gauthier de Costes, Seigneur de la Calprenède], *Pharamond or the History of France*, rendered into English by John Davies of Kidwelly. N. Brook and S. Speed, London, 1662.

[John Wilson, Recorder of Londonderry], *The Cheats*, a comedy. G. Bedell, T. Collins, C. Adams, London, 1664.

*The true and admirable History of Patient Grissel*. J. Wright, J. Clarke, etc., London, 1682.

Sir Josiah Child, *A new Discourse of Trade*. J. Everingham, London, 1693.

[Sir Richard Steele], *The Procession*, a poem on Her Majesties Funeral. By a Gentleman of the Army. T. Bennet, London, 1695. Steele's first published work.

*Early Spanish Books.*

Las Epistolas de Seneca en romance. P. Hagembach, Toledo, 1502. With woodcuts.

Antoninus, Summa de confession llamada Defecerunt. P. Hagembach, Toledo, 1504.

Ramon Lull, Arbor scientiae. P. Posa, Barcelona, 1505. With woodcuts.

Fasciculus myrrhe nueuamente corregido. J. Varela, Seville, 1518.

Ramon Lull, Blanquerna. J. Joffre, Valencia, 1521. A specimen of a very rare edition, in the original Valencian, of this famous work.

Cristobal de San Antonio, Triumphus Iesu Christi contra infideles. Salamanca, 1524. A very rare edition.

Gamaliel nueuamente traduzido. D. de Robertis, Seville, 1536. With woodcuts.

Martin Cortes, Breve compendio de la sphaera y de la arte de navegar. A. Alvares, Seville, 1551. The first edition of a famous treatise on navigation. With maps.

La Historia de los dos nobles cavalleros Oliveros de Castilla y Artus de Algarve. P. de Santillana, Burgos, 1553.

Recibimiento que la Ciudad de Toledo hizo a la Reyna Ysabel. Toledo, 1561. A very rare historical work.

Relacio delo sucedido ala Armada de Su Magestad desde que entro enel Canal de Inglaterra. C. de Lara, Seville [1588]. A hitherto undescribed report, printed at an otherwise unknown press, on the operations of the Spanish Armada.

Henrique Visorio, Anagramma de la vida humana. A. Alvares and A. Lopez, Lisbon, 1590. An otherwise unknown Spanish poem.

*Later Books.*

Vergil, Traductieou de l'Eneido [books 1, 2, 4, 6]. Besies, 1682. A translation into the dialect of the Narbonnais.

A collection of over 200 German hymnological works, including numerous hymn-books for local use, the earliest dating from the 17th century.

A collection of fifty-nine works, complete in seventy-two volumes, printed by or under the superintendence of Mr. Bruce Rogers, mostly at the Riverside Press, Cambridge, Mass.

A complete set, including all the supplements, of "La Libre Belgique," published in Belgium during the German occupation.

A copy of the Shelley Society's reprint of "Adonais" bound in brown morocco with gold tooling by T. J. Cobden-Sanderson in 1888. Presented by T. J. Cobden-Sanderson, Esq.

A volume of photographs of an early Greek manuscript of the Psalms now in the Freer Collection at Washington. Presented by Charles Lang Freer, Esq.

*Music.*

Theobaldus Billicanus, De partium orationis inflexionibus. [Wittenberg], 1526. With specimens of musical settings of Horatian Odes, a very early instance of such settings.

Claude Gervaise, Quart liure contenant xxvj. chansons musicales a troys parties. Paris, 1550.

John Adson, Courtly Masquing Ayres composed to 5 or 6 parts. T.S. for John Brown, London, 1621. Six parts in one volume.

Walter Porter, Madrigales and Ayres. W. Stansby, London, 1632. The only perfect copy known.

John Gamble, Ayres and Dialogues, London, 1656, and the Second Book of the same, London, 1659. With a power of attorney signed by the composer inserted. Of the Second Book only two other copies appear to be on record.

A volume of compositions by Bach and Mendelssohn, once in Mendelssohn's possession and with his autograph, also a volume of first editions of compositions by Schumann with autograph inscriptions by him.

### *Maps.*

The first and second issue of *Le Théâtre François* par Maurice Bouguereau, Tours, 1594, and three editions (Paris, 1621, 1626, 1637) of the *Théâtre géographique du Royaume de France*, these additions making the Museum set of early French atlases exceptionally complete. *Presented by Sir H. George Fordham.*

A collection of 102 maps, containing some very fine specimens of 18th-century cartography, among them a number of excellent English county maps. *Presented by R. Holland Martin, Esq., C.B.*

A collection of thirty-nine maps and plans of Western Flanders, of the period around 1850, including Ypres, Dixmude, Nieuport, etc., of interest as giving in great detail the land on which many battles were fought during the War.

*Alfred W. Pollard.*

## DEPARTMENT OF MANUSCRIPTS.

1. *Catalogue of Additions*.—Egerton MS. 2901, acquired in 1913, has been described and indexed.

Of the MSS. acquired in 1914, Additional 38,988–38,996, 39,021–39,048, 39,060, 39,064–39,066, 39,068, 39,069, 39,072–39,075, 39,079, 39,080, 39,091–39,096, 39,098–39,119, 39,121–39,164; of those acquired in 1915, Additional 39,218–39,252; of those acquired in 1916, Additional 39,259–39,264; of those acquired in 1917, Additional 39,569, 39,625–39,628, 39,658, and Egerton 2,973, 2,977; of those acquired in 1918, Additional 39,757, Egerton 3,018; of those acquired in 1919, Additional 39,840–39,842, 39,848–39,859, 39,865, 39,866, 39,907; and of those acquired in 1920, Additional 39,929–39,936, 39,954, 39,955 have been described and indexed.

The Charters and Detached Seals acquired in 1911–1915 have been described and indexed for the quinquennial Catalogue of Additions.

2. *Catalogue of Greek Papyri*.—The Papyri acquired in 1911–1915 have been described and indexed for the quinquennial Catalogue of Additions.

Papyri 2,103–2,182, acquired in 1920, have been provisionally transcribed.

For the projected Catalogue of Literary Papyri, Papyri 272, 273, 486, 736, 886, 1,545, 1,862, 1,873, and 2,037 have been transcribed.

3. *Catalogue of the Royal and King's MSS.*—Sheets Z—Pp of Vol. III., completing the general index and the index of Greek initia, and beginning that of Latin initia, have been printed off, and sheet Qq is in type. The introductions to Vols. I. and III. are in type. The revision of the index of initia has been continued.

4. *Catalogue of Irish MSS.*—The revision of the section Theology is nearly completed, and that of the sections Poetry and Tales is in progress.

5. *Catalogue of Charters*.—Additional Charters 57,769–57,805, 58,271–58,335, acquired in 1913, have been described and indexed.

6. *Miscellaneous*.—A list of original Papal Bulls and Briefs in the Department has been compiled.

7. *Binding*.—One hundred and twenty-three Additional MSS., newly acquired, and ninety-eight MSS. of the old collections have been bound, repaired, or lettered, together with seventy-seven Books of Reference and Catalogues. Three Charters and Rolls have been repaired.

8. *Verification*.—The entire collection of MSS. has been verified by comparison with the Shelf-lists.



9. *Reproductions*.—Three reproductions of miniatures in colours (Royal MS. 15 D. II., f. 3, and Additional MSS. 18,850, f. 65, and 25,698, f. 8) and one set of Pictorial Postcards (Life of St. Cuthbert) have been issued; and two further sets of Pictorial Postcards (Calendar-pictures from Queen Mary's Psalter) have been passed.

Part III. (English, 1300–1350) of Schools of Illumination is in preparation.

10. *Stamping, folioing, and placing*.—128 Additional MSS., 344 Charters and Rolls, 124 Books of Reference and 161 Postcards have been stamped. The total number of impressions made was 9,169.

180 MSS. have been folioed, with a total of 43,832 folios.

4,290 slips have been numbered.

50 newly acquired MSS. and 26 Papyri have been placed, and 7 MSS. and 11 Papyri have been re-placed. All have been press-marked and entered in Hand- and Shelf-lists. 168 Additional Charters and Rolls have been placed, and have been entered in the Hand-list. 85 seals and casts have been provided with boxes, placed, and entered in Hand- and Drawer-lists.

11. *Books of Reference*.—125 volumes and parts, together with 161 postcards and 2 reproductions, have been received, catalogued and placed.

Seven volumes and parts have been added to the series of Facsimiles placed in the Department and available for the use of readers. These include a noteworthy addition in an unpublished photographic reproduction of the text of Euripides in the Laurentian MS. (Plut. xxxii. 2), *presented by J. A. Spranger, Esq.*

12. *Consultation of MSS.*—19,827 MSS. and 2,632 Charters and Seals have been consulted in the Students' Room. The number of Students was 7,340.

13. *MSS. photographed*.—631 MSS. (including Papyri, Charters, and Seals) were allowed to be photographed, with a total of 7,906 photographs taken.

14. *Acquisitions*.—The number of Manuscripts and Documents, etc., acquired during the year has been:—

Additional MSS.	-	-	-	-	-	93
Egerton MSS.	-	-	-	-	-	4
Charters and Rolls	-	-	-	-	-	162
Papyri	-	-	-	-	-	138
Detached Seals and Casts	-	-	-	-	-	63

The most interesting acquisition of the year is the illuminated Life of St. Cuthbert, written at Durham at the end of the 12th century. This important work of North of England art, which came up in the second sale of Mr. Yates Thompson's MSS., was beyond the unaided reach of the Museum funds, and appeals were necessary, not only to the National Art Collections Fund, which provided £1,000, but also to the generosity of individuals. Mainly

through the help of Dr. F. W. Dendy of Newcastle, this appeal raised from fourteen donors a further £2,000, and the Trustees provided the rest of the purchase-money.

Another acquisition, of importance in itself and of great interest from the circumstances of its presentation, is a volume of Middle English religious verse written in the 15th century, including several unique and unpublished pieces. It was selected and purchased (by private arrangement with the owners) from the Phillipps collection at Cheltenham by Dr. Carleton Brown, Professor of English in the University of Minnesota, acting on behalf of a number of teachers of English in American Colleges and Universities. These subscribers, to use their own words, having "enjoyed the privilege of reading in the British Museum, desire to convey to the authorities of the Museum our grateful appreciation of the courtesies so generously accorded to students from abroad," with the hope that this gift "may have its influence in strengthening the cordial bonds which unite British and American scholars." It is to be known as "The American Testimonial MS."

The Gospel-Book of Thorney Abbey, written, perhaps on the Continent, in the 10th century, has been used as a "Liber Vitae," to record long lists of benefactors and others whose names were commemorated in the monks' prayers in the 11th and 12th centuries. It was purchased at Lord Mostyn's sale.

Other monastic records acquired are the Chartulary of Bridlington Priory, 13th-14th centuries; a portion (D-J) of the large 15th centuryoucher-book of Fountains Abbey, of which two other volumes were already in the Museum; a rental and an accompt-book of the same monastery; and a 14th century chartulary of the collegiate church or chantry of Shottesbrooke in Berkshire. *The last was purchased from the Farnborough Fund. Also an inventory and rental of Pershore Abbey, 1376, presented by R. Steele, Esq.*

A copy of the minor works of the historian Ralph de Diceto, purchased at Sir W. Ingilby's sale, is apparently the original presentation-copy to William Longchamp, the Chancellor, about A.D. 1195.

A Spanish sacramentary of the early part of the 13th century is a notable addition to the representation of Spanish illumination in the Museum.

A 13th-century Latin Bible is valuable from its correctorium-notes in the margin.

A small roll-calendar of the late 13th century has English illuminated ornament.

A volume of French romances of the cycle of Fierabras, of the middle of the 14th century, and a well-drawn armorial of English nobility, about 1440, with some Flemish additions, were both bought from the Bridgewater Fund.

Other manuscripts worthy of mention are:—

Catullus, Tibullus and Propertius, 15th century. *Purchased from the Farnborough Fund.*

A small expense-roll of Edmund, Earl of Lancaster, 1294.

Justice-book of Philippe de la Crux, 1469-1476. *Presented by R. Steele, Esq.*

Visitation of Cheshire, 1566, with a chronicle of the mayors of Chester.

Formulary-book for the Courts Palatine of Chester and Lancaster, 18th century.

Narrative of voyages to Guinea and parts of the West Indies, &c., 1714-1716.

"Aristides," an anonymous pamphlet against Lord St. Vincent's naval administration, 1804.

Diary and papers of William Erskine (1773-1852), translator of Baber's Memoirs. *Presented by Mrs. H. Beveridge.*

Minute-book of the National Union of the Working Classes, 1831. *Presented by Professor Edwin Gay.*

Manual of Artillery, copied at Woolwich R.M.A. by Collingwood Dickson, afterwards V.C., in 1835. *Presented by Lt.-Col. J. H. Leslie.*

Specifications for the re-erection of the Crystal Palace at Sydenham, 1852. *Presented by Rev. H. Chadwick.*

Vocabulary of the Romany language by Rev. R. N. Sander-son. *Presented by E. J. Beaumont Nesbitt, Esq.*

Holograph letter of Louis XIV. to Charles II. relating to the secret treaty of 1676.

Correspondence (50 letters) of George Mackenzie, Earl of Cromarty, chiefly with Lord Treasurer Godolphin, 1703-1708.

Collection of about 80 letters, chiefly relating to the Jacobites, from the Hodgkin collection.

Correspondence of the Twining family, especially Rev. Thomas Twining, translator of Aristotle, 1735-1804, etc.

Letters (21) of Lieut. Robert Knowles, 7th Fusiliers, during the Peninsular War, 1809-1813. *Presented by Sir Lees Knowles, Bart.*

Supplementary letters to the Huskisson Papers, chiefly letters addressed to William Huskisson's widow. Two volumes.

Select correspondence, other than scientific, of Sir Richard Owen. *Presented by C. D. Sherborn, Esq.*

Autograph poems by George Meredith and Sir William Watson, and letters of Swinburne, Matthew Arnold, A. H. Clough and others. *Bequeathed by Sir E. T. Cook.*

Autograph letter of Dr. Isaac Watts, 1745. *Presented by Mrs. E. K. Drummond.*

Autograph letter of William Hogarth, 1758. *Presented by F. Tessier, Esq.*

Autograph letters of Horace Walpole (to Chatterton), Gilbert Elliot (Lord Minto), Henri Murger, Bernardin de St. Pierre, Ivan Tourgeneff and others.

Situation-map of the Western Front in the Great War, 25th September, 1918, signed by F.M. Earl Haig. Also a memorandum concerning operations on that front during his command. The latter is sealed up, and not to be opened till 1940. *Presented by Earl Haig.*

Collections relating to Hampshire and Berkshire by F. J. Baigent. 34 vols. and two series of rolls. *Presented by H. E. Cardinal Gasquet.*

Collections by Daniel Howard on the history of Portsmouth. *Presented by Mrs. E. R. Howard.*

Twenty-five rubbings of monumental brasses by Rev. F. E. Scott. *Presented by Mrs. Scott.*

Plans of ancient earthworks in co. Monmouth, by Rev. E. A. Downman.

Harpichord solos by Dr. Arne, Handel and others, in Dr. Charles Burney's hand, 1744. *Presented by A. Hughes-Hughes, Esq.*

About 138 Greek papyri, chiefly of the Roman and Byzantine periods, and mainly from Oxyrhynchus.

Early deeds from Spain, a remarkable series of seventy-nine, from the neighbourhood of Barcelona, mostly dated in the 10th and 11th centuries.

A document with signatures of Gian Galeazzo and Ludovico Maria Sforza-Visconti, 1480. *Presented by Dr. A. S. Woodward.*

Deeds (53) relating to Ludworth and the Lumley family, from the 13th century onwards.

*J. P. Gilson.*

## DEPARTMENT OF ORIENTAL PRINTED BOOKS AND MSS.

*Arrangement and Cataloguing.*—The number of the sheets of the Catalogue of Persian Printed Books sent to press in 1920 was 25.

The number of titles written for the Catalogues is:—Arabic, 723; Armenian, 3; Assamese, 24; Bengali, 272; Brahui, 2; Burmese, 54; Chin, 8; Chinese, 111; Coptic, 2; Gujarati, 124; Hebrew and Samaritan, 694; Hindi, 300; Hindustani, 184; Japanese, 25; Kachin, 6; Kanarese, 89; Karen, 12; Kashmiri, 44; Khasi, 6; Kond, 3; Malay, 188; Malayalam, 10; Mandaean, 8; Manipuri, 3; Marathi, 144; Mikir, 6; Naga, 3; North Arvan (Khotanese), 2; Oriya, 71; Pali, 23; Panjabi, 87; Persian, 664; Prakrit, 64; Pushtu, 4; Sanskrit, 435; Santali, 3; Siamese, 9; Sindhi, 16; Sinhalese, 11; Syriac, 40; Talaing, 8; Tamil, 328; Telugu, 266; Tibetan, 58; Total, 5,137.

One thousand one hundred and thirteen Chinese MSS. have been catalogued for the Hand-list of the Stein Collection.

One hundred and thirteen short descriptions of MSS. have been entered in the Descriptive List, the Register, and the Classed Inventory.

Three hundred and eighty-nine MSS. (71,779 folios) and seven printed books (1,017 folios) have been folioed.

*Binding.*—The number of Printed Books and MSS. sent to the binders is:—Arabic, Persian and Hindustani Books, 57; Chinese Books, 9; English Books, 4; French Books, 1; Hebrew Books, 146; Malay Books, 1; Books in Sanskrit and other Indian languages, 124; Siamese Books, 25; Uighur Books, 2; MSS., 379. Total, 748.

*Students.*—The number of visits of Students to the Oriental Students' Room attached to this Department during the year is 1,926. The number of Oriental MSS. used by them is 2,295, and the number of Oriental Printed Books used by them is 12,357. 1,910 Oriental Printed Books were used in the Reading Room.

*Photography.*—One hundred and thirty-two applications have been made to photograph books and MSS. in this Department.

*Additions.*—The number of volumes, etc., added to the collections of the Department during the year is 1,890, of which 1,817 are Printed Books and 73 are MSS.

Of the Printed Books, 327 were bought; 1,295 were received under the India Copyright Act; 21 were received under the Colonial Copyright Act from Ceylon; and 184 were presented. Of the MSS., 57 were bought and the remainder presented.

The MSS. are as follows:—

Arabic	...	...	...	...	...	25
Armenian	...	...	...	...	...	1
Chinese	...	...	...	...	...	26
Coptic	...	...	...	...	...	1
Hebrew	...	...	...	...	...	3
Hindustani	...	...	...	...	...	1
Manchu and Chinese	...	...	...	...	...	1
Persian	...	...	...	...	...	3
Sanskrit	...	...	...	...	...	3
Sanskrit and Khotanese	...	...	...	...	...	3
Syriac	...	...	...	...	...	2
Syriac and Arabic	...	...	...	...	...	1
Tibetan	...	...	...	...	...	3
Total	...	...	...	...	...	73

The most important acquisitions are:—

*Arabic MSS.*—1. A fragment on vellum containing an Arabic version (apparently unknown) of the Epistles from Ephesians ii., 10, to II. Timothy ii., 12, in a fine early hand, perhaps of the 9th century. 12°.

2. A MS. containing a detailed criticism of Islām, apparently from the Jewish standpoint; incomplete at the beginning and end. 11th or 12th century. 8°. Apparently unique.

3. A letter in Jewish-Arabic from Šemaḥ Hakkōhēn ben Samuel to Abu Ishāk Ibrāhīm. A.D. 1151.

4. *Ijtimā'āt al-falāsifah fī buyūt il-ḥikmah*, sayings of the Greek philosophers, by Ḥunain b. Ishāk. Nearly the first quarter of the work, two quires being lost at the beginning. 12th century. 12°. Only one other copy is on record.

5. A Jewish-Arabic commentary by Sa'adyāh Gāōn on the two Songs of Moses. Followed by translations of parts of the Jewish liturgy. 12th century. 12°. Apparently otherwise unknown.

6. A MS. containing four grammatical works, viz., al-Anbarī's *Mizān al-'arabīyah* and *Asrār al-'arabīyah*, al-Jurjānī's *al-Jumal*, and *al-Murtajal*, a commentary on the last by 'Abd Allāh b. Aḥmad al-Khassāb. With an *ijāzah* in the handwriting of Aḥmad b. 'Alī b. Aḥmad al-Kūfī, called Ibn al-Faṣīḥ. Copied A.H. 661 (A.D. 1263). 8°.

7. A letter in Jewish-Arabic to Ibn al-Rabī' Sulaimān Hakkōhēn b. Abi Zakariyā. 13th century?

8. *Al-Risālat al-muknī'ah*, a work on the recitation of the *bismillah* formula at prayers, by Abu 'l-Faṭḥ Salīm b. Aiyūb al-Rāzī; transmitted by the author's disciple Abu 'l-Faṭḥ Naṣr b. Ibrāhīm al-Maḥḍisī, and collated with a MS. corrected from the author's holograph. Copied A.H. 737 (A.D. 1336-37). 12°. No other copy seems to be recorded.

9. Part 2 of *al-Iḥāṭah fī akhbār il-Ghirmāṭah*, a biographical dictionary of famous men of Granada, by Lisān al-Dīn Ibn al-Khaṭīb. Copied A.H. 780 (A.D. 1378)? 4°. An important work; MSS. are rare.

10. *Al-Tabyīn fī ansāb il-ḳurashīyīn*, genealogies of the Prophet Muḥammad and his descendants and followers of the tribe of Ḳuraish, by Muwaffiḳ al-Dīn 'Abd Allāh b. Aḥmad ibn Ḳudāmāh al-Maḳdisī. Copied A.H. 795 (A.D. 1393). 12°.

11. A work on ethics, apparently the *Aḳabāt* of al-Ghazzālī. 15th century. 12°. Not otherwise known.

12. *Faḥḥ rabb al-barrīyah*, a commentary by Aḥmad b. Ḥasan al-Sandūbī on al-Ḳaṣ. at al-maḳarīyah, an elegy on the kings of Spain, by Aḥmad b. Muḥ. al-Maḳarī. 15th-16th century. 8°.

13. *Matālī' al-anzār*, a commentary by Maḥmūd b. 'Abd al-Raḥmān al-Isfahānī on al-Baidāwī's metaphysic *Tawālī' al-anwār*. 16th century. 8°. Presented by Colonel R. H. Whitwell.

14. A MS. containing part of *Ta'wīlāt al-Ḳur'ān*, the commentary of Ḥasan b. Muḥ. al-Nishābūrī on the *Ḳur'ān* (viz., on Sūrah 78 to the end), etc., XVIIth-XVIIIth century. 8°. Presented by Colonel R. H. Whitwell.

15. The Old Testament in the Jewish-Arabic dialect of the Aleppo district. XVIIIth-XIXth century. 8°.

16. A collection of Egyptian folk-songs, compiled by 'Abd al-Malik b. 'Abd al-Waḥḥāb al-Fitnī. 2 vols. XIXth century. 8°.

*Chinese MSS.*—1. "The Old Drunkard's Arbour," a composition written in 1048 A.D. by Ou-yang Hsiu; copied in calligraphic style by Su Shih (1036-1101). With many notes of appreciation by various scholars, the first dated A.D. 1348. Roll.

2. An essay on the art of handwriting, written by the artist and calligrapher Mi Fei, and dated A.D. 1080. Roll.

3. Facsimiles of writing by the poet Ts'ao Tzū-chien (A.D. 192-232) and by Ssū-t'u Chung-yu. Roll.

4. An ink-rubbing of a specimen of writing by the calligrapher Ou-yang Hsün (A.D. 557-645).

5. Black-and-white drawings and calligraphy, with notes of appreciation by various scholars. Roll.

6. Pen-and-ink drawings of orchids, etc., with calligraphy. Roll.

7. Specimens of calligraphy by the artists Chao Mêng-fu (A.D. 1310) and Tung Ch'i-ch'ang (A.D. 1582).

8. An album of calligraphy by the Ming artist Tung Ch'i-ch'ang, with a specimen by the poet Lo Pin-wang (7th century).

9. A volume of specimens of Ming calligraphy.

10. A volume of specimens of calligraphy by 26 artists under the reigns of Shun Chih and K'ang Hsi (A.D. 1644-1722).

11. A volume of calligraphy on silk, by various artists.

12. The *P'i p'a hsing*, written in calligraphic style by the Ming artist Tung Ch'i-ch'ang.

13. A volume of calligraphy in cursive style by Liang Shan-chou.

14. Ch'in ting kuo shih to ch'ên lieh chuan, vol. 121 of the Manchu dynastic records, containing biographies.

15. Vol. II., ch. 6-10 of Ta ch'ing mu tsung i huang ti shêng hsün, Imperial edicts. In an embroidered case.

16. Ping ling fang lüeh, a collection of works on the military art. 6 parts, in brocaded cover.

17. Huo lung shên ch'i, a work on military weapons, etc. 3 parts, in brocaded cover.

18. Yü t'u pien lan, a geography of China, with maps. 4 vols.

19. Chien cha hui ts'un, an album of letters.

20. A collection of seal-impressions with decipherment. 4 vols.

21. A collection of seal-impressions. 2 vols.

22. An examination of the Japanese "Spirit Character," believed to be identical with the ancient "Tadpole Script" of China. Translated into Chinese by Shên Wên-ying, and revised by his brother Shên Wên-wei. 4°. Presented by Colonel R. H. Whitwell.

*Hebrew MSS.*—1. Gan Yêhōshūa', i.e. pt. 3 of the 'Āšē Lēbhōnāh, a commentary on the section Nāshīm of 'Ēn Yisrā'ēl by Joshua Segri. Autograph copy, in an Italian cursive hand. XVIIIth century. 4°.

2. Discourses of Israel Benjamin Basan. Autograph copy. 4 vols., in an Italian cursive hand. Copied A.D. 1740-93. Fol.

3. A vellum strip containing (1) a contract of marriage and (2) a bill of divorce, of A.D. 1065.

*Manchu and Chinese MS.*—1. Part of a collection of Imperial seals of the Ching dynasty with decipherment.

*Persian MS.*—1. A fragment of a Jewish-Persian commentary in the Book of Joshua. XIIIth century. 12°.

*Syriac and Arabic MSS.*—1. A collection of letters of Yūsuf Odo, Chaldean Patriarch of Babylon. XIXth century.

L. D. BARNETT.



## DEPARTMENT OF PRINTS AND DRAWINGS.

I.—*Arrangement and Cataloguing, &c.*

*Arrangement.*—212 drawings and 2,481 prints recently acquired have been incorporated with the divisions of the collection to which they severally belong.

82 books of drawings and prints have been placed.

Much preliminary work has been done on the engravings presented by Lady Lucas, before incorporating them with the main collection.

The whole of the select mezzotints of the Cheylesmore collection, now completely mounted in royal, imperial and atlas size, have been incorporated with the mounted select mezzotints of the old Museum collection, to complete the engravers' works. The arrangement is now alphabetical under engravers' names, and each case is arranged according to Chaloner Smith or other standard catalogues. An alphabetical list of the engravers represented in the select English mezzotints has been drawn up. The new references have been added to the Cheylesmore catalogue and the catalogue of select English mezzotints. The "royal" mezzotints now occupy 79 cases, the imperial 48, and the atlas 44. In addition, 15 mezzotints from the Cheylesmore collection have been incorporated with the series of early mezzotints. A selection has been made for special mounting from the mezzotints presented by Lady Lucas, and 32 mezzotints by S. W. Reynolds have been added to the special series. The work of indexing mezzotints placed with portraits and masters' works has been continued.

Catalogue references have been printed on the mounts of the drawings by Rembrandt and his school.

The whole engraved work of the Master E.S. has been collected and re-arranged according to the catalogue by Max Lehrs (Vol. II.), 19 engravings being re-mounted for this purpose. The work of this engraver is now placed in four solander cases following that which contains the engravings described in Lehrs, Vol. I. The work of arranging the engravings described in Vol. III. has been begun, but they are not yet fully mounted or lettered.

The work of re-arranging the engravings by Marcantonio Raimondi in the order of Bartsch has been completed, and references have been inserted in Bartsch, vol. XV.

The complete etched work of G. B. Tiepolo has been arranged according to the catalogue of De Vesme, and detailed instructions have been given for mounting it.

The reproductions of drawings by Clouet, Dumonstier and Lagneau have been re-arranged.

The works of J. Perrissin and J. Tortorel have been marked off in Robert-Dumesnil's catalogue.

References to engravings by W. Faithorne have been inserted in the catalogue by Fagan.

The collection of duplicate engravings available for loan has been thoroughly revised, many specimens being eliminated and

others added. A new systematic list of the loan collection, which will occupy 284 frames, has been drawn up and prepared for press.

*Catalogues and Indexes.*—Work has been continued on the catalogue of Dutch and Flemish Drawings, and study of the drawings by Rubens, Van Dyck and their followers is in progress.

Work has been continued on the catalogue of British engraved portraits, and the preparation of the fifth volume is advanced, with a view to printing some sheets in 1921.

The work of indexing foreign portraits contained in books of prints has been continued.

The work of inserting the new references to case, shelf and number in the indexes of artists has been completed, and is being methodically kept up as new acquisitions are placed.

*Exhibition.*—The gallery was re-opened to the public on July 15th, with a large and varied exhibition of prints and drawings, in which the principal features, apart from the Oriental section, were as follows:—174 drawings by old masters of the various foreign schools; 165 drawings by British artists, all acquired since 1914; 37 drawings of the War by Muirhead Bone; a first selection, 146 in number, of the engravings presented by Lady Lucas, chiefly of the British school, 1780–1820, and including many printed in colours; select prints illustrating the processes of engraving, and new acquisitions, both old and modern, including some early illustrated books, MSS. containing 15th-century engravings, and sketch books. In the autumn some portions of this exhibition were modified, 22 drawings of the work of the Egyptian Expeditionary Force being exhibited in place of those by Bone, while in connection with the Spanish Exhibition at Burlington House, 16 Spanish drawings and a large selection of etchings and lithographs by Goya were placed on view. Many changes have been made in the section of recent acquisitions.

*Registration.*—2,801 items have been entered in the Register of Acquisitions.

*Stamping and Mounting.*—6,271 drawings, prints, etc., recently acquired, have been impressed with the departmental stamp and references to the Register.

800 prints and drawings have been permanently mounted and lettered with artists' names and references to register and catalogues, and about 200 prints have been temporarily mounted for exhibition.

Numerous prints and drawings have been cleaned and mounted.

*Students.*—The total number of visitors admitted to the Print Room during the year ended December 31st, 1920, was 5,439. The Students' Room was re-opened under normal conditions on August 3rd.

*Photographing.*—291 applications were made for leave to photograph, and 1,192 photographs were taken.

II.—*Acquisitions.*

The total number of prints, drawings, books, &c., acquired during the year was 4,773, no acquisition of outstanding importance being included in this number, except the book of Paduan drawings presented by Lord Rosebery. The chief acquisitions are mentioned, as follows, under the various schools.

## ITALIAN SCHOOL.

*Drawings.*

Anonymous, Paduan school, second half of 15th century. Book of 26 leaves of vellum with drawings in pen and ink on both sides, representing sacred and mythological subjects, scenes from contemporary court life, groups of children, and heads wearing fantastic helmets. This book, when discovered at Padua in the 18th century, was attributed for the first time to Mantegna, on the analogy of the "Tarocchi" wrongly ascribed to that artist. All the drawings were engraved in 1795 by Francesco Novelli. *Presented by the Earl of Rosebery, K.G., K.T.*

Anonymous, probably Sienese school, influenced by Raphael. The Virgin and Child with SS. Bernardine and Catherine of Siena; pen and ink. Richardson and Northwick collections.

Angolo (or Angeli), Battista (del Moro). Sketch for a decoration, in fresco with the Resurrection and two Prophets. The Body of Christ beneath the Cross, with St. Catherine and a sainted bishop. Red and violet wash over black chalk upon yellow paper, heightened with white. Northwick collection.

Bassano, Jacopo. Sketch for a picture of Dives and Lazarus; black chalk.

Bernini, Giovanni Lorenzo. Allegorical composition, with figures of Time, Health, Medicine, etc.; pen and ink.

Canuti, Domenico Maria. Coronation of the Virgin; pen and bistre, and bistre wash.

Castello, Valerio. The Finding of Moses; pen and bistre. Northwick collection.

Caula, Sigismondo. A figure kneeling before a crucifix; wash, heightened with white. Prince de Ligne collection. *Presented by Prof. W. Bateson, F.R.S.*

Crespi, Daniele. Head of a negro; red chalk. Northwick collection.

Creti, Donato. The Virgin crowned by two angels; pen and ink. Northwick collection.

Feti, Domenico. A man being shaved by torchlight; pen and bistre, and bistre wash. Northwick collection.

Ricci, Sebastiano. The Adoration of the Shepherds, and two single figure studies; pen and sepia, with Indian ink wash. *Presented by Mr. F. R. Mealyard.*

Sacchi, Andrea. A draped figure standing, highly finished; red chalk. F. Abbott collection.

Tiarini, Alessandro. St. Lucy; black chalk. *Presented by F. Wellesley, Esq.*

Vanni, Francesco. Death of a monastic saint; pen and bistre, and bistre wash. Northwick collection.

Zampieri, Domenico. Study, over life size, for the head of St. Luke in the fresco of the Four Evangelists in S. Andrea della Valle, Rome; black chalk. Lawrence and Labouchere (Lord Taunton) collections.

#### *Engravings.*

Anonymous, Florentine, 15th century ("Fine Manner"). The Annunciation, from the Life of the Virgin and of Christ. Coloured, with ornamental border, having been used as part of an altar-piece (no example of a Florentine engraving thus treated was hitherto in the Museum). Poynter collection. *Presented by the National Art-Collections Fund, with the aid of a contribution from Prof. W. H. Woodward.*

Anonymous, School of Marcantonio. Twenty engravings of the ruins and antiquities of Rome.

Beatrizet, Nicolas. Laocoon, B. 90, first state; Castello di S. Angelo, B. 101, first state.

Francia, Jacopo (attributed to). Three boys. *Presented by G. T. Clough, Esq.*

Novelli, Francesco. Disegni del Mantegna; complete set of 52 plates and title after the drawings recently presented to the Department by the Earl of Rosebery. *Presented by Arthur Kay, Esq., through the National Art-Collections Fund.*

#### *Woodcuts.*

Campagnola, Domenico. Landscape, B. 5. *Presented by Y. Urushibara, Esq.*

Carpi, Ugo da. Hercules and the Nemean lion, chiaroscuro, B. 15; fine impression, printed in blue.

Hercules driving out discord, after B. Peruzzi, chiaroscuro, B. 12; early state.

Coriolano, Bartolommeo. St. Jerome, after Reni; fine impression in yellow.

Fantuzzi, Antonio (da Trento). The Martyrdom of SS. Peter and Paul, chiaroscuro; two impressions in different colours.

Zuccaro (after, by unknown engraver). Silenus, Pass. VI. 237. *Presented by G. T. Clough, Esq.*

#### *Prints arranged to illustrate the works of masters.*

Cignaroli, G. B. Joseph and Potiphar's wife. Mezzotint by J. Clarot.

Errante, Giuseppe. "Quidquid Amor jussit." Mezzotint by G. Bigatti.

Reni, Guido. The Adoration of the Shepherds. Mezzotint by J. P. Pichler, from the picture in the Liechtenstein Gallery.

#### GERMAN SCHOOL.

##### *Drawings.*

Beham, Hans Sebald. Christ crowned with thorns. St. Peter denying Christ. Round pen and ink drawings, designs for glass painting, both dated 1522. Fairfax Murray collection.

Elsheimer, Adam. Jupiter and Mercury entertained by Philemon and Baucis; pen and ink, with Indian ink wash. Northwick collection.

Scholderer, Otto. Seven black chalk drawings, including a study for a portrait of the artist's wife, various figure subjects, and studies of still life. *Presented by J. V. Scholderer, Esq.*

Winterhalter, Franz Xaver. Four small portrait heads; red, black and white chalk.

### *Engravings.*

Master of the Mount of Calvary. An armed knight, Lehrs 9 (the only impression known). *Transferred from the Department of Printed Books.*

Olmütz, Wenzel von. The Virgin with an apple, after Schongauer, Lehrs 13, first state (only two impressions were hitherto known, in two states). Curzon collection. *Presented by Major G. H. Anson.*

Schongauer, Martin (after). The Nativity; undescribed anonymous copy.

Beham, Hans Sebald. St. Bartholomew, P. 50, fourth state; St. Matthew, P. 52, first state; Justice, P. 134, third state. *Presented by Frank Madan, Esq.* "Night," P. 154, first state. Lanna and Heseltine collections. *Presented by T. D. Barlow, Esq.*

Monogrammist I. W., 1598. Ornament.

Clarot, Joseph. Hercules and Alcestis (after G. B. Cignaroli?). Mezzotint, before letters.

Clerck, Jacob Friedrich. Death of Semiramis, after J. Platzer. Mezzotint, before letters.

Hampeln, Carl von. Holy Family, after Jan van Hoek. Mezzotint.

Kininger, V. G. The Holy Family, after Batoni. Mezzotint, before letters.

Pichler, J. P. Ferdinand IV, King of the Two Sicilies, after J. B. Lampi. Melchior Birkenstock. Baron von Sperges, after J. B. Lampi. Mezzotints; the first two proofs before letters.

Unterberger, Ignaz. The bust of Kaunitz crowned by Immortality. Allegory of Death and Eternity. Mezzotints.

Wrenk, Franz. The Magdalen in the desert, after O. Gentileschi. Caritas, after B. Franceschini. Mezzotints, before letters.

### *Etchings.*

Scholderer, Otto. Ten, of various figure subjects, several in more than one state. *Presented by J. V. Scholderer, Esq.*

Welti, Albert. Hochzeitszug, Teufelsbrücke, Der Ehehafen, Glück und Unglück, and five other subjects, including two book-plates. *Presented by M. Albert J. Welti, son of the artist.*

### *Woodcuts.*

Anonymous, 15th century. Four coloured illustrations from *Leben der Heiligen* (Winterteil), printed at Augsburg by Günther Zainer, 1471. (The first illustrated book printed at Augsburg; not in the British Museum.)

Beck, Leonhard. Twenty-three woodcuts (*six presented by Charles Shannon, Esq., R.A.*) from the series of Saints connected with the House of Habsburg; early impressions.

Cranach, Lucas. Eleven out of fourteen woodcuts of the Passion, B. 8, 9, 12-20, printed on vellum. *Presented by Major G. H. Anson.*

St. Mary Magdalen, B. 72; good impression, surrounded by a border. Heseltine collection.

Dürer, Albrecht (after). St. John swallowing the book; copy by H. Greff, 1502, with German text, completing a set of the copies in which this subject was wanting.

Traut, Wolf. St. Stephen between two bishops, from the Passau Missal of 1514; first state. E. Schultze and V. Mayer collections.

#### SCHOOLS OF THE NETHERLANDS.

##### *Drawings.*

Berchem, Nicolaes. Small oblong sketch-book of 158 leaves, with original parchment cover, containing drawings of animals and landscape in black and red chalk. Woodburn and Mayer de Rothschild collections. *Presented by the Earl of Rosebery, K.G., K.T.*

Bol, Ferdinand (attributed to). Study for a lady's portrait; red chalk drawing of the school of Rembrandt, about 1640.

Bol, Hans. The Lamentation beneath the Cross. Pen and ink and purple wash; signed and dated 1570.

Breughel, Pieter I. Avarice. Pen and bistre, signed and dated 1556. One of a series of the Seven Deadly Sins; "Avarice" was engraved in 1558 by P. Van der Heyden (Petrus a Merica). Denon and Fairfax Murray collections.

Claesz, Aert. Christ taken captive. Christ before Pilate. Round designs for glass-painting; pen and ink and Indian ink wash. Lawrence, Woodburn and F. Abbott collections.

Koninck, Philips de. Two studies of a ragged man. Pen and sepia. Northwick collection.

Lingelbach, Johannes. A Levantine or Italian sea-port. signed. Pen and ink and water-colours. Northwick collection. Scene in a harbour; a Chinaman and a man seated, smoking. Black chalk and bistre wash.

Maes, Nicolaes. Cottagers entertaining a satyr. Pen and sepia and sepia wash. Richardson, Reynolds and Northwick collections.

Momper, Joos de. Harbour with shipping. Black chalk, pen and ink, and indigo wash. Fairfax Murray collection.

Visscher, Cornelis. Half-length portrait of a lady, 1649; lead point on vellum. *Presented by F. J. Wellesley, Esq.*

Vos, Paulus de (by or after). A woman selling fruit and vegetables. Pen and ink and wash.

##### *Engravings.*

Muntinck, Adriaen. Six prints of ornament with fruit.

Valck, Gerard. Series of the Twelve Months, each with four verses in Dutch and French.

*Etchings.*

Bauer, Marius. Eleven etchings of Oriental subjects, scenes in Cairo, Stamboul and Jerusalem.

Nieuwenkamp, W. O. J. Constantine. Verona. *Presented by J. de Graaff, Esq.* The Fisherman. Indian bullock cart. Death and the Fisherman. *Presented by the Artist.* The picturesque Sluice. Arab quarter at Java.

*Woodcuts.*

Key, Adriaen Thomas. The death of Absalom, chiaroscuro.

Nieuwenkamp, W. O. J. Verona. Mill at Bruges. *Presented by the Artist.*

*Prints arranged to illustrate the works of Masters.*

Rubens, P. P. Lion and boar hunt; etched by W. P. van Leeuw.

## FRENCH SCHOOL.

*Drawings.*

Carrière, Eugène. Mother and child; black chalk. *Presented by C. Dodgson, Esq., C.B.E.*

Degas, Edgar. Horse galloping; slight sketch in red chalk. *Presented by C. Dodgson, Esq., C.B.E.* Study of nude woman; black chalk. Study of head of jockey; black chalk. *Bought from the H. L. Florence fund.*

Géricault, J. L. A. Théodore. Woman standing with her arms above her head; brush drawing in Indian ink on brown paper, heightened with white. A fight between soldiers and civilians; pencil and red chalk. Both from the His de la Salle and Fairfax Murray collections. *Bought from the H. L. Florence fund.*

Leu, Thomas de. Portrait of Étienne Tabourot, poet (Seigneur des Accords); black chalk. Fontette and Northwick collections.

Marilhat, Prosper. View of Toledo; pen and ink.

Matisse, Henri. Study of the nude; black chalk. *Presented by R. E. A. Wilson, Esq.*

Miller, Jean-François. The good Samaritan; pen and ink. *Presented by Denys Hague, Esq.*

Pils, Isidore A. A. Study of a Zouave trumpeter; black and red chalk. His de la Salle and Fairfax Murray collections.

Pissarro, Camille. Landscape sketch at Eragny, 1890; water-colour. *Presented by Charles Ricketts, Esq.* Three studies of peasant women; pastel. Woman seen from the back; charcoal and pastel. *Purchased from the H. L. Florence fund.*

Ribot, Théodule. Four pencil drawings of boys. *Purchased from the H. L. Florence fund.*

Rousseau, Théodore. Three sketches of trees and cottages; pen and ink. J. Staats Forbes collection.

St. Aubin, Augustin de. Nine small portrait drawings; black and red chalk. W. Basevi Sanders and Fairfax Murray collections.

St. Aubin, Gabriel de. Portrait of Simon-Nicolas-Henri Linguet; black chalk. Northwick collection.

Thomon, Thomas de. Architectural composition; palatial buildings seen through an arch; pen and ink and water-colour, signed and dated 1785. *Purchased from the H. L. Florence fund.*

Toulouse-Lautrec, Henri de. Head of a woman; blue chalk.

#### *Engravings.*

Alix, P. M. La promenade du Soir, after Demarne; aquatint, printed in colours. Phipson collection.

Daullé, Jean. Louis Cazeau de Nestier (equestrian portrait), after Delarue; unfinished proof.

Levachez. Napoléon I; large equestrian portrait, after Carle Vernet; aquatint, printed in colours. Phipson collection.

Morel. La promenade du Matin, after Demarne; aquatint, printed in colours. Phipson collection.

Ridé. Louis XVI, after Benard; aquatint, printed in colours.

Sergent-Marceau, A. F. Clovis I<sup>er</sup>; aquatint, printed in colours. Louis Philippe, Duc d'Orléans; printed in two colours. *Presented by H. W. B. Joseph, Esq.* Jean Jouvenet; aquatint, printed in colours.

#### *Etchings.*

Bracquemond, Félix. Twenty-five decorative etchings of birds, fish, flowers, etc., intended for transfer to china and known as the "Service de table de la Maison Rousseau" (Beraldi 530-554).

Bresdin, Rodolphe. Repos de la Sainte Famille.

Heyman, Charles. Train de Marchandise. *Presented by John Murray, Esq., M.P.*

Meryon, Charles. Le Ministère de la Marine, Paris (W. 26, L.D. 45 I); the rare first state, dated in Meryon's writing, from the Wasset and Macgeorge collections. L'ancien Louvre (W. 60, L.D. 53 I); the rare first state, dated in Meryon's writing, from the Macgeorge collection.

Pissarro, Camille. Ten etchings (recent impressions, 1920), including figure subjects, landscapes and a portrait of Cézanne. *Presented by the Widow and Sons of the Artist.*

#### *Lithographs.*

Anquetin, Louis. Les Courses; printed in colours. *Presented by C. Dodgson, Esq., C.B.E.*

Bresdin, Rodolphe. La Comédie de la Mort.

Courbet, Gustave. L'Apôtre Jean Journet.

Pissarro, Camille. Gardeuse d'oisies. Baigneuse le soir. Groupe de baigneuses le soir. Théorie de baigneuses. Baigneuses (L'estampe originale). *Presented by C. Ricketts, Esq.*

Toulouse-Lautrec, H. de. Les Vieilles Histoires. Cover for L'estampe originale. Désastres de la guerre. Yvette Guilbert, 1898 (set of seven, with frontispiece and cover). Treize Lithographies: Tirage spécial pour les XX (two impressions of each subject). *Presented by C. Dodgson, Esq., C.B.E.*



*Woodcuts.*

Bischoff, Henri. Seven of various subjects, coloured by hand. *Presented by Oskar Reinhart, Esq.* Susanna and the elders; coloured by hand.

Busset, Maurice. *Le Vieux Pays d'Auvergne; En Avion.* Two albums of woodcuts, partly printed in colours. *Presented by the Artist.*

Carlègle, F. *Copa*, with an extra set of proofs of the illustrations. *Presented by C. Dodgson, Esq., C.B.E.*

Morin-Jean. *Suite domestique en dix tableaux.* *Presented by C. Dodgson, Esq., C.B.E.*

Paul, Hermann. *Chansons de France*; set of six ballad sheets with woodcuts. *Presented by C. Dodgson, Esq., C.B.E.*

*Prints arranged to illustrate the works of masters.*

Decamps, Alexandre. *Episode de la défaite des Cimbres. Samson turning the mill.* Lithographs by Eugène Le Roux. *Presented by the Hon. Walter James.*

## SPANISH SCHOOL.

*Drawings.*

Cano, Alonso. Four angels; pen and bistre and bistre wash. A Miracle of St. Anthony of Padua; pen and bistre and bistre wash.

Carducho, Vincenzo. Christ on the Cross; black chalk.

Roelas, Juan de las. The Infant Christ; pen and bistre and indigo wash.

Zurbaran, Francisco. A saint in glory in the clouds; red chalk on blue paper.

All of the above are from the Northwick collection.

## GREEK SCHOOL.

Zarokilli, Nicholas Panagiotti (Nikolaki). Sixteen dry point portraits, some in more than one state, including those of H.M. the Queen of Spain, the Infantas Maria Christina and Beatriz, the Grand Duchess Alexander Mikhailovitch, Feodor Alexandrovitch, André Alexandrovitch, the Grand Duchess Marie Paulovna, Prince and Princess Youssoupoff, the Archbishop of Canterbury, and others; also a study of the nude, "Biblis," in two states. *Presented by the Artist.*

## AMERICAN SCHOOL.

*Drawing.*

Whistler, J. A. McN. *The Thames at Battersea*; water-colour (monochrome), from the collection of Sir Wm. Eden, Bart. *Presented by Miss Hague.*

*Etchings.*

Brown, Benjamin C. Six soft-ground etchings printed in colours (views of Venice and California).

Whistler, J. A. McN. Jo's bent head; dry point, Kennedy 78 II. *Presented by Mortimer Menpes, Esq.* Boats, Dordrecht, Kennedy 244. *Presented by C. Dodgson, Esq., C.B.E.*

*Lithographs.*

Brown, Bolton. Thirty-nine, chiefly of landscape subjects. *Presented by the Artist.*

Oakley, Thornton. Fifteen lithographs of shipbuilding in Hog Island shipyard. *Presented by the Artist.*

FOREIGN ARTISTS RESIDENT IN ENGLAND.

*Drawings.*

Brandoin, Michel-Vincent (wrongly called "Charles" by some authorities). North view and West view of the Castle of Grignan in Provence, a pair; pen and ink and water-colour. *Presented by A. E. Anderson, Esq.*

Goupy, Joseph. Sir Robert Walpole, K.G., addressing a meeting of the Cabinet (ca. 1730-40); gouache. *Presented by the National Art-Collections Fund.*

Griffier, Jan. Mountain landscape with travellers; black chalk and sepia wash on blue paper. Northwick collection.

Loutherbourg, P. J. de, R.A. Cattle and a boy piping, signed and dated 1766; pen and sepia. Northwick collection.

Roubiliac, Louis-François. Design for a statue of a physician, emblems of Æsculapius; pen and ink. Fairfax Murray collection. *Presented by Mr. Frank T. Sabin.*

Van Dyck, Anthony. Study for Venus rising from the sea; on the back, sketch of figures dancing, both suggested by compositions of Rubens; pen and ink. Fairfax Murray collection.

Zoffany, John, R.A. Two designs for the decoration of a ceiling with Apollo driving the Chariot of the Sun, and a third design with nude figures; black and white chalk. From the collection of Sir Frederick Gore-Ouseley.

*Engravings.*

Geminus, Thomas. Two engravings of arabesque ornament (duplicate) from the book "Morysse and Damashin renewed and increased," London, 1548, of which the only copy known (26 leaves, omitting these two duplicates and title page) is in the Landesmuseum at Münster in Westphalia. These are the only line engravings at present known to have been published in England during the reign of Edward VI.

Schiavonetti, Luigi. Archduke Charles of Austria, after Kellerhoven; stipple, unfinished proof.

Swertner, John. View of London from the North; coloured aquatint, published at Bristol, 1802.

BRITISH SCHOOL.

*Drawings.*

Barlow, Francis. Ostrich, peacock and other birds; pen and ink and Indian-ink wash; etched by John Griffier.

Callow, William. View of a lake; water-colour, signed and dated 1834. Poynter collection.

Cameron, D. Y., R.A. The Hills of Morvern; water-colour (monochrome). *Presented by the Artist.*

Crane, Walter. Una and the Lion; unpublished illustration to Spenser's "Faërie Queene"; pen and ink.

Evershed, Arthur. A book containing 27 drawings in gold and silver point. *Presented by Mrs. Evershed.*

Gill, Eric. The original designs (1914) for the Stations of the Cross in Westminster Cathedral; pen and ink, enriched with water-colour and gold, and heightened with white. *Presented by the Contemporary Art Society.*

Gooden, James Chisholm. Six water-colour sketches, chiefly of marine subjects. *Presented by Arthur Phillips, Esq., and J. Walters, Esq.*

Hunt, William Henry. View in a park; water-colour, from the collections of Dr. Thomas Monro and Lord Northwick. *Presented by Captain E. G. Spencer-Churchill.* Sawyers working at Bushey, with Dr. Monro on horseback as a spectator. Northwick collection.

Lessore, Thérèse. Stalls, the Euston Palace; pen and ink and water-colour. *Presented by J. L. Rayner, Esq.*

MacColl, D. S. The Fishers' Church, Honfleur; water-colour. Dordrecht; pencil. *Presented by the Artist.*

May, Phil. Thirty-one humorous drawings; chiefly pen and ink, but including specimens in pencil and water-colour. *Presented by Arthur Morrison, Esq.*

Nasmyth, Patrick. Cottages near Maidenhead; black chalk. Northwick collection.

Nollekens, Joseph, R.A. Six sketches for monuments, including that of Jonathan Shipley, Bishop of St. Asaph. Indian ink and water-colour.

Parry, John Orlando. The twelfth passenger; black, red and white chalk, signed and dated 1865. *Presented by E. E. Leggatt, Esq.*

Paton, Frank. Four studies of dogs, ducklings and chickens; water-colour and body colour on tinted papers. *Presented by Mrs. Paton.*

Reynolds, Sir Joshua, P.R.A. Four sheets of pen and sepia sketches of portraits after Sir J. Kneller, including those of Edward and Lady Elizabeth Southwell. Northwick collection.

Riviere, Briton, R.A. A wolf; charcoal and wash; study for the picture "Væ victis!" Three studies of a collie dog. Studies of wolves and wolves' heads; charcoal. *Presented by Mrs. Briton Riviere.*

#### *Lithographs.*

Bellerocche, Albert. Woman seated in a chair. *Presented by C. Dodgson, Esq., C.B.E.*

Conder, Charles. Béatrix et Conti; unpublished and very rare, only two other impressions being known. *Presented by C. Dodgson, Esq., C.B.E.*

Nasmyth, James. Seven pen lithographs, minutely finished, of the years 1854-55.

Rothenstein, William. Twelve portraits of Americans. *Presented by the Artist.*

#### *Woodcuts.*

Batten, John Dickson. Book-plate of J. D. Batten, 1894 (three impressions). Book-plate of J. Platt (two impressions). The Mermaid, 1894 (three impressions). Eve, 1895 (ten impressions, from separate blocks, combinations of blocks and trial proofs, the finished work in different colour schemes). The Harpies (outline and colour print). Constance (trial proof and finished colour print). The Tiger (finished colour print). *Presented by the Artist.*

Fletcher, Frank Morley. Eve; colour print (1895).

Gardner, W. Biscombe. George Meredith, after Watts, and two subjects after J. W. Edwards and F. Wilfred Lawson. *Presented by Mrs. Gardner.*

Giles, William. Midsummer Night; colour print from six relief blocks of metal. *Presented by C. Dodgson, Esq., C.B.E.*

Mackie, Charles Hodge. Five progress proofs of the colour-printed woodcut, "Picardy Poplars." *Presented by Mrs. Mackie.*

Moore, Thomas Sturge. Book-plates of Mrs. W. B. Yeats, W. S. Kennedy (two states), and Sibyl Pye. *Presented by the Artist.*

Pilkington, Margaret. Six original woodcuts (hens, geese, goats, mountains), 1916-19. *Presented by the Artist.*

Platt, John Edgar. Snow in summer; colour print. *Presented by the Artist.*

Rooke, Noel. The Edge of the Wood (in black and in colours). *Presented by the Artist.*

Soper, George. The Shepherd. The Hay Cart. Introduction. *Presented by the Artist.*

#### *Prints arranged to illustrate the Works of Masters.*

Herring, J. F. The Return from the Derby; coloured aquatint by J. Harris, 1862.

Landseer, Sir Edwin, R.A. Fifteen engravings by T. Landseer and others, hitherto wanting in the collection of Landseer's engraved work.

#### PORTRAITS.

The 1,383 English and 354 foreign portraits acquired during the year include 1,591 portraits selected from the duplicates in a large collection of small engraved portraits, formed by the late Mr. John Doyle Fry; these duplicates were presented by his son, Mr. H. R. Fry. They also include 11 recently issued portraits of members of the Grillion Club (*presented by the Rt. Hon. Sir George H. Murray, G.C.B.*), 61 foreign portraits, chiefly French, of the Revolution period (*presented by H. W. B. Joseph, Esq.*),

a number of Austrian and German mezzotints, and a large etching by Ferdinand Schmutzer of the Archduke Francis Ferdinand (d. 1914).

#### BOOK-PLATES.

These include a collection of 71, in proof state, by the Spanish artist, A. de Riquer (*presented by Messrs. Bromhead and Cutts*), six by Ludovic Rodo (*presented by the Artist*), and a few American specimens, by W. F. Hopson and others.

#### COLLECTIONS AND SETS.

A collection, formed by the engraver's daughter, of 148 mezzotints and line engravings by Charles Algernon Tomkins (1821-1905), pupil of Henry Quilley. *Presented by W. M. Newton, Esq.*

The first eight "Jahresmappen" (1898-1904) of the Gesellschaft für Vervielfältigende Kunst, Vienna, containing 69 modern engravings, etchings, lithographs and woodcuts of various schools, but chiefly Austrian and German. *Presented by Campbell Dodgson, Esq., C.B.E.*

#### BOOKS OF PRINTS AND BOOKS OF REFERENCE.

Leonardo da Vinci. Quaderni d'Anatomia, 6 vol., Christiania, 1911-16.

J. Veth and S. Muller. A. Dürer's Niederländische Reise, 2 vol., 1918.

G. Glück. Niederländische Gemälde aus der Sammlung des Herrn Dr. L. Lilienfeld in Wien, 1917. *Presented by Dr. Lilienfeld.*

Gustav Klimt. Fünf-und-Zwanzig Handzeichnungen. Vienna, 1920. *Presented by C. Dodgson, Esq., C.B.E.*

J. Meder. Die Handzeichnung, ihre Technik und Entwicklung, Vienna, 1919. *Presented by Victor Koch, Esq.*

G. Keller. Die drei gerechten Kammacher (six etchings by A. Cossmann). Vienna, 1915.

Le Nouvel Imagier. Published by La Société de la gravure sur bois originale. Paris, 1914.

P. de Nolhac and L. Demonts. Quarante Dessins de Claude Lorrain. Paris, 1920.

Adam E. M. Paff. Etchings and dry-points by F. W. Benson, vol. 2, 1919. *Presented by the Author.*

C. Dodgson. Catalogue of the etchings of Augustus John, 1920. *Presented by Messrs. Charles Chenil & Co., Ltd.*

L. Delteil. Le Peintre-Graveur illustré. Tome 11, 12. Toulouse-Lautrec. *Presented by M. Loys Delteil.*

*Campbell Dodgson.*

## SUB-DEPARTMENT OF ORIENTAL PRINTS AND DRAWINGS.

I.—*Arrangement and Cataloguing, &c.*

The framed Chinese and Japanese pictures intended for permanent exhibition at the western end of the exhibition gallery were re-hung, and a series of Chinese paintings (including a number of Buddhist paintings from the Stein collection), with a selection of Indian drawings, were arranged in cases and on screens for the re-opening of the gallery on July 15th. This exhibition remained on view till about the end of November.

On December 3rd a new exhibition of Japanese Colour-Prints was opened to the public. This is intended to be the first of a series, to be held in successive winters, illustrating the various phases of the Ukiyo-yé School and the whole history of the colour-print in Japan. A Guide to this exhibition has been printed and is on sale.

The entire collection of Japanese paintings has been re-arranged. The Morrison collection has been incorporated with the older Museum Series (chiefly from the Anderson collection) and the whole arranged chronologically within the several schools, and continuously numbered. The series now contains between three and four thousand items. A list of the paintings, in their new order, with the subjects and the artists' names, has been written in duplicate. The necessary re-labelling has been done.

The Index of Chinese Artists has been revised for publication. New matter has been incorporated, and over three hundred cross-references have been added.

The reproductions of Chinese and Japanese paintings have been arranged in twelve portfolios.

A case-list of the Oriental collections has been prepared.

Twelve albums containing Indian and Persian drawings and paintings have been transferred from the Department of Oriental Printed Books and MSS. to the Sub-Department. Most of these, being of a miscellaneous character, are in process of being broken up, so that the drawings may be separately mounted and arranged according to school and period. Ten drawings detached from albums remaining in the Library have also been transferred.

A small selection of duplicate Japanese Colour-Prints has been mounted and framed, to form a loan collection.

All corrections of references in the indexes, rendered necessary by recent re-arrangements, have been made.

Three books of reference, recently acquired, have been catalogued, placed and labelled.

The work of entering corrections and additions in an interleaved copy of the Catalogue of Japanese Woodcuts has been begun.

A record has been begun, in slip form, of all Japanese woodcuts acquired since the printing of the Catalogue.

Three hundred and thirty-two prints, paintings, etc., have been incorporated with the divisions of the collection to which they belong.

*Registration.*—651 items have been entered in the Register of Acquisitions.

*Stamping and mounting.*—1,019 prints, paintings, etc., recently acquired, have been impressed with the departmental stamp and references to the Register.

Two large paintings from the Stein collection have been mounted with silk borders.

One Chinese painting has been mounted and five repaired.

Two Persian drawings and one Indian drawing have been mounted on sunk mounts.

Two hundred and six Japanese prints have been mounted on sunk mounts.

Fifty Persian and Indian drawings have been removed from albums and backed.

## II.—Acquisitions.

The total number of paintings, prints, etc., acquired during the year was 878, of which the following are the most important:—

### CHINESE.

#### *Paintings.*

Lang Shih-ning (*i.e.*, the Jesuit Giuseppe Castiglione). Hunting scene. Kakemono, painted in colours.

Lêng Mei. A lady at a window. Kakemono, painted in colours.

Wu Li. Twelve landscape designs in an album, made with a "fire pencil" (heated stylus).

#### *Woodcuts.*

Anonymous. "All Nations Coming to Court." Printed in colours.

### JAPANESE.

#### *Paintings.*

Mitsuoki, Tosa. Five makimono illustrating the Isé Monogatari. Painted in colours. *Presented by G. B. Dodwell, Esq.*

Sanraku, Kanō, attributed to. Ch'ao Fu and Hsü Yu: two-fold screen, painted in colours and gold.

Takanobu, after. Portrait of Yoritomo, the first Shōgun. A fine and very ancient copy after the portrait of Yoritomo preserved in Japan and attributed to Takanobu. Kakemono, painted in colours. *Purchased with the aid of the National Art-Collections Fund and a contribution from G. Eumorfopoulos, Esq.*

Yūshō, Kaihoku. Birds on a willow in winter. Kakemono painted in ink.

#### *Woodcuts.*

Bunchō. Actor playing in a woman's part. *Presented by R. N. Shaw, Esq.*

Fujinobu. A man talking to a girl. *Presented by R. N. Shaw, Esq.*

Hiroshige. White heron among reeds. *Presented by R. N. Shaw, Esq.*

Hokusai. Long surimono; Yoshitsuné and the princess. Men dragging nets; Hundred Poems series, No. 3. *Presented by R. N. Shaw, Esq.* Three prints from the Hundred Poems series, Nos. 5, 37 and 97.

Jakuchiū. Set of six prints of birds and flowers on black ground.

Kiyonaga. Girls on a verandah by the sea. Girls and children near a temple gateway; diptych. *Presented by R. N. Shaw, Esq.* Evening by the sea.

Kiyoshige. Michizane holding plum-blossom. *Presented by R. N. Shaw, Esq.*

Koriūsai. Tea-house scene.

Riūkoku. Girl with scroll.

Shunchō. Girls and cat.

Utamaro. Girl painting her lips. Girl tying a poem to a blossoming tree. *Presented by R. N. Shaw, Esq.* An actor in a woman's part (very early print). Two lovers under an umbrella.

Yeisui. Three girls. *Presented by R. N. Shaw, Esq.* Lovers eloping.

#### *Book of Woodcut Designs.*

Minchō Seidō Gwayen. Printed in colours after Shunboku, 2 vol., 1746. The first edition, of which no other copy appears to be known, of one of the earliest examples of colour printing in Japan. *Presented by Arthur Morrison, Esq.*

#### KOREAN.

The God of the North; The God of the South. Two large paintings in colours.

#### INDIAN.

##### *Paintings and Drawings.*

The paintings and drawings, approaching 500 in number, acquired by transference from the Department of Oriental Printed Books and MSS., make a very important addition to the Indian collections. They are mostly of the Mogul School. A few are of the time of Akbar, but the finest paintings are of the time of Jahāngir and Shāh Jahān, and include signed examples of the work of Hūnhār, Chitarman, Anūpcharar, Govardhan, Muhammad Nādir and other distinguished artists of the 17th century.

Group of young prince and maidens; water-colour copy by Mukul Dey after one of the most ancient of the Ajantā Frescoes.

Kangra School. Lovers on a terrace. *Presented by Ernest Debenham, Esq.*



## PERSIAN.

About 50 drawings and paintings, mostly of the 16th and 17th centuries. *Transferred from the Department of Oriental Printed Books and MSS.*

## TIBETAN.

Mahākāla. Banner painting, in colours. *Presented by Arthur Morrison, Esq.*

## BOOKS OF PRINTS AND BOOKS OF REFERENCE.

Hiroshige Memorial Exhibition, Tokyo, 1918. *Presented by Laurence Binyon, Esq.*

Nakamura. Catalogue of National Treasures in Japan. *Presented by H. F. Visser, Esq.*

Liang Chang-Chu Collection: illustrated catalogue. *Presented by Laurence Binyon, Esq.*

Otani, Count. Sai-iki Kōko Zufu; Central Asian Antiquities. 2 vol. *Presented by Sei-ichi Taki, Esq.*

Petrucci, Raphael. Encyclopédie de la Peinture Chinoise; traduction et commentaires.

Streelneek, F. A. Chinese Pictorial Art (Streelneek collection). *Presented by E. A. Streelneek, Esq.*

*Laurence Binyon.*

## DEPARTMENT OF EGYPTIAN AND ASSYRIAN ANTIQUITIES.

I.—*Arrangement, Cataloguing, &c.*

## EGYPTIAN ANTIQUITIES:—

The general re-arrangement of the Egyptian Galleries and Vestibule has been continued, and a number of portrait figures, statues, etc., have been incorporated and provided with pedestals or plinths, and wooden cases. The washing and cleansing of the hard stone statues have been continued.

The predynastic pottery and other antiquities, and the objects of the Archaic and Early Dynastic Periods have been removed from the cases on the north-west staircase and re-arranged in the Sixth Egyptian Room. Descriptive labels have been attached to the painted casts in the Vestibule and in the Fifth Egyptian Room.

Metal tubes, with perforated ends and filled with cotton wool, have been fixed in all the wall-cases for the purposes of ventilation, and holes have been drilled in the glass coverings of painted frescoes to prevent condensation of moisture.

The collections of mummies and coffins and large funerary furniture have been arranged in Egyptian Rooms I.—III., which were re-opened to the public on May 24th (Whit Monday). The Fourth Egyptian Room, containing the smaller funerary objects, scarabs, shabti figures, jewellery, etc., was re-opened to the public on July 15th, and the Fifth and Sixth Egyptian Rooms on December 5th.

The Egyptian, Nubian and Meroëtic pottery and earthenware objects have been grouped and arranged, each object having a distinguishing letter painted upon it.

A selection from the funerary, historical, legal, and magical papyri in the hieroglyphic, hieratic and demotic characters has been made and exhibited in the Sixth Egyptian Room.

The collection of Royal scarabs has been amplified and classified and re-arranged in chronological order; and one hundred and ninety-seven scarabs have been re-mounted.

Ten frames for miscellaneous objects have been made; several hundreds of feet of mahogany slips for labels have been prepared for ebonizing; fifty-eight pedestals for mummies and coffins and seventy-seven bearers have been made; three hundred dividing slips for scarabs and twenty-three for pottery have been prepared and either distempered or covered with cloth; one box and a number of stands for boats have been made; new shelves and bearers have been prepared and fixed in Egyptian Rooms IV.—VI.; five coffins have been re-dowelled, and a large house-door has been removed from the Vestibule and fixed in Room V. Three hundred and forty-three figures of gods have been refixed.

About five hundred objects have had numbers painted upon them; one hundred and ninety-one labels have been written and painted and fixed; four hundred and thirty-one objects have been

registered; ten inscriptions have been copied and several copies revised, and the plates for Part VI. of Egyptian Texts have been checked over.

A set of twenty-two postcards with coloured representations of coffins and mummies has been printed, descriptive labels have been written for them, and short introductions dealing with the Book of the Dead and mummification have been written and printed.

A monograph on the Book of the Dead has been written.

Three hundred and forty-four slips for the *Catalogue of Scarabs* have been written.

#### ASSYRIAN ANTIQUITIES:—

The general re-arrangement of the Babylonian Room and the Phœnician and Semitic Rooms in the Second Northern Gallery has been completed, and the Rooms were re-opened to the public on July 15th.

The collection of Sumerian and early Babylonian antiquities has been amplified, and all objects bought during the year have been incorporated.

Thirty-one cases of antiquities have been brought from the Docks to the Museum, and their contents unpacked and examined.

The collection of Hittite sculptures has been brought upstairs, and the bas-reliefs and sculptures have been placed in the wall-cases on the North-West Staircase.

Twenty Babylonian bricks, twelve miscellaneous Babylonian objects (ovoids, plaques, etc.), one seated figure, and one Kûfî gravestone, have been mounted on stone plinths; eight table-cases have been covered with cloth.

Thirty tablets, twenty figures, thirty-one terra-cotta vases, twenty-one bowls and dishes, etc., have been repaired, and five tablets have been cleaned.

The restoration of the bronze masks from the heads of animals from Babylonia has been continued, and the bitumen cores of the masks have been treated with preservative solutions. Four boxes of human and animal bones have been treated.

The remainder of the cases of Babylonian antiquities from the Postal Tube have been unpacked, and their contents, about fifty thousand tablets, have been checked, and their glass-topped boxes cleaned and repaired.

Seven thousand seven hundred objects have been numbered; fifteen hundred and forty-three objects have been registered; two hundred and ten texts have been copied; the wall-cases in the Babylonian Room have been labelled.

An introduction has been written for Part XXXV. of "Cuneiform Texts; an Index to Parts XXVI.-XXXV. of "Cuneiform Texts" has been compiled and printed; an Introduction to "Hittite Texts" has been written and printed; and a list of signs and personal names in the Cappadocian tablets has been prepared.

A monograph on the Deluge Tablet and the Epic of Gilgamish has been written.

*Students.*—About two thousand and five hundred visits have been made to the Department by students, dealers, and soldiers from Egypt and Mesopotamia, and descriptions of four hundred and eighty-four objects brought by them for examination have been written.

*Publications:*—

The Book of the Dead. An illustrated monograph.

The Babylonian Story of the Deluge. An illustrated monograph.

Cuneiform Inscriptions. Part XXXV.

Hittite Texts in the Cuneiform Character.

Twenty-two coloured postcards of typical mummies and coffins.

II.—*Acquisitions.*

I.—EGYPTIAN:—

- I. 1-14. Ushabtiu figures in wood, stone, faïence, from the XIIth to the XXVIth dynasty.
15. Bronze ægis of Khnemu-Amen. XXIIInd dynasty. A rare object.
16. Bronze libation bucket with figures of gods in relief. XXVIth dynasty.
17. Bronze plate bearing the prenomens of Thothmes IV.
18. Scale from a suit of bronze armour.
19. Bronze base of a figure of Pa-nefer-änkh.
20. Model of a hoe, in wood.
21. Model of a cradle for moving stones, in wood.
- 22, 23. Two wax figures made to be burnt in working magic. XXIInd dynasty.
24. Terra-cotta head of Apis, late period.
25. Terra-cotta vase handle, late period.
- 26-31. Six porcelain handles of sistra. XXVIth dynasty.
- 32-45. A group of objects, scarabs, figures of animals, &c. VIth to XIIth dynasty.
- 46-80. A miscellaneous collection of scarabs, chiefly of the XVIIIth dynasty.
- 81-99. A miscellaneous collection of scarabs, &c. XIXth to XXVIIth dynasty.
- 100-104. Gold ægis of Bast and four small silver objects. XIIth dynasty.
105. Faïence disc with the prenomens Uah-ab-Rä. XXVIth dynasty.
106. Portion of sistrum with a figure of Sesheta.
107. Head of Ptah-Seker.
- 108, 109. Figure of Hâpi and a blue and green fragment.
110. Vase with cartouche in a bronze stand.
111. Marble vessel of Ptah-mes, high priest of Memphis.
112. Fragment of marble vase of Thothmes II.
- 113-117. Bone figures of a lion, a man, and three women.
- 118-125. Bone die, and seven bone objects.
- 126-130. Five objects—use unknown.
- 131-136. Six fragments inscribed with royal names.

- 137-138. Wooden box and arm of a figure.  
 139. Model of a woman in terra-cotta.  
 140. Alabaster head of a duck, painted.  
 141. Circular object, drill (?).  
 142-194. A collection of 53 glass objects. XVIIIth dynasty to the Roman Period.  
 195-254. A miscellaneous collection of objects in porcelain, stone, &c., of various periods.  
 255, 256. Two Gnostic gems with figures of Abrasax.  
 257. Modern imitation of a Gnostic gem.  
 258. A draughtsman in the form of Khnemu-Horus.  
 259. A fragment of blue colour.

II. A codex of the Saïte Recension of the Book of the Dead, about 18 feet 6 inches in length. The text of this very valuable papyrus is written in a small but beautifully clear and distinct hand, and is illustrated by a series of vignettes which are executed in great detail and with great delicacy. This papyrus contains 165 chapters, which run in the order of those found in the Turin Papyrus published by Lepsius, and was probably written in the early years of the Roman Period. It is the fullest and most perfect of all the known codices of the Saïte Recension written in the hieratic character.

## II.—ASSYRIAN:—

- I. 1. A copy of an inscription of Sin-Gashid concerning his palace.  
 2-5. Four Sumerian texts of the early period.  
 6, 7. Two Babylonian contracts.  
 8-25. Eighteen letters and deeds dating from the time of the Ist dynasty of Ur, about B.C. 2400.  
 26-45. Twenty fragments of Cappadocian tablets, many of which bear fine and complete impressions of seal cylinders. About B.C. 2200.
- II. 1. Inscription of Gimil-Sin, King of Ur, B.C. 2300, recording the building of a temple to the god of Vmma.  
 2. Cone of Libit-Ishtar, with a Semitic inscription. A rare and valuable object, as most of his cones are inscribed in Sumerian.  
 3. Brick of Gudea, governor of Lagash.  
 4. Votive offering, cake (?).  
 6, 7. Archaic tablets—Accounts, list of property, cattle, grain, &c.  
 8, 9. Clay divining bowl and a broken case tablet.  
 10. Babylonian letter.  
 11. Receipt for cattle. Dynasty of Ur.
- III. 1. Brick bearing the name and titles of Rammanu-Nirari I., son of Arik-dên-ilu, King of Assyria, B.C. 1325.

- IV. 1. Foundation deposit tablet of Eannatum, King of Lagash (Tall Loh), giving the names and titles of the king and Akurgal, and recording the sinking of a well in the temple of Ningirsu.
- V. 1, 2. Two tablets inscribed with mathematical calculations. About B.C. 2400.
- 3-22. Twenty commercial tablets of the 1st dynasty of Babylon.
- 23-172. A collection of tablets inscribed with legal texts, and dating from the early part of the Persian Period.
- 173-252. Eighty well-written tablets dealing with loans, contracts, &c. Persian Period.
- 253-275. A collection of 23 tablets which were made during the period that followed immediately after the fall of Alexander's Empire. The tablets are well written in the Babylonian character, and are of unusual thickness. The seal impressions on some of them are of peculiar interest.
- VI. 1-151. A collection of commercial documents and lists written during the late Babylonian and Persian Periods; two scribe's exercise tablets, and fragments of two literary texts. The dated tablets bear the names of Shamash-shum-ukin, Nabopolassar, Nebuchadnezzar II., Nabonidus, Cyrus, Darius, Cambyses, and Artaxerxes.
- VII. A large and important collection of North Syrian antiquities:—
- 1-7. A group of seven bas-reliefs in hard grey stone, similar to basalt, on which are sculptured:
1. The figures of an archer, after an Assyrian design.
  2. A man on horseback, soldier or trainer (?).
  3. Horseman wearing a conical cap and holding a shield.
  4. A man holding a noose or lasso.
  5. A king.
  7. Warrior with spear and shield.
  8. A bird—vulture (?).
- 8-13. A group of six bas-reliefs in soft limestone (?), coloured pink, on which are sculptured:
1. A conventional representation of the date palm, copied from an Assyrian design.
  2. The king ascending a ladder, resting against a palm tree, to perform the ceremony of fertilising the palm.
  3. Lioness.
  4. A boat on a stream in which fish are swimming.
  5. Figures of a gryphon and bird.
  6. A king slaughtering a prisoner by thrusting a knife into his body.

- 14-125. One hundred and twelve tablets and fragments written during the latest Assyrian Period.
- 126-331. Two hundred and sixteen fragments of painted and incised pottery of various periods.
- 332-343. Twelve fragments of glazed pottery.
- 344-346. Three fragments of pottery with Greek inscriptions.
- 347-351. Five stone figures, three-quarter length.
352. One small relief.
- 353-365. Thirteen boxes containing miscellaneous groups of amulets, utchats, &c.
- 266-371. Six clay figures of a man and animals.
372. Stone head of a lioness.
373. Mutilated steatite female figure.
- 374, 375. Two scarabs.
- 376-398. Twenty-three cylinder seals on which are cut signs, &c., similar to those found on Hittite remains.
399. Stamp for cakes or bread.
400. Clay impression of a scarab.
- 401-410. Ten miscellaneous objects with incised decoration.
- 411-414. Four boxes containing 78 bronze coins.
- 415-425. Eleven iron spear-heads.
- 426-433. Eight iron arrow-heads.
- 434-508. About seventy-five iron objects, rings, &c.
509. Bronze bowl.
510. Bronze cup.
511. Bronze axe-head.
512. Bronze ladle.
513. Bronze bell with iron clapper.
- 514-518. Five bronze arrow-heads.
- 519-562. About fifty-four bronze objects, handles, rings, fibulæ, &c.
- 563-614. Fifty-two objects, in ivory, alabaster, &c.
- 615-640. Thirty-six stone bowls, stands and fragments.
- 641-654. Fourteen pottery vessels, dishes, bowls, jugs, lamp, &c.
- 677-1504. Eight hundred and fifty fragments of pottery of various styles and periods.
- 1505-1520. Sixteen stone bowls and dishes.
- Eighteen small racks containing specimens of sherds, stones, &c.
- Forty-six cardboard boxes containing specimens of earth, stony deposits, sand, gravel, &c.

*Presents.*

- I.—A calcareous stone whorl of the Coptic Period.  
*Presented by Captain D. S. Savours.*
- II.—A small gravestone with a Kûfî inscription. From Old Basrah.  
*Presented by S. Meer, Esq.*
- III.—Squeeze of a Hittite bas-relief in the Taurus Mountains.  
*Presented by Colonel A. J. G. Bird, R.E.*

- IV.—Green glazed faïence scarab bearing the cartouche of Thothmes III. About B.C. 1500.  
*Presented by Miss E. S. Tudor and H. Tudor, Esq.*
- V.—Hæmatite cylinder seal which was made for a worshipper of the god Rammânu. About B.C. 1200.  
*Presented by Sir Albert Gray.*
- VI.—1. Bronze figure of the god Râ or of a king in the character of Râ.  
2. A small bronze figure of Osiris.  
*Presented by Miss E. M. Palmer.*
- VI.—A piece of rope taken from the bitumen layer between bricks at Mukayyar (Ur).  
*Presented by Major C. A. Cusse.*
- VII.—1, 2. Two pieces of blue beadwork.  
3. Wooden hawk.  
4. A hand.  
5. A shabti figure.  
6. A linen sheet.  
7. Terra-cotta lamp.  
8. Board used in teaching the Greek or Coptic alphabet.  
9–10. Two scarabs.  
*Presented by John Herratt, Esq.*
- VIII.—Vestiges of Assyria. Sheet No. 3.  
*Presented by the Registrar of Maps, India Office.*
- IX.—Fragment of a Sassanian brick from Noaterhie, Mâl al-Amîr.  
*Presented by A. W. B. Holland, Esq.*
- X.—Stone portrait shabti figure. XIXth or XXth dynasty.  
*Presented by C. Pett Triscott, Esq.*
- XI.—Green glazed steatite amulet inscribed “Meri-Râ, Lord of the Two Lands” (Egypt).  
*Presented by J. H. Armstrong, Esq.*
- XII.—1. A stone plaque with inscription of Bur-Sin, about B.C. 2300.  
2–11. A group of ten Babylonian tablets written during the reign of Bur-Sin and other kings of his dynasty.  
12. A stone figure of a king with inscription. Modern imitation.  
*Presented by Colonel S. Anderson, I.M.S.*
- XIII.—Clay cone bearing an inscription of Libit-Ishtar, an early Babylonian king, about B.C. 2200.  
*Presented by Colonel A. G. H. Hogg.*
- XIV.—A stone sphinx mounted on a modern hard stone base. From Denderah. Roman Period.  
*Presented by J. H. Kennedy, Esq.*
- XV.—1–4. Four small terra-cotta vases. Period uncertain. Said to come from Maskat.  
*Presented by Mrs. Kossman.*
- XVI.—1. Mace-head dedicated to Nergal by Laba Erishum, the king’s diviner, for the life of Shu-dur-kib, King of Agade.



2. Seal inscribed in Sumerian with prayers to the goddess Nin-Sun, on behalf of Ubalisu-Marduk, the servant of Kuri-galzu I. B.C. 1600.

*Presented by Major V. E. Mocatta.*

- XVII.—1, 2. Two-handled handsome alabaster jar with painted frontal design, and an alabaster unguent jar. From the tomb of Menephthah I. in the Valley of the Tombs of the Kings at Thebes.

*Presented by the Right Hon. the Earl of Carnarvon.*

- XVIII.—Porcelain bead bearing the names of the Nubian King Tet-ka-Rā Shabaka.

*Presented by Captain the Hon. R. Bethell.*

- XIX.—Limestone amulet with illegible Babylonian inscription.

*Presented by Colonel Luxmoore.*

- XX.—1, 2. Two blue glazed shabti figures, uninscribed.

*Presented by J. Pollak, Esq.*

- XXI.—Blue glazed steatite scarab of Thothmes II.

*Presented by Miss T. Weldon.*

- XXII.—1. The original map of the Al-Kab district in Upper Egypt, drawn by F. W. Green in 1896, and five printed copies of the same.

2. "Christian Antiquities in the Nile Valley," by Somers Clarke, Oxford, 1912, 4to (with added notes, letters, extracts from periodicals and drawings, and 24 photographs).

3. Fifty-six drawings and tracings (originals of the illustrations of the above work).

4. Fifteen photographs of scale drawings of the churches in the Wādî Natrûn (made for the Comité de Conservation des Monuments de l'Art Arabe).

5. Eight photographs of scale drawings of the Kasrash-Shamina. (Nos. 3-5 are bound up in one volume.)

*Presented by Somers Clarke, Esq., F.S.A.*

- XXIII.—Head and forefront of a small ivory Sphinx, probably representing a Hyksos Pharaoh, grasping the figure of a prostrate Egyptian. From Abydos. Middle Empire. Unique.

2. Ivory figure of a boy squatting; on the base is the name of the steward Ata. XIIth dynasty. A very fine object.

3. Mother-of-emerald figure of Maät; a rare and valuable object.

4. Red pottery bowl. IVth dynasty.

5. Red and black ware pot. XIIth dynasty.

6. Plain red ware jug. XVIIIth dynasty.

7. Red pottery—woman and child. XVIIIth dynasty.

8. Black ware jug.

9. Three-handled pilgrim bottle. Roman.

10. Red model vase. XVIIIth dynasty.

11. Black model jug. XVIIIth dynasty.

12. Blue marble alabastron, with lid. XIXth dynasty.
13. Blue marble alabastron, without lid. XIXth dynasty.
14. Bronze vase, with lily handle. New Empire.
15. Bronze dagger. XIIth dynasty. From Abydos.
16. Bronze razor.
- 17, 18. Bronze arrow-heads.
19. Wooden scoop.
20. Figure of a pelican. XIIth dynasty.
21. Clay figure of a naked dancing girl. XIIth dynasty.
22. Clay model hoe.
23. Blue glazed porcelain bunch of grapes.
24. Glazed ware button seal. From Abydos. XIIth dynasty.
25. Glazed scarab of Amenemhat III. From Abydos. XIIth dynasty.
26. Glazed cylinder seal of Amenemhat III. From Abydos. XIIth dynasty.
27. Glazed cylinder seal. From Abydos. XIIth dynasty.
28. Glazed scarab with spirals. From Abydos. XIIth dynasty.
29. Glazed scarab. From Abydos. XIIth dynasty.
30. Blue glazed porcelain scarab of Sebek. XVIIIth dynasty.
31. Blue glazed steatite scarab of Amenhetep I. XVIIIth dynasty.
- 32, 33. Two blue glazed steatite scarabs. XVIIIth dynasty.
34. Blue glazed steatite scarab of Hatshepsut. XVIIIth dynasty.
35. Blue glazed steatite frog. XVIIIth dynasty.
36. Blue glazed porcelain cow. XVIIIth dynasty.
37. Bronze ring, with scarab of Rameses II.
38. Blue glazed porcelain hawk. Late period.
39. Slate object—pre-dynastic?

*Presented by Mrs. Russell Rea.*

*E. A. Wallis Budge.*

## DEPARTMENT OF GREEK AND ROMAN ANTIQUITIES.

I.—*Arrangement.*

1. *The Sculpture Galleries.*—During the early months of the year the remaining storecasts and casts, which had formed a part of the Temporary War Time Exhibition, were returned to their proper places, and all traces of war-time conditions were thus effaced from the Galleries.

In May a rearrangement of the Ephesus Room was undertaken. The sculptures of the older Temple of Ephesus were concentrated in the middle of the East side of the room and delimited by the provision of wooden screens. The corners of the room were cleared by the removal of the Dionysos of Thrasyllos and the Cypriote bull-headed capital to the Mausoleum Room. In the vacant north-east corner a series of Greek portrait busts was arranged. In the opposite south-east angle was installed a series illustrative of the schools of sculpture of the 4th century B.C., including the Towneley Venus, the Nicocleia statue and several busts from the Third Græco-Roman Room.

A rearrangement of the Second Græco-Roman Room was undertaken with the object of forming a similar series of the sculpture types of the 5th century B.C. The Vaison Diademenos was brought from the First Græco-Roman Room to fill the alcove formerly occupied by the Towneley Venus; the Westmacott athlete and other pieces were transferred from the Third Græco-Roman Room.

In the First Græco-Roman Room the large altar of Calpurnius from Ephesus and the colossal bust of Faustina from Sardis have been placed on exhibition. In the Third Græco-Roman Room minor adjustments have been made, necessitated by the rearrangement elsewhere. In the Elgin Room, three newly acquired casts of fragments have been inserted into the Frieze of the Parthenon. In the Hall of Inscriptions and the Gallery of Roman portraits, all sculptures were covered up during the repainting of the rooms and afterwards replaced on exhibition. The contents of the Gallery of Casts and the Carthaginian basement and the mosaics on the north-west staircase have also been cleaned.

Eighteen pieces of sculpture or fragments have been repaired and fifty-nine mounted; eighteen inscriptions have been mounted and eighty-three plinths and pedestals cleaned and repolished. Six sculptures at the Natural History Museum have been cleaned.

Moulds have been made of two slabs and a fragment of the Frieze of the Parthenon, and of three slabs of the Frieze of the Mausoleum. Six busts have been restored in plaster. The storecasts of the Harpy Tomb and of the Frieze of the Parthenon have been repaired.

2. *The Upper Galleries.*—In preparation for structural work on the roof, the First and Second Vase Rooms have been completely cleared and the vases placed in storage in the other

rooms. A temporary exhibition illustrative of the contents of these two rooms has been arranged in the Third Vase Room.

The exhibition of Greek and Roman Life has been rearranged and renumbered throughout in correspondence with the new edition of the Guide.

In the Terracotta Room a rearrangement of the exhibited and unexhibited collections has been made and a new Finding List of Terracottas prepared. The Finding List of Bronzes is similarly in process of revision; the standard case of large bronzes has been refitted and rearranged to permit of the inclusion of the Astor statue. In the Terracotta Room and the Room of Ancient Life, all cases have been boarded up and shades removed during repainting; at the conclusion of this, the rooms have been restored to exhibition. A rearrangement of unexhibited gems is in progress; and a large number of case fittings for the Gold Ornament Room have been made.

A temporary exhibition illustrative of the collections made by the Salonica Expeditionary Force has been arranged in the Room of Ancient Life. Sixty-nine vases, fifty-six terracottas, two gold, four silver, twenty-two iron, sixty-four bronze, one wood, two stone and two glass objects have been cleaned and repaired. Casts have been made from three hundred and ninety gems and from two terracotta moulds. Seventy-one terracottas, sixty-eight bronzes and two hundred and forty-eight rings and gems have been mounted. Three hundred and eighty objects were registered, and one thousand three hundred and eight numbered; seventy-four labels were written and forty-seven printed. One hundred and eight vases were measured to supply materials for the study of Mr. Jay Hambidge's system.

The number of visits to the Departmental Library and Students' Room for the purposes of research was 359; there were 1,450 visits to the staff for enquiry or on Departmental business. Seventy-nine tickets were issued and 27 renewed to students of art and architecture, who made 1,272 attendances in the Sculpture Galleries.

3. *Publications.*—The revised editions of the Guide to the Exhibition of Ancient Life and of the Departmental Guide have been issued. The Catalogue of Silver Plate has been set up in type. Progress has been made with the Catalogue of Vases, Vol. I., part I, and with the revised edition of the Catalogue of Gems. Four new sets of pictorial postcards have been placed on sale, the subjects being Greek Terracottas, Greek Sculpture in Relief, Greek Statuary, and Roman Imperial Portraits. Two sets have been reissued, namely the Exhibition of Greek and Roman Life, and the Frieze of the Parthenon.

## II.—*Acquisitions.*

### I.—*Sculpture in Stone and Marble.*

- 1.—Unfinished statuette of the archaic Apollo type; height .39 metre. Found in the Stamato Vouni Quarry, on Mount Pentelicus in Attica. *Revue Archéologique*, 4th series, XI., p. 40. Presented by the late Canon Rawnsley through the National Art-Collections Fund.

- 2.—Sepulchral relief of L. Ampudius Philomusus; within a frame, busts of wife, husband and daughter; on either side, a *modius* or corn-measure. Ht. .61 m., Length 1.63 m. Found about 1700 near the Porta Capena, Rome; during the 18th century in the Villa Casali; recovered from a garden at Putney, previous to which it had lain for at least fifty years in a contractor's yard in North London. *C.I.L.*, VI., 11595; VI. 4, 34044, and *Journal of Roman Studies*, VIII., pl. 2, p. 179, where references to the older literature are given.
- 3.—Fragment of seated figure on a throne sculptured on back and front with two tiers of reliefs. Ht. .32 m. From the Atkinson Collection; said, probably erroneously, to have formed part of the Elgin Collection. *Journal of Hellen. Stud.* VI., p. 43, No. 5.
- 4.—Votive relief of Zeus Sabazios on horseback; inscribed *Εὔτυχος Δι Σαβαζίω κατ' ὄνειρον χαριστήριον*. Acquired in Constantinople. *Presented by W. H. Buckler, Esq.*
- 5.—Sepulchral relief of banquet, inscribed *τέκνω γλυκυτάτῳ μείλας χάρις*.
- 6.—Sepulchral relief; two busts, male and female.
- 7.—Votive relief; horseman, youth on altar, and tree.
- 8.—Slab bearing the inscription C.I.G. 3332, copied at Smyrna about 1710. *Presented by the Committee of the Guildhall Museum.*

## II.—Gems and Glass.

- 9.—Carnelian gland, Minoan; intaglio of a cuttle-fish; from Crete. *Presented by Henry Burgon, Esq.*
- 10.—Rock crystal scarabæoid intaglio of a seated girl playing a lyre. Found about 1819; formerly in the Ross, Broendsted and Cockerell collections. Broendsted, *Voyages de la Grèce*, II., vignette and p. 277; King, *Antique Gems*, II., pl. XVII. B. No. 7; Furtwaengler, *Antike Gemmen*, pl. XIV., No. 20; *Geschichte*, p. 137; *Burlington Fine Arts Club, Exhibition of Greek Art, Catalogue*, L. 153, pl. 63, p. 181; *Encycl. Brit.*, 11th ed., s.v. Gems, pl. II. 36.
- 11.—Sard scarab with an intaglio of a female head; fourth century B.C.
- 12.—Sard scarabæoid with an intaglio of a cow; inscribed V. MAQRINVS.
- 13.—Sard intaglio of the Ephesian Artemis. *Presented by A. P. Ready, Esq.*
- 14.—Burnt sard intaglio with head of Ariadne; the reverse has been re-used as a signet ring, with a Cufic inscription. *Presented by Mrs. F. Macalister.*

## III.—Gold and Silver.

- 15.—Pair of Greek earrings of finest style of 4th century B.C., with palmettes and wave-pattern.

- 16.—Pair of earrings in the form of a cluster of pendant leaves; from Populonia.
- 17.—Large bulla with palmette and tongue decoration; from Populonia.
- 18.—Two pairs of earrings in the form of a duck with fine filigree work.
- 19.—Pair of earrings with beads of turquoise and glass and pendant in the form of a deer's-head rhyton.
- 20.—Silver finger-ring with intaglio of a squirrel. *Presented by W. Barclay Squire, Esq.*

#### IV.—Bronze.

- 21.—Stand for a vase; four panels with open work reliefs of a seated citharist and figures bringing offerings, alternating with conventional trees. From Curium, Cyprus; an example of the class of bronze vessels associated with the metal furniture of the Temple of Solomon (I. Kings, vii., and see Furtwaengler, *Kleine Schriften*, II., p. 298).
- 22.—Statue of a priestess, two-thirds life size; formerly considered a portrait of Drusilla, sister of Caligula. Ht. .95 m. *Revue Arch.* 1909, p. 177; *Times* of June 19 and July 3, 1909; *Illustrated London News* of 1st Jan., 1910; Reinach, *Répertoire*, IV., p. 307. *Bequeathed by the late Viscount Astor.*
- 23.—Statuette of Athena-Isis-Fortuna; a pantheistic combination of attributes hitherto unknown, though Athena-Isis and Athena-Fortuna are known and Isis-Fortuna is common. Weber Collection.
- 24.—Helmet of early Corinthian form. *Transferred from the United Services Museum.*
- 25.—Copper implement of early date; hammer-head with socket, balanced by an animal's head. From Laurium.
- 26.—Twenty-two Italian fibulæ, mainly of early types. *Presented by the Committee of the Guildhall Museum.*
- 27.—Toe, broken from the foot of a colossal statue. *Presented by A. Lawson, Esq.*
- 28.—Funnel, with incised patterns.
- 29.—Mirror in case.
- 30.—Iron chisel, pincers, link of chain and fragments of balance. From the Province of Cordova, Spain. *Presented by A. Taylor, Esq.*

#### V.—Vases.

- 31.—Large beaked jug of late Cycladic style. Ht. .4 m. From Melos or Thera. *Presented by G. Dunn, Esq.*
- 32.—Mycenæan kylix; on each side, a serpent. From Vari.
- 33.—Jug of Phaleron ware; two horses at a manger; birds and geometric patterns. From Vari.
- 34.—Plate of Corinthian style; animals and rosettes. From Vari.
- 35.—Late Corinthian kylix; on each side, two dancing figures. Fairfax Murray Coll.

- 36.—Early Attic black-figure kylix; on each side, dance of men and women. Fairfax Murray Coll.
- 37.—Feeding bottle; on the top, a black-figure frieze of a hunting scene in "Kleinmeister" style.
- 38.—Attic black-figure amphora; Theseus slaying the Minotaur, and other figures.
- 39.—Attic black-figure skyphos; lion behind a tree confronting a herd of cattle. For a similar vase, compare Heinemann, *Landschaftl. Elemente in d. Griech. Kunst*, fig. 14. Fairfax Murray Coll.
- 40.—Attic black-figure lekythos; owls, and in centre, a Siren standing on an altar playing a lyre.
- 41.—Large lekythos of late Attic black-figure style; combat, with Athena between the protagonists. Inscribed *καλὸς ὁ παῖς δοκεῖ ναιχί ἐμοί, ναιχί.*
- 42.—Lekythos with design in opaque paint; Centaur pursuing an armed man. *Presented by C. Ware, Esq.*
- 43.—Kylix of early red-figure style, signed by the potter Euergetides. Interior, woman dancing; exterior, young men and groom with horses. Found at Old Capua, and first published in *Annali dell' Inst.*, 1849, p. 145, pl. B. Afterwards lost to view for many years. For full reference to the literature, see Hoppin, *Handbook of Red-Figure Vases*, Vol. I., p. 366.
- 44.—Kylix, red-figure style. Interior, Victory and youth; exterior, Victory crowning Theseus who turns away from the prostrate Minotaur, a new type for this subject. Fairfax Murray Sale.
- 45.—Hydria of strong red-figure style; the Lapith Kaineus overwhelmed by two Centaurs. Formerly in the Barone Coll. *Bull. Napol.*, VI., pl. 2. Reinach, *Répertoire*, I., p. 474.
- 46.—Bell-crater, late red-figure style; Marsyas playing on the flutes in the presence of Apollo and two Muses. Deepdene Coll.
- 47.—Hydria of finest red-figure style. Toilet scene; seated mistress and maid with casket.
- 48.—Pyxis of fine red-figure style; on box, a marriage procession with chariot, herald and torch-bearers; on lid, Helios, Selene and Nyx. (Sotheby's Catalogue, Dec. 6, 1921, plate.)
- 49.—White Lekythos with design in varnished outline; man with drawn sword ("Tyrannicide" type) advancing from a house.
- 50.—White Lekythos with design in dull outline and wash; tombstone with old man and boy with hoop.
- 51.—Guttus of early Italian red-figure style; grotesque procession of Mænad, Seilenos and Satyrs, going to a revel.
- 52.—Fragment of Samian ware, showing imperfect modelling. From Puy-de-Dôme. *Presented by H. H. Cox, Esq.*
- 53.—Fifteen Roman vases from the Rhineland, of various red and grey fabrics. *Presented by the Committee of the Guildhall Museum.*

- 54.—Roman cup of black ware, found with a stone painter's palette and other fragments in a tomb on the French front. *Presented by Lieut. C. M. Grieve.*
- 55.—Lamp with bust of Athena and stamp of the potter Lucius. *Presented by S. C. Atchley, Esq.*
- 56.—Lamp with bust of Vitellius (modern). *Presented by L. A. Lawrence, Esq.*

VI.—*Terra cottas.*

- 57.—Tablet inscribed in the Minoan script. *Presented by Major F. W. B. Willett.*
- 58.—Two fragmentary statuettes; one of Græco-Phœnician, one of Hellenistic style. From Larnaca, Cyprus. *Presented by Col. D. H. Colnaghi.*
- 59.—Statuette of draped young man holding a lyre; style of early fifth century B.C. From Lamia.
- 60.—Statuette of standing youth with drapery over shoulder; the head has been moulded separately; on the back is inscribed the maker's name Παιτροφίλου. From North Syria. *Presented by Major C. L. Woolley.*
- 61.—Pair of clay sealings stamped with impressions of the head of Athena. From Egypt. *Presented by J. D. Beazley, Esq.*
- 62.—Series of votive eyes. From the site of Lake Regillus. *Presented by Miss E. B. Ede.*
- 63.—Tile bearing the sepulchral inscription of a child Kerasa: εὐτυχεῖ Κερασά Ἀσιδίαο ἀνατοῦ ἐτών δ'. From Sinai. *Presented by L. Richmond Wheeler, Esq.*

VII.—*Casts and Reproductions.*

- 64.—Electrotype copy of the situla of Kuffarn (*Mitt. d. Anthropol. Ges. in Wien, 1891, XXI., pl. 9*).
- 65.—Electrotype copies of geometric and medical instruments from Pompeii.
- 66.—Plaster casts of one slab and nine fragments of the Frieze of the Parthenon. *Presented through the British School at Athens by the Greek Government.*

A. H. Smith.



DEPARTMENT OF BRITISH AND MEDIEVAL ANTIQUITIES AND  
ETHNOGRAPHY.1.—*Arrangement, Cataloguing, etc.*

*Prehistoric Room.*—The exhibition drawers in the Central Saloon have been overhauled, and two table-cases re-arranged. The labelling of the Greenwell Collection has been continued.

*Iron Age Gallery.*—A series of Teutonic finger-rings has been specially mounted and exhibited in a table-case.

*Room of Roman Britain.*—Additions have been made to the exhibits of New Forest and Pudding Pan Rock pottery, and moulds exhibited in a table-case.

*King Edward VII. Gallery (Ground Floor).*—The arrangement of the mediæval collections and European pottery and porcelain was completed, and the western portion of the gallery opened to the public in July. The collections of Oriental Ceramics and Glass are in course of arrangement in the eastern portion.

*Christian Room and Buddhist Room.*—The temporary arrangement of the Early Christian collections made for the opening of the gallery to the public is in course of revision. The large wooden Buddhist figure has been exhibited in the Buddhist Room in place of the Chinese altar furniture now removed to the King Edward VII. Gallery.

*Room of Indian Religions.*—The colossal bronze figure of a Chinese dignitary has been removed to the top of the Grand Staircase, and its place taken by a Hindu stone relief from Bihar. Some re-arrangements have been made, and a number of fresh labels provided.

*Asiatic Saloon.*—A temporary exhibition of a large portion of the Mexican and Central American Antiquities, and of the North American stone age, has been made. The Tower Collection of Oriental arms has been re-arranged, and permanent fittings provided.

*Ethnographical Gallery.*—A temporary exhibition of the greater part of the South American Antiquities has been made in the Asiatic section. The Kabyle pottery, part of which had been removed for safety, has been re-exhibited, and several of the wall-cases entirely re-arranged. Numerous additions have been made to the exhibits and many fresh labels provided in all sections. The whole of the contents of table-case cupboards and drawers has been examined.

*Basement.*—The whole of the ethnographical material, which had been temporarily accommodated in the former Departmental Offices, has now been checked, sorted and stored in the basement, including the collection of Christy duplicates. The re-arrangement of collections stored in the basement has been continued

in such a way as to ensure the maximum of accessibility to students under present conditions, and the provision of an index to these collections is in progress. That portion of the Chinese and other Oriental ethnographical collections which was stored in cupboards in the King Edward VII. Gallery has been transferred to the basement. The unpacking of the Sturge Collection and its arrangement and storage in cases has been completed.

*Registration, etc.*—The registration of current acquisitions has been continued and 1,614 objects have been added, including ethnographical specimens. The cataloguing of the French and Spanish pottery is in progress. Numbers have been painted on 1,825 specimens, and 1,296 permanent labels have been written. Objects have been mounted to the number of 908; 380 ring-mounts have been covered with cloth, and the rings mounted upon them, and a number of ring-impressions made and mounted; 52 mounting-boards have been prepared and a number of case fittings covered with cloth; 529 labels have been typewritten and 114 printed; 118 photographs have been taken, 66 photographic prints and 10 lantern-slides made. The wall-cases in the Prehistoric Room, Iron Age Gallery, Room of Roman Britain, and the Rooms of Oriental Religions have been photographed. A large number of specimens have been cleaned, repaired and restored. The card-catalogue of the departmental library has been continued.

*Publications.*—A second edition of the Bronze Age Guide and a monograph on the Chinese Statue of a Lohan have been prepared and published. A Guide to the Room of Roman Britain and a second edition of the Guide to the Early Christian and Byzantine Antiquities are in preparation. A Catalogue of the Mediæval Enamels is in progress. A series of pictorial post-cards illustrating Indian art with descriptive letterpress has been published, and letterpress has been prepared for a series of post-cards illustrating English porcelain.

Much assistance has been given by Mr. Longworth Dames in the preparation of a slip catalogue and in the arrangement and labelling of the collections illustrating Oriental Religions, and Mr. Oscar Raphael has devoted much time to the arrangement of the Ceramic Collections.

Two lectures have been delivered by a member of the Staff in the Prehistoric Room and the Iron Age Gallery.

*Students.*—1,213 students and visitors have been received in the Department.

## 2.—Acquisitions.

### (1) *Prehistoric and Early British Antiquities:*—

(a) *Stone Age.*—Two palæoliths found at the Foreland, Isle of Wight (see *Quarterly Journal of the Geological Society*, XXVI., 542), and Warsash, N.E. of Southampton Water respectively, from the collection of the late Thomas Codrington, Esq., F.G.S. Presented by Commander G. G. Codrington.

Conical flint plane from Redhill, Dyke Road, Brighton, and worked flint flake from Stow, Suffolk. *Presented by G. J. Buscall Fox, Esq.*

Large series of pygmy flints from various localities from the collection of the late Dr. Colley March. *Presented by Mrs. Colley March.*

Series of flint implements of rostro-carinate form, some figured in *Philosophical Transactions of the Royal Society*, B. 202, pl. 15, I, and figs. 18, 19, 25 and 26 in text, from Suffolk, Selsey Bill, Sussex, etc. *Presented by Sir E. Ray Lankester, F.R.S.*

Eleven flint implements from rock-shelters, etc., Oldbury, Kent. *Presented by Benjamin Harrison, Esq.*

Series of neolithic flints collected by the donor in Tilgate Forest, Sussex (*Sussex Archæological Collections*, LV., 123). *Presented by Dr. Edgar Willett.*

Diorite celt found at Longdon Marsh in a ditch at S. end of Malvern Hills, 1860, and made of local stone. *Presented by H. D. Acland, Esq., F.S.A.*

Series of flint implements from Yorkshire. *Bequeathed by Thomas Boynton, Esq., F.S.A.*

Chalk lump cut nearly spherical, found by the donor on Floor 52, Grime's Graves, near Weeting, Norfolk. *Presented by Rev. H. G. O. Kendall, F.S.A.*

Two chalk carvings excavated by the donor at Grime's Graves, near Weeting, Norfolk. *Presented by Derek Richardson, Esq.*

(b) *Bronze Age*.—Gold hoop with trumpet-ends, found near a stone coffin in Islay, Scotland. *Bequeathed by Eleanore Anne, Lady Trevelyan, widow of Rt. Hon. Sir Charles Trevelyan, K.C.B., through Mrs. James Anstruther.*

Series of food-vessels, beads, etc., mostly from Ireland and Scotland. *Presented by N. D. Smith, Esq.*

Series of jet beads and studs from Yorkshire. *Presented by the Earl of Feversham.*

Two-handled vase of black pottery, figured and described in *Proc. of the Society of Antiquaries*, xxv., 84-88. It resembles ware from Troy of about the 9th century B.C., and was found in the Thames gravel below Hammersmith.

Chert core and arrowhead from Bralo, Mount Parnassus. *Presented by Rev. Harold Pyner.*

(c) *Foreign*.—Ten flint implements from the trenches at Coigneux, 16 miles S.W. of Arras. *Presented by Capt. Francis Buckley.*

Twelve stone specimens of the Vespestad type (shell-mound stage of neolithic period), excavated by the donor on the Isle of Boemmel, S. of Bergen, Norway. *Presented by Dr. Haakon Shetelig, Hon. F.S.A.*

Ten stone specimens of Nöstvet type (early neolithic) from Kristiania Fjord, Norway. *Presented by Dr. A. W. Brøgger.*

Stone implements and flakes from Imbros found in the bank of a stream. *Presented by Capt. Hugh Copley, R.A.F.*

Re-chipped polished celt (Dolmen period) obtained in Paris. Presented by *C. R. Jennings, Esq.*

Bronze statuettes and ring-brooches, Early Iron Age, from Despeñaperros, Spain. Presented by *C. T. Andrews, Esq.*

Gold capsule of the Oxus Treasure type; 4th century B.C. from N.W. India.

(2) *Romano-British*:—

Pottery and pieces of kiln-lining from a kiln at Sloden, New Forest, Hants. Presented by *Heywood Sumner, Esq., F.S.A.*

Specimens of "Samian" pottery from the Pudding Pan Rock, off Herne Bay, Kent (*Proc. Soc. Antiq.*, xxi, 279). Presented by the Librarian, Guildhall, London.

Pottery lamp with cross found near Tidworth House, Wilts. Presented by *W. G. Wise, Esq.*

(3) *Anglo-Saxon and Foreign Teutonic*:—

Anglo-Saxon shield-boss, brooches, etc., from Dorchester. Presented by the Librarian, Guildhall, London.

Anglo-Saxon iron girdle-hanger from Cliffe, near Rochester. Presented by *F. Wright, Esq.*

Part of a Merovingian pin with bird-terminal, and brooch in the form of a horse. Presented by *Louis C. G. Clarke, Esq., F.S.A.*

Bronze penannular brooch, early 9th century, from the Island of Mull, Scotland, figured in *Proc. of the Society of Antiquaries of Scotland*, xiii, 70, fig. 2. Presented by *N. D. Smith, Esq.*

Bronze medallion set with blue glass inlaid with silver, Celtic work of about A.D. 800, from the collection of Sir Benjamin Chapman at Killua, W. Meath.

(4) *Mediæval and Later*:—

(a) *British*.—Bronze candlestick in the form of a centaur playing a fiddle, 13th century. Found at Felixstowe, Suffolk, in digging trenches.

Bronze seal-matrix, late 13th century, from Salisbury (Evans Collection).

Bronze seal-matrix, 13th century, found in the Close, Exeter, 1887 (Evans Collection). Presented by *Maurice Rosenheim, Esq., F.S.A.*

Seventeen seal-matrices, two described and figured in *Proc. Soc. Antiq.*, xxiii, 105, another in *Proc. Soc. Antiq.*, xxv, 78.

Two ivory panels, 14th century.

Bronze pax, late 15th century, described and figured in *Proc. Soc. Antiq.*, xxv, 27.

Gold badge of the Order of the Garter, jewelled and set with an onyx cameo, about 1660.

Cup of Boscobel oak turned and mounted in silver, used at the audit dinner of the Dean and Chapter of Worcester. Bequeathed by *Mrs. Editha Wathen*.

Pewter plate, 18th century, with stamps and initials F.S.G. Presented by *W. E. Bennett, Esq.*

Sextant in mahogany case, made by Cary, London, formerly the property of David Walker, surgeon and naturalist under Sir L. McClintock in the search for Franklin 1857-9. *Presented by Miss Constance M. Steel.*

Steel official seal-matrix of the Nyassaland Protectorate (*temp.* George V.), damaged by fire and replaced. *Presented by the Lord President of the Council.*

(b) *Foreign*.—Series of bronze seal-matrices, Italian, 14th century and later, collected by Commander Francesco Grecchi, Milan.

Gold seal-ring, N. Lombard, found at Bergamo, Italy.

Bronze seal-matrix of Jean d'Orléans, found in digging trenches near Arras, 1917. *Presented by Major E. St. Clair Harnett.*

Sard intaglio signed ΑΠΟΛΛΩΝΙΔΟΥ, formerly in the Poniatowski Collection. *Bequeathed by Eleanore Anne, widow of Rt. Hon. Sir Charles Trevelyan, K.C.B., through Mrs. James Anstruther.*

(5) *Ceramic and Glass Collections*:—

(a) *Oriental Wares*.—Earthenware model of a cooking-stove, Chinese, Han dynasty. *Presented by Lady Cunard.*

Three Chinese pottery specimens of the Han dynasty, two of the T'ang dynasty, a pottery figure of the T'ang dynasty, and two pottery bowls, Ming dynasty, from tombs in Szechuan, S.W. China.

Vase, T'ang dynasty, with enamelled colours.

Two Chinese porcelain bowls, one of the Sung, the other of the Ming dynasty, and fifteen specimens of Japanese pottery and porcelain. *Presented by the Misses Alexander.*

A remarkable stoneware glazed bulb-bowl, Chün Yao, Sung dynasty, made at Chün Chou, Honan; given in commemoration of Sir Hercules Read's completion of 40 years' service at the Museum. *Presented by G. Eumorfopoulos, Esq., F.S.A.*

Chinese pottery tiles, one blue-glazed, from the Temple of Heaven, the other green-glazed, from the Temple of Confucius, the latter taken during the Boxer Rising at Peking. *Presented by Alfred Harburn, Esq.*

Early Persian pottery bowl. *Presented by Sir Henry Howorth, K.C.I.E., through the National Art Collections Fund.*

Persian lustre-bottle, with date 1180 A.D.

Six specimens of modern ware in the ancient style, made at Kutahia, Anatolia. *Presented by Mrs. J. Valentine Salvage.*

(b) *Continental*.—Eight jugs of majolica, 15th and 16th centuries, found in excavations at Orvieto, Italy.

Dutch Delft figure, about 1660. *Bequeathed by Thomas Boynton, Esq., F.S.A.*

Nine pottery fragments from waste-heaps at Bologna, Italy; eight pottery tiles from Toledo, and two pottery bowls excavated in Seville, Spain. *Presented by Dr. W. L. Hildburgh, F.S.A.*

Cup and saucer of Capo di Monte porcelain.

(c) *English*.—Pottery ball inlaid with marble and star pattern, found at Ruscombe, Berks, 1862. *Bequeathed by Mrs. Editha Wathen.*

Copy of a German stove-tile with date 1561, made in Fulham stoneware and signed E.M. *Presented by Sir Hercules Read, P.S.A.*

Sixteen pieces of English pottery and porcelain. *Bequeathed by Thomas Boynton, Esq., F.S.A.*

Pottery jug, marked PRATT, late 18th century. *Presented by R. L. Hobson, Esq.*

Box of fragments of tin-glazed earthenware from the site of the potteries at Wincanton, Somerset, formerly in the Bristol Museum. *Presented by W. Pountney, Esq.*

(d) *Glass*.—Two pieces of antique glass.

(6) *Collection illustrating various religions*:—

(a) *Christianity*.—An ivory liturgical diptych with a Greek inscription written between A.D. 623 and A.D. 662; probably used in a church in the diocese of Hermonthis.

A pair of bronze openwork Coptic earrings from Cairo. *Presented by Captain Murray.*

A portion of a painted wooden ikon from Russia. *Presented by Howard Carter, Esq.*

A glass money-weight with bust of the Emperor Justinian. *Presented by Col. the Hon. Milo. G. Talbot.*

(b) *Buddhism*.—A Chinese wooden statue of more than life-size, representing a Buddhist personage, probably of the 12th century. *Presented by the National Art Collections Fund and others.*

A gilt figure of a seated Buddha from Burma. *Presented by Mrs. Roberts.*

A brass figure of Buddha seated on a lotus throne.

A gilt bronze Lamaistic figure of Avalokitesvara, small life-size, from Tibet.

A Gandhâra stone relief, representing Buddha enthroned between worshippers. *Presented by Lt.-Col. H. S. Moberley.*

(c) *Hinduism*.—Two early Hindu stone sculptures from Java, representing Saktis of Bodhisattvas. *Presented by Col. Sir John Hall, Bart.*

A brass lingam with figures of Nandi and a Naga, obtained at Deolali, Bombay, and said to have come from Nasik. *Presented by E. G. Millar, Esq.*

(d) *Mohammedanism*.—A Mohammedan engraved standard of silvered copper. *Presented by Mrs. Hallinan.*

(e) *Zoroastrianism*.—A stone panel relief of a male figure with cloak, representing Athar, the Persian fire-god, from Masjid Suleiman. *Presented by Dr. M. Y. Young.*

(7) *Oriental and Ethnographical*:—

*Asia*.—Three Turkish bows, a bow-ring, bracer, and arrows, together with descriptive notes and sections illustrating the structure of the composite bow. *Presented by Lady Payne Gallwey.*

A bronze horse-bit of early date obtained in Mesopotamia.

A silver ring, set with a sapphire glass cameo of the head of a Persian king.

A relief in iron and brass representing a saint seated between two lions. Indo-Persian. *Presented by Mrs. Hallinan.*

A portion of an early Indian stone relief, representing a banquet scene. *Presented by Sir Hercules Read, P.S.A.*

A bronze Brahmi seal of the 4th century A.D. *Presented by Mrs. M. S. Jacomb.*

A gold ring with sapphire, a gold earring, and a garnet intaglio with name Animida, dating A.D. 480–500, from India.

A jewelled armlet from India. *Presented by Mrs. H. Randolph Rose.*

A number of bronze objects and beads from three early graves in the Ranchi district, Chota Nagpur, India. Collected by *Sarat Chandra Roy.*

Four strings of stone beads found in association with leaden coins dating 250 B.C.–150 A.D. at Gudevada, Khrishna District, S. India. *Presented by E. D. Puzey, Esq.*

A selection from a series of crystal, stone, and pottery beads, together with a piece of limonite in which a number of beads are embedded; found while clearing jungle at Deniyaya, Ceylon. *Presented by the Beverley Tea and Rubber Estates Ltd.*

A number of native woven and dyed cloths from the Naga tribes, Assam. *Presented by Major J. Hardcastle.*

A native hand-woven coat and leggings from the Mru, a kilt or shawl from the Nung, and a belt from the Khamti Shan tribes, Upper Burma. *Presented by L. Lacey Langley, Esq.*

A circular mirror of speculum metal with relief designs, of the Han dynasty, from China. *Presented by Prof. Masumi Chikashige.*

*Africa*.—An ethnographical series, including a number of silver amulets and ornaments, from the Oasis of Siwa, Sudan. *Presented by W. Seymour Walker, Esq.*

A series of ethnographical objects chiefly from Bassa and Kabba Provinces, Northern Nigeria. *Presented by C. A. Woodhouse, Esq.*

A carved ivory double armlet of ancient Benin work, W. Africa.

An ethnographical series, including a number of objects in cast bronze, from Benin, West Africa.

A plaster cast of an ivory cup with cover, in the possession of the Society of Antiquaries of Newcastle-on-Tyne, of XVI century West African work. *Presented by Parker Brewis, Esq., F.S.A.*

A wooden idol, pottery bowl, and various other objects obtained from the Aros near Arochuku, S. Nigeria. *Presented by D. A. Macalister, Esq.*

A wristlet of gold and glass beads taken from one of the Ashanti temples, Gold Coast. *Presented anonymously.*

The robe and cap of the King of Dahomey, given to Vice-Admiral Eardley Wilmot.

Two steatite carvings of a man and a woman from Mendiland, Sierra Leone. *Presented by Major Hugh Rochford.*

A steatite figure obtained in about 1884 in the Yoni country, Sierra Leone. *Presented by Major H. E. Weaver.*

A series of stone implements of palæolithic type, found at or near the village of Katende, 40 miles from Luebo, in the gravels of the Lulua River, Belgian Congo. *Presented by the Rev. G. Tollefsen.*

An iron arrowhead, found in a cave at Kakontwe Quarry, Katanga, Belgian Congo. *Presented by Alexander Hay, Esq.*

A Bushman ochre painting on stone, representing antelopes, from Rhodesia. *Presented by H. H. Hamling, Esq.*

Two large digging-stick stones and several other stone implements from the Transvaal. *Presented by Major T. G. Trevor.*

The rod of office of a priestess of the "Nabingi" Secret Society, and a necklet of charms worn by the Muhundé Ndochibiri, from Kigezi, British Ruanda. *Presented by Capt. J. E. Philipps, M.C.*

A nine-stringed guitar from the Uganda Protectorate. *Presented by C. O. Skilbeck, Esq.*

A series of beads found upon the seashore, and a "slate" made from a camel's scapula, from Zanzibar.

*Oceania.*—A wooden cannibal fork from Fiji. *Presented by H.M. the King.*

A large series of ethnographical objects, chiefly from Fiji, Tonga and the New Hebrides, collected by the donor, and including a large whale's tooth given by King George Tubou of Tonga to Thakombau, and an heirloom mat of Fatafehi, "Divine King" of Tonga. *Presented by Sir Everard im Thurn, K.C.M.G., K.B.E., C.B.*

A large series of stone implements, sculptures and other objects from Easter and Pitcairn Islands, collected by the donor and Mrs. Scoresby Routledge on their expedition to the Pacific, 1913-16. *Presented by Scoresby Routledge, Esq., F.S.A.*

A stone sculptured head, mounted on a shell ring, representing the "tindalo" of Kulanikama, and a stalagmite armlet and breast ring worn by his priest, from the Solomon Islands. *Presented by the Rev. Canon A. Penny.*

A carved wooden block for printing "tapa" from Fiji. *Presented by Dr. A. P. Maudslay.*

A kava bowl and dish from Fiji, and a paddle from the Caroline Islands. *Presented by C. O. Skilbeck, Esq.*

A wooden slop-bowl studded with human teeth, formerly the property of Kamehameha I, King of Hawaii.



A fine carved club from the Marquesas Islands, and a jade pendent charm from New Zealand. *Bequeathed by Thomas Boynton, Esq., F.S.A.*

A Maori carved box for "huia" feathers, from New Zealand.

*America.*—Two ancient pottery vases and two pottery heads from the Valley of Mexico. *Presented by Señor Manuel Gamio, on behalf of the Government of Mexico.*

A Maya painted vase found on the banks of the Rio Lempa in Salvador, Central America.

An ancient pottery mould and impression, a figurine, and two vases from Azcapotzalco, Mexico. *Presented by Señor W. Niven.*

Several pottery vessels for burning copal found in a temple at Menche, two ancient vessels from Alta Vera Paz, and two vases from Peru. *Presented by Dr. A. P. Maudslay.*

Three silver cups, and a series of gold ornaments and other objects from graves mainly at Ancon, Peru. *Presented by G. Lockett, Esq.*

Seven ancient Peruvian vases from the Chicama Valley.

An ancient Peruvian copper knife obtained in Cuzco. *Presented by W. G. Buchanan, Esq.*

A small stone pestle with carved handle from Bogota, Republic of Colombia. *Presented by Sir Percy Wyndham, K.C.M.G.*

Three stone arrowheads, a stone pendant, and a stone hook for a spear-thrower, found at or near Cabo Verde, Minas Geraes, Brazil. *Presented by Dr. Alfonso Taunay.*

A large series of ancient stone implements from the West Indies. *Presented by A. R. Brailey, Esq.*

A wooden chest carved with totemic designs and inlaid with teeth and shell, from the Haida Indians, Queen Charlotte Island. *Presented by St. George Littledale, Esq.*

A large wooden chest with totemic carvings, a carved baby-carrier, a totem-pole, and several other objects from the North West Coast and New Mexico.

A carved horn spoon, wooden fork and spoon, and fish-hooks from the North West Coast of America, and several other objects. *Presented by Miss Bowick.*

A series of games and implements collected by the donor from the Zuñi Indians in 1893 and 1907. *Presented by Stewart Culin, Esq.*

A wooden mask from the Boruca Indians, Costa Rica. *Presented by Comte Maurice de Périgny.*

An ethnographical series from tribes of the Upper Amazon, obtained at Iquitos, Peru. *Presented by the heirs of Emilio Kanthack, Esq.*

A number of feather ornaments, collected in 1916 by the donor, from tribes on the Bermejo River, Argentine Republic. *Presented by A. S. Hume, Esq., C.E.*

A basket for collecting shell-fish, a string child-carrier, and a quartz arrowhead from the Coast of Patagonia. *Presented by Miss M. B. Dockray.*

## CHRISTY COLLECTION.

During the year the Trustees have acquired by donation the following objects, which have been transferred to the Trustees of the British Museum:—

(1.) *Ethnography of Asia.*

Five stone implements from the Kachin district of the Northern Shan States, Upper Burma. *Presented by G. C. B. Stirling, Esq.*

Two silver coins from Siam. *Presented by Miss Cleverley.*

A pottery water-vessel from the neighbourhood of Kula Kangsar, Perak, Federated Malay States. *Presented by Mrs. C. T. Huttenbach.*

Two bronze key-hangers with silk tassels and copper pendants, from Korea. *Presented by Sir Hercules Read, P.S.A.*

(2.) *Ethnography of Africa.*

An iron spear-head from the Sudan. *Presented by A. E. Warden, Esq.*

A doll from el Duem, Egyptian Sudan. *Presented by Mrs. Lock.*

A doll from el Duem, Egyptian Sudan. *Presented by C. F. Lock, Esq.*

Firesticks from the Mt. Sabinio area of Ruanda, Uganda Protectorate. *Presented by Capt. J. E. Philipps, M.C.*

Three copper bangles obtained at Nairobi, British East Africa. *Presented by R. Stanley Taylor, Esq.*

A musical instrument called Limba, used by the Anyanja of Nyasaland. *Presented by H. S. Stannus, Esq., M.D. (See "Man," 1920-20.)*

Six carnelian beads found on the beach, Pondoland, South Africa. *Presented by J. Burt-Davy, Esq., F.L.S.*

A wooden figurine from the Coast District, Belgian Congo. *Presented by Mrs. Wilson.*

Grotesque pottery head from the Cameroons, W. Africa. *Presented by C. L. Fenton, Esq.*

An ivory fetish from the Kwilu, an ivory comb from the Lualaba, and a silver amulet from North Africa. *Presented by Louis C. G. Clarke, Esq.*

(3.) *Ethnography of Oceania.*

Three spears and two spear-throwers from Western Australia. *Presented by Capt. Coghlan.*

Two clubs and two boomerangs from Queensland, Australia. *Presented by Mrs. A. M. Pollock.*

Two jade ceremonial axes from New Caledonia. *Presented by the Dowager Countess of Dunmore.*

Seven arrows from the New Hebrides. *Presented by T. Thompson, Esq.*

A human skull with modelled features from the Island of Espiritu Santo, New Hebrides. *Presented by Vice-Admiral E. F. A. Gaunt.*

Three carved dancing clubs from the island of Buka, Solomon Islands. *Presented by C. E. Reader, Esq.*

(4.) *Antiquities and Ethnography of America.*

Three stone arrowheads found near Russell, Illinois. *Presented by E. Firth, Esq.*

The head of a dancing staff, with totemic carving, from the north-west coast, and a pottery vase from the Nasca Valley, Peru. *Presented by Louis C. G. Clarke, Esq.*

Four pottery figurines in primitive style from the Panuco Valley, Mexico. *Presented by J. M. Muir, Esq.*

A gold ornament in the form of a human head, found by the late F. M. de Waldeck in the ruins of Palenque, Chiapas, Mexico. *Presented by C. B. O. Clarke, Esq.*

A pottery vase with painted ornament from the highlands of Ecuador. *Presented by Miss Lilian E. Elliott.*

Pottery figurine of a fish, found six feet below the surface of the ground on the island of La Tola, in the estuary of the Santiago River, Ecuador. *Presented by H. S. Gordon, Esq.*

A shrunk human head from the Jivaro Indians, Ecuador. *Presented by J. H. Spottiswoode, Esq.*

A series of stone implements and fragments of early pottery from Santa Catharina, Brazil. *Presented by Dr. G. C. Bleyer.*

Ancient pottery vase, found at a depth of 10 feet in the bank of the Rio Colorado (Bermejo), 6 miles east of Tinogasta, Catamarca, Argentina. *Presented by H. Teschmaker, Esq.*

Stone *manija* of a *boleador* from the Tuyu region of Cape San Antonio, Buenos Aires, Argentina. *Presented by Sir Herbert Gibson.*

A series of stone arrowheads and implements from middens in the Chubut Valley, about five miles from the coast, Argentina. *Presented by Canon P. E. Class.*

Series of antiquities from the windward side of Montserrat, West Indies. *Presented by the Hon. Fred Driver.*

In addition to the above donations, the Christy Trustees have acquired by purchase a collection of pottery figurines, vase fragments, whistles, stamps, and ornamented spindle-whorls, all of pre-Inca date, and found within a comparatively small area in the Province of Manabi, Ecuador.

*Charles H. Read.*

## DEPARTMENT OF COINS AND MEDALS.

I.—*Registration and Arrangement.*1. *Greek Series.*

Two thousand seven hundred and fifty-seven coins of various parts of the Greek world, recently acquired, have been registered, and two thousand seven hundred and twenty-nine incorporated, while thirty-six coins hitherto classed as uncertain have been identified and incorporated in the general series.

Eleven pieces have been added to the collection of forgeries.

Owing to these large additions, two cabinets have been inserted in the series of European Greece and Asia Minor, and the coins have been re-spaced in the trays throughout the major part of the collection. This has necessitated the renumbering of most of the trays and the correction of the labels attached to the outside of the cabinets, which task is now nearly completed.

The substitution of the new for the old pattern glass trays has been continued.

The provenance of the electrum coinage assigned to Ionia in the collection has been examined and, where ascertainable, noted in the trays.

The treatment and cleaning of sick and dirty coins has been undertaken with the assistance of the scientific adviser to the Museum, and good results have been obtained.

The following collections have been examined and a selection made for purchase: (a) Two dealers' stocks of North African coins; (b) a collection made in the Troad, another made in the Black Sea area, and another made during the war in the Levant; (c) various Sale Catalogues, British and Continental.

Many small parcels of coins submitted for identification by private individuals, and in some cases by local Museums, have been dealt with.

A Hand-list has been compiled of all available Sale Catalogues, with notes as to their relative utility as material for study. The bibliography has been kept up to date.

Several selections of casts have been made for foreign scholars.

2. *Roman and Byzantine Series.*

Five hundred and sixty coins have been registered and incorporated.

All issues of Hadrian and the second brass issues of the period from Trajan Decius to Carus have been rearranged, while considerable progress has been made with the classification of the billon issues of the 3rd century after Christ, according to mints. The arrangement of the issues of the period 395–476 A.D. has been checked in the light of recent research.

The weights of the coins of the early 3rd century after Christ have been examined in order to determine the standards to which they conform.

The specific gravity of a number of aurei and denarii has been taken with a view to determining their metallic composition and thereby deciding, in some cases, their genuineness.

The collection of casts of Imperial coins has been largely increased, and the casts of medallions from Philip I. to the end have been rearranged.

Several collections offered for presentation or purchase have been examined and selections made.

The bibliography has been kept up to date.

### 3. *British and Colonial Series.*

One thousand six hundred and fifty-nine coins have been registered and incorporated.

Various collections etc., offered for purchase or presentation have been examined and a selection made from them, notably a find of Anglo-Saxon coins of Eadgar, Eadward II. and Aethelred II., a collection of 18th century tokens, a large collection mostly composed of Kentish tokens of the 17th century, and a collection of English gold coins of the first importance.

### 4. *Modern and Mediæval Series.*

One thousand four hundred and eight coins have been registered and one thousand three hundred and twenty-five incorporated.

The Swiss coins and medals in the Townshend collection, which up till now have been kept separate, have been incorporated into the general collection: this has necessitated the rearrangement of all the coins in the series and the insertion of fresh heading-cards.

Various collections offered for purchase or presentation have been examined, and a selection made, notably from a large bequest and from a collection of money of necessity struck during the great war in the Central Empires.

### 5. *Oriental Series.*

One thousand and twenty-five coins have been registered and incorporated.

An unusually large number of collections has been offered for presentation and purchase. These have been examined and selections made for the Museum.

## PUBLICATIONS.

### 1. *Catalogue of Greek Coins.*

*Coins of Arabia, Mesopotamia, &c.*, by G. F. Hill.

Fifty-five collotype plates and sheets B—L (80 pages) have been passed for press and M and N sent for revise.

*Coins of Cyrenaica*, by E. S. G. Robinson.

One hundred and twenty-four coins have been described. The issues of the fourth century have been rearranged in a more convenient order. The weights of all coins of the district available have been collected and digested into tables with a view to their insertion in the Catalogue.

2. *Catalogue of Roman Coins.**Coins of the Early Roman Empire*, by Harold Mattingly.

All the coins have been described and a considerable portion of the introduction has been written, while the description of the coins of Augustus and Tiberius and the earlier sections of the introduction have been revised and thrown into final form.

3. *Catalogue of Indian Coins.**Ancient Indian Coins*, by J. Allan.

Ninty-four coins have been described.

4. *Guides.**Guide to Exhibition of Historical Medals.*

The text and introduction of the old Guide to English Medals have been subjected to a first revision; descriptions of the additions to the English series and of the medals in Part II (general series) have been written. An index to the inscriptions on medals in Part I has been written and translations added.

5. *Miscellaneous.*

*Grains and Grammes. A Table of Equivalents for the Use of Numismatists*, has been published.

*Exhibition.*

The New Exhibition Room has been fitted with cases. The mounting of the coins and medals for exhibition has been begun, eleven cases of medals illustrating British and European history from the fifteenth century onwards having been mounted and labelled, and the first draft of the guide to this section prepared.

*Extension of the Medal Room.*

The screen between the Medal Room and the North Corridor has been removed, and the latter space is being fitted for inclusion in the main room, thus increasing by nearly one-half the accommodation for the collections.

## III.—ACQUISITIONS.

The total number of coins and medals added to the department during the year 1920 was 7,919, of which 460 were of gold, 2,843 of silver, 4,138 of copper and 478 of other metals. The average of the preceding ten years was 2,787.

The following table shows the numbers of the new acquisitions classified according to the several series to which they belong:—

Class.	Gold.	Silver.	Bronze.	Other Metals.	Total.
Greek... ..	15	737	2,197	21	2,970
Roman ... ..	14	151	396	38	599
British and Colonial ...	255	514	711	118	1,598
Mediæval and Modern ...	64	869	473	272	1,678
Oriental ... ..	112	572	361	29	1,074
Total ... ..	460	2,843	4,138	478	7,919

Of the above 6,033 were presented, viz., 314 of gold, 1,905 of silver, 3,384 of bronze, and 430 of other metals.

The following is a list of benefactors to the Department of Coins and Medals during the past year:—

H.M. the King; H.M. the King of Italy; the Lords Commissioners of the Admiralty; the Adjutant-General to the Forces; the Administration of the Air Force; the Assistant-Director of Statistics, Inland Revenue; the Deputy-Master of the Royal Mint; the Director of Industries for the Central Provinces; the Director of the Memorial Plaque Factory; the West African Currency Board; the British Academy; the British School in Egypt; the Birmingham Mint; the Camberwell Public Libraries; the Gas Light and Coke Company; the Goldsmiths' Company; Rev. Justin E. Abbott; Mrs. Frederick Adam; W. Airy, Esq., M.I.C.E.; S. C. Atchley, Esq.; A. H. Baldwin, Esq.; Captain J. W. Bailie; Master Reginald Bennett; Colonel J. Biddulph; M. Adrien Blanchet, Membre de l'Institut; Edwin Bradnam, Esq.; Prof. C. J. Brown; J. C. Brudenell-Bruce, Esq.; Hr. L. E. Bruun; F. Buckler, Esq.; W. H. Buckler, Esq.; Sir John Bucknill, K.C.; W. E. M. Campbell, Esq., I.C.S.; Miss A. Cazenove; G. P. Churchill, Esq.; A. H. W. Cleave, Esq.; Col. F. P. Cockerell; Colin H. Dakers, Esq.; Col. G. A. Dale; M. A. Dieu-donné; L. V. Keitley Duff, Esq.; F. R. Durham, Esq.; E. Earle, Esq.; Robert J. Eidlitz, Esq.; Sir Arthur Evans, F.R.S.; Miss Helen Farquhar; B. S. Faudel-Philips, Esq.; W. Fensome, Esq.; Lionel L. Fletcher, Esq.; L. F. Ford, Esq.; Albert Fox, Esq.; the late H. B. Earle Fox, Esq.; Rev. T. S. Frampton, M.A., B.C.L., F.S.A.; Heer M. Frankenhuis; Henry Garside, Esq.; Stephen Gaselee, Esq., C.B.E.; C. S. Gifford, Esq.; Col. F. Guays; G. C. Haines, Esq.; the late D. T. Harris, Esq.; Mrs. F. W. Hasluck; the late F. W. Hasluck, Esq.; Thomas Hedley, Esq.; Richard Heming, Esq.; L. M. Hewlett, Esq.; Mrs. E. L. Hicks; George F. Hill, Esq.; J. C. Hodgson, Esq.; A. W. W. Horsbrugh, Esq.; Sir Henry H. Howorth, K.C.I.E.; Major E. G. Hume; Major E. H. S. James; Gresham P. L. James, Esq.; Hubert S. Job, Esq., O.B.E.; Louis Keen, Esq.; E. G. H. Kempson, Esq.; Sir Frederic G. Kenyon, K.C.B.; Signor L.

Laffranchi; H. A. Latham, Esq.; L. A. Lawrence, Esq., F.S.A.; M. H. Lee, Esq.; W. H. Lee-Warner, Esq.; Dr. Ritter A. von Loehr; G. D. Lumb, Esq.; Lt.-Col. G. B. Croft Lyons, F.S.A.; Mrs. Macdonald; Harold Mattingly, Esq.; Rev. F. L. Powys Maurice; J. Mavrogordato, Esq.; E. G. Millar, Esq.; J. Grafton Milne, Esq.; Messrs. Samuel Montagu & Co.; L. A. D. Montague, Esq.; Mons. J. de Morgan; Prof. R. Newstead, F.R.S.; Heatley Noble, Esq.; H. E. Okeover, Esq.; Henry Oppenheimer, Esq., F.S.A.; Charles L. Pack, Esq.; Conte Nicolò Papadopoli-Aldobrandini; Henry E. Parkes, Esq.; R. E. W. Partridge, Esq.; W. W. Pearson, Esq.; Prof. Dr. Behrendt Pick; Ernest Richmond, Esq.; C. A. Robertson, Esq.; Commander A. P. Robinson; E. S. G. Robinson, Esq.; Maurice Rosenheim, Esq., F.S.A.; J. Sanford Saltus, Esq.; Signor A. Segré; C. T. Seltman, Esq.; E. H. Shine, Esq.; C. Davies Sherborn, Esq.; Master T. C. Skeat; T. R. Skinner, Esq.; Messrs. Spink & Son; Robert Sutcliffe, Esq.; Rev. E. A. Sydenham; Sir Percy M. Sykes, K.C.I.E., C.M.G.; Col. the Hon. Milo G. Talbot, C.B.; E. Timperley, Esq.; Alderman W. Vernon, Esq., J.P.; Gordon Ward, Esq., M.D.; W. C. West, Esq.; Howland Wood, Esq.; C. L. Woolley, Esq.; Andrew W. Young, Esq.; Dr. W. Young, C.I.E.

#### IV.—*Remarkable Coins and Medals.*

The year has been marked by a very large number of accessions, and by some important gifts. Amongst these special attention must be called to the gift of a notable series of fine gold English coins by the Goldsmiths' Company; the bequests by Mr. Earle Fox of his very useful collection of Greek coins and by Mr. Hasluck of a selection from his remarkable collection made in the Levant; the gift of the Crown of the Rose of Henry VIII by Mr. Sanford Saltus; and the gift by Mr. Frampton of his collection of Kentish Tokens.

Among the purchases the first place is taken by the silver "Marathon" decadrachm of Athens described below.

##### 1. *Greek Series.*

Further acquisitions have been made by purchase or donation during the year from the collection of the late Sir Hermann Weber. Among the most important are the following:—

*Cumæ.* A silver Campanian didrachm of the early fifth century B.C. *Obv.* Lion scalp between two boars' heads. *Rev.* shell.

*Hyria.* A silver Campanian didrachm of 400 B.C. *Obv.* Head of Pallas. *Rev.* man-headed bull and, in addition to the ethnic, the letters *ASKH* between its legs.

*Thurium.* A silver Italic didrachm of the fourth century B.C. *Obv.* head of Pallas. *Rev.* bull butting with the letters *THE* above and two fishes in the exergue. *Presented by Sir Arthur Evans, F.R.S.*

Two other similar didrachms with a torch and *TI*, and a dolphin and *PHI*, respectively, as reverse symbols and letters.



*Aenus.* A silver Attic tetradrachm of the late fifth century B.C. of fine style. *Obv.* head of Hermes. *Rev.* goat, a pig's head as symbol.

*Damastium and Pelagia.* Two rare silver tetradrachms of quasi-barbarous style of the fourth century B.C. *Obv.* head of Apollo. *Rev.* tripod and the ethnics of Damastium and Pelagia respectively. *Presented by Sir Arthur Evans, F.R.S.*

*Elis.* A very fine silver stater of the early fifth century B.C. *Obv.* eagle devouring hare. *Rev.* Nike running.

*Cyzicus.* An electrum hekte with the type of a crouching lion and a hemihekte with the type of a winged monster, both about 400 B.C.

*Caria.* A gold hekte of the dynast Pixodarus B.C. 340-334. *Obv.* Head of Apollo. *Rev.* Zeus Labrandeus.

*Tarsus.* A fine specimen of the rare issue of the satrap Mazaeus, B.C. 350-333. *Obv.* Baal-Tars seated. *Rev.* The walls of Tarsus, above which lion killing bull, and the inscription "Mazaeus ruler of the country beyond the Euphrates and Cilicia" in Aramaic, with mint letters differing from those on the Museum specimen.

*Syria.* A tetradrachm of Antiochus IX. with the reverse type of the monument of Sandan. *Presented by Miss Helen Farquhar.*

The Greek series has received a most useful accession in the collection bequeathed to it by the late Mr. H. B. Earle Fox. Among many other coins, principally of European Greece, may be noted a series of over four hundred Athenian coins of all periods, mostly copper, but including a very fine silver tetradrachm of the sixth century B.C., and an abundant series of the smaller silver denominations in which the Museum collection had previously been relatively weak, as well as four hundred and eighty varieties of the coinage of Corinth as a Roman colony.

Among other Greek coins acquired during the year may be noted the following:—

*Hatria.* A fine variety of the copper As of the early fourth century B.C., with types of the facing head of Silenus and the sleeping dog.

*Velia.* A silver Campanian didrachm of about 400 B.C. *Obv.* Head of Pallas, the bowl of her helmet decorated with Scylla (an ornament hitherto unknown at this mint). *Rev.* Lion bringing down stag.

*Macedon.* A silver stater of Philip II. of unusually fine style and condition, with the star mintmark.

*Olbia.* An unpublished silver tetradrachm of the first century A.D. of Inensimeus, King of Olbia. *Obv.* Diademed bust of Inensimeus with his name and title. *Rev.* Head of Apollo with the name of the moneyer Niceratus and symbol bow.

*Crannon.* An example of the very rare silver drachm of the early fifth century B.C. *Obv.* Taurokathapsia. *Rev.* Horse with trailing rein and trident.

*Chalcis.* A silver drachm of about 200 B.C. *Obv.* Female head diademed (a portrait possibly of Euboea, the Queen of Antiochus III.). *Rev.* Eagle with serpent.

*Athens.* A silver decadrachm of the early fifth century B.C. with the types of the head of Athena and an owl facing with open wings. This coin, whose existence was hitherto unrecorded, appears to be the seventh known example of this extremely rare and important coinage which has been thought to have been issued in commemoration of the victorious close of the Persian War. The head is from a different die from any of the other known specimens, and, while the style is perhaps not quite so strong as that of the example already in the Museum (which had been irretrievably damaged by a deep gash across the face), it is in excellent condition.

Two silver tetradrachms, local imitations of Athenian types, both found on the banks of the Oxus. One bears on the reverse in Aramaic the name conventionally interpreted as Mazæus, with the additional inscription SA, the other the apparently unique symbol of a prow of a vessel.

*Achaea.* One hundred and two varieties, hitherto unrepresented in the Museum, of the coinage of the Achaean League from the collection of the late Major-General M. G. Clerk.

*Elis.* A unique variety of the silver didrachm issue of the later fourth century B.C., combining an obverse die with a head of Zeus similar in style to that of the issues of the middle of the century, with a reverse die on which appears a spearhead symbol as well as a thunderbolt and the initials HP which are characteristic of the following period.

*Cnossus.* An apparently unpublished silver drachm of the second century B.C. with the types *obv.* Head of Zeus laureate, *rev.* Labyrinth.

*North-Western Asia Minor.* Over a hundred coins, mostly copper, of the Imperial period collected in this district and containing many unpublished varieties and interesting pieces, notably the second known example of the medallion struck at Magnesia in Ionia in the reign of Antoninus Pius, of which the reverse type is a copy of the statue of Themistocles which stood in the market-place of that city.

*Smyrna.* The second example known of the silver drachm issued during the second century B.C. with types *obv.* Head of Apollo; *rev.* Homer seated, *without* magistrate's name.

*Lycia.* A silver stater of a hitherto unknown Lycian dynast Krīna about 400 B.C. *Obv.* Head of Athena. *Rev.* Head of dynast in Persian headdress with the name Krīna in Lycian characters.

*Selge.* A silver stater of the second half of the fourth century B.C. with the types: *Obv.* Two wrestlers. *Rev.* Heracles, with lionskin over his arm, wielding his club.

*Cibyra in Cilicia.* A copper coin of the second or first century B.C. with the types of Zeus and Hermes. The very rare issues of this city were hitherto unrepresented in the Museum.

*Cyprus.* A gold hemiobol of the fourth century B.C. with the types: *Obv.* horse's head. *Rev.* ram's head, a very rare piece sometimes attributed to the Cyrenaica.

*Arabia.* A very interesting hoard of copper coins, of which no other examples are known, of very barbarous style and types ultimately derived from Athenian coins, obtained by the late Sir Richard Burton in the land of Midian. *Deposited on permanent loan by the Camberwell Public Libraries Committee.*

*Elymais.* Fifty-nine coins of Orodes I., Phraates and Orodes II. in unusually fine condition. *Presented by Monsieur J. de Morgan.*

*Characene.* Five tetradrachms of base silver with the reverse type of the seated Heracles and the name of Attambelus, but bearing dates which show that they must be attributed to an earlier and hitherto unrecorded king of that name.

*Barce.* A very rare silver tetradrachm of the late fifth century with the types: *Obv.* head of Zeus Ammon and the magistrate's name PHAIN. *Rev.* Silphium.

## 2. Roman and Byzantine Series.

A rare as of L. Atratinus with *rev.* ANTONIVS IMP. Prow, r.

Three fine denarii of Augustus and a rare as of Vitellius, *rev.* CERES AVG S.C. *Presented by Sir Henry Howorth, K.C.I.E.*

A rare denarius of Augustus with *rev.* M. DVRMIVS III VIR. Man-faced bull crowned by Victory.

A dupondius of Nero, perhaps unique, with *rev.* S.C. Triumphal Arch.

A series of rare denarii of Galba, Vitellius and the Civil Wars.

An aureus of Vitellius of the mint of Lugdunum, with *rev.* VICTORIA AVGVSTI and two others of the mint of Tarraco with *rev.* CONSENSVS EXERCITVVM and SECVRITAS IMP. GERMAN.

An aureus of Vespasian of unusual style, of the mint of Tarraco, with *rev.* MARS VLTOR.

A billon coin of Regalian, with *rev.* ORIENS AVG. Sol standing l.; found at Carnuntum. Very rare and very fine for the series.

An interesting series of more than a hundred and fifty silver and brass coins of the Empire, including many of the mint of London. *Bequeathed by the late F. W. Hasluck, Esq.*

A series of interesting bronze coins of the Byzantine Empire, showing dates and mintmarks not represented in the Museum. *Presented by C. Davies Sherborn, Esq.*

## 3. British and Colonial Series.

### (a) Coins.

Two gold Ancient British coins of types, *Evans* A. 2. and C 7. *Presented by Sir Arthur Evans, F.R.S.*

A silver Ancient British coin (Evans G. 2) and a bronze coin (Evans H. 8) found at Great Chesterford. *Presented by E. H. Shine, Esq.*

An unpublished penny of Offa and a very rare penny of Coenwulf.

A new variety of the penny of Wulfred, Archbishop of Canterbury, 805-832 A.D.

Fifty-eight Anglo-Saxon pennies of Eadgar, Eadweard II. and Aethelred II., found at Chester, including coins of mints and moneyers unrepresented in the Museum. *Presented by Prof. R. Newstead, F.R.S.*

Eight Anglo-Saxon coins of Eadgar, Eadweard II. and Aethelred II. from the Chester find. *Presented by Alderman W. Vernon, Esq., J.P.*

Seventeen Anglo-Saxon pennies of Eadgar, Eadweard II. and Aethelred II. from the Chester find.

Five English pennies of Cnut and Siefried from the Cuerdale hoard. *Presented by His Majesty the King.*

Two pennies of Stephen from a find made in 1881 in Park Place, one of the Oxford mint and the other perhaps of Rochester. *Presented by Heatley Noble, Esq.*

A long cross penny of Henry III. of the moneyer Nichol of Canterbury. *Presented by L. A. Lawrence, Esq., F.S.A.*

A very rare variety of the half noble, a rare variety of the groat, and a new variety of the London half groat of Edward III.

A very rare penny of London mint of Henry IV.

A very rare halfpenny of Edward IV. of Dublin.

A fine selection of 230 English gold coins from the Carlyon-Britton Collection, remarkable alike for condition and rarity. The period covered is from Edward III. to the Commonwealth and many gaps are filled in the Museum series. Among the more notable coins are a fine series of 13 nobles of Richard II., an exceptionally rare noble of Henry II., a rare spur-ryal of James I. and some very fine and rare Anglo-Gallic coins of the Black Prince. *Presented by the Goldsmiths' Company.*

The second known specimen of the "Crown of the Rose" of Henry VIII., one of the rarest and most valuable of English coins. It was ordered to be issued on 22nd August, 1526, and was current for barely two months, after which it was replaced by the crown of the double rose, current at 5s.; the value 4s. 6d. of the crown of the rose had been found inconvenient as it was not an aliquot part of the pound. *Presented by J. Sanford Saltus, Esq.*

A collection of English coins in gold, silver and copper, from the earliest times to the nineteenth century. *Bequeathed by the late F. W. Hasluck, Esq.*

A collection of 12 gold, 45 silver, 602 brass or copper coins, and 4 lead English coins, including a collection, almost complete, of the XVIIth and XVIIIth century tokens of the County of Kent, the latter to be kept separate and known as the Frampton Collection of Kent Tokens. *Presented by the Rev. T. S. Frampton, M.A., B.C.L., F.S.A.*

(b) *Medals.*

A fine engraved portrait on a silver plaque dated 1594, of George, Earl of Cumberland, by Jacques de Gheyn. *Presented by H. E. Okeover, Esq.*

A rare silver engraved medal signed P.A. satirising Oliver Cromwell and Masianello.

An unpublished silver medal of Monmouth's rebellion signed B.H.

A bronze medal of Princess Louise, Marchioness of Lorne, by Lady Feodora Gleichen.

One silver and two bronze Canadian centenary medals of Laura Secord. *Presented by Thomas Hedley, Esq.*

A silver medal struck by the Gas Light and Coke Company for war services of its employees. By E. Carter Preston. *Presented by the Gas Light and Coke Co.*

A specimen in silver of the Serena Medal for Italian Studies, by E. Carter Preston. *Presented by the Council of the British Academy.*

4. *Mediæval and Modern Series.*(a) *Coins.*

Six deniers of Charles the Bald, Berengar, etc., from the Cuerdale hoard, and an extensive series of gold and silver European coins from the sixteenth to the nineteenth centuries, including gold ducats of Hungary, Prussia and Brandenburg-Bayreuth, and an extensive series of thalers, many of great historical interest. *Presented by His Majesty the King.*

A large collection of mediæval and sixteenth and seventeenth century coins of the Low Countries, Germany, France, Italy, especially those which circulated in the Levant, and of the mediæval coinage of the Latin East. This acquisition is particularly valuable to the Museum as it covers series not usually collected, which rarely find their way to this country. *Bequeathed by the late F. W. Hasluck, Esq.*

74 bronze coins of the Despots of Epirus. *Presented by the late F. W. Hasluck, Esq.*

171 modern continental coins in silver, bronze and nickel in continuation of previous gifts. *Presented by Henry Garside, Esq.*

A very rare bronze coin of Stephen, Duke of Naples 758-759 A.D. *Presented by C. Davies Sherborn, Esq.*

98 specimens of the zinc and iron money of necessity of Germany. *Presented by Albert Fox, Esq.*

49 iron or zinc German local coins of necessity. *Presented by Louis Keen, Esq.*

A specimen of the U.S.A. half-dollar of 1920 commemorating the *Mayflower* tercentenary. *Presented by C. S. Gifford, Esq.*

35 gold coins of France, the Low Countries, and Italy, of the sixteenth century, of great rarity and in beautiful condition, from the Carlyon-Britton Collection. *Presented by the Goldsmiths' Company.*

*(b) Medals.*

A hitherto unrecorded Italian medal of the end of the fifteenth century of Filippo Maria de' Rossi, Count of Berceto, and his grandfather, Pier Maria, founder of the dynasty. *Presented by Henry Oppenheimer, Esq., F.S.A.*

An Italian medal of Gabriel de' Gabrielli, Cardinal of S. Prassede, about 1500 A.D.

A bronze medal of Alfonso V. of Aragon, by Paolo da Ragusa.

A medal by an unknown artist of Pietro Manna of Cremona, c. 1550.

A bronze medal of Gonsalvo de Cordova by Annibal of Milan.

An unsigned medal of Girolamo Morcat (about 1525).

A rare bronze Italian medal of Christ of the XVIth century, signed PHILIPPI OPUS. *Presented by E. G. Millar, Esq.*

A bronze medal of Philip II. by Jacopo da Trezzo.

A lead medal of the artist Franz Floris.

A silver medal of Count Tilly, with his coat of arms, 1628.

A fine specimen in bronze gilt of the medal of Wolfgang Jörger, 1518, after Hans Schwarz. *Presented by Maurice Rosenheim, Esq., F.S.A.*

A silver medal of Thomas Schweicker of Halle, the artist born without hands, dated 1582. *Presented by His Majesty the King.*

78 German medals in bronze and iron relating to the War, in continuation of previous gifts. *Presented by Heer M. Frankenhuis.*

A silver medal of the Danish numismatist L. E. Bruun, by Lindahl. *Presented by L. E. Bruun, Esq.*

A bronze medal of the International Commission for the Schleswig Plebiscite. *Presented by J. C. Brudenell-Bruce, Esq.*

5. *Oriental Series.*

A very rare gold coin of the Sassanian Emperor Peroz. *Presented by Colonel G. A. Dale.*

An extensive series of Sassanian silver coins from the collection of the late General Malcolm Clerk, including very rare coins of Ardashir III., Kobad II., and Hormazd V.

Six silver coins of Arab governors of Persia. *Presented by Mons. J. de Morgan.*

A dinar of Harun al-Rashid, 178 A.H., with the name of his vizier Ja'afar.

A dinar of the Buyid Azad al-Daula struck at Basra, 370 A.H.

Three dirhems of the Buyid Baha al-Daula struck at Suk al-Ahwaz, 395, 398, 399 A.H. *Presented by Commander A. P. Robinson.*

A dinar of the Great Seljuk Toghrul Beg, of Madinat al-Salam (Baghdad), 455 A.H.

A dinar of the Great Seljuk Muhammad of Nishapur, 498 A.H. *Presented by Major E. H. S. James.*

A dinar of the Ilkhan of Persia, Abu Said of Madinat al-Salam (Baghdad), 717 A.H.

A series of 51 silver and copper coins of mediæval Persia, including the first known coin of Hasan b. Zaid, an Alid rebel who founded a dynasty in Tabaristan, struck at Amul 254 A.H. *Presented by Sir Percy Molesworth Sykes, K.C.I.E., C.M.G.*

A rare gold late Kushan coin with the name *Lohavatyā*. *Presented by Colonel J. Biddulph.*

A very fine specimen of the horse-sacrifice type of Samudragupta from the General Clerk Collection, and a specimen of his Candragupta I. type from the Hoey Collection.

A gold coin of Candragupta II. of the Lion-slayer type, a new variety of B.M.C. no. 113, having the King to left, and the specimen of his Chattra type of Candragupta II. illustrated in B.M.C. Pl. VIII. 4.

The unique gold coin of Puragupta from the Hoey Collection (B.M.C. Pl. XXI. 23).

Four gold tankas of Muhammad II. of Dehli, Dar al-Islam, 704 A.H., Dehli, 697, 698 and 713 A.H.

A rare gold tanka of Muhammad III. of Dehli (744 A.H. type of B.M.C. 328) and another, an unpublished variety of B.M.C. 334.

A fine collection of Moghul coins in gold and silver and copper, including gold muhrs of Akbar, Patna 987; Lahore 47; Jaunpur 980; gold muhrs of Jahangir, Lahore, 1016; Agra, 1021; gold muhrs of Shah Jahan, Agra 1038 and 1044; Surat year 5 (Isfandarmuz) and 1044; Lahore 1050; Delhi 1047 and 1084; Daulatabad 1048; gold muhrs of Aurangzib, Jahangirnagar 1114; 47; Multan 1074; 7; Shahjahanabad 1101; 3 and 1102; 36; Hyderabad 1112; 45; a gold muhr of Jahandar, Murshidabad 1124; 1; a gold muhr of Ahmad, Multan 1164; 4; a gold muhr of Shah Jahan III., Indore, 1174; 1; from the collections of the late Sir Thomas Dennehy, the late Sir Denzil Ibbetson and the late Mr. J. Doyle Smith.

A specimen of the rare gold coinage of the Sikh Ranjit Singh, dated Samvat 1868.

Forty-one coins of the Turks struck in Egypt. *Presented by Henry Garside, Esq.*

Gold coins of Nadir Shah of Persia, struck at Meshhed and Peshawar 1055 A.H.

Four gold coins of Karim Khan of Persia, of Tabriz 1179 and 1184, Kazwin 1186 and Shiraz, 1184 A.H. and one of Fath Ali-Shah, Erivan, 1185 A.H.

Five gold coins of Nasir al-Din Shah of Persia of the mints Tabriz, 1269, Teheran, 1271 ( $\frac{1}{2}$  and  $\frac{1}{4}$  tuman), 1272 A.H. *Presented by His Majesty the King.*

Three gold coins of Nasir al-Din Shah of Persia of Tabriz 1280, Kazwin 1270 and 1271 A.H.

Two gold Nepalese coins of Girvana Yuddha and one of Queen Siddhi Laksmi Devi (1756). *Presented by His Majesty the King.*

A gold muhr of Surendra Vikrama of Nepal (1791), quarter muhr of Queen Samrajya Laksmi (1746) and a half muhr of Rana Bahadur.

Four muhrs of the Kings of Oudh, Nasir al-Din 1248; 5; Amjad Ali 126x, and Wajid Ali 1264; 2; 1266; 3.

Two gold and silver coins of Assam, including a muhr of Gaurinatha 1706, a quarter muhr of Laksmi Sinha and a unique rupee of Candrakanta, 1742. *Presented by A. W. W. Horsbrugh, Esq.*

A gold muhr of Laksmi Sinha of Assam of the year 1693. *Presented by C. A. Robertson, Esq.*

A gold muhr of Gaurinatha Sinha of Assam, 1707.

A series of rare Afghan coins including gold mohurs of Ahmad Shah Durrani of Dera 1166 and Shahjahanabad 1173, of Timur, Peshawar 1205 and Herat 1195, of Mahmud, Ahmadshahi 1218 and Bhawalpur 1225 and Shuja al-Mulk, Kabul 1223; from the collection of the late Sir Thomas Dennehy.

#### VI.—*Students and Visitors.*

The number of visits made to the Department of Coins and Medals during the year 1920 was 2,533. The average for the last ten years before the closing of the Exhibition was 3,854. The Exhibition has been closed since July, 1919, when it was dismantled with a view to fitting the new Exhibition Room.

*George F. Hill.*



## BRITISH MUSEUM (NATURAL HISTORY).

STATEMENT of PROGRESS made in the ARRANGEMENT and DESCRIPTION of the COLLECTIONS, and ACCOUNT of OBJECTS added to them, in the year 1920.

## GENERAL PROGRESS.

*Visitors, &c.*

The total number of visitors to the Natural History Museum during 1920 was 527,701, as compared with 455,736 in 1919. This is the largest total since 1909, when the number was 535,116. The attendance on Sunday afternoons was 65,431, as against 56,673 in the previous year. The average daily attendance for all open days was 1,450; for week-days, 1,482; and for Sunday afternoons, 1,258. The number of persons who attended the demonstrations of the official Guide during the year was 14,306.

The members of the International Council for the Exploration of the Seas, which met in London in March, paid an official visit to the Natural History Museum.

The Egg-collection in the Bird-room, which was closed during the War, was re-opened to students under the usual conditions.

*The Staff.*

Dr. F. A. Bather, F.R.S., attended the Annual Conference of the Museums Association held at Winchester in July as delegate from the Natural History Museum, and Mr. M. A. C. Hinton the Congress of the Royal Sanitary Institute held at Birmingham during the same month. Sir Sidney Harmer was appointed to represent the Museum on the Executive Committee of the Society for the Preservation of the Wild Fauna of the Empire, and Mr. Percy R. Lowe on a Home Office Advisory Committee in connection with the administration of the Wild Birds Protection Acts. Permission was given to Mr. J. Ramsbottom to serve on a Committee appointed by the Army Council to advise as to processes to improve the durability of Tentage; to Mr. A. S. Hirst to accept the post of Honorary Acarologist to the London School of Tropical Medicine; and to Dr. L. J. Spencer and Mr. W. Campbell Smith to act as Examiners in Mineralogy for the Natural Sciences Tripos at Cambridge in 1921.

*Swiney Lectures.*

Dr. J. D. Falconer, Swiney Lecturer for 1920, gave a course of lectures in the Lecture Theatre of the Imperial College of Science on "The Modelling of the Earth's Crust." The total attendance for the course was 2,556, or, on an average, 213 persons per lecture.

The Trustees have accepted Dr. Falconer's suggestion to take "The Wonders of Geology" as the subject of his next course of lectures under this foundation to be given in November and December, 1921.

*Selous Memorial.*

A memorial bust to the late Captain F. C. Selous, D.S.O., was presented to the Trustees by the Selous Memorial Committee and placed on the west side of the wall facing the Central Staircase. The memorial was unveiled by Mr. E. N. Buxton, Vice-Chairman of the Memorial Committee, on June 10th, Viscount Grey of Falldon receiving it on behalf of the Trustees. It is proposed to exhibit the greater part of the Selous Collection of Big Game Trophies, presented to the Trustees by Mrs. Selous, in the corridors surrounding the Central Hall on the first floor. A catalogue of the collection is in preparation by Mr. Guy Dollman.

*New Spirit Building.*

Provision was made in the Office of Works Estimates for 1920-21 for a commencement of the work on a new building to form part of the western extension of the main building for the storage of specimens in spirit. Such a building has long been urgently necessary owing to the congestion and consequent reduced efficiency and increased risk of fire in the existing spirit building. Plans were prepared and a little preliminary work was done on the site during the year.

*Sir John Murray's Oceanographical Collection.*

Lady Murray, widow of the late Sir John Murray, K.C.B., having approached the Trustees with a view to the possible transfer to the Museum of her late husband's important Oceanographical collection, it was decided to accept the collection of Marine Deposits and Animals with the corresponding part of the Library, and portions of the collection of Microscopical Preparations and of the contents of the Chemical Laboratory.

Some difficulty arose with regard to the housing of the collection, as there was no accommodation available in the Museum, but it was finally arranged that the Trustees should have the use for the purpose of one of the temporary buildings erected as offices during the War on Museum ground at the back of the main building.

*Whaling and Sealing in Southern Waters.*

Information was received from the Colonial Office that a regulation had been issued making the period from 1st June to 15th September inclusive in each year, commencing in the season 1919-20, a close time for whaling in South Georgia. This is a matter for unmixed satisfaction as a definite step towards the protection of whales, since whaling reports and statistics give serious grounds for the belief that the supply of whales has fallen off during recent years.

Various reports and statistics were received through the High Commissioner for the Union of South Africa relating to the South African Whaling Industry for the season 1918. The total number of whales captured showed a considerable reduction on the number obtained in 1917. As compared with the figures for South Georgia and the South Shetlands, the most striking feature was the greater predominance of the Sperm Whale and the Sei Whale. The Humpback formed a very inappreciable proportion of the catch, as contrasted with the large numbers of this animal in earlier years. The Fin Whale and the Blue Whale together amounted to more than sixty per cent. of the total catch.

A satisfactory report was received from the Colonial Office with regard to sealing in South Georgia. It stated that no young seals or females were taken during the 1918 season; that arrangements were being made for obtaining, in future, reports and records of the number of seals caught during each month of the season, and that no licences had been issued in the 1919 season for that part of the coast set aside as a seal reserve.

Numerous other reports bearing on these subjects were referred by the Colonial Office to the Museum during the year, and a considerable volume of information and advice was supplied for the benefit of the authorities in the Falkland Islands and elsewhere.

#### *Other Investigations.*

Records continued to be kept of Whales and Dolphins stranded on the British Coasts, and a leaflet was prepared for the Board of Trade to aid in the recognition of those species of Cetacea which come under the designation of "fishes royal," the ownership of which is the subject of special legislation in Scotland.

Two conferences were held, under the chairmanship of the Director, with representatives of the Plumage Trade and members of the Royal Society for the Protection of Birds, respectively, to consider the actual state of affairs in regard to Egret farming in Sind and the collection of moulted Egret feathers in Venezuela. The assistance of the Museum was given to the Board of Trade on several occasions during the discussion of the Plumage Bill (1920) in Parliament.

Information was given to the Advisory Committee for Aeronautics, National Physical Laboratory, in connection with the flight of birds.

Mr. C. Tate Regan, F.R.S., prepared a report for the Colonial Office on the Fisheries of the Colonies. He also attended a conference at the Ministry of Agriculture and Fisheries to consider the development of the Fisheries of Malta.

By recent legislation the use of cocaine has been prohibited, under stringent penalties, except by certain privileged classes such as medical practitioners and pharmacists, and by others receiving special permits. The Museum was consulted by the Home Office with regard to the conditions under which excep-

tions might be made, in view of the fact that this substance is a reagent which had been in common use for the preservation of many animals which require special treatment.

As a result of an investigation undertaken in July at the request of the Royal Air Force at Halton, Buckinghamshire, Major E. E. Austen, D.S.O., of the Department of Entomology, found *Anopheles maculipennis* (a well-known malaria-carrying mosquito) breeding extensively in the canal, and to a less extent in Halton reservoir, and advised the medical authorities as to the necessary preventive measures.

Reports were received from Mr. L. R. Crawshay, who is conducting investigations in connection with the sponge fishery of the Bahama Islands, and the Colonial Office were informed that in the opinion of the Trustees a good beginning had been made with the work.

Enquiries were received from the Colonial Office with regard to fish-poisoning in the West Indies. The Museum supported the proposal for an investigation, and suggested that it should not be limited to a single locality, but should be one in which the whole of the West Indies could share and that it might profitably be undertaken in concert with the Ministry of Agriculture and Fisheries.

#### *Dinosaurian Fossils in Tanganyika Territory.*

In view of the importance of the deposits containing Dinosaurian fossils in Tanganyika Territory, partially explored by German geologists before the War, the Trustees considered the advisability of sending out an expert to continue the excavations for the benefit of the Museum. As a preliminary, Dr. E. O. Teale, Government Geologist, Tanganyika Territory, undertook to examine the fossils left behind by the Germans; to try to arrange for the packing of all that were worth sending to the Museum; and to report on the present state of the excavations, with suggestions as to the best method of following up the work.

#### *Marine Fauna of South Africa.*

The Trustees accepted an invitation to co-operate in a survey of the marine fauna of South Africa which is being undertaken by the Union Government, on the understanding that the Museum should keep the first set of specimens collected, in return for services rendered in getting the collections worked out and in distributing the material to specialists.

#### *Bequests.*

An important collection of New Zealand insects was bequeathed to the Museum by the late Major Thomas Broun, of Auckland, but it is being allowed to remain in the Dominion for a period in order to enable New Zealand entomologists to refer to it and to determine their specimens as far as possible.

The late Mrs. Emily Owen has bequeathed to the Museum a marble bust, by Wagnmüller, of her father-in-law, the late Sir Richard Owen, K.C.B., who was Superintendent of the Natural History Departments of the British Museum from 1856 to 1884.

The mounted specimens presented to the Museum during the year by the Trustees of the Rowland Ward Bequest comprised 27 mammals and birds.

*Presents.*

An offer was accepted from H.R.H. the Prince of Wales to present to the Museum the skeleton of an Arab stallion, "Dwarka," bred in the Arabian Desert by the Anazeh tribe and described as the most perfect Arab ever seen.

Mr. E. Dukinfield Jones removed all restrictions and conditions from the deed of gift, made during the previous year, of his collection of 20,000 Brazilian Lepidoptera, which thus became the absolute property of the Trustees.

Among other gifts of special importance may be mentioned those from:—

Mr. G. E. Bryant—A collection of 21,000 specimens of Coleoptera from the East Indies, Australia and South America, in addition to more than 16,000 specimens which he had presented during the previous year.

Lt.-Col. C. G. Nurse—A named collection of 9,400 specimens of Indian Hymenoptera Aculeata.

Sir George F. Hampson, Bart.—126 natural history publications and his collection of separata, &c., with notes.

Mr. G. L. Bates—A collection of 590 birds made by him in Cameroon.

Capt. G. Blaine—An important collection of African Big Game, from Angola.

H.R.H. Prince Abhakara of Chumpon—A collection of fishes, cephalopods, crustaceans, arachnids and insects from Siam, with a large series of water-colour drawings of Siamese fishes.

Mr. M. Maxwell—The skull of a Javan Rhinoceros and two frontlets, with horns, of the Javan Banteng.

Lord Brabourne—A collection of birds made near Lima, Peru, by the late Lord Brabourne.

Messrs. Johan Rasmussen og Alex. Lange of Sandefjord, Norway—Certain very interesting whale specimens from South Georgia.

The Government of the Union of South Africa—A nearly complete skeleton of a Bryde's Rorqual.

Prof. P. S. Pavlović, Director of the Natural History Museum, Belgrade—A valuable collection of about 2,500 land and freshwater shells from Serbia.

*Expedition.*

A collecting expedition to the West Coast of Africa, made by Mr. Willoughby P. Lowe, resulted in the acquisition for the Museum of 110 mammals (including two new species) and 503 birds (including five new species).

*Purchases.*

The Trustees authorised the purchase of Mrs. Elizabeth Gray's collection of some 38,000 Ordovician and Silurian fossils, to be paid for in instalments spread over three or four years.

Other important purchases made during the year include 248 birds from Cameroon; 601 birds from the United States of America; 395 birds from the Canary Islands; the Penard Collection (consisting of 706 slides) of Rhizopoda and Infusoria; 5,000 specimens of Rhynchota and Coleoptera, including 307 types, being the tenth and final instalment of the Distant collection of insects; a series of about 1,000 fossil sponges, chiefly from the Cretaceous and Jurassic of Hanover; 400 fossil corals and molluscs from the Cretaceous of Gosau, Austria; fossil cephalopods and sponges from the Trias of Timor; selections from the fossils collected round Peterborough by the late Mr. A. N. Leeds; the meteoric stone which fell near Appley Bridge, Wigan, on 13th October, 1914, being the second largest on record that has fallen in Great Britain; a collection of fragments of 74 meteorites; plants from China, Tasmania, and North America; a very fine copy of "Ortus Sanitatis," by Joannes de Cuba, 1491, the excessively rare first dated edition of the greatest mediæval cyclopædia of Natural History.

Exchanges were made with, and gifts of duplicate specimens made to, various institutions and persons.

The skeleton of the famous racehorse "Eclipse" was received from the Royal College of Veterinary Surgeons on "permanent loan" for exhibition in the Museum.

The Museum took charge, on behalf of the Colonial Office, of a collection of negatives of photographs of Nigerian Natives made by Mr. N. W. Thomas.

*Publications.*

The following new works on Natural History were published during the year:—

British Antarctic ("Terra Nova") Expedition, 1910.

Natural History Report.

Zoology. Vol. II.

No. 9. Mollusca. Pt. III. Eupteropoda (Pteropoda Thecosomata) and Pterota (Pteropoda Gymnosomata). By Anne L. Massy. Pp. 203-232: 9 text-figures. 4to. 7s. 6d.

No. 10. Mollusca. Pt. IV.—Anatomy of Pelecypoda. By R. H. Burne, M.A. Pp. 233-256: 4 plates. 4to. 8s. 6d.

Zoology. Vol. IV.

No. 3. Echinoderma (Part II.) and Enteropneusta, Larvae of Echinoderma and Enteropneusta. By E. W. MacBride, D.Sc., LL.D., F.R.S. Pp. 83-94: 2 plates (with explanations). 4to. 7s. 6d.

Monograph of the Lacertidae By G. A. Boulenger, LL.D., D.Sc., F.R.S. Vol. I. Pp. x., 352. [With Systematic Index]. 8vo. £2.

Catalogue of the Lepidoptera Phalaenae in the British Museum. By Sir George F. Hampson, Bart.:—

Supplement. Vol. II. Catalogue of the Lithosiadae (Arctianae) and Phalaenoididae. Pp. xxiii., 619: 112 woodcuts. [With Systematic and Alphabetical Indexes.] 8vo. £1 10s.

Atlas of 30 Coloured Plates (xlii.-lxxi.). 8vo. £1 12s. 6d.

Handbook of British Mosquitoes. By W. D. Lang, M.A., Sc.D. Pp. vii., 125: 132 text-figures and 5 plates. [With List of Plates, Index of Trivial Names, and List of Figures.] Roy. 8vo. £1.

Flora of Jamaica, containing descriptions of the Flowering Plants known from the Island. By William Fawcett, B.Sc., F.L.S., &c., and A. B. Rendle, M.A., D.Sc., F.R.S., F.L.S., &c.

Vol. IV. Dicotyledons. Families Leguminosae to Callitrichaceae. Pp. xv., 369: 114 text-figures. [With List of Works referred to, Conspectus of Families, Key to Families, and Index.] 8vo. £1 5s.

Summary Guide to the Exhibition Galleries of the British Museum (Natural History). [By C. Tate Regan, M.A., F.R.S.] Pp. 16: 3 plans and view of the façade. 8vo. 3d.

Economic Series:—

No. 1A.—The House Fly. Its Life-history and Practical Measures for its Suppression. By Major E. E. Austen, D.S.O. Pp. 52: 11 plates and text-figures. 8vo. 1s. 6d.

No. 11.—Furniture Beetles. Their Life-history and how to check or prevent the damage caused by the worm. By C. J. Gahan, D.Sc. Pp. 23: 1 plate, 5 text-figures. 8vo. 6d.

New editions were issued of the following pamphlets:—

Instructions for Collectors:—

No. 10.—Plants. Fifth Edition. Pp. 10: 3 text-figures. 8vo. 6d.

Economic Series:—

No. 1.—The House Fly as a Danger to Health. Its Life-history, and how to deal with it. By Major E. E. Austen, D.S.O. Third Edition. Pp. 20: 3 plates (containing 6 figures), and 5 figures in text. 8vo. 3d.

- No. 3.—Fleas as a Menace to Man and Domestic Animals. Their Life-history, Habits and Control. By James Waterston, B.D., B.Sc. Second Edition. Pp. 21: 1 plate, 6 text figures. 8vo. 4*d*.
- No. 4.—Mosquitoes and their Relation to Disease. Their Life-history, Habits and Control. By F. W. Edwards, B.A. Second Edition. Pp. 20: 6 text-figures. 8vo. 4*d*.
- No. 6.—Species of Arachnida and Myriopoda (Scorpions, Spiders, Mites, Ticks and Centipedes) injurious to Man. By S. Hirst. Second Edition. Pp. 60: 26 text-figures. 3 plates. 8vo. 1*s*.
- No. 8.—Rats and Mice as Enemies of Mankind. By M. A. C. Hinton. Second Edition. Pp. 63: 2 plates and 6 text-figures. 8vo. 1*s*.

The undermentioned works were in preparation during the year:—

“Terra Nova” Antarctic Report. Further sections, including Tanaidacea and Isopoda, by W. M. Tattersall, D.Sc.; Parasitic Protozoa, by H. M. Woodcock, D.Sc., and Miss Olive Lodge; Collembola, by Prof. G. H. Carpenter; Mallophaga, by James Waterston, B.D., B.Sc.; Fish Remains from the upper Old Red Sandstone of Granite Harbour, Antarctica, by A. Smith Woodward, LL.D., F.R.S.

Handbook of British Lichens, by Miss A. L. Smith.

Catalogue of Fossil Bryozoa:—The Cretaceous Bryozoa. Vol. III., by W. D. Lang, M.A., Sc.D.

#### GENERAL LIBRARY.

The additions to the General Library during the past year have been:—

By purchase	...	269	volumes.		
By transference from other Departments				53	maps.
By donation...	...	640	volumes, 3 maps, and 106 photographs.		
Total ...	...	<u>909</u>		<u>56</u>	<u>106</u>

All the volumes and maps have been catalogued, press-marked and put in their places, while 1,484 volumes have been bound in 464, and 415 maps mounted.

The extent of the collection on the 31st December was 48,667 volumes, 6,004 maps, and 1,211 photographs (not including those in the Owen Collection of Drawings, &c.).

The accessions to the Departmental Libraries have also been catalogued as they came in, and duplicate transcripts of the titles have been returned with the books.

Altogether 2,806 title-slips have been written, 90 rewritten, and 3,208 revised (independently of those prepared for printing).



There are now, on a rough estimate, 106,945 volumes (exclusive of continuations and minor separata) and 6,339 maps in the whole building.

The number of visits paid to the General Library during the year by Students and others (irrespective of the Staff and persons to whom the use of a key is granted) was 1,585.

Donations have been received from a great number of Museums, Academies and other corporate bodies, as well as from personal donors.

The printing of the Supplement to the Library Catalogue has been continued, title-slips to the middle of "GUËN" have been set up in type, and printed off as far as "GREG," and the first four sheets of the "Addenda and Corrigenda" have also been printed off.

#### INDEX TO THE GENERA AND SPECIES OF ANIMALS.

During 1920 work has proceeded satisfactorily, and upwards of 25,000 references have been added to the manuscript.

After thirty years' work every book referring to Zoology (published before 1851) in the libraries of the British Museum (Natural History), of the British Museum and all the scientific societies of London, Oxford, Cambridge, Manchester, &c., have been collated and indexed. There remain some 1,000 volumes of serials yet to be dealt with, and about 150 volumes not in England, which have been referred to by systematists.

A start has already been made towards the preparation for press by lexicographically sorting the slips preparatory to editing, and it is hoped that the "Introduction," "Bibliography," and letter "A" will be ready for the printer by July, 1921.

Valuable help has been afforded Mr. Sherborn by correspondents, in Zürich, Berlin, Vienna, Dijon, Poitiers, New York, Washington, &c., who not only carried out the work personally, but also in such form as to be of permanent value to the libraries under the charge of the Trustees.

#### INDEX MUSEUM AND MORPHOLOGICAL COLLECTIONS.

All the dissections exhibited in the Index Museum have been examined during the course of the year, and where necessary have been cleaned, re-spirited or re-sealed.

A new case has been placed on exhibition in the Hall, to illustrate the connection between Tsetse-Flies and Sleeping Sickness. It contains a greatly enlarged model (the work of Mr. A. J. Engel Terzi) of the tsetse-fly, *Glossina palpalis*, the chief transmitter of this disease, together with actual specimens. Enlarged coloured drawings showing the fly in its characteristic resting position, its attitude while sucking blood, and the armature of the piercing proboscis as compared with other flies, are also exhibited. The case further includes models of the infective parasite *Trypanosoma gambiense*, as well as drawings of Trypanosomes from the saliva and gut of the transmitting tsetse-fly. A series of photographs of "habitats" of *Glossina palpalis*, and

a map of distribution of the species are also shown. The work in connection with this case was carried out with the help of Major E. E. Austen, D.S.O. (Entomological Department).

The original models illustrating the life-history of the malarial parasite have been replaced by a better series, which was exhibited at the Ghent Exhibition in 1913. Opportunity was taken at the same time to change the old and faded labels for new ones.

Captain Sir David Wilson-Barker's observations on the flight of the Albatros have been illustrated by a chart (including detailed and explanatory labelling) which has been framed and placed on exhibition in Bay III.

The labels of the Schistosomiasis (Bilharziasis) exhibit in the Hall have been revised, and a drawing has been inserted in the series to replace a vague and over-exposed photograph.

The Amphioxus case in Bay V. has also been thoroughly overhauled and renovated.

The preparation of an Index-series, to serve as a general introduction to the contents of the Museum, has occupied much time. The first case, containing part of this series, should soon be ready to be placed in the Central Hall.

*Sidney F. Harmer,*  
Director.

British Museum (Natural History),  
1st April, 1921.

## DEPARTMENT OF ZOOLOGY.

## I.—Arrangement and Conservation.

## MAMMALIA.

*Mammal Galleries.*

Considerable progress has been made with the Exhibition of the collection of Big Game Trophies shot by the late Captain F. C. Selous, D.S.O., and presented by Mrs. Selous in 1919. More than half the Collection has been placed in position on the Walls of the South, East, and West Corridors. Wooden screens have been prepared for fixing into the windows of the East Corridor; as soon as these screens are in position the remainder of the Collection will be exhibited on them. The finest of the Kudu heads has been placed over the Selous Memorial, and another in a corresponding position on the other side of the Wall. The heads of the two largest Moose in the Collection are exhibited over the arches under the main staircase. The whole Collection has been registered and labelled and the preparation of special exhibition labels is now being undertaken. A Catalogue of this Collection has been prepared and will shortly be ready for press.

The central case in the Upper Mammal Gallery has been repainted and the specimens rearranged. Other than this no special alterations in the arrangement of the Mammal Galleries have been made, and work has been confined in the main to the installation of new specimens and the rewriting and printing of such labels as required modification in order to bring them up to date. The Sunscreens of the windows in the West Corridor have been renewed, the screens being placed inside the windows, instead of outside as formerly.

The additions to the exhibited series in the Mammal Galleries and Corridors include many specimens presented by the Rowland Ward Trustees, among them:—In the Primates: 2 Elliot's Colobus Monkeys (*Colobus ellioti*), a Black Guereza (*Colobus satanas*), 2 Dent's Guenons (*Cercopithecus denti*), a Stuhlmann's Guenon (*Cercopithecus leucampyx stuhlmanni*), and an Ituri Mangabey (*Cercocebus albigena ituricus*). In the Carnivora: a Caracal (*Felis caracal*), an Indian Wild Dog (*Cuon dukhunensis*), a Maned Wolf (*Chrysocyon jubatus*), and a Cape Hunting Dog (*Lycan pictus*). In the Rodentia: a West African Scaly-tail (*Anomalurus erythronotus*), and an Ituri Scaly-tail (*Anomalurus pusillus*). In the Ungulata: 2 Mongalla Gazelles (*Gazella albonotata*), 2 Angolan Springbucks (*Antidorcas marsupialis centralis*), a Sudan Bushbuck (*Tragelaphus scriptus bor*), an Angolan Duiker (*Cephalophus grimmi splendidulus*), a young Yellow-backed Duiker (*Cephalophus sylvicultrix*), a Mrs. Gray's Waterbuck (*Kobus maria*), and an Angolan Gemsbuck (*Oryx gazella*). In the Edentata: A Tamandua Anteater (*Tamandua tetradactyla*), a Giant Pangolin (*Manis gigas*), and a Pigmy Armadillo (*Chlamyphorus truncatus*). In the Marsupialia: an

Australian Opossum (*Trichosurus vulpecula*), a Philander Opossum (*Philander lanigera cicur*), a Tree Kangaroo (*Dendrolagus lumholtzi*), a Black-gloved Wallaby (*Macropus irma*), and a Rabbit-eared Bandicoot (*Thalacomys lagotis*).

Other additions to the Mammal Galleries include a fine male specimen of Varian's Sable Antelope (*Hippotragus niger variani*), presented by Captain H. F. Varian; a mounted specimen of the Angolan Mountain Zebra (*Equus zebra hartmannæ*), presented by Captain Gilbert Blaine; a mounted head of a Shou (*Cervus affinis*), presented by Mrs. Claude White; a mounted specimen of a young Harp Seal (*Phoca grænländica*), presented by Miss E. M. Balston; 22 mounted heads and horns, including 3 heads of the Astor Markhor (*Capra falconeri falconeri*), and a Kashmir Barasingha (*Cervus cashmirensis*), shot by the late Mr. Martyn Kennard and presented by the Right Hon. Cora Countess of Strafford; the skull of a Javan Rhinoceros (*Rhinoceros sondaicus*) with horn of record length, 2 pairs of horns of the Javan Banting (*Bibos banteng*), and antlers of a Sangnai (*Rucervus eldi*), presented by M. Maxwell, Esq.; a mounted head of a Mongalla Gazelle (*Gazella albonotata*), presented by P. Haig Thomas, Esq.; 5 pairs of horns, including those of a Wild Goat (*Capra hircus ægagrus*), presented by Brigadier-General J. Marriott, C.B.E., M.V.O., D.S.O.; a mounted specimen of a young East African Klipspringer (*Oreotragus oreotragus aureus*), presented by Lieut. Commander J. de B. Jessop, D.S.O., R.N.; the skull of an Indian Buffalo (*Bubalus bubalis macroceros*) with horns of nearly record length, shot and bequeathed by the late Mr. Arthur Forbes, I.C.S., C.S.I.; 17 mounted specimens, heads, and horns, including a mounted Red Sea Ibex (*Capra nubiana nubiana*), presented by His Highness Prince Demidoff; 8 skulls with horns of the Barren Ground Caribou (*Rangifer tarandus arcticus*), presented by the Sabellum Trading Company, Limited; 12 mounted heads of African Antelopes, including 2 Red-fronted Gazelles (*Gazella rufifrons lævipes*) and 2 Sudan Reedbucks (*Redunca redunca cottoni*), presented by C. E. Russell, Esq., and a Hyrax (*Procavia goslingi*) presented by A. W. Cardinal, Esq.

An interesting donation, in the form of 2 old-fashioned Sporting Rifles (8 and 12 bore), was received from Brigadier-General J. Marriott, C.B.E., M.V.O., D.S.O.

One of the most important purchases made during the year was an exceptionally large and well-preserved tusk of a Mammoth (*Elephas primigenius*) from Grand Liakhovsky, New Siberian Islands, collected in 1907-08 by the Count Alexander Steinbok-Ferron Geographical Expedition.

*Study series.*—The usual work of labelling, registering, and incorporating the mammals added to the collection, and of skull cleaning has been continued.

The collection of American Muridæ and a large part of the skull collection have been re-arranged.

The Department is again indebted to volunteer helpers for much valuable assistance. The following should be especially

mentioned in this connection:—Mr. R. C. Wroughton, Mr. T. B. Fry, Captain P. S. Kershaw, Mr. Hugh Smith, Miss W. M. Davidson, and Miss A. Grasemann.

Mr. R. C. Wroughton, with the assistance of Mr. T. B. Fry, Miss W. M. Davidson and Miss A. Grasemann, has worked out the various collections received from the Bombay Natural History Society's Mammal Survey of India and has published reports on them. Mr. Wroughton, with the same help, has again been engaged upon the preparation of a list of the types in the collection. This list already affords most valuable assistance in carrying on the work of the department; and it has now been completed for the orders Primates and Rodents.

The arrangement of the skeleton collection has made progress, but more cabinets are much needed. A number of Cetacean skeletons have been added, and numerous casts of heads, blow-holes and valves, and of paddles of various Cetaceans have been made.

#### DOMESTICATED ANIMALS.

The most noteworthy addition to the Collection of Domesticated Animals is the skeleton of the famous Thoroughbred Stallion "Eclipse," which the Trustees have accepted on permanent loan from the Royal College of Veterinary Surgeons, London. Eclipse was bred by the Duke of Cumberland in 1764 and died in 1789. He was never beaten, and during his two years' turf career was the winner of 18 races.

The additions by presentation to the series of Domesticated Animals include the following:—A mounted specimen of a German breed of Pointer, presented by Captain J. Hamilton Leigh; a Tibetan Spaniel, presented by Mrs. Wilmot Corfield; a Toy Trawler Spaniel, presented by Captain A. W. F. Fuller; a Pekinese Spaniel, presented by Mrs. L. Raymond Mallock; a Fancy Rat, presented by Ralph Blake, Esq.; 3 Fancy Rats, presented by H. C. Brooke, Esq.; a Belgian Bearded Bantam Hen, presented by Richard Terrot, Esq.; a Racing Pigeon (holder of the World's record for speed), presented by Dr. M. E. Tresidder; and a Linnet-Canary hybrid, presented by Messrs. Martin and Archer.

#### AVES.

In the Exhibition Gallery a start has been made in the re-arrangement and remounting of the various families of Passerine Birds. The following groups have been recently completed:—Pycnonotidae, Timeliidae, Troglodytidae, Cinclidae, Mimidae and Turdidae.

During the year the mounted specimens in every wall-case have been thoroughly cleaned and overhauled, as also the nesting group series.

In the Bird Room, the Paridae, Sittidae, Certhiidae, Regulidae, Motacillidae, Alaudidae, Podicipidae, and Limicolae, besides various independent genera, have been revised and re-arranged according to the latest views of systematists.

Owing to the war a large number of collections had accumulated since 1914. Most of these have now been determined, registered and incorporated. The egg-collection, which was closed during the war by order of the Trustees, has now been reopened to students.

Card-indexes of the Ornithological literature of geographical units, of authors, of groups, and of species in the collection have been initiated. Cabinets are still urgently required for the very necessary work of expansion of the collection.

Valuable assistance in the arrangement of the Collection and the determination of accessions has been given by Mr. C. W. Mackworth Praed and others.

Mr. W. L. Selater has made a revision of the Birds of Prey and has prepared a manuscript catalogue of the group. Captain H. Lynes, C.B., R.N., has worked out the valuable collections made on his expeditions to Darfur and presented by him to the Museum. Mr. D. A. Bannerman has continued his work on the Birds of West Africa, and Mr. C. Chubb has worked at the South American Birds, and has also continued the list of type specimens in the Collection.

#### REPTILIA AND BATRACHIA.

All additions have been registered and incorporated in the Collection, and the work of renewing spirit and replenishing jars has been proceeded with as usual.

The Lataste Collection has been catalogued separately, and the spirit specimens have been allowed to remain in their original sealed jars.

Since the retirement of Mr. G. A. Boulenger, F.R.S., the work in this section of the Department has been carried on by Miss Joan B. Procter. Dr. Malcolm Smith has worked out the extensive collection of Reptiles and Batrachians from Siam and Annam which he has now presented to the Museum.

#### PISCES.

All the accessions have been determined, registered and incorporated. The work of respiriting the collection has been continued.

Extensions of the Gallery in the Spirit Building have been made, and will accommodate 24 cases, which will relieve the congestion of a small part of the collection; the urgent necessity for a new Spirit Building still remains.

The taxidermist has been chiefly engaged in making casts and models from spirit specimens.

#### MOLLUSCA.

In the Shell Gallery 113 of the cabinets have been overhauled and, in many cases, rearranged. A number of surplus fuzes were purchased from the Disposal Board (Ministry of Munitions), and it is proposed to cut these in two and use the halves as end-weights for the loose series of boxes in order to keep them in position and obviate damage.

Mr. G. K. Gude has continued his rearrangement of the exhibited series of *Helicidae*. Work on the collections has been greatly facilitated by extra assistance, which has been partly voluntary, given by Mr. J. R. le B. Tomlin and Lieut.-Col. A. J. Peile. These gentlemen are responsible for the following work: Systematic rearrangement and cataloguing of the Marginellidae and Mactridae and of the Gwatkin collection of radulae, study and determination of collections from Antigua, Bermuda, the Mediterranean and other localities.

The arrangement and preparation of the Blanford and Godwin-Austen Collection of Oriental Land Mollusca have been continued by Lieut.-Col. H. H. Godwin-Austen, F.R.S.

General collections from Peru, Zanzibar, Florida, Syria, and from a Neolithic shell-mound in Trinidad (W.I.) have been determined and reported upon.

A beginning has been made of a card-index of Mollusca, with references to bionomic, distributional and other data.

A card-index of all accessions has been started, and the similar index of microscopic preparations made in 1919 has been rearranged upon a new plan.

In the Spirit Building the work of replenishing the jars and bottles has been continued, and concurrently with this a generic catalogue of spirit material is in course of preparation.

#### MYRIOPODA AND ARACHNIDA.

A number of large drawings of Mites and Ticks injurious to man and domestic animals have been mounted and are now exhibited on the wall in the Insect Gallery.

Considerable progress has been made with a manuscript list of the species of Myriopoda and Arachnida in the Collection.

#### CRUSTACEA AND PYCNOGONIDA.

Some accessions of more than usual interest have been dealt with, notably a small collection comprising several new or little-known species from the South Orkney Islands. All the spirit preparations exhibited in the Gallery have been inspected and a considerable number refilled or remounted. In the spirit collection bottles urgently requiring refilling have been attended to. The registration of the Norman collection, which has been in progress since 1911, has at length been completed, a total number of 53,611 specimens having been registered. A larger number of specialists than usual have consulted the collections during the year, and the Museum has profited by their determination of unnamed or wrongly-named specimens.

#### ECHINODERMA.

All accessions have been registered and incorporated.

Fourteen specimens of Holothurians exhibited in the Starfish Gallery have been remounted.

#### WORMS.

Accessions have been, as far as possible, determined and registered. Special attention has been given to the revision of certain

groups of Nematoda, the series of Gnathostomidae having been much improved, and certain sections of the Ascaridae worked over with a view to their more accurate determination and systematic arrangement. The determinations of many other specimens in the old collection have also been checked or revised; some of these specimens bear labels on the outside of the bottles, which have become almost illegible from fading and discoloration; in such cases the original data have been copied on to inside labels so that they may be more permanently preserved.

#### BRACHIOPODA.

A beginning has been made of the determination of unnamed forms in the collection. Mr. J. W. Jackson has kindly undertaken the study of this material.

#### COELENTERATA.

The study collection of Hydroida has been respired throughout, and the Norman collection sealed in addition. Two hundred microscopical preparations of Hydroida have been made and incorporated in the study slide collection.

Several small collections have been determined, catalogued and incorporated.

The study collection of dry Fungid corals has been reviewed and rearranged, many undetermined specimens having been named.

#### PORIFERA.

All accessions have been determined and incorporated and the respiring of the collection has been carried on.

### II.—*Duplicates and Exchanges.*

#### (a) *Duplicates.*

Duplicates have been distributed to museums, scientific institutions and individuals as follows:—

*Mammalia*.—Goeldi Museum, Para; Dr. A. Cabrera.

*Aves*.—Boy Scouts' Association; National Museum of Wales, Cardiff.

*Batrachia*.—American Museum of Natural History, New York.

*Pterobranchia*.—National Museum, Dublin.

*Mollusca*.—National Museum of Wales, Cardiff; Prof. J. H. Ashworth, F.R.S.; Mr. P. J. Barraud; Lt.-Col. A. J. Peile; Mr. J. R. Le B. Tomlin; Mr. G. A. Williamson.

*Crustacea*.—Indian Museum, Calcutta; Prof. E. L. Bouvier; Mr. Th. Delachaux; Mr. R. Gurney; Dr. B. Parisi; Dr. W. M. Tattersall.

*Arachnida* and *Myriopoda*.—Eton College Museum.

*Echinoderma*.—Prof. W. K. Fisher; Dr. T. Mortensen; Mr. W. K. Spencer.

*Worms*.—Mr. G. A. Williamson.

*Protozoa*.—Prof. W. J. Sollas, F.R.S.



(b) *Exchanges.*

Exchanges have been made with the following museums and individuals:—

*Miscellaneous.*—Prof. A. Dendy, F.R.S.

*Mammalia.*—Madrid Museum; Perth Museum, Western Australia; Frère Apollinaris-Maria.

*Reptilia.*—Mr. A. Loveridge.

*Pisces.*—Prof. C. H. Eigenmann.

*Mollusca.*—Mr. S. S. Berry; Commander F. H. Fitzroy; Mr. G. K. Gude; Mr. A. W. Stelfox.

*Echinoderma.*—Dr. Th. Mortensen.

*Polyzoa.*—Dr. M. J. Barroso.

*Coelenterata.*—Prof. Max Weber.

III.—*Departmental Library.*

The acquisitions to the Library of the Departments of Zoology and Entomology, including the Walsingham Library, obtained by purchase, presentation and exchange during the year, consist of 81 separate works and pamphlets in 107 volumes, and 1,982 parts of periodicals and works in progress.

Two hundred and thirty-two volumes have been bound, including those belonging to the Walsingham Library.

The work of collating, stamping, press-marking and entering all additions in the Catalogue has been performed as usual.

All the entries of Zoological Works in the portion of the General Catalogue of Books which has been printed during the year have been checked.

The following acquisitions are worthy of special mention:—

Mathews, G. M. *The Birds of Australia*. Vol. VIII., pts. 1-5; and Supplement No. 1. *Presented by G. M. Mathews, Esq.*

Oberthür, Ch. *Etudes de Lépidoptérologie comparée*. Fasc. xvii. Text and Pls. *Presented by Monsieur Ch. Oberthür.*

Rusconi, M. *Histoire naturelle, développement et métamorphose de la Salamandre terrestre* . . . ouvrage posthume publié par . . . J. Morganti. fol. Pavie, 1854. Purchased.

Latham, J. [Six volumes of original water-colour drawings upon which Latham founded the descriptions in his "General Synopsis of Birds" and "Index Ornithologicus," containing many figures of birds that formed the types of Latham's species.] Purchased.

The following is a list of Donors to the Departmental Library during the year 1920:—

Agricultural Adviser, Government of India, Pusa, Behar, British India.

Agricultural and Mechanical College, Mississippi, U.S.A.

Agricultural Research Institute, Pusa, Behar, British India.

Austen, Major E. E., D.S.O.

Avicultural Society.

Bannerman, D. A.

- Barbero, Dr. Andrés.  
 Barnes, Dr. W.  
 Baylis, H. A.  
 Boscà Seytre, Prof. A.  
 Boutan, L.  
 British Ornithologists' Union.  
 British Waterworks Association.  
 Bureau of Fisheries, Department of Commerce, Washington,  
 U.S.A.  
 Calderón, V. M.  
 Carazzi, Prof. D.  
 Casey, T. L.  
 Coastguards and Fisheries Service, Cairo, Egypt.  
 Conchological Society of Great Britain and Ireland.  
 Conseil permanent International pour l'Exploration de la Mer.  
 Cooper Ornithological Club, California.  
 Dehaut, E. G.  
 Department van Landbou, Nijverheid en Handel, Buitenzorg,  
 Java.  
 Department of Agriculture, Edmonton, Alberta, Canada.  
 Department of Agriculture, Federated Malay States.  
 Department of Agriculture, Fiji.  
 Department of Agriculture, Madras.  
 Department of Agriculture, New South Wales.  
 Department of Agriculture, Ottawa, Canada.  
 Department of Agriculture, Regina, Saskatchewan.  
 Department of Agriculture, South Australia.  
 Department of Agriculture, Union of South Africa.  
 Department of Agriculture, Victoria, Australia.  
 Department of Agriculture, Washington, D.C., U.S.A.  
 Department of Fisheries, New South Wales.  
 Director of Agriculture, Manila, P.I.  
 Dixon, W.  
 Doello-Jurado, M.  
 Dognin, P.  
 Donisthorpe, H.  
 Edwards, F. W.  
 Eecke, R. van.  
 Entomological Society of London.  
 Entomological Society of Nova Scotia.  
 Entomological Society of Ontario, Canada.  
 Ewart, Prof. J. Cossar., M.D., F.R.S.  
 "Field," Editor of.  
 Fisheries Department, Madras.  
 Fishery Board for Scotland.  
 Foreign Bird Club.  
 Fraser, C. McLean.  
 Godwin-Austen, Lt.-Col. H. H., F.R.S.  
 Government Publications Office, Cairo, Egypt.  
 Gray, Dr. R. W.  
 Guérin-Ganivet, Dr. J. E.  
 Hamlyn, J. D.

- Hawaiian Sugar Planters' Association, Honolulu.  
 Herdman, Prof. W. A., C.B.E., F.R.S.  
 Imperial Bureau of Entomology.  
 Imperial Department of Agriculture, Bridgetown, Barbados.  
 Imperial Department of Agriculture, India.  
 Imperial Museum, Tokyo.  
 Indian Museum, Calcutta.  
 Indian Research Fund Association, Simla, India.  
 Iredale, T.  
 Janse, A. J. T.  
 Junta para Ampliacion de Estudios, Madrid.  
 Kaburaki, T.  
 Kansas State Agricultural College.  
 Koeniglich Ungarisches Ornithologisches Institut, Budapest.  
 Kommissionen for Havundersogelser, Kobenhavn.  
 Laboratorio di Zoologia Generale e Agraria della R. Scuola  
 d' Agricoltura in Portici.  
 Linnean Society of London.  
 Lord, C. E.  
 Lucas, Dr. F. A.  
 McClymont, J. K.  
 McGregor, R. C.  
 Marine Biological Association, Plymouth.  
 Mathews, G. M.  
 Ministry of Agriculture and Fisheries.  
 Ministry of Public Works, Cairo, Egypt.  
 Museum of Comparative Zoology, Harvard College, Cambridge,  
 Mass.  
 Naef, Dr. A.  
 Navás, R. P. Longinos, S. J.  
 Oberthür, Ch.  
 Paganetti-Hummler, G.  
 Penard, E.  
 Provincial Secretary, Province of British Columbia, Canada.  
 Public Health Service, United States Treasury Department.  
 Redfield, C. L.  
 Regia Università di Palermo.  
 "Revista de Agricultura"; Sao Paulo; Director-Redactor.  
 Reynell, A.  
 Rockefeller Foundation, New York.  
 Rothschild, Hon. N. C.  
 Royal Society for the Protection of Birds.  
 Scherdlin, P.  
 Schmidt, K. P.  
 Schwetz, J.  
 Sclater, W. L.  
 Scott, H. H.  
 Secretary of State for India.  
 Sherborn, C. D.  
 Shiraki, Dr. T.  
 Smithsonian Institution, Washington, D.C., U.S.A.  
 Société Entomologique de France.

State Museum, University of Washington.  
 Stationery Office.  
 Stempell, Dr. W.  
 Sund, O.  
 Superintendent of Government Printing, India.  
 Swann, H. Kirke.  
 Tattersall, Dr. W. M.  
 Tropical Diseases Bureau, London.  
 Tufts College, Mass., U.S.A.  
 Under-Secretary of State for the Colonies.  
 University of Cornell.  
 University of Illinois, Agricultural Experiment Station.  
 University of Pennsylvania.  
 Zoological Museum, Copenhagen.  
 Zoological Society of London.  
 Zoological Society of New York.  
 Zoological Society of Philadelphia.  
 Zoological Society of Tokyo.

#### IV.—*Publications.*

In addition to the official catalogues and other volumes published by the Trustees (see p. 92), the following reports and descriptive papers, based on the collections, have been published:—

##### **Mammalia.**

By OLDFIELD THOMAS, F.R.S.:—

- “Scientific Results from the Mammal Survey, No. XXI.”  
 Journ. Bombay Nat. Hist. Soc., xxvi., p. 933.
- “Two new species of *Sylvilagus* from Colombia.” Ann.  
 Mag. Nat. Hist. (9) v., p. 31.
- “A new Shrew and two new Foxes from Asia Minor.” *Ib.*,  
 p. 119.
- “The generic positions of ‘*Mus*’ *nigricauda*, Thos., and  
*woosnami*, Schwann.” *Ib.*, p. 140.
- “A new *Taphozous* from the Soudan.” *Ib.*, p. 142.
- “A new Marmoset from the Peruvian Amazons.” *Ib.*,  
 p. 134.
- “A further collection of Mammals from Jujuy.” *Ib.*,  
 p. 188.
- “Some notes on *Babirussa*.” *Ib.*, p. 135.
- “Two new Asiatic Bats of the genera *Tadarida* and *Dyacop-  
 terus*.” *Ib.*, p. 283.
- “Four new Squirrels of the genus *Tamiops*.” *Ib.*, p. 304.
- “On Neotropical Bats of the genus *Eptesicus*.” *Ib.*, p. 360.
- “New species of *Reithrodon*, *Abrocoma* and *Scapteromys*  
 from Argentina.” *Ib.*, p. 473.
- “A new Fat-tailed Gerbil (*Pachyuromys*) from Western  
 Algeria.” *Novitates Zoologicae*, xxvii., p. 313.
- “Scientific Results from the Mammal Survey, No. XXII.”  
 Journ. Bombay Nat. Hist. Soc., xxvii., p. 25.

- “*Notoryctes* in North-west Australia.” *Ann. Mag. Nat. Hist.* (9), vi., p. 111.
- “A new genus of *Echimyinae*.” *Ib.*, p. 113.
- “On Mammals from near Tinogasta, Catamarca, collected by Señor Budin.” *Ib.*, p. 116.
- “A new Tuco-tuco from Tucuman.” *Ib.*, p. 243.
- “On Mammals from the Lower Amazons in the Goeldi Museum, Para.” *Ib.*, p. 266.
- “On small Mammals from the Famatina Chain, North-western Rioja.” *Ib.*, p. 417.
- “On Mammals from Ceram.” *Ib.*, p. 422.
- “New small Mammals from New Guinea.” *Ib.*, p. 533.
- “A note on the type-locality and geographical races of the Gundi (*Ctenodactylus gundi*, Rothm.)” *Novitates Zoologicae*. xxvii., p. 506.

By OLDFIELD THOMAS, F.R.S., and MARTIN A. C. HINTON:—

- “On the group of African Zorils represented by *Ictonyx libyca*.” *Ann. Mag. Nat. Hist.* (9), v., p. 367.
- “Captain Angus Buchanan’s Air Expedition. 1. On a series of small mammals from Kano.” *Novitates Zoologicae*. xxvii., p. 315.

By MARTIN A. C. HINTON:—

- “Scientific Results from the Mammal Survey, No. XVIII., Report on the House Rats of India, Burma and Ceylon, Part IV.” *Journ. Bombay Nat. Hist. Soc.*, xxvi., p. 906.
- “Three new sub-species of *Spalax monticola*.” *Ann. Mag. Nat. Hist.* (9), v., p. 312.
- “The sub-species of *Paraxerus flavivittis*, Peters.” *Ib.*, 308.
- “The Irish Otter.” *Ib.*, p. 464.
- “The species of *Pedetes* inhabiting Angola.” *Ann. Mag. Nat. Hist.* (9), vi., p. 102.
- “Three new Mammals from Northern Rhodesia.” *Ib.*, p. 239.
- “Note on the Duikers hitherto referred to *Cephalophus maxwelli*.” *Ib.*, p. 529.

By MARTIN A. C. HINTON and P. S. KERSHAW:—

- “On a collection of Mammals from the Dinka Country, Bahr-el-Djebel.” *Ib.*, p. 94.

By R. C. WROUGHTON:—

- “Summary of the Results from the Indian Mammal Survey of the Bombay Natural History Society.”  
Part V.—*Journ. Bombay Nat. Hist. Soc.*, xxvi., p. 955.  
Part VI.—*Op. cit.*, xxvii., p. 57.  
Part VII.—*Ib.*, p. 301.

By R. C. WROUGHTON and WINIFRED M. DAVIDSON:—

- “Bombay Natural History Society’s Mammal Survey of India, Burma and Ceylon. Report No. 30, Dekhan, Poona District and No. 31, Nilgiris.” *Journ. Bombay Nat. Hist. Soc.*, xxvi., p. 1025.

By R. C. WROUGHTON and MAJOR R. E. CHEESMAN:—

“A new species of *Mellivora* from Somaliland.” *Ann. Mag. Nat. Hist.* (9), v., p. 197.

**Aves.**

By N. B. KINNEAR:—

“A new form of Nuthatch from Burma.” *Bull. B.O.C.*, xl., p. 142.

By C. CHUBB:—

“Descriptions of new forms of South and Central American birds.” *B.O.C.*, xl., p. 73.

“Descriptions of new genera and new sub-species of South and Central American birds.” xl., p. 107.

“Descriptions of South American birds.” xl., p. 155.

By D. A. BANNERMAN:—

List of the Birds of the Canary Islands, with detailed reference to the Migratory Species and the Accidental Visitors. Part V. *Ibis*, 1920, pp. 97–132, 323–360, 519–569, pls. xv. and xvi. and sketch-map.

A Review of the African *Dicruridæ* in the British Museum. *Ibis*, 1920, pp. 439–445.

**Reptilia and Batrachia.**

By G. A. BOULENGER, F.R.S.:—

“A Monograph of the American Frogs of the genus *Rana*.” *Proc. Amer. Acad. Arts Sci. Boston.* lv. (9), p. 413.

“A Monograph of the South Asian, Papuan, Melanesian and Australian Frogs of the genus *Rana*.” *Rec. Ind. Mus.* xx., p. 1.

“A List of the Snakes of West Africa from Mauritania to the French Congo.” *Proc. Zool. Soc.* 1919, p. 267.

“A List of the Snakes of North Africa.” t.c., p. 299.

“Descriptions of two New Frogs from Brazil.” *Ann. Mag. Nat. Hist.* (9), v., p. 122.

“Descriptions of a New Gecko and a New Snake from Sumatra.” t.c., p. 281.

“Descriptions of three New Frogs in the Collection of the British Museum.” *Ib.*, vi., p. 106.

“Descriptions of Four New Snakes in the Collection of the British Museum.” t.c., p. 108.

“Description of a New Snake of the genus *Contia* B. and G., from Persia.” *Journ. Bombay Nat. Hist. Soc.* 1920, p. 1.

“Reptiles and Batrachians Collected in Korinchi, W. Sumatra, by Messrs. H. C. Robinson and C. Boden Kloss. *Journ. Fed. Malay Mus.*, viii., p. 286.

“Observations sur un Batracien Urodèle d'Asie.” *Bull. Soc. Zool. Paris.* 1920, p. 98.

“Une tortue extraordinaire: *Testudo loveridgii*, sp. n.” *C. R. Acad. Sci. Paris.* 170, p. 263.

“Sur le Gavial fossile de l'Omo.” *Ib.*, p. 913.

By JOAN B. PROCTER:—

“On the variation in the number of Dorsal Scale-rows in our British Snakes.” Proc. Zool. Soc. 1919, p. 357.

“On a collection of tailless Batrachians from East Africa made by Mr. A. Loveridge in the years 1914–1919.” *Ib.*, 1920, p. 411.

“On the type-specimen of *Rana holsti* Boulenger.” t.c., p. 421.

By ARTHUR LOVERIDGE:—

“Notes on East African Lizards collected in 1915–1919, with descriptions of a new genus and species of Skink, and a new sub-species of Gecko.” Proc. Zool. Soc. 1920, p. 131.

### Pisces.

By G. A. BOULENGER, F.R.S.

- Poissons recueillis au Congo Belge par l'expédition du Dr. C. Christy. Ann. Mus. Congo. Zool. Ser. 1, vol. ii., Fasc. 4.

By C. TATE REGAN, M.A., F.R.S.:—

The Classification of the Fishes of the Family Cichlidæ.—  
1. The Tanganyika Genera. Ann. Mag. Nat. Hist. (9), v., p. 33.

A new Cichlid Fish of the Genus *Limnochromis*. t.c., p. 152.

A Revision of the African Cichlid Fishes of the Genus *Tylochromis*. t.c., p. 163.

Freshwater Fishes from Madagascar. t.c., p. 419.

Three new Fishes from the Tanganyika Territory. *Ib.* vi., p. 104.

A Revision of the Flatfishes (Heterosomata) of Natal. Ann. Durban Mus. ii., p. 205.

Fishes collected in Korinchi, West Sumatra, by Messrs. H. C. Robinson and C. Boden Kloss. Journ. Fed. Malay States Mus. viii., p. 307.

### Mollusca.

By W. T. CALMAN, D.Sc., F.R.S.:—

“Notes on Marine Wood-boring Animals.—1. The Shipworms (Teredinidæ).” Proc. Zool. Soc. 1920, p. 391.

By G. C. ROBSON, B.A.:—

“On the anatomy of *Paludestrina jenkinsi*.” Ann. Mag. Nat. Hist. (9), v., p. 425.

“Observations upon the succession of *Paludestrina ulvæ* and *ventrosa* in brackish water.” Ann. Mag. Nat. Hist. (9), vi., p. 525.

By HUGH WATSON, M.A.:—

“The anatomy of two species of *Helicarion* from tropical Africa.” Proc. Malac. Soc. xiv., p. 91.

**Arachnida.**

By A. S. HIRST:—

“Revision of the English Species of Red Spider (Genera *Tetranychus* and *Oligonychus*).” Proc. Zool. Soc. July, 1920, p. 49.

“Notes on Acari parasitic on Birds, with descriptions of Two new Species.” Ann. Mag. Nat. Hist. (9), vi., p. 121.

**Crustacea and Pycnogonida.**

By W. T. CALMAN, D.Sc., F.R.S.:—

“A new crab of the genus *Sesarma* from Basra.” Ann. Mag. Nat. Hist. (9), v., p. 62. \*

“A whale barnacle of the genus *Xenobalanus* from Antarctic Seas.” *Op. cit.* (9), vi., p. 165.

“On a collection of Pycnogonida from the South Orkney Islands.” *Ib.*, p. 244.

“A new species of the Isopod genus *Serolis*.” *Ib.*, p. 299.

“Cumacea of the Canadian Arctic Expedition, 1913–1918.” Rep. Canad. Arct. Exped., vii., pt. c.

By OSCAR SUND:—

“The ‘Challenger’ Eryonidea.” Ann. Mag. Nat. Hist. (9), vi., p. 220.

**Platyhelminthes and Nematelminthes.**

By H. A. BAYLIS, M.A.:—

“Observations on the Genus *Crassicauda*.” Ann. Mag. Nat. Hist. (9) v., p. 410.

“*Oxyuris paronai* v. Linst., and its Association with another Oxyurid in the same Host.” Ann. Mag. Nat. Hist. (9), vi., p. 123.

“Notes on some Parasitic Worms from East Africa.” *Ib.*, p. 283.

“A new Siamese Nematode of the Genus *Falcaustra*.” *Ib.*, p. 408.

“On the Classification of the Ascaridæ.—1. The Systematic Value of certain Characters of the Alimentary Canal.” Parasitology, xii., 3, p. 253.

By H. A. BAYLIS, M.A., and LT.-COL. CLAYTON LANE, M.D.:—

“A Revision of the Nematode Family Gnathostomidæ.” Proc. Zool. Soc., 1920, p. 245.

**V.—Acquisitions.****MAMMALIA.**

The accessions during the past year have been both numerous and important. Chief among them, perhaps, are the fine collections made for the Bombay Natural History Society's Mammal Survey in Persia, Assam and North Burma by Colonel J. E. B. Hotson, Mr. J. P. Mills and Messrs. F. Kingdon Ward and P. M. Leonard; and the important collections of Siamese and Malayan



Mammals presented by Mr. E. G. Herbert and the Federated Malay States Museum.

The following is a list of the more important acquisitions arranged in geographical order:—

### Europe.

2 Badgers, 3 Otters and a Marten from the West of Ireland; purchased.

The 5th thoracic vertebra of a Blue Whale (*Balænoptera musculus*) stranded on the N.W. Shore of Colonsay Island, Hebrides; presented by Murdoch M'Neill, Esq.

The tympanic bone of the same Blue Whale; presented by Philip Mair, Esq.

A number of Cetacean tympanic bones from the Harris Whaling Station; presented by Carl F. Herlofson, Esq.

Head of a Common Dolphin (*Delphinus delphis*) stranded at Hayle Bay, N. Cornwall; head, paddles and tail-fin of a Pilot Whale (*Globicephala melæna*) stranded at Balmedie; a Risso's Dolphin (*Grampus griseus*) stranded at Wembury, S. Devon; and jaws and paddles of various small Cetacea stranded on the British Coasts; presented by the Board of Trade.

### Asia.

2 blades of baleen of a Rorqual (*Balænoptera sp.*) stranded at Viziadrug, Bombay; presented by N. B. Kinneear, Esq.

A few bones of a *Balænoptera* from Khanduli Peninsula, Siam; presented by the Federated Malay States Museum.

A skull with antlers of a Sambar (*Rusa unicolor*) from Central India; presented by Lieut.-Col. Eric H. Sharman.

4 Mammals from Sumatra, including a new Fruit Bat (*Dyacopterus brooksi*); presented by Cecil J. Brooks, Esq.

10 Mammals collected by Mr. G. Forrest in Yunnan; presented by Col. Stephenson R. Clarke, C.B.

7 skulls of Malayan Mammals from the collection of the late Dr. A. R. Wallace, F.R.S.; purchased.

109 Mammals from Ceylon; presented by W. W. A. Phillips, Esq.

51 Mammals collected by Col. J. E. B. Hotson at Shiraz, Persia; presented by the Bombay Natural History Society.

Skin and skeleton of a Père David's Deer (*Elaphurus davidianus*); presented by the Zoological Society.

25 Mammals from the Naga Hills, collected by Mr. J. P. Mills, and 59 Mammals from Assam collected by Mr. H. W. Wells; presented by the Bombay Natural History Society.

58 Mammals from Siam; presented by E. G. Herbert, Esq.

39 Mammals from Ceram, including 6 new species of rodent and a new Marsupial (*Rhynchomeles prattorum*); purchased.

26 Mammals from North Burma collected by Messrs. F. Kingdon Ward and P. M. Leonard, including the types of five new species; presented by the Bombay Natural History Society.

Skull, with record horn, of Rhinoceros (*Rhinoceros sondaicus*) and two frontlets with horns of *Bibos banteng* from Java; presented by M. Maxwell, Esq.

78 Mammals from the Garo Hills, Assam, collected by Mr. H. W. Wells; presented by the Bombay Natural History Society.

88 Mammals from Siam, including the types of nine new forms of *Callosciurus*; presented by the Federated Malay States Museum.

Skull of *Bubalus bubalis macroceros* from Assam (second in Rowland Ward's list); bequeathed by the late Arthur Forbes, Esq., I.C.S., C.S.I.

#### Africa.

A human skull and mandible from Mt. Ugi, Nigeria; presented by Capt. R. Wolseley.

A mandible, imperfect, and other portions of a human skeleton embedded in tufa from "Cleopatra's tomb"; presented by W. Louis Collins, Esq.

A collection of pelves, sterna, tympanic bones and baleen, representing the Sei Whale (*Balænoptera borealis*), Fin-whale (*B. physalus*), Bryde's Whale (*B. brydei*), Humpback (*Megaptera nodosa*) and Sperm Whale (*Physeter catodon*), taken at the Saldanha Bay Whaling Station; presented by Arthur F. Bearpark, Esq.

A skeleton of Bryde's Whale (*Balænoptera brydei*) from the Saldanha Whaling Station; presented by the Union Government of South Africa.

Skull of a Bottle-nosed Dolphin (*Tursiops truncatus*) found in the desert W. of Fayum; presented by H. Carter, Esq.

2 blades of baleen from Bryde's Whale (*Balænoptera brydei*) from Durban; presented by H. W. Bell Marley, Esq.

The heads of 12 Antelopes from the Sudan; presented by C. E. Russell, Esq.

22 Mammals from British Ruanda; collected and presented by Capt. J. E. Philipps, M.C.

8 Mammals from the N.E. Transvaal; presented by Maj. J. Stevenson Hamilton.

A new Fat-tailed Gerbil (*Pachyuromys duprasi faroultii*) from Western Algeria; presented by Lord Rothschild, F.R.S.

91 Mammals from Nigeria and Sierra Leone; collected by W. P. Lowe, Esq.

Skulls of 8 Antelopes and a Wart Hog from Katanga and N.W. Rhodesia; presented by Mrs. Peck.

42 Mammals collected by Maj. J. Stevenson Hamilton in the Southern Sudan; presented by the Wellcome Laboratory, Khartoum.

56 Mammals, including 9 specimens of Varian's Sable Antelope and 6 Zebras (one mounted) from Angola; collected and presented by Gilbert Blaine, Esq.

13 Mammals from South Tunis; presented by M. Blanc.

16 Mammals from the Southern Sudan; collected and presented by the Rev. A. Shaw.

76 Mammals collected by Mr. H. H. Swinny; *presented by Col. Cosens.*

51 Mammals collected in Algeria by Dr. K. Jordan; *presented by Lord Rothschild, F.R.S.*

22 Mammals from Darfur; *presented by Capt. H. Lynes, C.B., R.N.*

232 small Mammals from N. Rhodesia; collected by Capt. Guy C. Shortridge.

22 Mammals from N. Rhodesia; *presented by Col. Stephenson R. Clarke, C.B.*

#### **America, North.**

8 skulls of Reindeer from Baffin Land; *presented by the Sabellum Trading Co., Ltd.*

#### **America, South.**

499 Mammals from Argentina, comprising 143 from the province of Jujuy, 127 from the province of Catamarca, 68 from N.W. Rioja, all collected by Senor E. Budin; and 161 collected by Mr. H. E. Box; *presented by Oldfield Thomas, Esq., F.R.S.*

9 Mammals from Peru; purchased.

A Tuco-tuco (*Ctenomys talarum*) from La Plata; *presented by Dr. C. Bruch.*

69 Mammals from Amazonia, including the types of ten new forms; *presented by the Para Museum.*

7 Mammals from Bolivia; *presented by Walter Goodfellow, Esq.*

39 Mammals from Paraguay; *presented by the Marquis de Wavrin.*

3 human skulls from a cave in the Bolivian Andes; *presented by J. L. Wheeler, Esq.*

3 skulls of Sierionis Indians from El Kuachi Forest, E. Bolivia; *presented by Walter Goodfellow, Esq.*

#### **Antarctica.**

2 paddles of the Southern Right Whale (*Balæna australis*) and 2 fœtuses of the Humpback Whale (*Megaptera nodosa*) from South Georgia; *presented by Johan Rasmussen and Alex. Lange, Esqrs.*

A collection of Cetacean ear- and pelvic-bones, and a portion of the jaw of the rare Beaked Whale *Berardius*, from the South Shetlands; *presented by Sir W. Douglas Young, K.B.E., C.M.G., Governor of the Falkland Islands.*

#### **AVES.**

The acquisitions number 6,885. Of these the most noteworthy are as follows:—

#### **Europe.**

9 birds from Norfolk; *presented by S. L. Whymper, Esq.*

93 eggs of Birds from Macedonia; *presented by Mrs. Montague.*

4 eggs, 2 of *Grus monachus* and 2 of *G. leucauchen* (habitat E. Siberia), laid in confinement at Scampston Hall, Yorks., previously unrepresented in the collection; presented by W. H. St. Quintin, Esq.

#### Asia.

The type of *Cotile riparia indica* from the Punjab; presented by H. Whistler, Esq.

4 Birds from Siam, including the types of *Picus rubricollaris*, *Nigravis herberti*, and *Schæniparus rufigularis major*; presented by E. G. Herbert, Esq.

The type of *Pellorneum ruficeps minus* from N.W. Himalayas; presented by A. E. Jones, Esq.

41 Birds from Mesopotamia and Persia; presented by P. A. Buxton, Esq.

37 Birds from Ceylon; presented by W. W. A. Phillips, Esq.

172 Birds and 69 eggs from Palestine and Mesopotamia; presented by Capt. C. R. S. Pitman.

163 Birds from China; presented by E. B. Howell, Esq.

608 Birds from Sumatra; presented by Messrs. H. C. Robinson and C. B. Kloss.

3 Birds from Sind, Baluchistan and Mesopotamia, types of *Crateropus canorus sirdianus*, *Pycnonotus leucotis mesopotamica*, and *Ianthocincla lineata ziaratensis*; presented by Dr. C. B. Ticehurst.

A nest and 5 eggs of the Mesopotamian Sparrow (*Passer-moabiticus mesopotamicus*); presented by Maj. R. E. Cheesman.

#### Africa.

19 Birds from Kordofan; presented by Maj. Claude Graham.

A restoration of the Bourbon Dodo or White Dodo (*Didus borbonicus*); presented by the Trustees of the Rowland Ward Bequest.

608 Birds from Sierra Leone and Nigeria; collected by W. P. Lowe, Esq.

A male West African Ostrich (*Struthio camelus*) from the Gold Coast; presented by the Trustees of the Rowland Ward Bequest.

261 Birds and 114 eggs from Uganda; presented by L. M. Seth-Smith, Esq.

727 Birds from Darfur and Kordofan, including types of the following: *Mirafraga rufa*, *Anthus sordidus jebelmarrae*, *Amadina fasciata furensis*, *Saxicola torquata jebelmarrae*, *Myrmecocichla æthiops sudanensis*, *Prionops concinnata ochracea*, *Micropus æquatorialis furensis*, and *Fringillaria striolata jebelmarrae*; presented by Capt. H. Lynes, C.B., R.N.

569 Birds from Cameroons; presented by G. L. Bates, Esq.

248 Birds from Cameroons; purchased.

133 Birds from Rhodesia, including the type of *Lybius chaplini*; presented by Col. Stephenson R. Clarke, C.B.

395 Birds from the Canary Islands; purchased from D. A. Bannerman, Esq.

14 Birds from Nyasaland; *presented by Rodney C. Wood, Esq.*

**America, South.**

56 Birds from Paraguay; *presented by the Marquis de Wavrin.*

270 Birds and 923 eggs from Argentina; *presented by Mrs. Ernest Gibson.*

55 Birds from Para; collected by the late Dr. A. R. Wallace; purchased.

85 Birds from Bolivia; *presented by Walter Goodfellow, Esq.*

66 Birds from Western Ecuador; purchased.

840 Birds from the district of Lima, West Peru; *presented by Lord Brabourne.*

**REPTILIA.**

The accessions total 1,833; 1,722 were presented, 64 purchased and 47 received in exchange. Of this number 1,631 specimens belong to the magnificent private collection presented by Monsieur Fernand Lataste. This collection includes Reptiles from all parts of the world, but is especially rich in African species; it contains the types of the species described by the donor and many rarities.

The other accessions worthy of notice are:—

**Europe.**

3 Skinks from Cannes; *presented by M. Gaston de Witte.*

**Asia.**

8 Reptiles from Persia, including the types of a new snake (*Zamenis hotsoni*) and a new Tortoise (*Testudo buxtoni*); *presented by the Bombay Natural History Society.*

17 Snakes from S. India and Ceylon; *presented by Lt.-Col. F. Wall.*

The types of two new Snakes (*Rhinophis porrectus* and *R. drummond-hayi*); *presented by Lt.-Col. F. Wall.*

A very rare Gecko (*Teratolepis scabriceps*) from Madras; *presented by P. W. Devanesen, Esq.*

6 Reptiles from the Burma-Siam Border; *presented by Maj. C. H. Stockley.*

The type of a new Sea-Snake (*Hydrophis klossi*) from Selangor; *presented by the Federated Malay States Museum.*

23 Reptiles from Sumatra; *presented by C. J. Brookes, Esq.*

The type of a new Sea-Snake (*Hydrophis cyanosoma*) from the Philippines; *presented by Lt.-Col. F. Wall.*

**Australasia.**

9 Reptiles from Ceram, including the type of a new Snake (*Typhlops ligorostris*); purchased.

**Africa.**

47 Reptiles from E. Africa, including the types of the remarkable new ribless Tortoise (*Testudo loveridgii*), of a new Lizard

(*Scolecoseps boulengeri*), and of a new race of Gecko (*Lygodactylus capensis mossambica*); received in exchange from A. Loveridge, Esq.

29 Lizards from Teneriffe; purchased.

#### America.

The type of a new Snake from W. Ecuador (*Leptognathus hammondi*), collected by Mr. G. Hammond; purchased.

12 Reptiles from Bolivia, including a Lizard (*Ophiognomon trisanale*) new to the collection; presented by W. Goodfellow, Esq.

#### BATRACHIA.

1,473 specimens were added to the collection, 1,449 by presentation, and 24 by purchase.

Nearly the whole of the accessions belong to the splendid collection presented by Monsieur Fernand Lataste, which totals 1,334 specimens from all parts of the world, including many types and rare species.

The following also deserve special notice:—

#### Europe.

A very young Lungless Salamander (*Spelerpes fuscus*), born in London, the second recorded specimen of the young of this species; presented by Miss J. B. Procter.

#### Asia.

32 Batrachians from India, including the type of a new Frog (*Rana annandalii*); presented by the Indian Museum.

Tadpoles of the new Frog (*Nyctibatrachus sanctæ-palustris*) from Mysore; presented by C. R. Narayan Rao, Esq.

#### Australasia.

13 Batrachians from Ceram, including the types of a new Frog (*Rana grisea ceramensis*), and 6 Tree Frogs (*Hyla amboinensis*) new to the collection; purchased.

2 specimens of a rare Tree Frog (*Batrachopsis melanopyga*) from New Guinea collected by the Messrs. Pratt; purchased.

#### Africa.

4 examples of a rare Frog (*Anhydrophryne rattrayi*) from Cape Colony; presented by the Albany Museum.

28 Frogs from E. Africa, including the types of 2 new Tree Frogs (*Rappia platyrhinus* and *Megalixalus loveridgii*), and 3 specimens of a Frog (*Arthroleptis stenodactylus*) new to the collection; presented by A. Loveridge, Esq.

#### America.

13 Frogs from E. Bolivia, including the type of a new Tree Frog (*Hyla goodfellowi*); presented by W. Goodfellow, Esq.

## PISCES.

The accessions number 1,832; 1,400 were presented, 24 purchased, 184 received in exchange, and 224 formed a special collection.

The following are worthy of notice:—

One-spined and two-spined examples of the Three-spined Stickleback (*Gastosteus aculeatus*) from Staffordshire; presented by B. Bryam, Esq.

2 Hog-backed Trout (*Salmo trutta* var.) from Sutherlandshire; presented by P. M. Boase, Esq.

A large hybrid Roach and Rudd (*Rutilus rutilus* and *Scardinius erythrophthalmus*) from the Wensum; presented by R. Marsham, Esq.

The head of a very large Pike (*Esox lucius*) from Lough Conn; presented by R. B. Marston, Esq.

31 Fishes from the Lousy Bank, taken at depths of 108-200 fms., and a very large Plaice (*Pleuronectes platessa*) from Iceland; presented by the Ministry of Agriculture and Fisheries.

2 Rays (*Raia radiata*) from the Faroes; presented by R. M. Thomson, Esq.

31 Fishes from Palestine, including a specimen of *Caranx fuscus*, new to the collection; presented by I. Aharni, Esq.

300 Fishes from Basra, including examples of 5 species (*Discognathus rufus*, *Cyprinion macrostomus*, *Alburnus sellal*, *A. mossulensis* and *Acanthobrama arrhada*) new to the collection; collected and presented by Major C. Christy.

37 Fishes from the Inlé Lake and Seistan, including co-types of 5 new species (*Schizothorax zarudnyi*, *Barilius auropurpureus*, *Nemachilus brunneanus*, *Adiposia macmahoni* and *Chaudhuria caudata*) described by Dr. Annandale; presented by the Zoological Survey of India.

12 Freshwater Fishes from Burma and Siam; presented by Major C. H. Stockley.

83 Fishes from Siam; presented by H.R.H. Prince Abhakara of Chumpon.

25 Fishes from China; presented by J. D. La Touche, Esq.

358 Fishes from Lake Tanganyika and the Congo, including the types of 22 new species; collected by Dr. L. Stappers; presented by the Congo Museum, Tervueren.

100 Fishes from the Ubanghi and Gribingui Rivers; collected and presented by Monsieur A. Baudon.

13 Fishes from Cameroon, including the types of 3 new species (*Myomyrus macrops*, *Mormyrus jae* and *Barilius batesii*); collected by G. I. Bates; purchased.

72 Fishes from Sierra Leone, including a specimen of *Ephippus goreensis*, new to the collection; collected and presented by W. P. Lowe, Esq.

87 Fishes from the Tanganyika Territory, including the types of 3 new species (*Labeo loveridgei*, *Barbus aphantogramma* and *Pareutropius micristius*); collected and presented by A. Loveridge, Esq.

66 Fishes from the coast of Natal, including the types of 3 new species (*Chætodon marleyi*, *Cynoglossus durbanensis* and *Lepadichthys coccinotænia*) and examples of 6 others new to the collection; collected and presented by Romer Robinson, Esq., and H. W. Bell Marley, Esq.

31 Marine Fishes from Delagoa Bay (including *Apogon lineolatus* and *Lethrinus borbonicus*, new to the collection) and 47 freshwater Fishes from Madagascar (including *Doryichthys millepunctatus*, *Atherina alaotrensis* and *Bedotia madagascariensis*, new to the collection); presented by the Transvaal Museum, Pretoria.

19 Fishes from the West Indies and West Africa, co-types of species recently described by the donor; presented by Dr. J. Metzelaar.

224 Fishes from Tobago, including specimens of apparently new species of *Atherinichthys* and *Clinus* and examples of 5 other species new to the collection (*Holocentrum retrospinis*, *Upeneus parvus*, *Glyphidodon rudis*, *Scarus squalidus* and *Batrachus cryptocentrus*); collected by P. L. Guppy, Esq.

184 Fishes from Colombia and Ecuador, including several paratypes; received in exchange from Prof. C. H. Eigenmann.

15 Fishes from the Falklands and South Shetlands; presented by A. G. Bennett, Esq.

#### TUNICATA.

The additions to the collection total 14.

#### MOLLUSCA.

The accessions total 39,298, of which over 33,000 are Pteropods collected by the "Terra Nova." Others deserving special mention are:—

##### Europe.

4 complete examples and an egg-cluster of *Alderia modesta* from Leigh-on-Sea, Essex; collected and presented by G. C. Robson, Esq.

3 Shells of *Patulastra balmei* from Glasnevin, Co. Dublin; received in exchange from A. W. Stelfox, Esq.

2,500 land and freshwater Shells from Serbia and Macedonia; presented by Prof. P. S. Pavlović.

##### Asia.

56 Shells from Palestine; presented by I. Aharoni, Esq.

57 complete examples of land and freshwater Mollusca from Palestine; presented by Capt. P. J. Barraud.

3 Cephalopoda from Siam; presented by H.R.H. Prince Abhakar of Chumpon.

637 land and brackish-water Shells from the Soela Archipelago, including a remarkable series of *Xesta citrina*; collected by Mr. W. Frost; purchased.



**Australia.**

4 valves (co-types) of *Edentallina coralensis* from Queensland; presented by Charles Hedley, Esq.

**Africa.**

50 fixed and preserved examples of *Isidora contorta* and *Planorbis boissyi* from Egypt (economic research material); presented by Dr. E. Hindle.

73 examples of *Isidora contorta*, *I. dybowskii* and *Planorbis boissyi* from the Sudan (economic research material); presented by the Assistant Director, Wellcome Tropical Research Laboratory, Khartum.

131 complete land and freshwater Mollusca from Accra, Gold Coast; presented by Dr. J. W. McFie.

A Shell of *Euonyma gouldi* from Griqualand; presented by Major M. Connolly.

8 Shells of *Limnæa* sp. from Northern Rhodesia; presented by H. E. Hornby, Esq.

8 Shells (including 3 types) from South Africa; presented by H. C. Burnup, Esq.

4 complete examples of *Cochlitoma zebra* from South Africa; presented by Mrs. Longstaff.

**America.**

A string of egg-capsules containing young examples of *Busycon perversum* from Florida; presented by Mrs. E. P. Bryant.

63 land and freshwater Shells from Colorado, Utah and Wyoming; presented by J. Henderson, Esq.

300 marine and land Shells from Peru; presented by Dr. H. O. Forbes.

**Antarctic and Subantarctic Islands.**

1,270 marine Mollusca from the Falklands, South Georgia and the South Shetlands, collected by A. G. Bennett, Esq.; purchased.

An exceedingly fine egg-mass of *Natica* sp. from Scotia Bay, South Orkneys; presented by A. G. Bennett, Esq.

**MYRIOPODA.**

The accessions number 24; none is of special interest.

**ARACHNIDA.**

654 specimens of Arachnida were received during the year; the following are of interest:—

272 Ticks and Mites from various localities; presented by the Imperial Bureau of Entomology.

Numerous specimens of a new Mite (*Pygmephorus tarsalis*) found on the surface of cultivated mushrooms; presented by Prof. H. Maxwell-Lefroy.

Numerous specimens of Mites parasitic on poultry, including the rare species *Dermoglyphus elongatus*; collected and presented by A. S. Hirst, Esq.

A co-type (microscopical preparation) of a Mite (*Geckobiella (Hirstiella) trombidiformis*); presented by Prof. A. Berlese.

#### CRUSTACEA AND PYCNOGONIDA.

588 Crustacea and 12 Pycnogonida have been added to the collection during the year. The following are the more important of the accessions:—

10 syntypes of a recently described Crustacean (*Bathynella chappuisi*) of exceptional interest, from Switzerland; presented by M. Th. Delachaux.

4 deep-water Crustacea from the North Atlantic; presented by the Ministry of Agriculture and Fisheries.

145 freshwater Crustacea from India; presented by J. Omer-Cooper, Esq.

30 freshwater Decapoda from India and Mesopotamia; presented by R. Gurney, Esq.

6 freshwater Decapoda from Mesopotamia; presented by the Bombay Natural History Society.

7 freshwater Crustacea from Bagdad; presented by Capt. T. P. Buist, R.A.M.C.

5 Decapoda from the coast of Palestine; presented by I. Aharoni, Esq.

25 Decapoda from Sierra Leone; presented by W. P. Lowe, Esq.

A syntype of a remarkable new Crustacean (*Typhlocaris lethæa*) from the Cave of Lethe in Cyrenaica; presented by Dr. B. Parisi.

76 freshwater Shrimps from Madagascar; presented by the Hon. Paul A. Methuen.

16 Syncarida from Australia and Tasmania; received in exchange.

8 freshwater Crustacea from West Australia; presented by the Director of the West Australian Museum.

11 Crustacea from Torres Straits; presented by F. A. Potts, Esq.

6 Cumacea (including 4 syntypes of a new species) from the Antarctic; presented by the Australian Antarctic Expedition.

77 Crustacea and 6 Pycnogonida from the South Shetlands and South Orkneys; presented by His Excellency the Governor of the Falkland Islands.

45 Crustacea and 6 Pycnogonida from the South Shetlands and South Orkneys; purchased.

54 parasitic Crustacea from Whales, from South Georgia; presented by Messrs. J. Rasmussen and Alex. Lange.

#### ECHINODERMA.

The accessions numbered 108, of which 93 were presented, 13 purchased and 2 received in exchange. The following are of interest:—

68 specimens from Lousy Bank, Lat. 60° 20' N. Long. 12° 40' W. 108-200 fms., collected by Capt. F. M. Davis; presented by the Ministry of Agriculture and Fisheries.

13 specimens (species new to the collection) from the South Shetland and South Orkney Islands; collected by A. G. Bennett, Esq.; purchased.

#### WORMS.

The total number of Parasitic Worms registered during the year was 627; among the more important of these were the following:—

##### Europe.

Examples of 8 species of Nematodes parasitic in Equidæ, including co-types of 5 forms described as new by the donor; presented by Prof. Warrington Yorke, M.D.

85 parasitic worms, being duplicates of species collected at the Prosectorium from animals that had died in the Society's Gardens; presented by the Zoological Society of London.

##### Asia.

Examples of a number of species of the Nematode family Gnathostomidæ from India and Ceylon (some of them new to science); presented by Lt.-Col. Clayton Lane, M.D.

##### Africa.

A collection of 230 parasitic worms from East Africa; presented by A. Loveridge, Esq.

Other worms numbered 62, including the following:—

5 specimens of *Dichogaster jaculatrix* (co-types), from the Ituri Forest, Belgian Congo; presented by the Tervueren Museum.

5 examples of *Phreaotothrix cantabrigiensis* (co-types), from a well at Chittering, Waterbeach, Cambridge; presented by the University Museum of Zoology, Cambridge.

The type of *Trichodrilus icenorum* from Pulham St. Mary, Norfolk; presented by C. Candler, Esq.

22 worms, including examples of *Leocrates atlantica*, *Pontobdella muricata* and *Hyalinæcia* sp.; collected by Capt. F. M. Davis; presented by the Ministry of Agriculture and Fisheries.

#### BRACHIPODA.

The accessions total 42; none is of special importance.

#### POLYZOA.

The accessions total 24, including 8 specimens from the coast of Spain, received in exchange from Dr. M. J. Barroso.

#### COELENTERATA.

The accessions number 73.

The most important is a series of Pennatulidæ from the Indo-Australian Archipelago collected by the "Siboga"; received in exchange from Prof. Max Weber.

Collections from the Bahamas and from the Lousy Bank are also worth mention.

## PORIFERA.

The total number of accessions is 274, of which 90 were presented, 3 purchased, and 181 received in exchange; the more important are:—

90 mounted preparations of Norwegian Sponges of the A. M. Norman collection; *presented by L. R. Crawshay, Esq.*

181 specimens and preparations from the Indian Ocean and Ceylon, including many types; received in exchange from Prof. A. Dendy, F.R.S.

5 specimens from Lousy Bank; *presented by the Ministry of Agriculture and Fisheries.*

## PROTOZOA.

The accessions number 710, including 706 slides of Rhizopoda, Heliozoa and Infusoria, including many types and other specimens described by Dr. E. Penard; purchased.

Summary of the Acquisitions in the Department of Zoology during 1920.

	Donations.	Purchases.	Exchanges.	Special Collections.	Totals.
Mammalia (General)...	1,675	164	16	323	2,178
Mammalia (Skeletons) { Anthropology ...	8	—	—	—	8
{ Cetacea ...	50	—	—	—	50
{ Other Mammals ...	3	—	—	—	3
Aves { Skins ...	4,166	766	—	608	5,540
{ Nests ...	2	—	—	—	2
{ Eggs ...	1,333	—	—	—	1,333
{ Skeletons ...	10	—	—	—	10
Domesticated animals ...	12	—	—	—	12
Reptilia...	1,722	64	47	—	1,833
Batrachia ...	1,449	24	—	—	1,473
Pisces ...	1,400	24	184	224	1,832
Tunicata ...	6	8	—	—	14
Mollusca ...	37,232	2,066	—	—	39,298
Myriopoda ...	24	—	—	—	24
Arachnida ...	654	—	—	—	654
Crustacea ...	520	52	16	—	588
Pycnogonida ...	6	6	—	—	12
Echinoderma ...	93	13	2	—	108
Vermes { Chætopoda, etc. ...	62	—	—	—	62
{ Parasitic Worms ...	627	—	—	—	627
Brachiopoda ...	42	—	—	—	42
Polyzoa ...	11	5	8	—	24
Coelenterata ...	52	9	12	—	73
Porifera....	90	3	181	—	274
Protozoa ...	4	706	—	—	710
Totals ...	51,253	3,910	466	1,155	56,784

The following donors presented specimens to the Department of Zoology during the year 1920:—

Abhakara of Chumpon, Prince  
Agriculture and Fisheries,  
Ministry of  
Aharoni, I.

Albany Museum, Grahamstown  
Allen, Major W. H.  
Andrews, Dr. C. W., F.R.S.  
Austen, Major E. E., D.S.O.

- Australasian Antarctic Expedition  
 Baker, Mrs. E.  
 Baker, E. C. Stuart  
 Balston, Miss E. M.  
 Barclay, F. H.  
 Barnard, T. T.  
 Barraud, Capt. P. J.  
 Bates, G. L.  
 Baylis, H. A.  
 Bearpark, A. F.  
 Beeson, C. F. C.  
 Bennett, A. G.  
 Berlese, Prof. A.  
 Besant, E.  
 Billard, Prof. A.  
 Blackett, N. A.  
 Blaine, Gilbert  
 Blair, K. G.  
 Blair, W. N., Jun.  
 Blake, Ralph  
 Blanc, Monsieur  
 Blane, Brigadier-General C. F.,  
     C.M.G.  
 Blundell, E. G.  
 Board of Trade  
 Boase, P. M.  
 Bombay Natural History  
     Society  
 Bosworth, Dr. T. O.  
 Boulenger, Dr. C. L.  
 Bowring, Col. F. S., C.B.  
 Brabourne, Lord  
 Brand, Commander J., R.N.  
 Brooke, H. C.  
 Brooks, C. J.  
 Brown, A. W.  
 Brown, G. F.  
 Bruch, Dr. C.  
 Bryan, B.  
 Bryant, Mrs. E. P.  
 Buist, Capt. T. P.  
 Bunting, R. H. E.  
 Burnup, H. C.  
 Burr, Malcolm  
 Buxton, Capt. P. A., R.A.M.C.  
 Candler, C.  
 Cardinall, A. W.  
 Carter, H.  
 Cheesman, Major R. E.  
 Christy, Major C.  
 Clark, R. S.  
 Clark Maxwell, Rev. Preben-  
     dary  
 Clarke, Col. Stephenson R.,  
     C.B.  
 Collins, W. L.  
 Colombo Museum  
 Congo Museum, Tervueren  
 Connolly, Major M.  
 Cooke, Rev. Dr. A. H.  
 Cooke, Dr. W. E.  
 Corfield, Mrs. Wilmot  
 Cosens, Capt. C. P.  
 Cosens, Col.  
 Cotton, Dr. H. H. P.  
 Cousens, H. S.  
 Crampton, G. C.  
 Crawshay, L. R.  
 Cunningham, Dr. W. A.  
 Dalton, William, and Sons  
 Davison, Capt. J. F.  
 Dawson, Guy H.  
 Delachaux, Th.  
 Demidoff, H.H. Prince E.  
 Devanesen, D. W.  
 Dobb, Dr. F. C.  
 Duncan, C. C.  
 Dukinfield Jones, E.  
 Durban Museum  
 Eastern and Associated Tele-  
     graph Companies  
 Egyptian Zoological Service  
 Entomology, Imperial Bureau  
     of  
 Falkland Islands, His Excel-  
     lency the Governor of  
 Federated Malay States  
     Museums  
 Fell, Capt. M. E.  
 Fenton, E. W.  
 Flower, Major S. S.  
 Forbes, A., the late, C.S.I.  
 Forbes, Dr. H. O.  
 Forrest, Viner  
 Fox, Sir F.  
 Fryer, J. C. F.  
 Fuller, Capt. A. W. F.  
 Gabriel, C. J.  
 Garman, Dr. S.  
 Gibson, Mrs. Ernest  
 Gilchrist, Dr. J. D. F.  
 Godman, Miss E.  
 Gold Coast Colony, Department  
     of Agriculture

- Goodfellow, W.  
 Gosse, Dr. P.  
 Graham, Major Claude  
 Gray, Melville  
 Griffith, F. L.  
 Gunstone, E. F.  
 Gurney, R.  
 Haagner, A. K.  
 Hadden, N. G.  
 Hall, Mrs. E. M.  
 Hamilton, C. A.  
 Hamilton, Major J. Stevenson  
 Hedley, C.  
 Henderson, J. G.  
 Herbert, E. G.  
 Herlofson, C. F.  
 Hess, Dr. Alois  
 Hickson, Prof. S. J., F.R.S.  
 Hillier, Dr. W. T.  
 Hindle, Dr. E.  
 Hirst, A. S.  
 Hirst, Dr. L. F.  
 Hodson, A.  
 Hogan, F.  
 Hopkinson, Dr. E.  
 Hornby, A. H.  
 Howell, E. B.  
 Illingworth, Mrs.  
 Imperial Bureau of Entomology  
 Imperial College of Science  
 Imperial Institute, The Director  
 Iredale, T.  
 Jessop, Lt.-Commander J. de  
     B., D.S.O., R.N.  
 Jewell, Miss F.  
 Jobson, W. P.  
 Jones, A. E.  
 Kaburaki, Dr. T.  
 Kendrick, P.  
 Kinnear, N. B.  
 Klein, S. T.  
 Kloss, C. Boden  
 Knutsford, Lady  
 La Touche, J. D.  
 Lane, Lt.-Col. Clayton, M.D.  
 Lange, Alex.  
 Larken, Major P. M.  
 Lataste, F.  
 Leonard, J. H.  
 Leigh, Capt. J. Hamilton  
 Longstaff, Mrs.  
 Loveridge, A.  
 Lowe, W. P.  
 Luddington, Miss E.  
 Lynes, Capt. H., C.B., R.N.  
 McFie, Dr. J.  
 McNeill, M.  
 Mair, P.  
 Mallock, Mrs. L. Raymond  
 Manchester Museum, Keeper of  
 Manuelle, Miss  
 Marley, H. W. Bell  
 Marriott, Alfred L.  
 Marriott, Brig.-Gen. John  
 Marsham, R.  
 Marston, R. B.  
 Martin and Archer, Messrs.  
 Maxwell, M.  
 Maxwell-Lefroy, Prof. H.  
 Maynard, G.  
 Meggitt, F. J.  
 Meinertzhagen, Col. R.  
 Methuen, the Hon. P. A.  
 Metzelaar, Dr. J.  
 Miller, L. J.  
 Ministry of Agriculture and  
     Fisheries  
 Montague, Mrs.  
 Murrell, H. C.  
 Nairobi Museum  
 Natal Government Museum  
 National Museum of Wales  
 Nutting, Prof. C. C.  
 Omer-Cooper, J.  
 Owen, J. H.  
 Palaccio, C.  
 Pará Museum  
 Parisi, B.  
 Patmore, Capt. F. J.  
 Pavlović, Prof. P. S.  
 Pearl, R. T.  
 Peck, Mrs.  
 Peile, Lt.-Col. A. J., R.A.  
 Philipps, Capt. J. E., M.C.  
 Phillips, W. W. A.  
 Pitman, Capt. C. R. S.  
 Pollard, A.  
 Pollen, Miss A.  
 Portal, Major M.  
 Porter, H. W.  
 Potts, F. A.  
 Poulton, Prof. E. B., F.R.S.  
 Procter, Miss J. B.

- Railliet, Prof. A.  
 Rao, C. R. N.  
 Rasmussen, J.  
 Reinwaldt, E.  
 Renouf, L. P. W.  
 Rhodes, Col. J. E.  
 Rhynehart, J. G.  
 Ritchie, Dr. James  
 Ritchie, J., Jun.  
 Robinson, H. C.  
 Robinson, R.  
 Robson, G. C.  
 Rogers, C. G.  
 Rowland Ward Bequest,  
 Trustees of the  
 Royal Botanic Gardens, Kew,  
 Director of  
 Royal College of Surgeons  
 Rush, E. W.  
 Rushton, W.  
 Russell, C. E.  
 Ruthven, Dr. A. G.  
 Sabellum Trading Co., Ltd.  
 St. Quintin, W. H.  
 Sandwith, Major L.  
 Scott-Macfie, J. W.  
 Scott, Mrs. Ross  
 Seth-Smith, L. M.  
 Sharman, Lt.-Col. Eric H.  
 Shaw, Rev. A.  
 Sheppard, P. A.  
 Sheringham, H. T.  
 Sherrin, T. V.  
 Sikes, F. H.  
 Sloan, Miss M. V.  
 Smith, C.  
 Smith, Dr. H. Hammond  
 Smith, Dr. Malcolm  
 South Africa, Government of  
 the Union of  
 South Africa, Union of, Veter-  
 inary Department  
 South African Museum  
 Sowerby, A. de C.  
 Staadt, J. L.  
 Stammwitz, P.  
 Stelfox, A.  
 Stockley, Major C. H.  
 Strafford, Rt. Hon. Cora, Coun-  
 tess of
- Sviridenko, Dr. P. A.  
 Terrot, R.  
 Thomas, Oldfield, F.R.S.  
 Thomas, P. Haig  
 Thompson, F. Tyler  
 Thompson, Major W.  
 Thomson, Prof. J. A.  
 Thomson, J. W.  
 Thomson, R. M.  
 Ticehurst, C. B.  
 Tomlin, J. R. le B.  
 Transvaal Museum  
 Tresidder, Dr. M. E.  
 Trevor, Major W.  
 Uganda Natural History  
 Society, The Secretary  
 U.S. Department of Agriculture  
 University Museum of Zoology,  
 Cambridge  
 Unwin, E. E.  
 Varian, Capt. H. E.  
 Varriale, Capt.  
 Venning, Lt.-Col. F. E. W.  
 Wall, Lt.-Col. F.  
 Waterston, J.  
 Wavrin, Marquis de  
 Weber, Prof. Max  
 Wellcome Bureau of Scientific  
 Research, Director-in-Chief  
 Wellcome Tropical Research  
 Laboratory, Khartoum  
 West Australian Museum,  
 Director of  
 Wheeler, J. L.  
 Whistler, H.  
 White, E. E.  
 Whitehouse, R. H.  
 Whymper, L. S.  
 Wilmer, Col. W.  
 Wilson, Mrs.  
 Wilson Barker, Commander  
 Sir D., R.D., R.N.R.  
 Wintle, Brother W. J.  
 Witte, G. F. de  
 Wolseley, Capt. R.  
 Wood, Rodney C.  
 Yorke, Prof. Warrington, M.D.  
 Zoological Society of London  
 Zoological Survey of India

VI.—*Economic Zoology.*

The main work of the Department, the determination, conservation and arrangement of collections of animals, is the foundation of economic research, which depends on a knowledge of species and their distribution. This is more particularly evident in the case of groups such as the Parasitic Acari and Parasitic Worms, each of which has occupied the full time of an assistant. Museum work on Fishes and other marine animals is closely related to fishery development, and collections dealt with during the year include one from a new British fishing ground, received from the Ministry of Agriculture and Fisheries, and others sent for determination by the fishery authorities in Natal.

Members of the staff have answered many enquiries on economic subjects and have determined a number of specimens sent in connection with economic work; the following are examples:—

## I. MAMMALIA.

Bats which attacked a grove of *Araucaria* in the Gold Coast Colony, stripping the trees of their bark, were determined as the common fruit Bat, *Eidolon helvum*.

Information was given as to the possibility of establishing trade in the skins of West African Otters.

Rats and Mice, in relation to the public health and general economics, have again received much attention. Information and advice have been given in response to requests received from many public bodies and private individuals.

## II. MOLLUSCA.

A large number of Shipworms and other marine Mollusca destructive to timber have been determined for a Committee of the Institution of Civil Engineers which is conducting an inquiry into this subject, and a report on a part of the collection has been published.

Advice was given with regard to water-pipes choked by the growth of Mussels.

The operculum of a Gastropod is the source of a native dye extensively used and traded in E. Africa; the species was determined.

Advice has been given in connection with work on tropical diseases in the West Indies.

Several determinations of Molluscs injurious to crops, trees, etc., have been made for the Imperial Bureau of Entomology.

Applications for specimens of the Gastropods concerned in the transmission of Schistosomiasis (= Bilharziasis) having been received, steps were taken to obtain a supply, and a new form, acting as intermediate host, was discovered.

## III. ARACHNIDA.

Mites (*Carpoglyphus anonymus*) infesting jam; the species was determined and advice was given.

Furniture Mites (*Glycyphagus domesticus*) infesting houses; advice and information were given.



A Mite (*Tyroglyphus longior*), infesting larder, was determined and advice was given.

A Mite (*Tyroglyphus longior*), destroying packets of egg-powder in shops, was determined and advice was given.

A Mite (*Pygmephorus tarsalis*, sp.n.), found in very large numbers on the surface of cultivated mushrooms, was described.

A Mite (*Aleurobius farinæ*), found in the fæces of miners suffering from ankylostomiasis, was determined.

An enquiry on the habits of "Harvest Bug" (*Leptus autumnalis*) was answered.

Poultry Mites were determined for the U.S. Department of Agriculture.

A Mite (*Liponyssus bursa*), found on a Chinese patient at Hôko-tô Island, Formosa, was determined.

#### IV. CRUSTACEA.

Marine Isopoda destructive to timber have been studied and a report has been prepared for publication.

Woodlice reported to be damaging Mushroom-beds have been determined.

#### V. WORMS.

Human parasites, and parasites of domestic animals, have been named on several occasions, and enquiries from numerous correspondents, including various Public Health Officers and agricultural institutions, have been answered.

Assistance has been given to the Wellcome Bureau of Scientific Research, in connection with work on the parasites of rats.

#### VI. CŒLEENTERATA.

Correspondence took place between the Museum and the Imperial Institute with reference to possible economic uses for the "Organ Pipe" coral *Tubipora*.

#### VII.—*Students and Visitors.*

The number of visits paid to the Zoological Department during the year 1920 by students and other persons requiring assistance or information amounted to 8,973. This number includes the visits paid by students holding tickets entitling them to do special work in the Exhibition Galleries.

In the 10 previous years the numbers were as follows, including from 1910 to 1912 the visits to the Entomological Section, which was made a separate Department in 1913:—

7,459	in the year	1919.
5,553	„	1918.
6,314	„	1917.
7,018	„	1916.
8,020	„	1915.
9,235	„	1914.
9,982	„	1913.
12,564	„	1912.
12,175	„	1911.
12,443	„	1910.

*C. Tate Regan.*

## DEPARTMENT OF ENTOMOLOGY.

I.—*Arrangement and Conservation.*

*Exhibition Series.*—A few additional dissections, with illustrative drawings, have been added to the series in the Public Insect Gallery, while in the North Hall the exhibits dealing with Insect Pests of Tropical crops have been, in part, revised and added to, and faded and worn specimens replaced.

*Study Series.*—In the **Coleoptera** the identification and re-arrangement of the Carabidæ have made further progress, with the help of Mr. H. E. Andrewes and other specialists. Oriental species determined by Mr. Andrewes, Australian species determined by Mr. T. G. Sloane, and Palæartic species determined by Dr. Jeannel, have been incorporated. The Staphylinidæ have also been considerably expanded and arranged, and important collections of species named or described by Dr. M. Cameron incorporated. A large collection of Erotylidæ from Indo-China made by M. Vitalis de Salvaza has been named, and numerous species described as new. A number of West Indian crop-pests belonging to the genus *Lachnosterna* have been described, and revisions of the Melononthine genera *Ectinohoplia* and *Dichelomorpha* have also been prepared for publication. Mr. G. E. Bryant has incorporated the collection of Australian Phytophaga made by him, finished the incorporation of the Halticinæ, and determined several collections. Work on the Mordellidæ and Meloidæ has also been continued, the palæartic species of these families being arranged, together with *Camaria* and allied genera of Tenebrionidæ. Collections of Heteromera from Mesopotamia, Syria, Macedonia, Tonkin, and the Philippine Islands have been determined and incorporated. The Heteromera of the Dollman Collection from Rhodesia have also been worked out and incorporated.

In the **Lepidoptera** the expansion, rearrangement, and cataloguing of the family Hesperidæ, sub-family Pamphilinæ, of the Rhopalocera has been continued, all accessions, especially those of the Godman-Salvin Collections, being incorporated in the process; a certain amount of similar work has been done with the Lycænidae, sub-family Theclinæ. The Dollman Collection has been worked out, all available duplicates required for the General Collection have been incorporated, and a paper prepared. The collections made by Mr. Godfrey in Siam have been worked out with his co-operation, and a selection comprising nearly every known Siamese species and some 30 Types has been made from them for the Museum and a paper on the collections got out. Most of the numerous minor accessions in all families received during the year have been incorporated, and a number of collections have been identified in exchange for specimens. Copies have been made of Plotz's unpublished figures of (unidentified) Hesperidæ, from copies kindly lent by Col. Swinhoe. A card index has been started of all described Rhopalocera for reference

purposes, and the years 1907 to 1916 nearly completed. Mr. H. T. G. Watkins has given considerable assistance by voluntarily rearranging the Pierine genera *Pieris*, *Colias*, and *Gonepteryx*, and incorporating all accessions at the same time.

In the Heterocera the classification and rearrangement of the Anerastiinae have been continued, the Dioptidæ rearranged, and the collection of the Lasiocampidæ expanded. A large collection of moths made by Mr. E. J. Godfrey in Siam has been worked out.

In the Tineina and Pterophorina much unarranged material has been catalogued, determined and incorporated, and types and typical material have been identified and labelled. The large collection of separata presented to the Walsingham Library by Sir George F. Hampson has been catalogued and the exact references indicated (over 4,000).

In the **Diptera** the African Tipulidæ, determined by Dr. C. P. Alexander, and the exotic Psychodidæ, determined by M. A. Tonnoir, have been received back and reincorporated; the large collection of exotic Anthomyiidæ has been sent to Mr. J. R. Malloch for determination; the collection of British Rhyphidæ, Psychodidæ, Ptychopteridæ and Limnobiinæ has been arranged; the spirit collection of Dipterous larvæ and adults has been rearranged in filing cabinets. A series of Tabanidæ, chiefly from Africa and North Russia, has been worked out, described and incorporated. A series of named Nearctic and Neotropical Muscoidea, received in exchange from the United States National Museum, has been labelled and incorporated, while a small series of economically important Australian Calliphorinæ and Muscinæ has been determined and also incorporated. A large number of miscellaneous accessions have also been made to the General Collection. The official "Instructions for Collectors," Nos. 4, 5, 6, and 7, have been revised and edited (for a new edition of "Handbook for Collectors"), while during the year "A Handbook of British Mosquitoes" has been published.

In the **Hymenoptera** the parasitic families Chalcididæ and Haltichellidæ have been arranged, and the Agaonidæ and Eurytomidæ partially completed. Work has also been done on isolated genera belonging to various families. In the Ichneumonoidea the Australian genus *Pacilocryptus* has been arranged and monographed in conjunction with Mr. R. E. Turner. The African genus *Oneilella* has also been arranged. Several collections of general Hymenoptera—particularly from Eastern War areas—have been determined. Parasites of the Frit-fly, Wheat Pests, Forest Pests, pests affecting the Cabbage and Turnip, *Calliphora*, *Musca*, and *Glossina*, have been determined and described. In the Tenthredinidæ the Rev. F. D. Morice has completed the rearrangement of the family, and Prof. T. D. A. Cockerell has kindly assisted in incorporating a set of Apidæ presented by the United States National Museum.

In the **Rhynchota** the incorporation of the Distant Collection has been continued and completed, and named collections of American Tingidæ and Aradidæ have been incorporated. Many minor collections from various localities have been similarly dealt with. In the Coccidæ, collections from various parts of the world have been worked out, and good progress has been made with the rearrangement of the family. In the Aphidæ and Aleurodidæ, many small collections have been determined and incorporated.

In the **Orthoptera** valuable help in the arrangement and identification of species and genera was received during the second half of the year from Mr. B. Uvaroff, Assistant in the Imperial Bureau of Entomology.

Mr. Herbert Champion, also of the Imperial Bureau, has voluntarily rendered considerable service from time to time by the determination and description of **Odonata**.

In the **Thysanoptera** most of the unmounted material of the unnamed microscopic species has been transferred to slides, ready for determination.

In the **Mallophaga** and **Anoplura** the Denny and General Collections have been mounted on slides for study purposes, and are now being revised and catalogued. Several odd collections have also been worked out.

#### IMPERIAL BUREAU OF ENTOMOLOGY.

The Collections of the Entomological Department continue to benefit by the work done by the Imperial Bureau of Entomology. During the year this organisation presented some 8,000 specimens, mostly named, and including the types of 71 new species. The assistance given by members of the staff of the Bureau in naming and arranging parts of the Museum collection has been referred to above. As a considerable part of the work of the Bureau is carried on, and needs to be carried on, within the Museum, it is much to be regretted that it has not yet been found possible to increase the accommodation provided for the work of its staff in the Museum. The Entomological Department itself suffers equally through want of the necessary space.

#### II. *Duplicates and Exchanges.*

##### (a) *Duplicates.*

The following Institutions have been presented with duplicate specimens:—Glasgow Veterinary College; Hope Department of Zoology, Oxford; Marischal College, University of Aberdeen; Musée d'Histoire Naturelle, Brussels; Muséum d'Histoire Naturelle, Paris; War Office Entomological Laboratory, Sandwich, Kent. The following gentlemen, who have rendered service to the Museum by naming specimens, have been presented with duplicate specimens:—Mr. H. E. Andrewes, Major F. C. Fraser, Dr. K. M. Heller, Dr. R. Jeannel, Mr. K. J. Morton, Rev. R. P. Longinos Navás, S.J., and M. A. d'Orchymont.

(b) *Exchanges.*

Exchanges of specimens have been carried out with the following:—Leyland Stanford Junior University, California; Musée d'Histoire Naturelle, Paris; United States National Museum; University Museum of Zoology, Cambridge; Mr. C. P. Alexander; Dr. G. Enderlein; Dr. E. W. Ferguson; Dr. R. Frey; Rev. F. D. Morice; M. A. S. Nicolay; Prof. H. M. Parshley; M. Maurice Pic; Lord Rothschild; Prof. Y. Sjöstedt; Dr. H. Skinner; Dr. R. J. Tillyard; Mr. H. T. G. Watkins; Mr. Sydney Whicher.

III. *Departmental Library.*

As the Library has continued to be worked in conjunction with that of the Zoological Department, particulars in reference to it will be found included under the corresponding head in the return made by the Keeper of Zoology.

IV. *Publications.*

In addition to the official publications issued by the Trustees (see pp. 92-94), the following papers have been published in connection with the different branches of the collection.

**Coleoptera.**

By G. J. ARROW:—

- A Contribution to the Classification of the Coleopterous family Endomychidæ. *Trans. Ent. Soc. Lond.*, 1920, pp. 1-83.
- A list of the Endomychid Coleoptera of Indo-China, with Descriptions of new Species. *Ann. Mag. Nat. Hist.*, (9) 5, 321-326.
- A remarkable new Genus of Lamellicorn Beetles. *Ibid.* (9) 6, pp. 431-434.
- A peculiar new Genus of Australian Beetles. *Ibid.*, pp. 434-437.
- A new Genus of Clavicorn Beetles. *Ibid.*, pp. 437-440.
- On the Oriental Members of the Group Macroductylides (Melolonthidæ). *Ibid.*, pp. 441-455.

By K. G. BLAIR.

- Further Notes on the Fabrician Types of Heteromera in the Banks Collection. *Ann. Mag. Nat. Hist.* (9) 5, pp. 153-163.
- Notes on the Coleopterous Genus *Ischalia*, Pasc., with descriptions of two new species from the Philippine Islands. *Ent. Mo. Mag.* (3) 6, pp. 133-135.
- Notes on the Australian Coleopterous Genera *Palæstra*, Cast., *Tmesidera*, Westw., and *Palæstrida*, White. *Ibid.*, pp. 28-32.
- Notes on the Australian Genus *Cestrinus*, Er. (Tenebrionidæ) and some allied Genera. *Proc. Linn. Soc. New South Wales*. Vol. 44., pp. 529-535.

By G. C. CHAMPION:—

Notes on Various African and Asiatic Species of *Hapalochrus*, Er., with an account of their accessory male characters. *Ann. Mag. Nat. Hist.* (9) 6, pp. 177-201, 249-266, 305-327, 537-539.

On some Eastern Xylophilids (Coleoptera). *Ibid.* (9) 5, pp. 393-406.

Some new Coleoptera from Costa Rica. *Ent. Mo. Mag.* (3) 6, pp. 220-224.

#### Lepidoptera.

By SIR G. F. HAMPSON:—

On the New Genera and Species of Lepidoptera Phalænæ, with the Characters of two New Families. *Nov. Zool.* 26, pp. 253-282, 1920.

New Moths collected by Mons. A. Avinoff in W. Turkestan during his journeys in 1909-1912. *Trans. Ent. Soc. Lond.* 1920, pp. 431-434.

#### Diptera.

By F. W. EDWARDS:—

Mosquito Notes. *Bull. Ent. Res.* Vol. 10, Pt. 2, pp. 129-137.

Notes on the Mosquitoes of Madagascar, Mauritius and Réunion. *Ibid.* Vol. II., Pt. 2, pp. 133-138.

On the British Species of *Simulium*.—2. The early stages, with additions and corrections to Part 1. *Ibid.* xi., pt. 3, pp. 211-246.

A new *Trichocera* from Siberia. *Ann. Mag. Nat. Hist.* (9) 5, pp. 431-432.

On the use of the generic name *Ceratopogon*, Meigen (Diptera, Chironomidæ). *Ibid.* (9) 6, pp. 127-130.

Scent-organs (?) in female midges of the *Palpomyia* group. *Ibid.* (9) 6, pp. 365-368.

Dimorphism in the antennæ of a male midge. *Ent. Mo. Mag.* (3) 6, pp. 135-136.

Some records of predaceous Ceratopogoninæ (Diptera). *Ibid.*, pp. 203-205.

The British Chaoborinæ and Dixinæ (Diptera, Culicidæ). *Ibid.*, pp. 264-270.

A new British Mosquito. *Scottish Naturalist*, pp. 91-92. May-June, 1920.

The nomenclature of the parts of the male hypopygium of Diptera Nematocera, with special reference to mosquitoes. *Ann. Trop. Med.* Vol. 14, pp. 23-40.

By DR. C. P. ALEXANDER:—

An undescribed species of *Ptychoptera* from W. Africa (*Ptychopteridæ*, Diptera). *Entomologist*, 53, pp. 101-102.

Undescribed African Crane-flies in the British Museum (*Tipulidæ*, Diptera). *Canadian Entom.*, June, 1920, pp. 145-160.

Undescribed species of African Crane-flies in the collection of the British Museum (Natural History): Tipulidæ, Diptera. Pt. 1. Sub-family Limnobiinæ. Ann. Mag. Nat. Hist. (9) 6, pp. 1-44.

By M. A. TONNOIR:—

Notes sur quelques Psychodidæ africains. Revue Zool. Africaine, 8, pp. 127-147.

By J. R. MALLOCH:—

Some new species of the genus *Lonchæa* (Diptera, Lonchæidæ). Canadian Entom. 52, pp. 246-247.

By MAJOR E. E. AUSTEN:—

1. A Contribution to Knowledge of the Tabanidæ of Palestine. Bull. Ent. Res. 10. Pt. 3, pp. 277-321. Figs. 1-18.
2. The Percy Sladen Trust Expedition to the Indian Ocean in 1905 and 1907-1909, under Mr. J. Stanley Gardiner, M.A. Diptera: Tabanidæ. *Ibid.*, 11. Pt. 1, pp. 43-45.
3. Notes on the Nomenclature of Certain African Tabanidæ (Sub-family Pangoniinæ), with Descriptions of a New Genus and New Species. *Ibid.*, 11. Pt. 2, pp. 139-152.

#### Hymenoptera.

By R. E. TURNER and J. WATERSTON:—

A Revision of the Ichneumonid Genera *Labium* and *Pæcilocryptus*. Proc. Zool. Soc., 1920, pp. 1-26.

By J. WATERSTON:—

Notes on Fig Insects, including Descriptions of three new Species and a new Blastophagine Genus. Trans. Ent. Soc. Lond., pp. 128-136.

A new Blastophagine Genus and Species from E. Africa. Ent. Mo. Mag., 3rd ser., 6, pp. 197-200.

On a new polyembryonic Encyrtid (Chalcidoidea) *Copidosoma tortricis*, sp.n., bred from the Strawberry Tortrix moth. Ann. Appl. Biol. 7, pp. 1-5.

By R. E. TURNER:—

On Indo-Chinese Hymenoptera collected by R. Vitalis de Salvaza. Ann. Mag. Nat. Hist. (9) 5, pp. 84-98.

Notes on the Ichneumonidæ in the British Museum—3. On a new Tasmanian Species. *Ibid.*, pp. 150-151.

Notes on Fossorial Hymenoptera. On new Species in the British Museum. *Ibid.*, pp. 265-271.

#### Rhynchota.

By W. L. DISTANT:—

Cicadidæ from Indo-China. Ann. Mag. Nat. Hist. (9) 5, pp. 336-337.

Some Undescribed Ethiopian Cicadidæ. *Ibid.*, pp. 369–376.  
Rhynchota from New Caledonia. *Ibid.* (9) 6, pp. 143–164.  
Descriptions of a new Genus and Species of Cicadidæ from  
Cuba. *Ibid.*, pp. 455–456.

Rhynchota from New Caledonia. *Ibid.*, pp. 456–470.

On a small collection of Homoptera from British Guiana.

The Entomologist, 53, pp. 124–126.

Description of a New Species of Neotropical Cicadidæ.  
*Ibid.*, p. 169.

By F. LAING:—

On the Genus *Atheroides*, Halid. (Aphidæ). Ent. Mo. Mag.  
(3) 6, pp. 38–45.

Two Species of *Eupteryx* (Homoptera) new to Britain. *Ibid.*,  
pp. 196–197.

Two Species of British Aphides. *Ibid.* 5, pp. 272–274.

### Neuroptera.

By H. CAMPION:—

Some new or little-known Gomphine Dragon-flies from South  
America. Ann. Mag. Nat. Hist. (9) 6, pp. 130–141.

### V.—Acquisitions.

The number of specimens added to the Insect Collection  
during the year is 94,353, made up as shown in the following  
table:—

	Donations.	Purchases.	Exchanges.	Totals.
Coleoptera ... ..	50,927	707	212	51,846
Lepidoptera ... ..	6,689	1,059	239	7,987
Hymenoptera ... ..	15,356	—	—	15,356
Diptera ... ..	8,655	—	414	9,069
Rhynchota ... ..	2,971	4,395	20	7,386
Orthoptera ... ..	895	—	—	895
Neuroptera ... ..	733	—	79	812
Other orders ... ..	670	—	—	670
Larvæ, pupæ, etc. ... ..	332	—	—	332
	87,228	6,161	964	94,353

The most important of these accessions are the following:

### Various localities.

28,250 Coleoptera, mainly Oriental and South American;  
*presented by G. E. Bryant, Esq.*

8,004 specimens of various orders; *presented by the Imperial  
Bureau of Entomology.*

1,388 specimens, mainly Diptera; *presented by Dr. W. C. C.  
Pakes.*

421 specimens of various orders; *presented by Dr. P. A.  
Buxton.*



416 specimens, mainly Coleoptera; *presented by G. C. Champion, Esq.*

The tenth instalment of the Distant collection, containing 4,395 Rhynchota and 705 Coleoptera.

### Europe.

965 British Diptera and larvæ; *presented by F. W. Edwards, Esq.*

905 specimens of various orders from Macedonia and Britain; *presented by J. Waterston, Esq.*

579 specimens of various orders from Finland and Esthonia; *presented by Bassett Digby, Esq.*

543 British Diptera; *presented by W. R. Ogilvie-Grant, Esq.*

408 Rhopalocera from South France and Switzerland; *presented by F. Pinhey, Esq.*

400 Lepidoptera from Crete and Macedonia, collected by the late P. D. Montague, Esq.; *presented by Mrs. Montague.*

350 British Diptera; *presented by Miss Ricardo.*

200 British Rhopalocera; received in exchange.

500 British Lepidoptera; purchased.

### Asia.

9,413 Hymenoptera Aculeata from India, including about 200 types; *presented by Lt.-Colonel C. G. Nurse.*

1,292 specimens, mainly Coleoptera, from Indo-China; *presented by Mons. R. Vitalis de Salvaza.*

700 Coleoptera from Celebes and Japan; *presented by H. J. Carter, Esq.*

558 specimens, mainly Coleoptera from Siam; *presented by E. J. Godfrey, Esq.*

500 Rhopalocera from Ceylon; *presented by W. Ormiston, Esq.*

479 Coleoptera from Formosa; *presented by Dr. T. Shiraki.*

346 specimens of various orders from Sumatra; *presented by C. J. Brooks, Esq.*

311 Rhynchota from Indo-China; *presented by W. L. Distant, Esq.*

309 specimens, mainly Coleoptera, from Philippine Islands and Borneo; *presented by Prof. C. F. Baker.*

232 specimens, mainly Diptera, from Federated Malay States; *presented by Dr. H. P. Hacker.*

202 Rhopalocera from Darjiling; *presented by Capt. E. C. Linton, R.A.M.C.*

169 Rhopalocera from West Sumatra; *presented by the Federated Malay States Museum.*

### Africa.

6,795 specimens of various orders from Cape Peninsula; *presented by R. E. Turner, Esq.*

475 specimens of various orders from Nigeria and Sierra Leone; *presented by Willoughby P. Lowe, Esq.*

262 Lepidoptera Tineina from Madagascar; *presented by Lord Rothschild, F.R.S.*

### America.

710 specimens of various orders from the West Indies; *presented by W. E. Broadway, Esq.*

600 Heterocera from Jamaica; *presented by Dr. F. W. Jackson.*

572 specimens, mostly Lepidoptera from California and Brazil; *presented by E. Dukinfield Jones, Esq.*

400 Diptera from North and Central America; *presented by Dr. L. O. Howard.*

328 specimens of various orders from Ecuador; *presented by Gilbert Hammond, Esq.*

209 specimens, chiefly Diptera, from the West Indies; *presented by St. George Gray, Esq.*

150 Heterocera from South America; *presented by W. J. Kaye, Esq.*

150 Diptera from United States of America; in exchange.

160 Rhynchota from North America; in exchange.

468 Lepidoptera from Honduras; purchased.

### Australasia.

226 Coleoptera including many co-types; *presented by A. M. Lea, Esq.*

## VI. Economic Entomology.

Correspondence dealing with matters of an economic nature has shown a very great increase over previous years. The enquiries have been very varied and of wide scope, those having reference to pests of stored products and of wood predominating. Where it was thought that correspondence would not be quite satisfactory, visits were paid and examinations carried out on the spot. The series illustrating injurious and beneficial insects and the card catalogue of economic literature have been frequently consulted by students. The economic series is expanding rapidly, but progress is considerably hampered by lack of space. Pamphlets on the Furniture Beetles and the House-fly have been published, a new edition of the previous pamphlet on the latter subject has been prepared, the one on Mosquitoes revised, and one dealing with the Cockroach is on its way through the press.

Amongst the subjects on which information or advice has been sought, and so far as possible given, the following may be mentioned:—

### COLEOPTERA.

- (1) Woodworms.—Many pieces of damaged wood have been received and reported upon. One of the most interesting was a piece of Scots Pine from a City church riddled with the borings of *Xestobium tessellatum*. This species had not, hitherto, been suspected of attacking coniferous woods.

- (2) *Anthrenus fasciatus*, Hbst., destroying the bristles of brushes from Alexandria.
- (3) *Necrobia rufipes*, De G., destroying bundles of China bristles.
- (4) *Dermestes vulpinus* F., destroying hides arriving at various seaports.
- (5) *Ceuthorrhynchus sulcicollis*, the Turnip Gall-weevil. Judged by the number of enquiries received regarding it, this pest must have been causing severe damage during the summer.
- (6) *Phaedon cochleariae*, causing severe damage to Mustard in several counties in the East of England.
- (7) *Phyllotreta undulata*, *P. nemorum*, *P. consobrina*, *P. cruciferae*, all injuring turnips. The first species would appear to be the most serious and widespread.
- (8) *Meligethes aeneus*, F., attacking turnips.
- (9) *Tetropium gabrieli*, Ws., doing serious damage to Larch-trees.
- (10) *Crepidodera aurata*, and *Galerucella lineola*, ruining osier beds.
- (11) *Anthonomus grandis* (The Mexican Boll-weevil). Request for methods of control from Mexico.
- (12) *Longitarsus ater*, F., causing serious injury to the Flax industry in Ireland.
- (13) *Ptinus tectus*. This species, once so rare and still a comparatively recent arrival in this country, has become very widespread, and many cases of its damage to food-stuffs have been reported during the year.
- (14) *Carpophilus hemipterus*, frequently reported as damaging dried fruits.
- (15) *Cryptophagus saginatus*, Sturm., found in numbers in Stilton cheese.
- (16) *Henoticus californicus*, breeding in jam. The remedy lay in keeping the jam free from mould.
- (17) *Calandra granaria*, *C. oryzae*, *Tribolium castaneum*, *Rhizopertha dominica*, *Silvanus surinamensis*, *Sitodrepa panicea*, *Trogosita mauritanica*, all found in grain. Many enquiries were received regarding these species, several from warehousemen, many from medical officers of health. Perhaps the most remarkable case was that received from a firm of shipbrokers, regarding *C. oryzae*, which appears to have swarmed in such numbers in the hold of a sailing vessel carrying maize that the ship had to put into the nearest port.

## LEPIDOPTERA.

- (18) *Hyponomeuta padella*. This species was very prevalent during the past summer, plum-trees being badly attacked. Much work was entailed in consequence.
- (19) *Tortrix (Archips) lecheana*, *T. rosana*, *Argyresthia ephippella*, all damaging plum-trees.

- (20) *Lithocolletis messaniella* Z., damaging ornamental oaks.
- (21) *Tortrix viridana*. The damage to oak-trees caused by this species, though still severe, did not appear to be quite so extensive as in the two previous years.
- (22) *Phyllocnistis suffusella*, damaging the leaves of a valuable hybrid poplar in a nursery.
- (23) *Platyedra gossypiella*, Saund. Information asked for from Mexico and Java, as to the measures of control adopted in Egypt and elsewhere.
- (24) *Ephestia elutella*, *E. cautella*, infesting cocoa-beans in store and also in chocolate, cotton-bolls (Egypt), stored cotton seeds (Madras), earth-nuts (Alexandria), dates and stored apricots (Bagdad), pomegranate (Cyprus), dates (Basra and Egypt), peas (Italy).
- (25) *Corcyra cephalonica*, Stn., attacking stored cotton seeds (Madras).
- (26) *Arenipsea sabella*, Hmpn., attacking dates in London, probably imported from Algeria.
- (27) *Myelois ceratoniae*, Z., attacking dates in Egypt.
- (28) *Tinea pellionella*, damaging leather goods.
- (29) *Tineola biselliella*, attacking skins (Cambridge), and ostrich plumes (S. Africa).

## DIPTERA.

- (30) *Phytomyza albiceps*, mining and ruining the leaves of *Cinerarias*.
- (31) *Calliphora erythrocephala*, breeding in Stilton cheese.
- (32) *Drosophila melanogaster*, breeding in stored fruit which had been allowed to ferment.
- (33) *Chloropisca notata*, *Musca autumnalis*, *Pollenia rudis*, *Pyrellia eriophthalma*, *Fucomyia frigida*, all causing a nuisance on account of their numbers in houses.

## RHYNCHOTA.

- (34) *Scaptocoris talpa*, Champ., damaging sugar-cane in Guatemala.
- (35) *Calocoris norvegicus*, damaging flax in Ireland.
- (36) Bugs infesting various Government hutments.
- (37) Various species of green-fly attacking different plants in Britain. The Plum Aphis (*Aphis pruni*) caused a very great deal of damage in the early spring, but the trees recovered well later in the year.
- (38) *Aleurodes vaporariorum*, infesting greenhouses.
- (39) *Chermes cooleyi*, attacking Douglas Firs in England. This species threatens to become a very serious danger to this tree in Britain.

## MISCELLANEOUS.

- (40) Rubber pests.—Many enquiries by men taking up posts on rubber plantations.
- (41) Thrips.—Damaging various species of plants.
- (42) *Trichodectes subrostratus*, infesting dogs.

- (43) *Clothilla pulsatoria* and *Atropos divinatoria*, swarming in houses.
- (44) *Glycyphagus domesticus*.—Many enquiries from upholsterers and householders.
- (45) *Tyroglyphus longior* in dried fruits and packets of soup.
- (46) *Aleurobius farinæ* in cheese and prepared flour.
- (47) Earwigs, fleas and ants swarming in houses and constituting a nuisance.
- (48) The protection of books against the ravages of insects in the Tropics.

VII.—*Students and Visitors.*

The number of visits paid to the department during the year by students and other persons seeking information or assistance was 4,088.

*C. J. Gahan.*

## DEPARTMENT OF GEOLOGY.

## I.—Arrangement and Conservation.

*Mammalia* (Galleries 1 and 2).—The bone implement from Piltown has been added to the exhibition in table-case 1, and plaster casts of the fossil human skull from Talgai, Queensland, have been mounted in pier-case 3.

The Lewis Abbott collection of mammalian remains from a fissure at Ightham, Kent, has been incorporated, and a selection of the more important specimens has been labelled and arranged for exhibition in pier-case 2.

A skeleton of *Canis dirus* from the asphalt of California has been mounted and placed in pier-case 3.

Plaster casts of cervical vertebræ of *Baluchitherium osborni* have been prepared and mounted in pier-case 8.

Number of specimens of *Mammalia* registered, 2,646.

*Aves* (Gallery 2).—A plaster cast of the skeleton of *Diatryma steini* from the Lower Eocene of Wyoming, U.S.A., has been mounted and temporarily placed for exhibition on the top of wall-case 23.

An egg of *Struthiolithus* from China has been mounted in case EE.

Number of specimens of *Aves* registered, 64.

*Reptilia and Batrachia* (Galleries 3, 4, 5, 11).—The slip catalogue has been continued, and the sections of *Batrachia*, *Anomodontia* and *Dinosauria* have been completed.

During the preparation of the slip-catalogue, the unexhibited collections of *Anomodontia* and *Dinosauria* in the basement have been examined and more satisfactorily arranged and labelled.

Wall-case 6, gallery 4, has been cleaned and rearranged to admit some new bones of *Iguanodon*.

The carapace, plastron, and limbs of a large turtle, *Protostega gigas*, from the Chalk of Kansas, have been prepared and mounted in wall-case 18, gallery 5.

Number of specimens of *Reptilia and Batrachia* registered, 1,528.

*Pisces* (Gallery 6).—The collection of Devonian fish-remains from Granite Harbour, Antarctica, has been registered and labelled.

The Mesozoic Elasmobranchii in table-cases 4–8 have been revised and partly rearranged and re-labelled during the preparation of the supplement to the Catalogue.

Selected series of teeth of the Eocene sharks, *Odontaspis elegans* and *O. macrota*, have been mounted in table-case 6 to illustrate their arrangement in the jaws.

All recent accessions have been registered and incorporated, and the more important specimens have been mounted for exhibition.

The preparation of the fish-remains in drawers, to reduce the specimens in size, is still in progress.

Number of specimens of Pisces registered, 250.

*Mollusca* (Galleries 7, 8, and Workroom).—The accessions registered, labelled and incorporated include Cambrian and Ordovician Gastropoda from Newfoundland (Spath coll.); Carboniferous Gastropoda and Lamellibranchia from Durham and Newcastle (Trechmann and Hazzledine Warren colls.); Devonian Gastropoda and Lamellibranchia from Iowa (Fenton coll.); Oxfordian Lamellibranchia from Villers-sur-mer (Rakowski coll.); Jurassic, Cretaceous, and Tertiary Lamellibranchia from France (Lowe coll.); Cretaceous Lamellibranchia from Colorado (Colorado Univ.), and from Kansas (Sternberg coll.); Albian Lamellibranchia from Surrey (Tinne coll.); Tertiary Lamellibranchia from Italy (J. Wright coll.); Tertiary Gastropoda and Lamellibranchia from British East Africa (J. Parkinson coll.); Eocene Lamellibranchia from Flanders (Campbell Smith coll.); Eocene Gastropoda from Egypt (Beadnell coll.); Miocene Gastropoda and Lamellibranchia from Jamaica (Worthington Wilmer coll.); Pliocene Lamellibranchia from Corfu (Sordina coll.), and Egypt (Petrie coll.); Post-Pliocene Gastropoda and Lamellibranchia from Sardinia (Dehaut coll.); and Holocene Gastropoda from Ightham, Kent (Lewis Abbott coll.).

Additions to the exhibited series of Gastropoda and Lamellibranchia include the holotype of *Trechmannia trochiformis*, Longstaff, 1912, from the Carboniferous Limestone of Durham (C. T. Trechmann coll.); *Inoceramus intermedius* from the Chalk of Hunstanton, figured 1829, Ann. Mag. Nat. Hist., vol. ii., p. 296; an example, three feet in diameter, of *Inoceramus platinus* from the Chalk of Kansas (Sternberg coll.); a series of opalised fossils of Upper Cretaceous age from New South Wales, described R. B. Newton, 1915, Proc. Malacol. Soc., vol. xi., pl. vi. (St. John Thackeray bequest); and an example of *Scala rugulosa* from the Miocene of Patagonia (Gostling coll.).

The accessions of Cephalopoda registered, labelled, and incorporated include Triassic Ammonoidea, Nautiloidea, and Belemnoidea from Timor (Wanner coll.); Triassic Ammonoidea and Nautiloidea from Bosnia (Hawelka coll.), the United States and New Zealand (Trechmann coll.); Triassic and Jurassic Ammonoidea from Spitsbergen (Garwood and Gregory coll., W. T. Reynolds coll.); Liassic Ammonoidea from Glamorganshire and *Liparoceras pseudostriatum* from Lyme Regis (Trueman coll.); Oxfordian Ammonoidea from Villers-sur-mer (Rakowski coll.); Jurassic Belemnites and Cretaceous Scaphites from the United States (Colorado Univ.); Cretaceous Ammonoidea from Nigeria (Falconer, Kitson, and Temple colls.).

Additions to the exhibited series include *Nautilus* cf. *darwensis* from the Turonian of Burghclere, Berks. (Withers coll.); *Hercoglossa aegyptiaca*, from the Eocene of Mokattam (C. T. Taylor coll.); *Aturia aturi* from the Miocene of Western Australia, described by R. B. Newton, 1919.

The names of the specimens of Triassic Ammonites have been revised and a large series placed on exhibition. A similar revision of the Upper Lias Ammonites is in progress.

The slip-catalogues of the historical specimens and exhibited specimens have been continued.

Number of Mollusca registered:—Cephalopoda, 1,987; Gastropoda, 1,209; Lamellibranchia, 505. Total, 3,701.

*Arthropoda* (Gallery 8 and Workroom).—The accessions registered, labelled and incorporated include Cambrian Trilobites from British Columbia (Cutler coll. and Walcott coll.), and from Newfoundland (Spath coll.); Middle Cambrian Arthropods from British Columbia (Walcott coll. per Ward); Ordovician Ostracods and Phyllocarids from Girvan, Ayrshire (Gray coll.); an extensive series of Arthropods mainly from the Palæozoic Rocks of North America (G. J. Hinde coll.); Miocene Insects from Florissant, Colorado (Cockerell coll.); Miocene (Amber) Insects from Burma (Swinhoe coll.); Quaternary Cirripedes from Peru (Bosworth coll.).

Oligocene and Carboniferous Insects, Jurassic Odonata, Jurassic Decapods, and Carboniferous Millipedes have been selected, re-registered where necessary, and despatched for determination by various specialists.

Tertiary Cirripedes from S. America, India, and New Zealand, Cretaceous Cirripedes from America and England, and Jurassic Cirripedes from England, have been determined, arranged and labelled.

Additions have been made to the exhibited series of Ordovician and Silurian Trilobites, of Tertiary Cirripedia, and of Carboniferous and Tertiary Insects.

The slip-catalogues of exhibited specimens, of amber insects, of new genera, and of additions to various series, have been continued.

Number of specimens of Arthropoda registered, 2,310.

*Echinoderma* (Gallery 8).—The accessions registered, labelled and incorporated include a large collection of Cystidea from the Ordovician of Girvan (Gray coll.); Cystids and Crinoids from the Lower Palæozoic Rocks of N. America (Ward); Blastoids from the Devonian and Mississippian of the United States (Greger coll. and Ward); Crinoids from various divisions of the Mississippian series in the United States (T. A. Worthen coll.), from the Burlington Limestone and St. Louis group of Missouri (Greger coll.), from the Carboniferous of Malahide, co. Dublin (L. B. Smyth coll.), from the Trias of Bosnia (Hawelka coll.), from the Turonian of Germany (Jaekel coll.), and from the Senonian of Surrey (Withers coll.); Crinoids, Asteroids, and Echinoids from the Portlandian Hartwell Clay of Aylesbury (Hollis coll.); Echinoids from the Jurassic of England (Corfield coll.), from the Chalk of France (Mullins coll.) and England (Withers coll.), and from the Miocene of Anguilla and Antigua (J. W. Gregory coll.).

The specimens of *Herpetocrinus* from the Wenlock Limestone have been revised, registered, and re-labelled. The revi-



sion of the labels of the exhibited type-specimens of Echinoidea has been completed; other Jurassic and Cretaceous Echinoids of England have been re-registered and re-labelled; and the whole of the exhibited series of British Echinoids has been re-arranged. Specimens illustrating some of the Girvan Cystids have been exhibited. The revision of the Palæozoic Asteroidea continues. Various Echinoderms preserved in pyrites have been treated and soaked in melted paraffin to check decomposition.

The slip-catalogues of specimens studied or exhibited, of all Blastoids, and of genera and species of other classes, have been continued.

Number of specimens of Echinoderma registered:—Echinoidea, 297; Asteroidea, 19; Crinoidea, 442; Blastoidea, 90; Cystidea, 599; Total, 1,447.

*Annelida* (Gallery 8 and Workroom).—The accessions registered, labelled and incorporated include specimens of *Ottoia*, *Selkirkia*, and *Canadia* from the Middle Cambrian of British Columbia (Walcott coll.); *Tentaculites* from the Ordovician, Silurian, and Devonian of N. America (G. J. Hinde coll.); *Conchicolites* from the Silurian of Gotland (Bather coll.); *Spirorbis* from the Upper Devonian of Iowa (Fenton coll.); *Serpula* from the Oxfordian of Villers-sur-mer (Rakowski coll.). A number of *Tentaculites* have been re-registered on their transference from Mollusca.

A specimen of *Protoscolex latus*, a new Oligochaet from the Lower Ludlow Beds, has been placed on exhibition.

The slip-catalogues of specimens exhibited and of genera have been continued.

Number of specimens of Annelida registered, 111.

*Brachiopoda* (Gallery 8 and Workroom).—The accessions registered, labelled, and incorporated include specimens from the Silurian of Newfoundland (Spath coll.); Devonian of China (J. L. Smith coll.), India (Younghusband coll.), and the United States (Fenton coll.); Carboniferous Limestone of Derbyshire (Bather coll.); Mississippian of Missouri (Greger coll.); and the Miocene of Malta (Mullins coll.).

Number of specimens of Brachiopoda registered, 645.

*Polyzoa* (Gallery 8 and Workroom).—Upper Devonian Polyzoa from North America (C. L. Fenton coll.), have been registered, labelled, and incorporated.

Number of Polyzoa registered, 85.

*Anthozoa and Hydrozoa* (Gallery 10 and Workroom).—Palæozoic (mostly North American) Corals of the G. J. Hinde coll.; Devonian Corals and Hydrozoa from North America (C. L. Fenton coll.); Carboniferous Corals from Australia (Stanley Smith coll.); and Hydrozoa from the Trias of Timor (Wanner coll.); have been registered, labelled, and incorporated.

Number of Anthozoa and Hydrozoa registered, 2,288.

*Porifera and Protozoa* (Gallery 10).—Sponges from the G. J. Hinde collection, mostly Cretaceous, have been registered and incorporated.

Number of Porifera and Protozoa registered, 999.

*Plantæ* (Gallery 10).—A representative series of Tertiary and Quaternary plants, including many specimens figured by Heer, Ettingshausen and others, has been arranged and exhibited, with printed labels, in wall-cases 10 and 11.

The Whymper collection of Greenland plants has been sorted, labelled, re-registered where necessary, and incorporated.

The extensive Ettingshausen collection of Tertiary plants, chiefly from Austria, has been re-registered, labelled, arranged and indexed, and many of the specimens reduced in size, thereby saving much space. The collection includes over 100 type and figured specimens which had not previously been noted.

Eocene plants from Belgium and the Paris basin have been re-examined and sorted, and a commencement has been made with the arrangement of the British Tertiary plants.

Other specimens registered, labelled and incorporated include Miocene plants from Colorado (Cockerell coll.), slides of coccospheres, etc. (G. J. Hinde coll.), and Jurassic and Tertiary plants from Spitsbergen (Reynolds coll. and Gregory coll.).

Additions have been made to the collection of microscope-slides by the cutting of sections of fossil woods and by the preparation of leaf cuticles. The card index of fossil plants has been extended.

Number of specimens of *Plantæ* registered, 1,243.

## II.—*Duplicates and Exchanges.*

Duplicate fossils have been exchanged with the United States National Museum, Washington; Prof. O. Jaekel, University of Greifswald; and Dr. Robert Kidston, F.R.S.

## III.—*Departmental Library.*

The additions to the Library which have been registered, stamped, catalogued, and press-marked, comprise 178 new works and pamphlets, of which 56 were purchased and 122 presented; 1,005 parts of serials in progress, of which 169 were purchased and 836 presented. 111 sheets of maps were acquired, 14 by purchase and 97 by presentation. 7 photographs were presented. 43 volumes and pamphlets were obtained by transfer from other Departments.

91 volumes have been bound, press-marked and returned to the shelves. 829 geological maps have been mounted on linen, and 220 pamphlets have been put into covers.

1,679 visits were made to the Library by students and others during the year.

The following is a list of personal donors to the Library:—

Andrews, Dr. C. W.  
Bather, Dr. F. A.  
Bell, A., Esq.  
Bensley, Dr.  
Blumer, Dr. E.  
Broom, Dr. R.

Cockerell, Prof. T. D. A.  
Dall, W. H., Esq.  
Fischer, Dr. K.  
Freudenberg, Dr. W.  
Gonzaga de Campos, Dr.  
Gray, Mrs. R.

Gregory, Prof. J. W.	Piaz, Prof. Dal.
Hayashi, Prof.	Rendle, Dr. A. B.
Hinde, Mrs. G. J.	Reynell, A., Esq.
Jackson, J. Wilfrid, Esq.	Rohwer, S. A., Esq.
Jillson, Prof. W. R.	Roig, Dr. M. S.
Kerr, Mrs. R.	Sherborn, C. D., Esq.
Kilian, Prof. W.	Stopes, Dr. M. C.
Kitchin, Dr. F. L.	Tillyard, Dr. R. J.
Lambert, Dr. J.	Whitehouse, W., Esq.
North, Dr. F. J.	Wilson, Mrs.
Osborn, Prof. H. F.	Woodward, Dr. A. S.
Petronievics, Dr. B.	

IV.—*Publications.*

Progress has been made with the printing of the third volume of the Catalogue of Cretaceous Bryozoa, and with the preparation of the MS. of the Supplement to the Catalogue of Fossil Fishes.

Apart from the official publications of the Trustees, the following descriptive papers dealing with different parts of the collection have been contributed to scientific journals during 1920:—

By DR. A. S. WOODWARD.

1. On the Dentition of the Petalodont Shark, *Climaxodus*. Quart. Journ. Geol. Soc. vol. lxxv., pp. 1-6, pl. i.

By DR. F. A. BATHER.

1. Fossils and Life: Address to the Geological Section. Rep. Brit. Assoc., Cardiff, 1920.
2. *Protoscolex latus*, a new "Worm" from the Lower Ludlow Beds. Ann. Mag. Nat. Hist. (9) vol. v., pp. 124-132.
3. *Pholocidarid anceps*, a Correction. *Loc. cit.*, pp. 271-273.
4. Echinoid or Crinoid? Geol. Mag. 1920, pp. 371-372.

By MR. R. B. NEWTON.

1. On some Freshwater Fossils from Central South Africa. Ann. Mag. Nat. Hist. (9), vol. v., pp. 241-249, pl. viii.

By DR. C. W. ANDREWS.

1. Note on Two new Species of Fossil Tortoises. Ann. Mag. Nat. Hist. (9), vol. v., pp. 145-150.
2. Remains of the Great Auk and Ptarmigan in the Channel Islands. *Loc. cit.*, vol. vi., p. 167.
3. A Description of New Species of Zeuglodont and of Leathery Turtle from the Eocene of Southern Nigeria. Proc. Zool. Soc. 1919 (1920), pp. 309-319, pls. i., ii.

By MR. T. H. WITHERS.

1. The Cirripede Genus *Stramentum* (*Loricula*): its History and Structure. Ann. Mag. Nat. Hist. (9) vol. v., pp. 65-84, pls. iii., iv.
2. The Cirripede Subgenus *Scillaelepas*: its probable Occurrence in the Jurassic Rocks (*S. gaveyi*, sp. n.). *Loc. cit.*, pp. 258-264, pl. xiii.

By MISS D. M. A. BATE.

1. Note on a New Vole and other Remains from the Ghar Dalam Cavern, Malta. *Geol. Mag.*, 1920, pp. 208-211.

By MR. D. M. S. WATSON.

1. On the Cynodontia. *Ann. Mag. Nat. Hist.* (9) vol. vi., pp. 506-524.

By PROF. T. D. A. COCKERELL.

1. A Therevid Fly in Burmese Amber. *Entomologist*, vol. liii, pp. 169-170.
2. Fossil Arthropods in the British Museum. Parts I.-IV. *Ann. Mag. Nat. Hist.* (9) vol. v., pp. 273-279, 455-463, pl. xvi.; loc. cit. vol. vi., pp. 65-72, 211-214.

By MR. H. ST. J. K. DONISTHORPE.

1. British Oligocene Ants. *Ann. Mag. Nat. Hist.* (9) vol. v., pp. 81-94, pl. v.

By MR. W. B. R. KING.

1. Notes on the Genus *Sphaerocoryphe*. *Geol. Mag.*, 1920, pp. 532-534, pl. xiii.

By DR F. J. NORTH.

1. On *Syringothyris*, Winchell, and Certain Carboniferous Brachiopoda referred to *Spiriferina*, D'Orbigny. *Quart. Journ. Geol. Soc.*, vol. lxxvi., pp. 162-227, pls. xi.-xiii.

By MR. L. F. SPATH.

1. On a new Ammonite Genus (*Dayiceras*) from the Lias of Charmouth. *Geol. Mag.*, 1920, pp. 538-543, pl. xv.

## V.—Acquisitions.

### A.—By Donation.

*Mammalia*.—Portion of mandibular ramus of *Palaeotherium* from the Bembridge Limestone, Sconce Point, I. of Wight (collected by S. L. Wood, Esq.). *Mrs. T. D. A. Cockerell*.

Portion of mandible with milk-teeth, a deformed incisor tooth and a metacarpus of *Myotragus balearicus* from Majorca. *Miss D. M. A. Bate*.

Remains of *Hippopotamus minutus* from the Pleistocene of Cyprus. *C. Godfrey Gunther, Esq.*

Horn-core of *Bison* from Pleistocene gravel, Mitcham, Surrey. *W. S. Oulds, Esq.*

Caudal vertebra of a giant ground-sloth from the Jurua River, Amazon. *E. Stanley Sutton, Esq.*

The collection of vertebrate remains discovered by Mr. W. J. Lewis Abbott in a fissure near Ightham, Kent, including the mammalian and avian remains described by E. T. Newton, *Quart. Journ. Geol. Soc.*, vol. 50 (1894), and the mammalian remains described by S. H. Reynolds, "British Pleistocene

Mammalia," vol. ii. (Pal. Soc.), and by M. A. C. Hinton, Ann. Mag. N.H. (8), vol. vi. (1910), and Sci. Proc. Roy. Dublin Soc. n.s., vol. xii. (1909). *Sir Henry H. Howorth, K.C.I.E., F.R.S.*

Portion of antler of Irish Deer (*Cervus megaceros*) from Great Northern Railway ballast pits near Lolham, Northamptonshire. *Vernon B. Crowther-Benyon, Esq., F.S.A.*

Section of molar of *Equus* from the beach near Minster, Sheppey. *W. H. Shrubsole, Esq., F.G.S.*

*Aves*.—A feather from the Miocene of Florissant, Colorado. *Prof. T. D. A. Cockerell.*

The egg of an extinct Struthious bird (*Struthiolithus*) from China. *Rev. H. M. Clark.*

*Reptilia*.—Wax model of the skull of *Lysorophus* made by the donor's method of serial sections. *Prof. W. J. Sollas, F.R.S.*

Portion of Ichthyosaurian rostrum from the highlands N. of Grahamstown, S. Africa. *Miss Edyth Walton.*

Two vertebræ and two phalangeals of a Plesiosaurian collected by the late F. J. Barnes, Esq., from the Portland Stone, I. of Portland. *The family of the late F. J. Barnes, Esq.*

Mandibular ramus of *Homoeosaurus major* from the Middle Purbeck, Durlston Bay, Swanage. *Miss Grace Pickford.*

*Pisces*.—Three fish-remains (*Cheirolepis*, *Gyroptychius* and *Cocosteus*) from the Old Red Sandstone, Edderton Burn, Tain, Ross-shire. *Miss Annie C. Jackson.*

A collection of remains of a new Palæoniscid fish (*Elonichthys* sp.) and a new Dipnoan, collected by the donor from the Lower Carboniferous, Deer Lake, Newfoundland. *T. Landell-Mills, Esq., F.G.S.*

A specimen of *Cleithrolepis minor* from the Upper Karoo, Caledon River, Orange River Colony. *Dr. Robert Broom, F.R.S.*

Nine Otoliths from the Portlandian Hartwell Clay, Aylesbury. *E. Hollis, Esq.*

The type-specimen of *Mesodon barnesi*, A. S. Woodward, Proc. Dorset Field Club, vol. 27 (1906), p. 187, pl. B.; a fin-spine of *Ischyodus townsendi* descr. and figd., *loc. cit.*, p. 181, pl. A.; a splenial bone of *Mesodon damoni* and three other fish-remains; all collected by the late F. J. Barnes, Esq., from the Portland Stone, I. of Portland. *The family of the late F. J. Barnes, Esq.*

Tooth of *Oxyrhina mantelli* from the Chalk of Beer, Devon. *P. B. Richards, Esq.*

Five fish-remains from the Lower Eocene (Cernaysian), Reims, France. *Rev. Prof. P. Teilhard, S.J.*

A collection of teeth of Lamnid sharks (including *Odontaspis elegans*, *O. macrota* and *O. trigonalis*) from the Middle Eocene, Lee-on-Solent. *C. Bevous Smith, Esq.*

Two fishes from the Miocene Shales of Florissant, Colorado. *Prof. T. D. A. Cockerell.*

A series of bones of *Platax woodwardi* from the Norwich Crag, Easton Bavent, Suffolk. *H. Skrimshire, Esq.*

A cranium of a Teleostean fish from the phosphates of N. Africa. *H. Dixon Hewitt, Esq., F.I.C.*

A tooth of *Oxyrhina* from the Patagonian formation, Beagle Bluff, Santa Cruz. *Leonard Cooper, Esq.*

Vertebrae and portions of skulls of a large fossil perch (*Lates niloticus*) collected by the donor on a sand-spit at the north end of Lake Rudolf, Sudan. *Major L. F. I. Athill, R.F.A.*

*Mollusca*.—Eleven Carboniferous Goniatites from Staffordshire and Cheshire. *The late Dr. Wheelton Hind, F.G.S.*

A *Bellerophon* from the Carboniferous Limestone, Weston-super-Mare. *Geoffrey E. O. Mullins, Esq.*

Three Gastropoda from the Carboniferous Limestone, Stanhope-in-Weardale, including *Trechmannia trochiformis*, Longstaff, Quart. Journ. Geol. Soc., vol. lxxviii., pl. xxx., and *Tropidostropha punctata*, Longstaff, *ibid.*, pl. xxvii. Two small blocks from the Upper Coal Measures, Claxheugh, co. Durham, with specimens of *Ancylus vinti*, figd. by the donor in the Geol. Mag., 1919, pl. v., figs. 1, 2. Six Ammonites from the Trias of Austria. Five Nautiloids and eighty Ammonites from the Trias of the United States. Six Ammonites and four Nautiloids from the Upper Trias of New Zealand, noticed, and two figured by the donor in Quart. Journ. Geol. Soc., vol. lxxviii. (1918), p. 165, pl. xvii. *Dr. C. T. Trechmann, F.G.S.*

Three Gastropoda (*Naticella*, &c.) from the Dolomite of Predazzo, S. Tyrol. *R. Kirkpatrick, Esq.*

Twelve Ammonites and six Lamellibranchs from the Lower Lias of South Wales; also the type-specimen of *Liparoceras pseudostratum*, Trueman, Quart. Journ. Geol. Soc., vol. lxxiv. (1919), p. 272, fig. 4, from the Lias of Dorset. *Dr. A. E. Trueman, F.G.S.*

Twenty Lamellibranchs, one Gastropod and ten Cephalopods, from the Oxfordian of Vaches Noires, Calvados, France. *Monsieur R. J. F. Rakowski.*

Twelve specimens of *Dentalium* from the Portlandian Hartwell Clay of Aylesbury. *E. Hollis, Esq.*

A *Pecten* from the Portland Stone, I. of Portland. *The family of the late F. J. Barnes, Esq.*

Ten Jurassic Mollusca from Wyoming; two Cretaceous Mollusca from Texas; and 69 Cretaceous Mollusca from Colorado. *University of Colorado, per Mr. Junius Henderson, Curator of Museum.*

Remains of Gastropods, probably Cretaceous, from near Komgha village, S. Africa. *Dr. Arthur W. Rogers, F.R.S.*

About fifty fossils, chiefly Lamellibranch shells, from the Upper Cretaceous of Persia. *J. V. Harrison, Esq.*

Seventeen fragments of Ammonites collected by the donor, 1912, from the Cretaceous of Enyiba, S. Nigeria. *A. E. Kitson, Esq., C.B.E.*

Two Ammonites from the Upper Cretaceous of Seebe, Alberta. *W. E. Cutler, Esq., F.G.S.*

An Ammonite in flint from the Mount of Olives. *Miss Winifred K. Baird.*

Two Nautili from the Chalk of Kent and Berks. *T. H. Withers, Esq., F.G.S.*

The type-specimen of *Inoceramus intermedius* J. de C. Sowerby, Mag. Nat. Hist., vol. ii. (1829), p. 296, fig. 83, from the Chalk of Norfolk; also three specimens of the same species. *L. F. Spath, Esq., F.G.S.*

Eight specimens of *Ostrea lunata* from the Åhus Sandstone, Scania, Sweden. *Prof. Karl A. Grönwall.*

A Nautilus (*Hercoglossa aegyptiacus*) from the Eocene of Mokattam, near Cairo, Egypt. *Charles Taylor, Esq., M.D.*

A shell of *Fusus serratus* from the Lutetian (Middle Eocene) of Seine-et-Oise. *R. N. C. Hunt, Esq.*

Fifty-six natural casts of Mollusca from the Miocene Limestone, Mandeville, Jamaica. *Col. L. Worthington Wilmer.*

Eight valves of *Ostrea* from a Tertiary (probably Miocene) formation in British East Africa. *C. W. Hobley, Esq., C.M.G.*

Thirty Lamellibranchs from the Tertiary of South Kurdistan. *J. V. Harrison, Esq.*

An oyster from the phosphates of N. Africa. *H. Dixon Hewitt, Esq., F.I.C.*

A *Scala* from the Patagonian Formation of Santa Cruz. *Asa Gostling, Esq.*

A collection of land-shells obtained by the donor from a fissure near Ightham, Kent. *W. J. Lewis Abbott, Esq., F.G.S.*

Fifteen terrestrial and marine shells from an ossiferous breccia and caverns in Sardinia, noticed in the donor's works, "Nat. Hist. Zool. Paléont. de la Corse et de Sardaigne," fasc. 5 (1914), p. 72, and "Contrib. Étude Vie Vert. Insul. Medit. Occid." (1920), p. 54. *Monsieur D. G. Dehaut.*

*Arthropoda*.—Eleven specimens of *Marrella splendens* from the Middle Cambrian (Burgess Shale), Burgess Pass, Field, British Columbia. *Dr. C. D. Walcott.*

Three pieces of Lower Ludlow rock with *Ceratiocaris*, from Mocktree, Herefordshire. *Dr. Herbert L. Hawkins, F.G.S.*

Two slabs of *Eistheria* collected by the donor from the Lower Carboniferous, Deer Lake, Newfoundland. *T. Landell-Mills, Esq., F.G.S.*

Nineteen Insects, including among other type-specimens a reverse of the type of the Ichneumid, *Tryphon explanatum*, from the Miocene of Florissant, Colorado. *Prof. T. D. A. Cockerell.*

Sixty-nine pieces of Amber from the Miocene of Burma, containing the remains of Arthropods and including the type-specimens of *Burmitembia venosa*, *Aleurodiscus burmiticus*, *Micropteryx pervetus*, *Johannsenomyia swinhoei*, *Psylloneura* (?) *parantiqua*, *Garypus burmiticus*, *Epyris atavellus*, *Psilocephala electrella*, *Labidura electrina*, and *Eophlebotomus connectens*, described by Prof. T. D. A. Cockerell. *Rodway C. J. Swinhoe, Esq.*

Three specimens of *Balanus tintinnabulum* var. *concinna*, and two of *B. laevis* var. *nitida*, from raised beaches near Payta, Peru. *Dr. T. O. Bosworth, F.G.S.*

*Echinoderma*.—A plaster cast of the type-specimen of *Eucalyptocrinus proboscidalis* from the Silurian, Pontiac, Ohio. *Dr. Aug. F. Foerste*.

Thirty-four Crinoids and two Blastoids from the Lower Carboniferous of Malahide, Dublin. *Louis B. Smyth, Esq., B.Sc.*

An Ophiurid arm from the Rhaetic, near Frome. *T. H. Withers, Esq., F.G.S.*

A piece of Crinoid Limestone (with *Isocrinus*) and two Echinoids (*Hemipedina* and *Diademopsis?*) from the Lower Lias of Charmouth, Dorset. *Dr. W. D. Lang*.

Fifty-six Echinoid, sixteen Ophiurid and sixty-two Crinoid remains from the Portlandian Hartwell Clay of Aylesbury. *E. Hollis, Esq.*

Two Echinoids (*Hemiaster*) from the Cretaceous of Wady-el-Tib, near Ajul, Ephraim, Palestine; and four Echinoids from the Lower Senonian, near Abancourt, France. *Geoffrey E. O. Mullins, Esq.*

Nine Echinoids and eighteen Crinoid remains from the Chalk of Surrey. *T. H. Withers, Esq., F.G.S.*

Four stem-fragments of *Balanocrinus* collected by the donor from the Eocene of Biarritz. *E. Heron-Allen, Esq., F.R.S.*

A *Clypeaster* from the Oligocene of Cerro La Puerta, Tophila, northern Vera Cruz, Mexico. *John M. Muir, Esq.*

An Echinoid (*Clypeaster aegyptiacus*) from the Miocene, Mussendum, Persian Gulf. *Mrs. Kossman*.

A fragment of Echinoid (*Schizaster*) from the Coralline Crag, Broom's Hill, Gedgrave. *Alfred Bell, Esq.*

A Crinoid, *Holopus rangi*, from a depth of 60 fathoms in the sea off Barbados. *Dr. C. T. Trechmann, F.G.S.*

*Annelida*.—Three Annelids from the Silurian of Gotland. *Dr. F. A. Bather, F.R.S.*

A large slab of Sandstone with worm-like tracks, from the base of the Carboniferous, near Kirkby Lonsdale. *Major Gibson*.

A Triassic (Carnian) worm, *Terebellina mackayi*, from the Misol Archipelago. *Director of the Geological Institute, University, Bonn, Germany*.

Five Serpulæ from the Oxfordian of Vaches Noires, Calvados. *Monsieur R. J. F. Rakowski*.

*Brachiopoda*.—Two internal casts of Palæozoic Brachiopods from near Huanuni, Bolivia, 13,000ft. above the sea. *William T. Rennie, Esq.*

Two Brachiopods from the Lower Senonian, near Abancourt, France. *Geoffrey E. O. Mullins, Esq.*

*Polyzoa*.—A Polyzoan from the Wenlock Limestone, Penylan, Cardiff. *Dr. F. A. Bather, F.R.S.*

A Polyzoan from the Lower Greensand of Folkestone. *L. F. Brady, Esq.*

Two Polyzoa from the Senonian Åhus Sandstone, Scania, Sweden. *Prof. Karl A. Grönwall*.

*Coelentera*.—Twenty Carboniferous Corals from New South Wales and Queensland, described by the donor in Proc. Linn.



Soc. N. S. Wales; two Corals from the Carboniferous Limestone of Northern England; and two sections of *Orionastraea ensifer* from the Carboniferous Limestone of Wrington, Somerset. *Dr. Stanley Smith, F.G.S.*

Two Corals from the Miocene Limestone of Mandeville, Jamaica. *Col. L. Worthington Wilmer.*

*Porifera*.—A Sponge from the Chalk Marl of Arlesey, Bedfordshire. *Prof. T. D. A. Cockerell.*

A portion of a Sponge (*Ventriculites*) in flint. *Miss Joan Chapman.*

*Protozoa*.—Five sections of *Nummulites* from the Bracklesham Beds, Bracklesham, Sussex. *H. A. Moncrieff, Esq.*

A piece of Foraminiferal limestone from the Tertiary of South Kurdistan. *J. V. Harrison, Esq.*

Two microscope-slides of Radiolarian earth from Barbados. *Lieut.-Gen. Sir Nicholas Yermoloff, K.C.B.*

*Miscellaneous Invertebrata, etc.*—A collection of 166 fossils from Spitsbergen, made chiefly by W. J. Reynolds, Esq., namely:—Permo-Carboniferous and Permian fossils from Mimer Bay and Ekman Bay; Triassic fossils from Sassen Bay; Triassic and Jurassic fossils from Van Keulen's Bay; Kimmeridgian fossils from Green Harbour; Jurassic plants from various localities; ammonites and *Aucella* from Cape Delta; Aptian fossils from Whale's Head, &c.; and belemnites from various localities. *Messrs. Beeby Thompson and Partners.*

About eighty Upper Cretaceous fossils (Gastropoda, Lamellibranchia, Brachiopoda, Polyzoa, and Echinoids), collected by the donor in Persia. *J. V. Harrison, Esq.*

About a hundred and ninety Tertiary fossils (Mollusca, Crustacea, Echinoids, Corals, &c.) collected by the donor in Persia. *B. K. N. Wyllie, Esq.*

Four Corals, three Polyzoa, one Annelid, two Brachiopods and five Mollusca from the Miocene of Malta. *Geoffrey E. O. Mullins, Esq.*

About eighty Tertiary fossils (Corals, Echinoids, Mollusca, &c.) from Mombasa, British East Africa. *C. W. Hobley, Esq., C.M.G.*

One Coral, three Crustacean remains, three Lamellibranchs, six Gastropods, two rock-specimens and one piece of resinous substance from the Tertiary of Corosal Quarry, Trinidad. *R. J. Faulkner, Esq.*

*Plantæ*.—Two Coal-balls from the Coal Measures, Romsée, near Liège, Belgium. *Prof. Armand Renier.*

A specimen of the Permo-Carboniferous *Gangamopteris* from Bald Hill, Bacchus Marsh, Victoria, Australia. *Dr. C. T. Trechmann, F.G.S.*

Three specimens of *Halymenites major* from the Crêtaceous of Colorado. *University of Colorado, per Mr. Junius Henderson, Curator of the Museum.*

A silicified rock containing *Chara* and remains of Gastropods, with two microscope-sections of the same, probably Cretaceous, from near Komgha village, South Africa. *Dr. Arthur W. Rogers, F.R.S.*

Sixteen Plants from the Miocene of Florissant, Colorado. *Prof. T. D. A. Cockerell.*

Two fossil Plants from Miocene leaf-beds, Ormond, Poverty Bay, New Zealand. *W. Hill, Esq.*

Leaf-impressions in porcellanite from Trinidad. *C. B. Williams, Esq.*

Five microscope-slides of diatomaceous earth from Lompoc, Santa Barbara Co., California. *Lieut.-Gen. Sir Nicholas Yermoloff, K.C.B.*

A piece of laminated mud with seeds, &c., deposited in 1913 by flood at Dayton, Ohio. *Dr. Aug. F. Foerste.*

*Rock-specimens.*—A piece of chert worn into the shape of a vertebra, from Stonebarrow Hill, Charmouth, Dorset. *Mrs. Cecil Bagot.*

#### B.—By Purchase.

*Mammalia.*—A molar and two vertebræ of *Tetrabelodon*; a molar of *Rhinoceros*; a right maxilla, a sacrum and a caudal vertebra of *Brachyodus*; an axis vertebra of a Carnivore; and a portion of the jaw of *Cyrtodelphis*; collected by Lieut. Lamb from the Lower Miocene of the Libyan desert.

Mammalian remains from the Pleistocene and later deposits round Peterborough (Leeds Coll.).

A collection of ten portions of skulls and lower jaws of small mammals, chiefly Rodentia, from the Caves of Cuba and Indian shell-mounds of Porto Rico.

*Reptilia.*—About twenty-eight reptilian remains from the Oxford Clay of Peterborough (Leeds Coll.).

A skull and portion of another skull of *Tomistoma dowsoni*, collected by Lieut. Lamb from the Lower Miocene of the Libyan Desert.

*Pisces.*—Fifteen fish-remains from the Oxford Clay of Peterborough (Leeds Coll.).

A piece of rostrum of *Pristis* collected by Lieut. Lamb from the Lower Miocene of the Libyan Desert.

*Mollusca.*—Lower Cambrian Scaphopoda and sixty-four Ordovician Gastropoda from Newfoundland.

A hundred and seventeen Cephalopoda from the Trias of Timor (J. Wanner Coll.).

Mollusca from the Cretaceous of Gosau, Austria (Schrammen Coll.).

A very large *Inoceramus* from the Chalk, Kansas (Sternberg Coll.).

A *Nautilus* from the Barton Clay.

*Arthropoda.*—Sixty-eight Lower Cambrian Trilobites from Newfoundland.

*Echinoderma*.—Seventeen Cystids, twelve Blastoids and forty-three Crinoids from the Palæozoic of N. America.

Four specimens of the Carboniferous Crinoid *Agaricocrinus*.  
A fossil Echinoid (*Clypeaster*) showing internal structure.

*Brachiopoda*.—Twenty-five Lower Cambrian Brachiopoda, and seventeen Silurian fossils, chiefly Brachiopoda, from Newfoundland.

*Polyzoa*.—Two hundred Polyzoa from the Chalk of Worthing.

*Coelentera*.—Corals from the Cretaceous of Gosau, Austria (Schrammen Coll.).

*Porifera*.—Sixteen Porifera from the Trias of Timor (J. Wanner Coll.).

A thousand Sponges from the Jurassic and Cretaceous chiefly of Hanover (Schrammen Coll.).

*Miscellaneous Invertebrata*.—The first instalment of the Gray Collection of Girvan fossils, including seven hundred type and figured specimens.

Seven hundred and forty Devonian Invertebrata from N. America, chiefly Iowa.

*Problematical fossils*.—Eleven problematical fossils from the Middle Cambrian, Burgess Pass, Field, British Columbia.

#### C.—By Exchange.

Fifteen remains of a Crinoid, *Drepanocrinus sessilis*, from the Cretaceous of Mülheim-am-Rhein, Germany.

Two pieces of chert with petrified plant-remains from the Devonian of Rhynie, Aberdeenshire.

The total accessions during 1920 are as follows:—

	Donations.	Purchases.	Exchanges.	Total.
Vertebrata -	3,042	73	—	3,115
Invertebrata -	1,518	16,235	15	17,768
Plantæ - -	18	—	2	20
Rocks - -	5	—	—	5
	<hr/>	<hr/>	<hr/>	<hr/>
	4,583	16,308	17	20,908

The total number of specimens registered is 17,317.

#### VI.—Students and Visitors.

The number of visits paid to the Department by Students and other persons for the purpose of consultation or study during 1920 was 4,920.

Arthur Smith Woodward.

## DEPARTMENT OF MINERALOGY.

I.—*Arrangement.*

The specimens of limonite have been re-arranged in the case-tops, and those of proustite in a special light-proof case provided with a wooden lid which can be raised in order to view the specimens.

Photomicrographs of micro-sections of some of the more important types of rocks have been placed in the cases containing the species-collection of rocks.

Series of minerals and rocks have been arranged for the use of students, and descriptive labels have been prepared for them.

Forty-eight boxes of mineral and rock specimens have been received, unpacked, and examined; and fifty-two boxes have been packed and dispatched.

II.—*Registration, Indexing, and Cataloguing.*

All the specimens of minerals, rocks, and meteorites acquired during the year have been registered, numbered, provided with permanent labels, and incorporated in the collection. In this connection many specimens have been examined and determined, and localities have been checked.

The preparation of the slip-catalogues of the mineral specimens in the collection, species by species, and of permanent labels giving all available information for each specimen, has been continued for the Division of the Oxides, and has been commenced for that of the Sulphates. In this connection slips and permanent labels have been prepared for opal, valentinite, cervantite, kermesite, and the remaining species up to the end of the Oxides.

The slip-catalogue of species is being utilised for the preparation of a complete and detailed topographical index of all specimens in the Mineral Collection, giving on cards the names of the species represented from each locality; and at the same time a topographical list of localities for each species is being prepared. This work has been completed as far as the end of the Sulphides and Sulpho-salts, and 2,670 locality cards have been written and 154 species dealt with.

All the described specimens in the collection of rocks of the "Discovery" Antarctic Expedition, and the specimens of rocks described in the reports of the National Antarctic Expedition of 1907-9, have been provided with permanent labels, and the names have been included in the list of rock-names.

The preparation of a new descriptive and alphabetical list of the meteorites represented in the collection has been in progress.

Two copies of the new periodical publication, "Mineralogical Abstracts," issued by the Mineralogical Society, have been cut up when received and arranged for reference in the Department.

### III.—*Preparation.*

Two hundred and thirty-three micro-sections of minerals, meteorites, and rocks have been prepared.

Coloured plaster casts have been made of the Appley Bridge meteorite.

### IV.—*Investigation.*

The crystallographic and optical investigation of the series of crystals of lead and copper minerals from Red Gill, Cumberland, and Leadhills, Lanarkshire, in the Trechmann Collection, has been completed, and a description has been prepared for publication.

Among other species which have been examined for purposes of identification or other reasons may be mentioned, minerals from Tanganyika Territory, Northern Nigeria (zircon, corundum, etc.), Ceylon (zircon, fibrolite, etc.), and Madagascar (chrysoberyl, betafite, columbite, etc.); crystals of tin compounds from tin furnaces (tin sulphide, iron stannide, tin arsenide); fibroferrite from Cyprus; manganite from Cumberland.

The investigation of the metamorphic rocks represented in the collections of the "Terra Nova" Antarctic Expedition has been in progress, and descriptions have been prepared of rocks from Evans Cove, McMurdo Sound, and Granite Harbour.

Rock-specimens from Islands off the coast of Peru, from Darfur, and from Somaliland; specimens of riebeckite-rhyolite from Kordofan; and of "blood-rain" and sands from the Canaries, have been examined, and descriptions have been prepared for publication.

In the Chemical Laboratory a complete quantitative analysis has been made of the Ensisheim meteorite. Many minerals have also been qualitatively analysed.

### V.—*Departmental Library.*

*Cataloguing and Press-marking.*—All the accessions, including 809 plates, have been catalogued and stamped; 69 volumes have been pressmarked or re-pressmarked.

Proofs of the General Library Catalogue (Supplement) have been read and checked against the slip-catalogue in the Department.

*Accessions.*—31 volumes of separate works, 80 periodicals, 351 pamphlets, 21 mining and survey reports, and 12 sheets of maps have been added to the Library.

*Binding.*—96 volumes have been bound.

### VI.—*Publications.*

A new short guide to the Mineral Gallery has been prepared for press.

The following papers relating to specimens in the Collection have been published in the Mineralogical Magazine and Journal of the Mineralogical Society, 1920, vol. xix. :—

The classification of Meteorites: by G. T. Prior (p. 51).

New crystal-forms on Pyrites, Calcite, and Epidote: by L. J. Spencer (p. 1).

Fibrolite (=Sillimanite) as a gem-stone from Burma and Ceylon: by L. J. Spencer (p. 107).

A curious crystal from the Binn Valley, Switzerland: by G. F. Herbert Smith (p. 40).

Riebeckite-rhyolite from northern Kordofan, Sudan: by W. Campbell Smith (p. 48).

#### VII.—*Acquisitions.*

1,758 specimens have been acquired, namely, 500 minerals, 621 rocks, 540 micro-sections of rocks, 93 meteorites, and 4 artificial products.

Exchanges of specimens have been arranged with the Royal Ontario Museum of Mineralogy, Toronto, Canada; the Museum of Practical Geology, London; and the United States National Museum, Washington, D.C.

The following mineral names added to the Museum List were previously not represented in the collection:—

Amosite, creedite, ferrazite, inyoite, manganapatite, phosphoferrite, phosphophyllite, phosphosiderite, schoharite, temiskamite, uvanite.

The specimens acquired by presentation (arranged alphabetically according to donors) and by exchange, and a selection of the more important of those obtained by purchase are as follow:—

#### *Minerals.*

##### *By Presentation.*

Chalcedony, as an encrustation on the surface of the desert, Fayûm, Egypt: *by Dr. C. W. Andrews, F.R.S.*

Further instalments from the donor's collection of zeolites, namely, 103 specimens, representing 46 localities; 33 specimens (aragonite, barytes, galena, hemimorphite, pyrites, vanadinite, witherite, etc.) from Wanlockhead, Dumfriesshire, some of them recently collected by the donor; cerussite from Weardale, Co. Durham; bayldonite from Tsumeb, S.W. Africa; a zoned crystal of green corundum from Siam: *by F. N. Ashcroft, Esq.*

Sapphire crystals in matrix from Mogok, Upper Burma: *by A. L. Bacon, Esq.*

A series of 25 specimens of Australian minerals, mainly from the mining districts of north Queensland, including good crystals of chillagite, chessylite, scheelite, cassiterite, molybdenite, topaz, etc.: *by Rev. C. C. Barclay.*

A scalenohedron of calcite: *by S. F. Barnes, Esq.*

A series of 13 specimens (galena, pyrites, blende, quartz, calcite, aragonite, and pseudomorph of hemimorphite after calcite) from Wanlockhead, Dumfriesshire: *by Robert Brown, Esq.*

A small collection of minerals, mainly fragments of gemstones from Ceylon (including fibrolite, zircon, corundum, etc.): *by Lt.-Col. C. F. Call, late R.E.*

Stalactites from a cave on Mangaia Island, Cook Islands, Pacific: *by Mr. and Mrs. F. W. Christian.*

A large, well-formed scalenohedral crystal of calcite, from Millclose mine, Derbyshire; a large specimen of fluor from Wear-dale, Co. Durham; barytes from Mexico; altered biotite from Spain; and calamine crystals from Rhodesia: *by H. F. Collins, Esq.*

Two large sheets of mica (4 ft. by 2 ft.) from Tanganyika Territory: *by the Under-Secretary of State, Colonial Office, Downing Street (through Arnold Bradley, Esq.)*

Magnetite from Chamonix, Haute-Savoie: *by F. E. Coulet, Esq.*

Ferrazite, a "fava" from the Brazilian diamond-washings (a new species named after the donor): *by Dr. J. B. de Araujo Ferraz.*

Various rare-earth, radioactive, and gem-minerals from Madagascar: *by E. H. Florens, Esq. (through Franklin White, Esq.)*.

Allophane from Argenta, British Columbia: *by Thomas French, Esq.*

Amethyst crystal, showing zonal banding, from Brazil: *by Rev. J. M. Gordon.*

Fluor (purple and green) pebble from the River Avon, Banffshire: *by Mrs. M. Smith Grant.*

Jasper from Nunkirchen, Rhenish Prussia, some artificially stained to imitate lapis-lazuli: *by Albert G. F. Gregory, Esq.*

Amosite, a new variety of asbestos, from Transvaal: *by A. L. Hall, Esq.*

Crystals of calcite on oolite from Cotswold Hills, Gloucestershire: *by M. C. Hampton, Esq.*

Hornblende crystals in hornblende-andesite from Vic-sur-Cère, Central France: *by Mrs. Ernest Harrington.*

Gypsum from Algeria: *by Miss C. F. Harrison.*

Rock-crystal grading into quartzite, from Diamantina, Minas Geraes, Brazil: *by Messrs. Adam Hilger, Ltd.*

Kyanite, epidote, and garnet from British East Africa: *by C. W. Hobley, Esq., C.M.G.*

Pickeringite from Cobriza, Peru: *by W. C. Holden, Esq.*

Chrysotile in dolomite, hæmatite crystals, "jarrowite" pseudomorphs, and diaspore, illustrating Japanese mineral occurrences: *by Prof. Kitora Jimbō.*

A suite of specimens of sapphire from New Mine, Yogo Valley, Montana, U.S.A., comprising two matrix specimens, loose rough stones, and four cut stones: *by Messrs. Johnson, Walker and Tolhurst, Ltd.*

Gypsum nodules from the Wealden beds at the Gypsum mines, Mountfield, Robertsbridge, Sussex: *by L. C. Kemp, Esq.*

Melanterite stalactites from Abertysswg colliery, Monmouthshire: *by W. C. Kendrick, Esq.*

Chalcedonic flint from the Kentish Rag at Ightham, Kent: *by A. S. Kennard, Esq.*

Crystals of betafite and specimens of kornerupine from Madagascar: *by Prof. A. Lacroix.*

Gold found during excavation in the City of Cuyabá, Brazil: by *T. H. Lee, Esq.*

Fluor, kyanite, and actinolite from the River Avon, Banffshire: by *W. McPherson, Esq.*

A very large and finely crystallised specimen of blende with calcite from New Glencrieff mine, Wanlockhead, Dumfriesshire: by *John Mitchell, Esq.*

An interesting series of specimens of ruby, fibrolite, sapphire, and diopside, from the Burma Ruby mines, Mogok, Upper Burma: by *A. H. Morgan, Esq.*

"Star Pyrites" (dendritic crystallisations of pyrites between layers of shale) from Lightmoor colliery, Cinderford, Gloucestershire: by *William Morgan, Esq.*

Herderite from Auburn, Maine, U.S.A.: by *W. D. Nevel, Esq.*

"Kurokō" (Black ore) and radioactive barytes from Japan: by *Prof. R. Ōhashi.*

Large crystallised specimen of inyoite from Hillsborough, New Brunswick, Canada: by *Hon. Chas. J. Osman.*

Specimens of inyoite and gypsum from Hillsborough, New Brunswick, Canada: by *C. W. Osman, Esq.*

Stannite from Anaconda mine, Butte, Montana: by *Dr. Richard Pearce.*

Gypsum from Central Arabia: by *St. J. B. Philby, Esq., C.I.E.*

Cone-in-cone structure from Barf Hill, Keswick: by *J. Postlethwaite, Esq.*

Gaylussite crystals from the Salt Pan near Pretoria, Transvaal; vanadinite crystals from Marico district, Transvaal: by *Dr. A. W. Rogers, F.R.S.*

Limonite pseudomorphous after pyrites from the Chalk quarries, Portsdown Hills, Hampshire: by *Messrs. H. Rogers and Sons.*

Stibnite and cinnabar from China; cassiterite from Western Australia; and copper-pyrites from Tasmania: by *H. A. H. Russell, Esq.*

Quartz from Bristenstock, Switzerland: by *W. Schmassmann, Esq.*

Hornblende enclosed in blende from Norway; and villamani-nite, portions of the original material used for analysis: by *Dr. W. R. Schoeller.*

Cassiterite from Katanga, Congo: by *Dr. A. Schoep.*

Gearsutite (some of the original material recently described by the donor) from Gingin, Western Australia: by *Dr. E. S. Simpson.*

Allophane from Barcelona: by *Club Muntanyenc, Barcelona, Spain (through Señor Mateo Sust).*

Pyromorphite, galena, and crystallised slags, from Pontgibaud, Puy-de-Dôme, France; native bismuth and scheelite crystals from Wheal Friendship, Tavistock, Devonshire; hæmatite and dolomite from Brazil: by *Arthur Taylor, Esq.*



Calcite concretions from Sherika, Khargeh Oasis, Egypt: *by Dr. Charles Taylor.*

Rock-crystal grading into quartzite, and diamond matrix and associated minerals, collected by the donor in Brazil, 1919: *by Robert R. Walls, Esq.*

Ores (blende, galena, tetrahedrite, ankerite, etc.) from the Combe Martin silver-lead mines (worked from about 1200 to 1880), North Devon; gold, iridosmine, and platinum from South Africa: *by Franklin White, Esq.*

Native bismuth, zircon, and corundum from Northern Nigeria: *by A. Stanley Williams, Esq.*

#### *By Exchange:*

A series of specimens of zinc phosphate minerals from the new find at Salmo, British Columbia, viz., two specimens of spencerite as crystals (a new species); hopeite and parahopeite with spencerite; hemimorphite, crystals and mamillated, and pseudomorphous after spencerite.

Crystallised willemite from Broken Hill, Rhodesia.

#### *By Purchase:*

A series of large show specimens of various minerals (axinite, blende, chessylite, copper, copper-pyrites, polybasite, sphærosiderite, wavellite, quartz pseudomorphous after barytes, etc.) selected from an old collection made by the late Charles Walker.

Miscellaneous specimens illustrating British mineral occurrences, including:—cerussite, acicular crystals, from Weardale, Co. Durham; tennantite crystals from St. Just, Cornwall; native silver, botryoidal blende, pinite, dufrenite, halloysite, etc., from Cornwall; caledonite with lanarkite from Leadhills, Lanarkshire.

A series of minerals from the asbestos mines of Val Malenco, Lombardy, including asbestos (a mass of long fibres), actinolite, albite, tourmaline, penninite, quartz, magnesite.

Covellite, large brilliant blue plates, from Sardinia.

Linarite and paratacamite, well-crystallised, from Chili.

Serpierite, a fine crystallised specimen from Laurion, Greece.

Minerals from Germany, comprising:—new occurrences of phosphate minerals in pegmatite at Hagendorf and Pleystein, Bavaria, including the new species phosphophyllite, phosphoferite; various minerals from Thuringia, including native gold with pyrophyllite, bournonite with caledonite, etc.; a large crystalline mass of chalcantite from the Harz Mountains; crystals of kainite and kieserite.

Minerals from the Otavi district in S.W. Africa, *e.g.*, otavite, phosgenite, anglesite, cuprodesclowitzite.

New Canadian mineral occurrences, including:—polished slabs showing the association of breithauptite, niccolite, smaltite, and native silver in the veins at Cobalt, Ontario; spencerite, parahopeite, orthoclase crystals, and sodalite from British Columbia; temiskamite (a species new to the collection).

New occurrences in the United States, including:—creedite and uvanite (new species); strontianite from California; phosphorites from Wyoming and South Carolina; riebeckite from Colorado.

Cupro-scheelite and scheelite, spessartite, and chessylite crystals, from New South Wales.

Alunite from Japan.

Graphite from Greenland.

### *Rocks.*

#### *By Presentation :*

Dust which fell on 8–11 Feb., 1920, at the Canary Islands; volcanic tuffs and basalt from the Canary Islands: *by D. A. Bannerman, Esq., M.B.E.*

Rock-specimens collected by the donor in the South American Antarctic Islands: *by A. G. Bennett, Esq.*

Kaolinized quartz-porphry from Cornwall: *by Charles H. Bowser, Esq.*

Sandstone from South Orkneys; volcanic bomb from Deception Island, South Shetlands; *by the Governor of the Falkland Islands.*

Marble and porphyrite from British Somaliland: *by Miss E. M. Godman.*

Polished specimen of porphyrite from near Ballantrae, Ayrshire: *by Rev. J. M. Gordon.*

Shell-sand and 'Red rain' from Gran Canaria: *by S. H. M. Head, Esq.*

Glacial boulders and pebbles from the neighbourhood of Toronto, Canada; opicalcite blocks showing 'Eozoon Canadense' structure from Quebec; 164 miscellaneous micro-sections mostly of sedimentary rocks from various localities: *by the family of the late Dr. G. J. Hinde, F.R.S.*

Rounded scoria of olivine-basalt from near Old Meroe, Egypt: *by Lt.-Col. Sir Herbert W. Jackson, C.B., Governor of Dongola, Egypt (through Dr. P. Chalmers Mitchell, C.B.E., F.R.S.).*

Serpentine, trachyte, and limestone, from Raska, Serbia, collected by the donor 1918-19: *by Miss A. L. Lang.*

A series of 49 specimens collected by the donor in 1920 from the province of Darfur, Sudan: *by Capt. Hubert Lynes, C.B., C.M.G., R.N.*

Pebbles of various rocks from the River Avon, Banffshire: *by W. McPherson, Esq.*

Limestone impregnated with oil, basalt coated with asphalt, and gilsonite, from Vera Cruz, Mexico: *by John M. Muir, Esq.*

A series of 125 specimens, with the corresponding micro-sections, of metamorphic rocks from British East Africa: *by John Parkinson, Esq.*

11 specimens from Central Arabia: *by St. J. B. Philby, Esq., C.I.E.*

Erratic boulders from the foot of the cliffs between Cromer and Overstrand, Norfolk; 50 specimens collected by the donor: *by Dr. G. T. Prior, F.R.S.*

Erratic boulders, including 2 rhomb-porphyrines and 3 fossiliferous limestones, collected by the donor from the foot of the cliffs between Cromer and Overstrand, Norfolk: *by Mrs. G. T. Prior.*

A series of 260 specimens from southern Abyssinia and Somaliland, collected by Dr. R. Koettlitz and Lord Lovat in 1898, and described by the donor in 1903: *by Dr. Catherine A. Raisin.*

9 rock specimens from the nickel-ore deposits at Talnotry, Kirkcudbrightshire, and three other miscellaneous Scottish rocks, collected by the donor: *by W. Campbell Smith, Esq., M.C.*

Sandstone and limestone from the Combe Martin mines, North Devon: *by Franklin White, Esq.*

A small set of specimens collected by the donor on his journey through Chitral, western Himalayas: *by Lt.-Col. Sir Francis Younghusband, K.C.S.I., K.C.I.E.*

*By Purchase:—*

Minverites, granites, spilite, etc., from Cornwall; foraminiferal limestone from Yorkshire.

Two polished specimens of devitrified rhyolite showing very large spherulites.

A set of 134 micro-sections of rocks from Abyssinia and Somaliland.

43 miscellaneous micro-sections of rocks.

METEORITES.

*By Presentation:—*

*Mount Ayliff*, Griqualand East, South Africa, a fragment weighing 189 grams from the mass of iron known in 1907; also a coloured plaster cast of the whole mass:

*Simondium*, Paarl, Cape Colony, fragments weighing together 204 grams of the stone found in 1907:

A fragment of metallic iron (pseudo-meteorite) from *Elandsberg*, South Africa:

*By the Public Museum of King William's Town, South Africa (through the Director F. A. O. Pym, Esq.)*

*Karee Kluff*, Hofmeyer, Cape Province, South Africa, a piece weighing 38.6 grams and 7.2 grams of filings of this meteoric iron: *by the Trustees of the Port Elizabeth Museum, South Africa (through the Director, F. W. FitzSimons, Esq.).*

*By Exchange:—*

*Cumberland Falls*, Whitley Co., Kentucky, two crusted fragments, weighing respectively 379 and 261 grams, of this brecciated stone which fell on April 9th, 1919.

*By Purchase:—*

*Appley Bridge*, Wigan, Lancashire, the main mass, consisting of two pieces, fitting together and weighing respectively 10,900 and 1,900 grams (total 28 lb. 3½ oz.), of the stone which fell on October 13th, 1914. Coloured plaster casts have been made in the Department.

*Cookeville*, Putnam Co., Tennessee, a polished and etched slice weighing 135.6 grams of the iron found in 1913.

*Cabeza de Mayo*, Murcia, Spain, a fragment, weighing 61 grams, of the stone which fell on August 18th, 1870.

*Mount Ayliff*, Griqualand East, South Africa, a polished and etched slice weighing 95 grams of the iron known in 1907.

*Richardton*, Stark Co., North Dakota, four complete stones weighing respectively 478, 372, 413, 166 grams of the shower of June 30th, 1918.

A series of fragments of 74 meteorites previously represented in the collection, acquired for purposes of investigation and exchange.

Of the above meteorites those of which the names are printed in italics belong to falls hitherto unrepresented in the Museum Collection.

The following artificial products have been presented:—

Crystals of aluminium-copper alloy: *by Miss Constance F. Elam.*

Magnetite crystals from the hearth of a copper furnace near Salt Lake City, Utah: *by Dr. Richard Pearce.*

A cast of an Italian renaissance medal (about A.D. 1500) showing on the obverse a representation of Mt. Vesuvius; probably the earliest representation of a volcano in eruption: *by C. Davies Sherborn, Esq.*

#### VIII.—*Donations of Duplicates.*

Duplicate specimens of minerals have been given to Professor A. Lacroix and Mr. C. B. Newton.

#### IX.—*Demonstrations.*

A demonstration on “Forms of Silica” was given to the Geologists’ Association.

#### X.—*Students and Visitors.*

The number of visits recorded as made to the Department for purposes of consultation or study is 625. Many specimens of minerals and rocks have been determined for visitors and correspondents.

*G. T. Prior.*

## DEPARTMENT OF BOTANY.

I.—*Arrangement and Conservation.*

During the past year 12,722 specimens have been incorporated with the Herbarium. This number includes 11,625 Flowering Plants, 6 Ferns, 431 Mosses, 132 Hepatics, 52 Algæ, 209 Fungi, and 267 Lichens.

*Flowering Plants.*—Collections acquired during the year have been mounted and incorporated wholly or in part; and unincorporated material of the families of Polypetalous Dicotyledons and of the Orchidaceæ, Cyperaceæ and Gramineæ has been sorted and in part arranged in genera and species. Work of revision and incorporation has been done in various families and genera, especially Orchidaceæ, Euphorbiaceæ, and the families of Apetalous Dicotyledons. Several genera have been rearranged in accordance with recent monographs. In the British and European Herbarium progress has been made with the selection and incorporation of the named material, and with the formation of a collection of British seeds. A large number of duplicate specimens have been sorted and arranged for purpose of exchange.

*Cryptogams.*—The important collection of West Indian Ferns by Mr. R. V. Sherring has been sorted and in part compared with the Herbarium, and work of revision has been done in the genus *Hymenophyllum*. Work of incorporation has been done in various groups, especially the Sphagnum mosses, Welwitsch's Angolan fungi, and the microfungi generally. The selection of the Stirton collection of lichens has been completed, and progress has been made with the formation of an Herbarium of Extra-European Lichens.

*Exhibition Series.*—Work of maintenance has been done in the various series in the Public Gallery, and new specimens have been added and labelled. Four large photographs illustrating the vegetation of the Ruwenzori Range in Central Africa, presented by Lord Rothschild, have been placed on exhibition. A number of specimens of British and cultivated plants have been specially collected and prepared for exhibition.

*Catalogues and Guides.*—Volume IV. of the *Flora of Jamaica* by Mr. Fawcett and Dr. Rendle has been published, and steady progress has been made with the preparation of Volume V. A *Handbook of British Lichens* has been prepared by Miss A. Lorrain Smith and in part printed.

II.—*Investigations.*

Collections have been investigated and determined from the following localities and collectors:—Macedonia (various collectors), Dardanelles (Cheesman), Palestine (Dinsmore), N.W. Himalaya (G. E. Benham), Annam (Kloss), Papua (White), Java, Sumatra and New Guinea (H. O. Forbes), Middle Atlas

and Darfur (Lynes), British Somaliland (Miss E. Godman), French Soudan (Buchanan), Nyasaland (Mrs. Shinn), Rhodesia (Eyles, Rogers), Transvaal (Rand), Belgian Congo (Burt-Davy), Portuguese Congo (Gossweiler), Cameroons (Bates), West Australia (Sargent), and New Caledonia (Compton). Work of determination and investigation has been done on the types of Loureiro's Cochin China plants, and in various families and genera, especially Orchidaceæ, Pandanaceæ, Liliaceæ, Leguminosæ, Compositæ, Rubiaceæ, Amarantaceæ, *Vellozia*, *Campynema*, *Rhynchosia*, and *Baphia*. Also in various genera of Algæ, especially from the Cape and the Pacific and Antarctic Oceans, and of micro-fungi. Numerous cases of diseases caused by fungi have been investigated, including diseases of timber, and various cultivated plants, such as potato, tomato, onion, tulip, narcissus, peony, calla, heaths, etc. Assistance to students and collectors has been given in determination of specimens, and various matters of economic importance have been investigated. In connection with work done in the Department, collections have been generously lent by the Government of Jamaica; the Director of the Royal Gardens, Kew; the Regius Keeper of Botany, Edinburgh; the Curator of the Bristol Museum; the Chief, Division of Botany, Union of South Africa; the Director of the Natal Herbarium; the Director of the South African Museum; the Director of the Jardin Botanique de l'Etat, Brussels; the Director of the Botanic Garden, Zurich; the Director of the Botanic Garden, Upsala; the Director of the Botanic Garden, Dahlem (Berlin); and the Director of the New York Botanic Garden.

Material has been lent for determination and critical study as follows:—58 specimens of *Acacia* to Director, Botanic Gardens, Sydney, N.S.W.; 5 Asiatic specimens of *Sedum* to Mr. R. Lloyd Praeger, National Museum, Dublin; 1 slide of Diatoms to Mr. N. E. Brown, Kew; 5 specimens of *Acioa*, and 10 specimens of *Alchemilla* to the Director, Jardin Botanique de l'Etat, Brussels; 5 specimens of *Baphia* from Tropical Africa to Mr. L. V. Lester-Garland; 12 specimens of *Canavalia* to Mr. S. T. Dunn, Royal Gardens, Kew; 50 specimens of *Desmodium* from Central America to Dr. A. K. Schindler, Minden, Westf.; 4 specimens of Tropical African Ebenaceæ to Mr. W. P. Hiern, F.R.S., Barnstaple.

### III.—Departmental Library.

1. *Arrangement, Cataloguing, and Pressmarking.*—The registering, stamping, and cataloguing of additions to the library has been carried out. A rearrangement in several of the sections has been effected; by this means the space rendered available by the transfer to the New Herbarium of many of the books dealing with European botany has been utilised. A set of shelves has been added to accommodate the larger works of reference. Departmental assistance in connection with the Official Catalogue of the Library has been continued. A collection of water-colour drawings of Orchids by J. N. Fitch has been arranged and labelled.

2. *Accessions*.—31 volumes and 19 pamphlets were acquired by donation and 95 volumes and 3 pamphlets by purchase; in all 126 volumes and 22 pamphlets. These numbers include 29 volumes of periodicals in parts presented, and 75 volumes of periodicals in parts purchased. The following is a list of the principal donors:—

- |   |  |
|---|--|
| Oakes Ames, Esq., Botanical Gardens, Harvard University, U.S.A. | Director, Rijks Herbarium, Leiden                              |
| Kolonial Instituut, Amsterdam                                   | Linnean Society, London  |
| Prof. L. H. Bailey  | Miss G. Lister   |
| R. T. Baker, Esq.   | G. C. Lloyd, Esq.  |
| Royal Botanical Society, Belgium                                | J. H. Maiden, Esq., I.S.O., F.R.S.                             |
| Paul Bertrand   | Editor, Philippine Agricultural Review, Manila                 |
| Prof. J. W. Bews  | Secretary, Advisory Council of Science and Industry, Melbourne |
| James Britten, Esq.   | Prof. Dr. Mereschkovsky  |
| Director, Jardin Botanique de l'Etat, Brussels                  | Director, Missouri Botanic Garden, St. Louis                   |
| Director, Institut Leo Errera, University of Brussels           | Spencer le M. Moore, Esq.                                      |
| Director, Dept. van Landouwinverheid en Handel, Buitenzorg      | Nederlandsche Botanische Vereeniging                           |
| Director, Royal Botanic Gardens, Calcutta                       | Director, Royal Botanic Gardens, Peradeniya                    |
| Government of Chosen, Corea                                     | Director, Agricultural Research Institute, Pusa                |
| Director, Botanical Library, University of Copenhagen           | Dr. A. B. Rendle, F.R.S.                                       |
| Director, Cornell Agricultural Experimental Station             | H. N. Ridley, Esq., C.M.G., F.R.S.                             |
| Director, Botanical School, Trinity College, Dublin             | Lord Rothschild, F.R.S.  |
| Regius Keeper, Royal Botanical Gardens, Edinburgh               | Director, Botanic Gardens, Singapore                           |
| William Fawcett, Esq.   | Harald Smith, Esq.   |
| Miss L. S. Gibbs  | Director, Dept. of Agriculture, Union of South Africa          |
| Director, Gray Herbarium, Cambridge, Mass., U.S.A.              | Botanical Institute, Tokyo                                     |
| Dame Helen Gwynne-Vaughan                                       | Tokyo Botanical Society  |
| Dr. Bunzo Hayata  | Director, Carnegie Institute, Washington                       |
| Miss Ida M. Hayward   | Director, U.S. National Museum, Washington                     |
| Mrs. G. J. Hindle   | Secretary, Watson Botanical Exchange Club                      |
| Director, Experimental Station, H.S.P.A., Honolulu              | C. T. White, Esq.  |
| Royal Horticultural Society                                     | Osborn Botanical Laboratory, Yale University                   |
| Director, Royal Botanic Gardens, Kew                            | Director, Botanic Garden and Museum, Zurich                    |
| Secretary, Kew Guild  |  |

The donations also include 405 water-colour drawings of Orchids, originals of plates in Williams' Orchid Album, by J. N.

Fitch, presented by the Right Hon. Lord Rothschild. The following have been acquired by purchase:—14 drawings of British Plants by Miss B. Corfe, and 9 drawings of Cactaceæ by Miss H. Coley.

3. *Binding*.—66 volumes have been bound and 17 volumes repaired.

#### IV.—*Publications.*

(1) *Issued by the Trustees*.—Flora of Jamaica, Vol. IV. By Dr. Rendle and Mr. W. Fawcett.

Instructions for Collectors: No. 10. Plants. Edition 5. By Dr. Rendle.

(2) *Issued by permission of the Trustees*.—Some segregates of *Erodium cicutarium* L'Herit. By Mr. E. G. Baker and Mr. C. E. Salmon. (Journal of Botany.)

*Dewevrella congensis* sp. nov.; and Tropical African Rubiaceæ, XIII. By Dr. H. F. Wernham. (Journal of Botany.)

Alabastra Diversa XXXII., XXXIII. By Mr. Spencer Moore. (Journal of Botany.)

A new Species of Coupoui. By Mr. J. Ladbroke. (Journal of Botany.)

(3) *By Students of the Collections other than members of the Staff*.—On the occurrence of Diatoms on the Skin of Whales. By A. G. Bennett and E. W. Nelson. (Proc. Royal Society.)

Some Early Cape Botanists and Collectors. By Mr. J. Britten. (Journal of the Linnean Society.)

*Schrankia microphylla*; and *Eugenia lucida* Banks. By Mr. J. Britten. (Journal of Botany.)

*Rhaphidostegium cæspitosum* Sw. and its allies. By Mr. H. N. Dixon. (Journal of Botany.)

The phytogeography and flora of the Mountain Summit plateaux of Tasmania (determinations by Mr. Ramsbottom and Miss A. Lorrain Smith). By Miss L. S. Gibbs. (Journal of Ecology.)

The Botany of the Moroccan Middle Atlas. By Mr. L. V. Lester-Garland. (Journal of Botany.)

The Marine Algæ of Guernsey. By Miss Lilian Lyle. (Journal of Botany.)

New or Rare Microfungi. By Miss A. Lorrain Smith. (Transactions of the British Mycological Society.)

Papers read at the Banks Celebration at the Linnean Society on June 17. Sir Joseph Banks as a Traveller, a Patron of Science and a Botanist. By Dr. B. D. Jackson, Dr. Rendle, and Mr. James Britten. (Proceedings of the Linnean Society, 1920.)

#### V.—*Acquisitions.*

##### (1) *By Donation.*

Additions to the British Herbarium have been received from the following donors:—Miss D. M. Chitty, a Small Collection of



British Plants; Rev. E. F. Linton, M.A., Herbarium of British Plants; Miss B. Reid, 32 Samples of Seeds of British Plants; Rev. H. J. Riddelsdell, 22 Phanerogams (Hort Herbarium); C. E. Salmon, Esq., 20 Phanerogams and 1 Chara; Watson Botanical Exchange Club (through J. E. Little, Esq.), 118 Phanerogams.

The following donations have been made to the General Herbarium:—

### Europe.

Dr. Grantham, 13 Cryptogams from Archangel; C. C. Lacaita, Esq., 9 Phanerogams from Italy; Major C. Norman, a small collection of Phanerogams from the Auvergne; Mrs. R. R. Pusey, Plants from Iceland and elsewhere; Miss P. Tindall Lucas, 128 Phanerogams from Serbia; A. W. Trehewy, Esq., 34 Phanerogams from Norway.

### Asia.

C. J. Brooks, Esq., 180 Phanerogams from Sarawak and Sumatra; Mrs. Cheesman, 8 Phanerogams from the Dardanelles, collected by Major Cheesman; J. E. Dinsmore, 17 Phanerogams from Palestine, in return for determination; Miss L. S. Gibbs, 9 Phanerogams from Dutch N.W. Guinea; Miss Octavia Gosset, 67 Ferns from Simla; Mrs. E. K. N. Lane, 29 Phanerogams from Central Provinces, India; Miss E. Lloyd Oswell, 205 Ferns from Darjeeling, India; Royal Horticultural Society, 27 Samples of Seeds from China; Sir Everard im Thurn, 48 Phanerogams from Fiji; C. T. White, Esq., 26 Specimens of Scitamineæ from Papua.

### Africa.

G. L. Bates, Esq., 424 Phanerogams from Bitye, Cameroons; Capt. A. Buchanan, 37 Phanerogams and 1 Cryptogam from French Soudan, 2 Phanerogams from Nigeria, Fruiting specimen of *Adenium sp.* from West Africa; J. Burtt-Davy, Esq., 283 Phanerogams and 9 Cryptogams from Belgian Congo, etc.; R. A. Dummer, Esq., 109 Phanerogams and 10 Cryptogams from Uganda; F. Eyles, Esq., 96 Phanerogams from Rhodesia; Miss E. Godman, 161 Phanerogams and 11 Cryptogams from Somaliland; Capt. Willoughby Lowe, 23 Phanerogams and 7 Ferns from Nigeria; Capt. H. Lynes, R.N., 101 Phanerogams and 5 Ferns from Darfur; N. S. Pillans, Esq., 32 Lichens from Cape Peninsula, South Africa; Dr. F. Rand, 195 Phanerogams from the Transvaal; P. A. Talbot, Esq., 17 Phanerogams from Nigeria; Dr. E. de Wildeman, 10 Species of *Baphia* and 9 photographs of *Acioa* from Tropical Africa.

### Australasia.

Dr. R. S. Rogers, 21 Species of Orchids from West Australia; O. H. Sargent, 49 Phanerogams from West Australia.

**America.**

Spencer le M. Moore, Esq., 13 Cryptogams from Paraguay; Fred Perry, Esq., 2 Phanerogams from Vancouver, B.C.; Earle E. Sherff, Esq., 4 species of North American Compositæ.

**Oceanic Islands.**

A. G. Bennett, Esq., 22 Phanerogams and 70 Cryptogams from Falkland and South Shetland Islands; Sir W. Douglas Young, 3 tubes of Fungi from Deception Island.

**Cultivated Plants.**

H. J. Elwes, Esq., F.R.S., 6 Phanerogams; J. Jolliffe, Esq., Fruiting specimen of *Dracæna*; Hon. N. C. Rothschild, 27 specimens of *Crocus*, 58 species and varieties of *Iris*; Sir N. Yermoloff, K.C.B., 11 Phanerogams from French Riviera.

**General.**

D. A. Bannerman, Esq., 6 Photographs illustrating the vegetation of Teneriffe; H. Bickham, Esq., Collection of European and Foreign Phanerogams and 43 Cryptogams; W. H. Carter, Esq., Portion of decayed stem of Cypress, showing branching; Cecil Carus-Wilson, Esq., Specimens of root of Oak with embedded flints; Miss Caroline C. Haynes, 2 species of Hepaticæ; Lord Pembroke, a very fine cross section, 6 ft. 6 in. diameter, of Cedar of Lebanon; Curator, Sheffield Museum, Collection of British and North American Phanerogams; Mrs. G. S. West, 7 slides of Diatomaceæ.

(2) *By Purchase.*

**British Isles.**

The Botanical Exchange Club, 39 Phanerogams.

**Europe.**

H. Dahlstedt, 29 specimens of Scandinavian *Taraxacum*; F. Petrak, 850 specimens of Fungi from Bohemia, Moravia, Bosnia and Poland; A. Zahlbruckner, Lichenes rariores exsiccatae: Nos. 188-207.

*Through Dulau & Co.*—Ascomycetes by Rehm, *Fasc.* 56, 57; Mycotheca Germanica, 200 specimens, by Sydow.

*Through T. O. Weigel.*—100 specimens of European *Salix* by Toepffer.

**Asia.**

Arnold Arboretum, U.S.A., 1,290 specimens of Chinese Plants by Wilson.

**America.**

E. Bartholomew, 600 specimens Fungi Columbiani, and 1,200 specimens North American Uredinales.

**Australasia.**

W. A. Weymouth, 562 Tasmanian Cryptogams.

**General.**

A. Kneucker, 150 specimens of Grasses; J. R. Martindale, 5,313 British and European Lichens.

*(3) By Exchange of Duplicates.*

Curator, Botanical Museum, Christiania, Norway, 335 European Plants, including 51 Ferns; Miss A. Eastwood, Academy of Science, San Francisco, California, 312 specimens from California and Colorado, and 200 specimens (including 27 Vascular Cryptogams) from Galapagos Islands; the Director, Goëldi Museum, Para, Brazil, 301 Brazilian Plants; Director, Botanic Garden, Harvard University, Cambridge, Mass., U.S.A., 104 Malayan Orchids; F. C. Hoehne, Instituto de Butantan, San Paulo, Brazil, 72 Brazilian plants; Director, Royal Botanic Gardens, Kew, 25 species of West Indian Grasses, 299 Malayan Plants, 46 Macedonian Plants, and 1 Fern from Malacca; Mr. L. V. Lester-Garland, 11 Critical species of Bavarian Plants, and 18 Indian Plants; Dr. Merrill, Bureau of Science, Manilla, Philippine Islands, 3,113 Philippine plants (including 159 Cryptogams), and 339 plants from Amboina; Chief, Division of Botany, Pretoria, South Africa, 34 South African species of Aloe, and 26 Cape Marine Algae; Director, Botanic Gardens, Sydney, Australia, 24 Australian plants; Curator, Department of Agriculture, Washington, U.S.A., 300 specimens of North American Grasses; Dr. A. Zahlbruckner, Hofmuseum, Vienna, 360 Cryptogams; Director, Botanisches Museum, Zurich, 38 Tropical African Leguminosæ.

*VI.—Students and Visitors.*

The number of visits to the Department for consultation and research was 3,443.

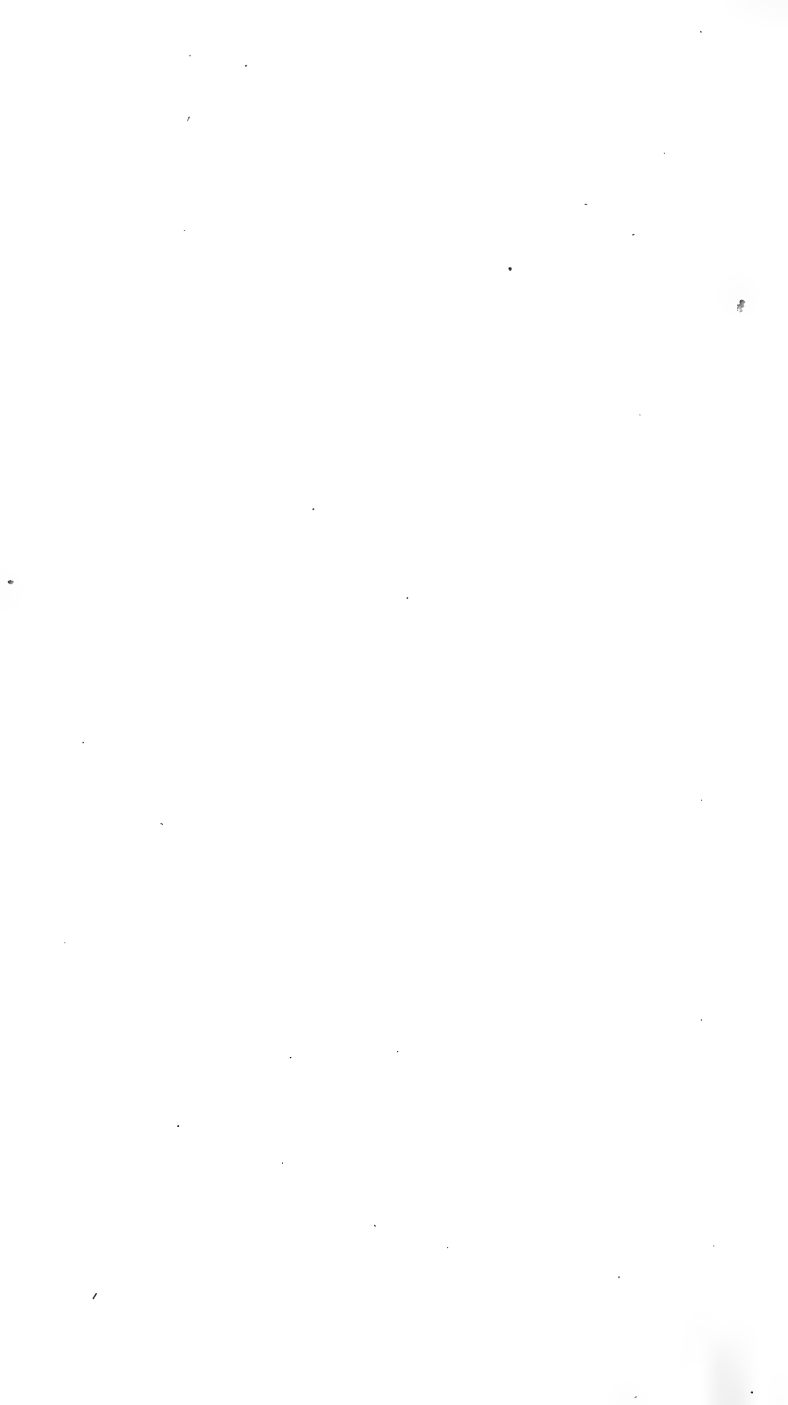
*VII.—Demonstrations.*

Demonstrations on the collections have been given to students from the Birkbeck College, the Lambeth Natural History Society, and others.

A. B. Rendle.

*Recd. in ...*







# RETURN.

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## BRITISH MUSEUM.

1921.

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