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ZOOLOGICAL SOCIETY OF LONDON





Annual Report 1965

The Zoological Society
of London

ZOOLOGICAL SOCIETY OF LONDON

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THE ZOOLOGICAL SOCIETY OF LONDON

The Society was founded in 1826 by Sir Stamford Raffles, Sir Humphry Davy (President of the Royal Society) and other eminent naturalists.

'for the advancement of Zoology and Animal Physiology and the introduction of new and curious subjects of the Animal Kingdom', and was incorporated by Royal Charter in 1829. A new Charter was granted to the Society in January 1963.

The Society's Gardens in Regent's Park, which were first opened to the public in 1828, now cover an area of 36 acres. Of the original features and buildings designed by Decimus Burton, the old Camel House with its clock tower, the Ravens' Aviary and the Giraffe House are still in existence. In 1927 the Society acquired 500 acres of farm and downland at Whipsnade and has developed them into a Zoological Park where there is a minimum of housing and a maximum of open space for the animals.

The existence of the Zoological Society as an Institution under a Royal Charter depends on the fulfilment of the object for which it was founded. Being primarily a scientific society it undertakes and encourages scientific research in zoology by members of its staff and by visiting scientists, and also spreads zoological knowledge through its educational activities. Scientific meetings, commencing at 5 p.m., are held in the Meeting Room on the second Tuesday in the months February to June and October to December. At these meetings the results of new research are communicated and discussed, and specimens and films of zoological interest are exhibited. Symposia on special subjects are arranged on other dates, which are notified as occasion arises. The Society owns one of the finest zoological libraries in the world, containing approximately 100,000 volumes, including many complete sets of scientific journals.

The Society publishes:

The *Journal of Zoology*, being the *Proceedings of the Society* – the papers cover all fields of zoology and are fully illustrated with plates and text figures. In 1965 four volumes (16 parts) were published, otherwise 3 volumes (12 parts) are published annually.

The *Transactions* are published at irregular intervals.

The *Symposia* record the papers read at the Symposia.

The *Zoological Record*, a comprehensive bibliography of zoological literature with subject and systematic indices, is available either as a complete volume or separately in 20 parts dealing with the different animal groups.

The *Nomenclator Zoologicus* contains the names of all the genera and subgenera in zoology from the 10th Edition of Linnaeus 1758 to the end of 1945, with a bibliographical reference to the original description of each. The work contains approximately 250,000 entries, and is published in 6 volumes.

The *International Zoo Yearbook*, published annually, provides authoritative information on developments in the zoo world and a comprehensive reference section of zoos.

Report of the Council 1965

The Council has pleasure in presenting its 137th Annual Report to the Annual General Meeting of the Society to be held on Friday 29th April 1966 at 4.15 pm in the Society's Meeting Room at Regent's Park

The Zoological Society of London

THE SOCIETY OF ANTHROPOLOGICAL ARCHAEOLGISTS

THE SOCIETY OF ANTHROPOLOGICAL ARCHAEOLGISTS
FOR THE YEAR 1905

Report of the Council 1905

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THE ZOOLOGICAL SOCIETY OF LONDON

PATRON: HER MAJESTY THE QUEEN

COUNCIL 1965-1966

President: H.R.H. The Prince Philip, Duke of Edinburgh, K.G., K.T.

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J. Eric Smith, Esq. *Sc.D.*, F.R.S.

The Most Hon. The Marquess of Willington, *Vice-President*

G. E. W. Wolstenholme, Esq. O.B.E., F.R.C.P., F.I.Biol. *Vice-President*

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FINANCIAL ACCOUNTS, WITH AUDITORS' REPORT

In the pocket on back cover

The Membership

COUNCIL

At the Annual General Meeting held on 29th April the following members of the Council retired:

Professor E. C. Amoroso
Professor E. J. W. Barrington
Mr A. H. T. Chisholm
Sir James Duncan
Air Vice-Marshal G. Silyn Roberts

The Fellows elected to fill the vacancies were:

Mr E. Michael Behrens
The Hon. William Fraser
Mr Maxwell Knight
Professor P. L. Krohn
The Hon. Ivor Montagu

In accordance with the Byelaws the Earl of Cranbrook and Sir Alexander Samuels, who had been appointed during the year to fill casual vacancies, retired at the date of the Annual General Meeting, and were elected for a further term of office.

ROLL OF MEMBERS

At the end of the year there were 3461 Fellows and 2112 Associates.

OBITUARY

The Society has shared the grief of the nation at the death of Sir Winston Churchill, who had been an Honorary Fellow of the Society since 1942.

The Council records with deep regret the death of Lady Chalmers Mitchell, widow of Sir Peter Chalmers Mitchell who was Secretary of the Society from 1903 to 1935.

General Review

ATTENDANCES

The number of visitors to the London Zoo during the year was higher than in any year since 1954. The figure was 2,126,000, about 300,000 more than the previous year. The number of visitors to the Aquarium and to the Children's Zoo also increased considerably. This gratifying result was due to a number of factors: the cumulative effect of the new buildings and other developments resulting in the vastly improved appearance of the Gardens; the exploits of 'Goldie', the Golden Eagle whose escapes aroused so much public interest; the weather, which, although poor during the summer, was possibly in our favour so far as Regent's Park was concerned; and finally, increased advertising and considerably improved publicity.

At Whipsnade, the number of visitors was 691,500, an increase of about 16,000 over 1964, but still below the peak figure of 750,000 reached in 1961. Fortunately more visitors than ever before visited the Children's Zoo, and the Council is initiating a number of projects which they hope will eventually lead to a considerable increase in the total number of visitors to the Park.

FINANCE

As a result of the larger number of visitors revenue increased. Higher costs in most departments, however, together with the additional expense of advertising, the higher running expenses of the Nuffield Institute of Comparative Medicine and the cost of servicing short-term rebuilding loans more than counterbalanced this increase, and resulted in a small deficit for the year on the current account. Although Council has decided to make no change in summer entrance charges for 1966, it may be forced to do so if the present inflationary trend does not abate.

Good progress was made in the rebuilding programme and capital expenditure during the year amounted to £350,000. A report on the work appears on page 12.

DONATIONS

The Council gratefully acknowledges a number of donations and legacies, including £1,295 from the late Mrs M. K. Baldry, £100 from the late Miss Betty Howard and £100 from Mrs V. D. Peareth (both for use by the hospital), £100 from Miss D. J. Heeremans, £50 from the late Mrs W. M. L. Frick, and £46 from the late Sir Geoffrey de Havilland.

The following donations in support of the Nuffield Institute of Comparative Medicine are gratefully acknowledged: Sir Samuel Scott Yews Trust £500; The Wade Foundation £250; The Trustees of Lord Austin, deceased, £200 (second

donation); Mrs Frances von Reigersberg Versluys £99; R. C. B. Lane, Esq. £15 (second donation); and Govett, Sons and Co. £10 (second donation).

PUBLICITY

Following the appointment of the Public Relations Officer a small publicity department was set up which incorporates the Television and Film Unit, and an Information Service. In co-operation with Mather and Crowther Ltd, the Society's advertising agents, a planned advertising campaign for Regent's Park and Whipsnade was launched. Advertisements appeared in the national and provincial Press, together with posters in the London and surrounding areas. It has now been decided to add to the department an Assistant Public Relations Officer, who will be based at Whipsnade.

A successful photographic competition for amateur photographers visiting the London Zoo and Whipsnade Park was organized, and the Council is indebted to the Photographic Information Council for their assistance in promoting this and for supplying the prizes. The standard of photography amongst the 1,880 entries was high.

The year has shown an increase in requests made to the Society for facilities for filming, television and still photography. The Film Unit has become responsible for the provision of photographs for the Society's photographic collection, as well as those required for publicity and other purposes, and since 1964 the number of occasions on which facilities have been provided for still photography has more than doubled.

The Granada TV series 'Zootime' continued to be transmitted weekly throughout the year, 28 new programmes being recorded in the Gardens during February. Numerous shorter items for inclusion in schools, news, documentary and features television programmes were filmed both at Regent's Park and Whipsnade by other major British and overseas television companies. Films completed in the Society's own Film Unit were 'The Comparative Ethology of the Canidae', which aroused much scientific interest, and 'Social Grooming in Vertebrates'. Six shorter films were prepared for use in the Education Department.

LABELLING OF EXHIBITS

Considerable progress was made in the production of scientific labels at Regent's Park, and it is hoped that the relabelling will be completed during 1966, enabling more attention to be given to the work for Whipsnade. Priority was given to the Parrot House, the Eastern Aviary, and the Bird House, where a neater and improved form of label display has been introduced.

The section responsible for this work was expanded during the year enabling it to undertake the production of other general notices and signs, and printing. The stationery, tickets and publicity leaflets are now printed in this section which has resulted in appreciable saving in costs and time.

The Society's new Meeting Room, alongside the main office building, was completed during the year. The room holds some 300 people but it can be divided, when necessary, into a small room accommodating some 50 people and a larger room. Both rooms with projection facilities can then be used independently. The old Meeting Room is now being converted as part of the new self-contained Library.

Zoological Gardens Regent's Park

THE COLLECTION

Mammal section The adult chimpanzee colony in its new quarters in the Middle Gardens is now well established, and it is not intended to add more animals to the two males and six females there. The first birth occurred this year and it is hoped that chimpanzees will now be bred regularly at Regent's Park.

An important exchange was completed with Antwerp Zoo by which we received a male Marco Polo Sheep as a mate for our single female. Earlier this year it was discovered that both our Maned Wolves were males and that both Antwerp Zoo's specimens of this species were females; in order that Antwerp and ourselves should have a potential breeding pair of these rare wolves one of our males was exchanged for one of Antwerp's females.

Youthful additions to the bear collection include a pair of American Black Bear cubs, a pair of Polar Bear cubs and a pair of Malayan Sun Bear cubs; the latter proved a great attraction during the summer when they were young and tame enough to walk on leads amongst the visitors in the Children's Zoo.

Amongst the interesting small mammals received this year were 3 Bornean Small-toothed Palm Civets, a subspecies new to the Collection; a collection of prosimians presented by the University College London Expedition to Fernando Po, comprising 2 Allen's Bushbabies, 1 Edward's Potto and a Needle-clawed Bushbaby, the latter being a genus new to the Collection; and a Bruijn's Echidna, presented to the Secretary of the Society by Sir Edward Hallstrom, Honorary Director of the Taronga Zoological Park Trust.

As in past years, the mammal collection has been enriched by the continuing generosity of Dr K. C. Searle in Hong Kong, who has sent so many interesting Asiatic mammals to Regent's Park. During the year he presented over 30 specimens, including one species and two subspecies new to the Collection. He also sent many gifts of birds, including four species new to the Collection.

Bird section In May a collection of 23 birds of paradise was presented by Sir Edward Hallstrom, Honorary Director of the Taronga Zoological Park Trust, to mark the visit to Taronga of the Earl Mountbatten of Burma and Sir Solly Zuckerman. Of particular interest among these birds are two species not previously in the Collection, *Loria loriae*, Lady McGregor's Bird of Paradise, and *Astrapia mayeri*, the Ribbon-tailed Bird of Paradise.

Aquarium In the Freshwater Hall there has been an increase in the number of

species of British freshwater fish exhibited, the most notable addition being some Burbot which have not been seen in the Collection for many years. Other additions include a number of species of Centrarchidae, a family confined to North America.

There have been several improvements in the Seawater Hall, mostly concerned with the design of the tanks. New methods of circulation and filtration are being tested experimentally.

Animals of all kinds (except fish and invertebrates) at Regent's Park

On 1st January 1965	2,611
Received in 1965 by presentation, exchange, deposit, purchase, and transfer from Whipsnade	717
Born and hatched in the Menagerie during 1965	190
	<hr/>
	3,518
Died, sold, sent in exchange, returned to depositors, and transferred to Whipsnade	884
	<hr/>
In the Gardens on 31st December 1965	2,634
	<hr/>

FLOWER GARDENS

The display of flowers was again up to the high standard reached in previous years, and the letters received indicate how much the colourful flower beds are appreciated by visitors. With the introduction of more garden areas it has been decided that it will not be possible to maintain as many beds of annuals, as the plants are grown in the nurseries and bedded out twice a year. Some areas are therefore being planted with roses, flowering shrubs and other more permanent displays, although the Broad Walk and Fellows' Garden will remain unchanged.

Several thousand daffodils, narcissi, crocuses and other bulbs have been planted on the Canal Banks, and young trees have been planted in the Middle and North Gardens.

The Society is grateful to Sir George Taylor, Director of the Royal Botanic Gardens, Kew, for his generous gifts of tropical plants and seeds.

CATERING

Work on the front extension of the Regent Cafeteria, which now provides covered accommodation for over 500 people, was completed during the year. This extension has provided greatly improved facilities for visitors and has contributed towards the increased turnover of the department as a whole.

Throughout the year the banqueting facilities operated by Zoo Restaurants Limited have been in constant demand and the Company has completed another successful year of operation.

Redevelopment Plan

MAJOR WORKS

The completion in the spring of the new Elephant and Rhino Pavilion designed by Casson, Conder and Partners marked another important stage in the Society's redevelopment plan. The building was fully described and illustrated in the Newsletter, which was sent to Fellows and Associates in October; suffice it to say, therefore, that it is living up to the highest hopes entertained for it and continuing to attract favourable comment both from visitors and the Press. Two minor difficulties have come to light – indoors, the problem of keeping two boisterous elephants together in one den without tethering them with chains, and out of doors, their tendency to dig up and scatter the hardcore which lies under the gravel in the paddocks. Steps to solve both problems are in progress.

The adjustments to the mesh of the Snowdon Aviary, referred to in last year's report, were completed. The first batch of birds was introduced and after a period for acclimatization the Aviary was opened to the public in the late summer. Some 150 birds from India and Africa were housed there: water birds; ground-dwelling birds, including cranes and plovers; cliff-nesting birds such as kittiwakes and alpine choughs; and glossy starlings and laughing thrushes which live in the trees. Visitors enjoy an unusual view of the birds as they walk through the Aviary along the elevated pathway, which cantilevers some forty feet from the cliff face, and from which they see both the area above and below the cliff, the pools, the linking waterfalls and cascade. Most of the birds settled down quickly – one pair of Night Herons has already nested – and although minor alterations to the water circulation and certain improvements to the planting remain to be done, the Aviary has already become a major attraction. An illustrated guide showing the birds on view is being prepared for the 1966 season.

Work on the new Small Mammal House, which is being built in the Middle Garden in and around the area where the elephants were previously housed, made good progress. Designed by Black, Bayes and Gibson, this building will replace the present two small mammal houses and will accommodate more than 100 species of flying, jumping, aquatic, nocturnal and other mammals.

FUTURE PLANNING

As recorded in the Society's January Newsletter – under the title 'A decade of rebuilding in the London Zoo' – a substantial part of the redevelopment plan prepared by Sir Hugh Casson in 1958 has now been completed, and the Council feels that this is an appropriate moment to review the plan in the light of present-day circumstances

and of any changes in outlook or collection policy. A Working Party of consultants and officials has therefore been formed and asked to make recommendations.

MINOR IMPROVEMENTS

The new Flamingo Pool on the site of the old wolverine cages in the Main Gardens was completed in time for the 1965 season. This central area now appears more spacious and attractive, and the flamingoes can be seen by people lunching in the new extension to the Regent Cafeteria.

A kiosk for the sale of guides and plans is being built near each of the Zoo entrances and these, with an Information Centre which will replace the New Zoo Exhibition, will be ready for the 1966 season.

Other smaller improvements undertaken during 1965 include the redesigning of the paddocks on the north side of the Ostrich House, and the provision of larger dens in the Lion House. A Wishing Well has been built near the Rose Garden, any money thrown into the Well by visitors being given to the World Wildlife Fund.

Litter clearance During the last few years considerable progress has been made in improving the appearance of the London Zoo from the point of view of litter, but the problem remains intractable particularly on busy days. Hitherto a few seasonal sweepers have been employed during the day-time, the evening and week-end sweeping being done by volunteer labour drawn from a number of the Zoo's own departments. In order to raise standards still further, it has now been decided to create a separate and homogenous staff of groundsmen, under the sole control of the Gardens Executive.

Whipsnade Park

THE COLLECTION

This year's breeding successes include a Kulan, 3 Onagers, an Arabian Camel and 3 Small Indian Mongooses, the first ever to be born at Whipsnade. Other births include a Black-faced Kangaroo, 2 Pronghorns, an Impala, a Banteng, 2 Moose, 4 North American Bison and 9 Red-breasted Geese.

Four lionesses presented by the Trustees of the Kenya National Parks were received in August, and a new pride has thus been established. A trio of the extremely rare Musk Oxen were received in April; these animals, which are found only in the most northerly parts of Canada and North-West Greenland, are a protected species and are seldom seen in Zoos. A second female of the rare Hartmann's Mountain Zebra has been acquired and it is hoped to start a herd. Three Wild Boar, the first ever to be exhibited at Whipsnade, were also received.

GENERAL DEVELOPMENTS

The elephant enclosure opposite the main entrance was completed early in June. Previously the elephants had no paddock and this improvement has been very worth while and has attracted favourable comment. The new office block is now almost completed and it is hoped that it will be ready for use early in 1966. The Quarantine Station for the animals destined for export to North America was completed, and the first animals for Canada were quarantined in August.

THE GENE BANK

The Gene Bank, where small flocks and herds of disappearing breeds of British and foreign domestic animals are established and held, now comprises:

	<i>No. remaining from original purchase or presentation</i>	<i>Present status of herds and flocks</i>
Longhorn Cattle	1 male 5 female	25
Chartley Cattle		23
Cotswold Sheep	1 male 4 female	10
Norfolk-horned Sheep	2 male 2 female	12
Lincoln Longwool Sheep	1 male 6 female	16
Manx Loghtan Sheep	1 male	4
Woodlands White-faced Sheep	1 male 5 female	9
Portland Sheep	1 male 3 female	8
Soay Sheep (ex Hirta)	4 male 7 female	34

There are also birds of the following breeds:

	<i>Present status of flocks</i>
Silver Spangled Hamburgs	3 male 9 female
Lakenvelders	2 male 9 female
Sumatra Game Fowl	4 female
Indian Game Fowl	5 male 7 female
Old English Game Fowl	2 male 14 female
Buff Cochins	7 male 8 female
Redcaps	4 male 5 female
Silver Dorkings	4 male 12 female

Dr R. M. Lee of the Cooper Technical Bureau collected further blood samples from the sheep to continue his studies of breed variations in a serological component which hydrolyses an anthelmintic preparation. Miss E. M. Tucker of the Agricultural Research Council, Babraham, collected blood samples from the sheep to study variations in haemoglobin types. Further skeletons of individual sheep which have died have been forwarded to the British Museum (Natural History) for preservation.

Animals of all kinds (except fish and invertebrates) at Whipsnade Park

On 1st January 1965	2,083
Received in 1965 by presentation, exchange, deposit, purchase, and transfer from Regent's Park	142
Transfer from Gene Bank	62
Born in the Park during 1965	448
	<hr/> 2,735
Died, sold, sent in exchange, returned to depositors, and transferred to Regent's Park	571
	<hr/> 2,164
Transferred to Gene Bank	29
	<hr/> 2,135
In the Park on 31st December 1965	<hr/> 2,135

Scientific Activities

SCIENTIFIC MEETINGS

Eight scientific meetings were held during the year, at which 49 papers accepted for publication were communicated or read in title. In addition many other communications were made: Professor L. D. Brongersma discussed the occurrence of turtles in European Atlantic waters; the breeding of Przewalski Horses in Prague was the subject of a talk by Dr L. Dobroruka; Mr J. D. Macdonald showed and commented on a film dealing with the study of birds in Australia; Mr Jon Miller showed films on the land crabs of Antigua and on the methods of collecting animals in Madeira for the Society's aquarium; a film on the lemurs of Madagascar by Dr J. J. Petter was introduced by Mr A. Walker, and Mr C. P. Groves commented on Dr G. Schaller's film of the Mountain Gorilla.

SYMPOSIA

Three Symposia were held, all of which were well attended and many scientists from abroad participated.

Dr W. J. Rees organized the Symposium on 'The Cnidaria and their evolution' which was held on 3rd/4th March.

A Symposium held on the 15th/16th June on 'Some recent developments in comparative medicine' was arranged by the Society and the World Health Organization, and was organized by the Pathologist, Mr R. N. T-W-Fiennes, in collaboration with the Veterinary Public Health Division of Communicable Diseases, World Health Organization.

Dr D. J. Morris and Dr P. A. Jewell, in collaboration with Mr M. G. Hardy and Dr Peggy Ellis, arranged a Symposium on 19th/20th November on 'Play, exploration and territory in mammals' which was held jointly with the Mammal Society of the British Isles and the Association for the Study of Animal Behaviour.

SEMINARS ON ANIMAL BEHAVIOUR

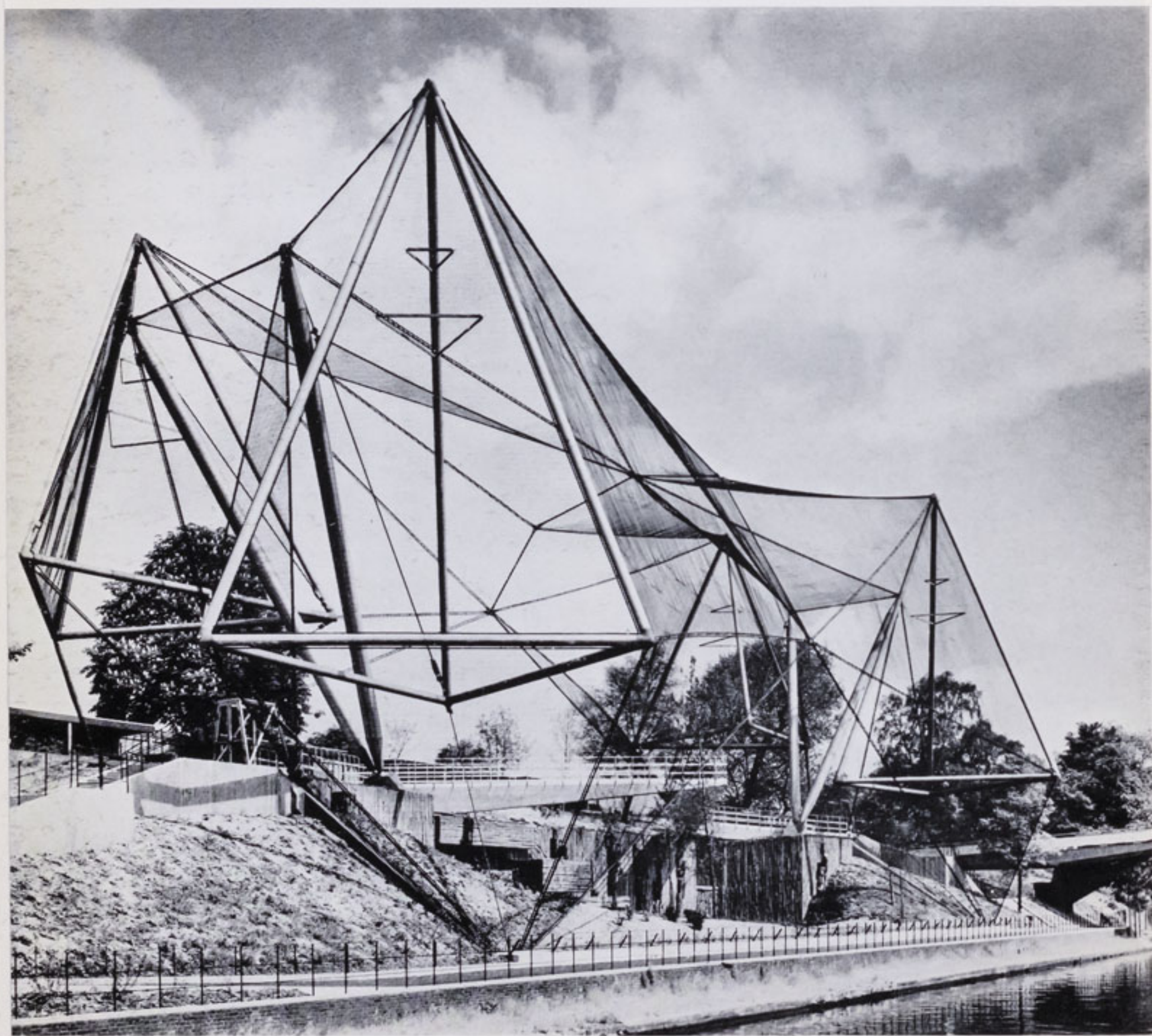
Seminars held under the supervision of Dr Desmond Morris included: Dr Vernon Reynolds - Consort relations in Rhesus Monkeys; Dr John Sparks - Grooming behaviour; Dr J. B. Sale - The social behaviour of the Hyrax; Dr Robin Fox - Inbreeding and outbreeding: the incest problem; Dr Shelley Wortis - Parental behaviour of doves; Dr Thelma Rowell - Field studies of Baboon behaviour; Dr Richard Sadleir - Aggressive behaviour in Deer Mice; Dr Lionel Tiger - Patterns of male aggregation; Dr Jan van Hooff - The use of factor analysis in the study of animal communication; Dr Fae Hall - The intelligence of the Gibbon.

Chimpanzee, born in the London Zoo, July 1965
Zoological Society of London

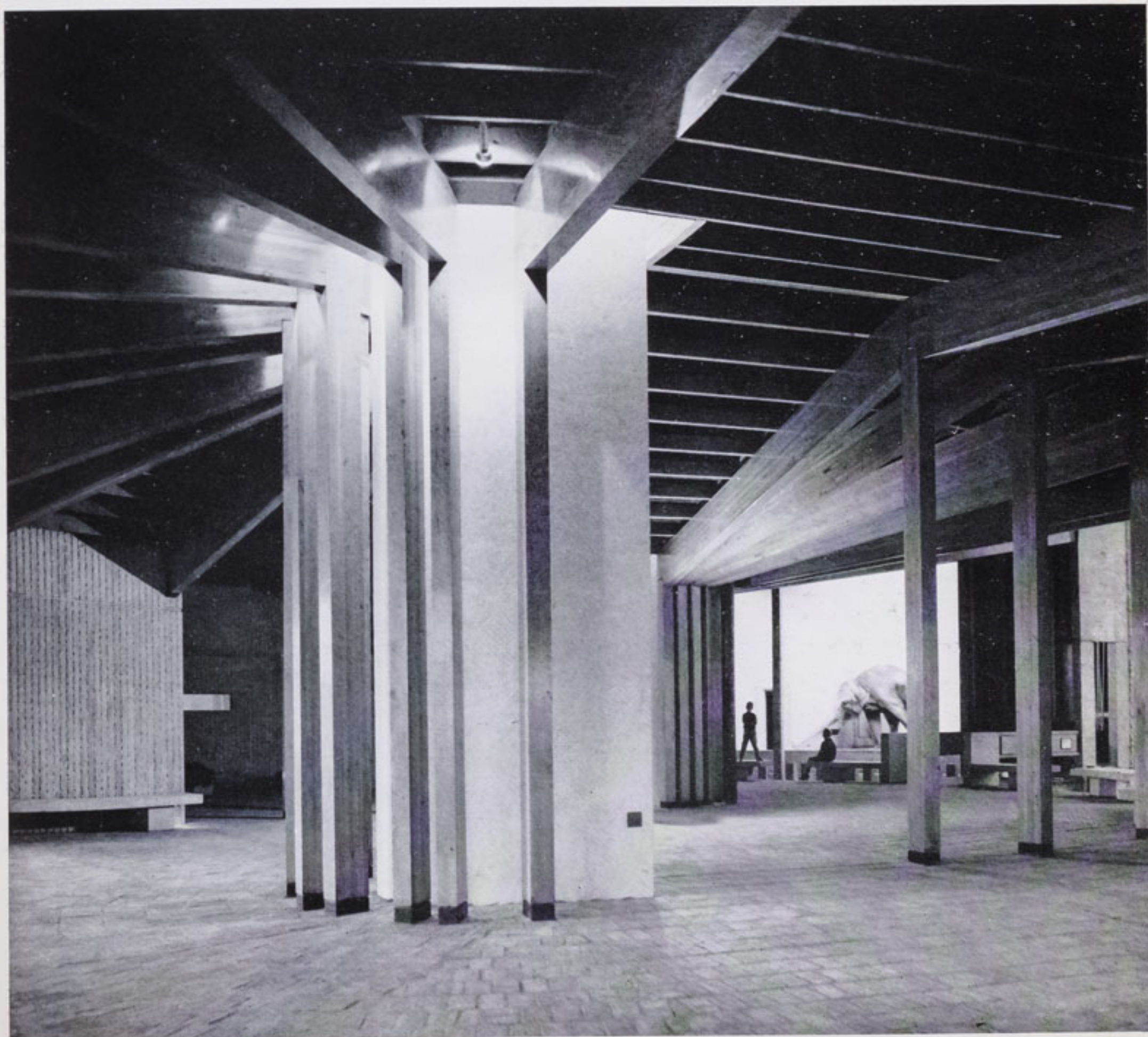


The Snowdon Aviary (before the birds were installed)

Architectural Review



Interior of new Elephant and Rhino Pavilion, London Zoo
Zoological Society of London



Wild boar born in the London Zoo, May 1965

Keystone Press Agency



PUBLICATIONS

Proceedings The arrangements made with Academic Press Inc. (London) Ltd have proved satisfactory. From volume 146 onwards the *Proceedings* appeared in a new format, and the title was changed to *The Journal of Zoology*, being the *Proceedings of the Zoological Society of London*. The steps taken to cut the delay in the publication of papers have been successful, the interval between acceptance of a paper and its publication being now four or five months, which is the minimum time necessary for printing. Four volumes of the *Journal* (Vols. 144-147) were published, containing 125 papers and abstracts covering a wide variety of subjects in the field of descriptive and experimental zoology.

Transactions Volume 30, by Jasmine Sidney, entitled 'The past and present distribution of some African ungulates', was published on 8th December.

Two papers by L. E. Richdale, 'Biology of the birds of Whero Island, New Zealand, with special reference to the Diving Petrel, and the White-faced Storm Petrel' and 'Breeding behaviour of the Narrow-billed Prion and the Broad-billed Prion on Whero Island, New Zealand', form part 1 of Volume 31, which was also published in December. Starting with this volume, the format of the *Transactions* was also changed.

Symposia Number 14, 'Social organization of animal communities', was published in April. Numbers 15, 16 and 17 are in the press and should be published in March, April and late summer 1966 respectively.

Nomenclator Zoologicus The 6th volume has now been published, and the work is in hand for the next supplement of this important work.

Zoological Record Volume 99 covering the literature for 1962 was completed in October. Of Volume 100, recording the literature for 1963, 11 sections have been published and 8 are in the press. One section of Volume 101 has been published and 5 are in the press. The amount of literature to be examined increases markedly, the number of papers listed has risen from 20,000 in Volume 96 (1959 literature) to over 25,000 in Volume 99. The Society is greatly indebted to the Recorders who cope so well with the formidable task of compiling the *Record*, and also to the individuals and institutions whose donations to the Zoological Record Fund are listed in Appendix 6.

International Zoo Yearbook Volume 6 of the *Yearbook*, was somewhat delayed, but will be published in February 1966. It is divided into 3 parts, Part I consists of a collection of 27 articles on the nutrition of animals in captivity. This section is introduced by Dr W. LANE-PETTER and papers include H. L. RATCLIFFE, 'Diets for zoological gardens: aids to conservation and disease control'; H. WACKERNAGEL, 'Feeding wild animals in zoological gardens'; H. HEDIGER, 'Diet of animals in captivity'; R. N. FIENNES, 'Feeding animals in captivity'; L. S. CRANDALL, 'Feeding the Platypus, *Ornithorhynchus anatinus* in captivity'; A. GIJZEN, J. MORTELMANS and J. VERCRUYSE, 'Zanzibar Red Colobus, *Colobus badius kirki*, at Antwerp Zoo'; J. KEAR, 'The food of geese'; R. PAWLEY, 'Observations on the care and nutrition of a captive group of Marine Iguanas, *Amblyrhynchus cristatus*, at Chicago Zoo; and

D. C. POWELL, 'Care and nutrition of the Giant Red Nudibranch, *Dendronotus iris*, at Steinhart Aquarium'.

Part 2, new developments in the zoo world, is divided into subsections entitled Architecture, Breeding, Conservation, Education, Stock, Veterinary Work, Zoological Research, and Zoos. There are 92 papers and reports, including B. MORRIS, 'Breeding the European Hedgehog, *Erinaceus europaeus*, in captivity'; Z. VESELOVSKY, 'A contribution to the knowledge of the reproduction of the Two-toed Sloth, *Choloepus didactylus*'; M. P. MCCRANE, 'Birth, behaviour and development of a hand-reared Two-toed Sloth, *Choloepus didactylus*'; I. POGLAYEN, 'Care, display and breeding of Olingos, *Bassaricyon*'; P. LEYHAUSEN and B. TONKIN, 'Breeding the Black-footed Cat, *Felis nigripes*, in captivity'; R. M. F. S. SADLEIR, 'Notes on reproduction in the larger Felidae'; L. DITTRICH, 'Breeding Indian Elephants, *Elephas maximus*, at Hanover Zoo'; G. D. FISHER, 'Keeping and breeding Antarctic Penguins at Edinburgh Zoo'; E. H. TONG, 'World register of Père David's Deer, *Elaphurus davidianus*'; J. M. DOLAN, 'The Scimitar-horned Oryx, *Oryx tao*, in captivity'; V. CHERNYSHEV, 'Acclimatisation of tropical species of monkeys in the forests of the Moscow area'; C. A. HILL, 'Coprophagy in apes'; F. A. ULMER, 'Voices of the Felidae'; H. G. DOWLING and P. BRAZAITIS, 'Size and growth in captive crocodylians'; J. C. PETERS, 'An epizootic of monkey pox at Rotterdam Zoo'; W. G. CONWAY, 'The availability and long-term supply of primates for medical research: report on the conference held in New York'; D. J. MORRIS, 'Animal behaviour studies at London Zoo'; E. YOUNG, 'Blood composition of the Red Hartebeest, *Alcelaphus buselaphus*'; and R. R. GOLDING, 'The concept of zoos in Africa'.

Part 3, the reference section, contains detailed lists of zoos and aquaria of the world, changes in personnel, numbers and species of animals bred by zoos and aquaria during 1964; a census of rare animals in zoos and aquaria in 1965; a list of important recent zoological research and veterinary work undertaken by zoos and aquaria; a list of recent and planned construction in zoos and aquaria, and a subject index to Volumes 1 to 6. New features are a list of zoo and aquaria publications and a survey of maximum longevities of reptiles and amphibians in captivity. The *Yearbook* contains 68 photographic plates and a number of line drawings. As in the past, the Society records its gratitude to the large number of zoos, aquaria, research institutions and private individuals who contribute to the *Yearbook*.

LIBRARY

The reconstruction of the Library began early in 1965, and in preparation for this all books and journals previously stored in the old Meeting Room were moved. An extensive rearrangement of the book-stacks in the basement made it possible to accommodate there all the volumes most frequently in use, so that inconvenience to readers was kept to a minimum. Throughout the year preparations have been made for moving into the new accommodation in 1966 – the books in the library are being classified, the Periodicals Catalogue retyped, new shelf marks are being lettered on to each individual volume and the Subject Index is being completely revised.

The loan and reference service to Fellows and research staff, and the information service to the public have continued with the minimum of interruption. With the establishment of the Nuffield and Wellcome Institutes the library and reference service has had to respond to a new and growing demand, and to meet this the intake

of periodicals has been considerably increased. During 1965 we received 7,357 parts of 1,079 journals.

The demand for prints from the photographic collection is also increasing and some 450 new pictures of animals were added during the year.

AWARDS FOR CONTRIBUTIONS TO ZOOLOGY

At the Annual General Meeting the President, H.R.H. The Duke of Edinburgh, presented the following awards:

The Silver Medal to *Lord Hurcomb*, in recognition of his services to the conservation movement.

The Scientific Medal (awarded to persons under 40 years of age for scientific merit and distinguished work in zoology) to *Mr J. Shaw* of the University of Newcastle upon Tyne, for his work in the field of comparative physiology.

The Stamford Raffles Award to *Mr C. W. Wright* in recognition of his distinguished contributions, as an amateur zoologist, to palaeontology.

The Thomas Henry Huxley Award (for original work submitted as a doctor's thesis) to Dr Alan Boyde of the London Hospital Medical College. Certificates of Commendation were also awarded to *Dr Martin Berry*, the University of Birmingham, and to *Dr Peter J. Miller*, the University of Glasgow.

The Prince Philip Prize (for an essay on animal ecology or behaviour submitted by a pupil of zoology, taking the G.C.E. 'A' Level or equivalent examination, in any school in the United Kingdom) to *Gerald Lincoln* of Fakenham Grammar School, Norfolk. A Highly Commended Certificate was awarded to *Brian William Young* of Reading School.

CLINICAL DEPARTMENTS

Veterinary section The total number of cases passing through the Hospital was 209, the average recovery rate being 81%. Twenty-one animals passed through the Quarantine Station, and seventy-one people used the clinics of the Out Patients' Department, where a total of 29 birds, 17 reptiles and 25 mammals were treated.

There are no particular developments to record, other than to note that a lion cub, tiger cub, chimpanzee, Capuchin Monkey and an Olive Baboon were hand-reared in the hospital. A film of an 'Exploratory laparotomy of a lioness' was made.

The 'cap-chur' equipment (a rifle that fires a projectile syringe) was used on 14 occasions on seven species, including: Onager, Przewalski's Wild Horse, chimpanzee, gnu, Grevy's Zebra.

Pathology laboratory During the year 519 autopsies were made on animals from amongst the resident acclimatized population which died in the London Zoo. A further 427 autopsies were made on newly arrived unacclimatized animals, and on animals received from external sources.

1154 diagnostic reports were made on specimens from living animals.

The health of the animals during the year has continued to be generally excellent, and during the late autumn respiratory deaths amongst the ungulates have been at a

lower level than previously. This reinforces the opinion expressed in last year's Report that the good conditions of heating and ventilation provided in the new Cotton Terraces have been markedly beneficial.

Deaths from infectious diseases have been at a low level and there has been no threat of any epidemic during the year, except for amoebiasis amongst the snakes. However, a health survey of the snakes followed by treatment was successful in preventing further trouble.

Mr Martin Senior (Consulting Veterinary Surgeon, Whipsnade Park), and Mr V. J. A. Manton, Deputy Director, carried out 261 autopsies, 119 on birds, 141 on mammals and 1 on a reptile.

CONFERENCES, VISITS AND LECTURES

The Scientific Director, Dr L. Harrison Matthews, and the Director, Whipsnade Park, Mr E. H. Tong, attended the Conference of the International Union of Directors of Zoological Gardens in Berlin in August, and visited the Zoos at Hamburg, Nuremberg, Munich, Frankfurt, Cologne and Vienna.

The Scientific Director, the Director, Whipsnade Park, the Controller, Major-General C. J. G. Dalton and the Assistant Controller, Miss E. M. Owen, attended the Annual Conference of the Directors of British Zoological Gardens at Dublin in April.

The Scientific Director has continued to serve as a member of the Board of Studies in Zoology and Comparative Anatomy of the University of London, the Consultative Committee on Grey Seals of the Nature Conservancy, the Scientific Advisory Committee to the Wildfowl Trust, the Biological Expeditions Committee, the North Borneo Expedition Committee of the Royal Society, the Trypanosomiasis Panel of the Ministry of Overseas Development, as Chairman of the World List of Scientific Periodicals, and as President of the Ray Society.

The Director, Whipsnade Park, attended the meeting arranged by the International Union for the Conservation of Nature, International Council for Bird Preservation, Fauna Preservation Society and World Wildlife Fund in September to prepare an agenda for an Inter-Governmental Conference on the Conservation of Rare and Vanishing Species which it is proposed to hold in the United States in 1967 or 1968.

During July and August the Curator of the Aquarium, Dr H. G. Vevers, worked as a member of the marine party of the Royal Society Expedition to the Solomon Islands 1965.

The Curator of Birds, Mr J. J. Yealland, has assisted Mr Anthony Minoprio, the Consultant Architect, in planning a Zoological Garden of some 250 acres which is to be built near Dacca by the Government of East Pakistan. He has continued to serve as Chairman of the committee set up in 1959 by the British Standards Institution to make recommendations on the packaging and care of live animals transported by air.

In January the Curator of Mammals, Dr Desmond Morris, delivered the Royal Institution Christmas lectures on the subject of 'Animal behaviour'. In the summer he also gave a lecture at a Royal Society symposium on 'Ritualization in animals and man', speaking on the subject of 'The rigidification of behaviour in captive animals', and addressed the British Association for the Advancement of Science in Cambridge on 'Conceptual advances in the study of animal behaviour.'

In September Dr Morris attended the IXth International Ethological Conference

with two members of the behaviour research group, Miss D. Kleiman and Mrs C. Loizos. At the Conference Miss Kleiman showed a film on 'Canid behaviour' which was made by Mr Michael Lyster of the Society's Film Unit.

Miss Kleiman and Mrs Loizos both gave papers at the Society's Symposium on 'Play, exploration and territory', Miss Kleiman speaking on 'Scent marking in the canidae' and Mrs Loizos on 'Play in mammals'.

The Senior Veterinary Officer, Mr O. Graham-Jones, visited the United States of America during March at the invitation of the American Animal Hospital Association and presented papers, 'Handling and care of zoo animals' and 'Some bone diseases of monkeys'. A grant from the Wellcome Trust enabled him to visit the Chicago Zoological Park, Lincoln Park Zoological Gardens, Houston Zoological Garden, National Zoological Park, Washington, Parke Davis (Detroit and Ann Arbor), Illinois University Medical Centre, Tulane University, Department of Physiology and Primate Centre, Houston Medical Centre (University of Texas). His paper on 'Some management aspects of breeding captive wild mammals' was presented, in his absence, to the International Symposium on 'Diseases in zoo animals' in Zürich by the Deputy Director, Whipsnade Park, Mr V. J. A. Manton. Mr Manton also attended the Annual Congress of the British Veterinary Association in Edinburgh and visited the Zürich and Basle Zoos.

Miss Caroline Jarvis, as Editor of the *International Zoo Yearbook*, was invited to become a member of the Survival Service Commission of the International Union for the Conservation of Nature and Natural Resources. During the course of a visit to China she saw the Zoological Gardens in Peking, Shanghai, Nanking, Hangchow and Canton, and met a number of Chinese zoologists. She also visited the Kuala Lumpur Zoo, the San Diego Zoo, the New York Zoological Park and the National Zoological Park in Washington.

The Director of the Nuffield Institute of Comparative Medicine, Dr L. G. Goodwin, has continued to serve on the Board of Studies in Pharmacology of the University of London, on the Tropical Medicine Research Board of the Medical Research Council, on the Trypanosomiasis Panel of the Ministry of Overseas Development, on the Expert Advisory Panel on Malaria of the World Health Organization, on the Toxicity Subcommittee of the (Dunlop) Committee on Safety of Drugs, on the Tropical Diseases Committee of the Royal Society, and on the Council of the Research Defence Society.

Dr Goodwin was Chairman of a session on chemotherapy at the 2nd International Conference on Protozoology in London, July-August 1965, and in July he visited the Serengeti National Park and other research centres in East Africa at the request of Mr J. Owen, Director of the Tanzania National Parks, and the Wellcome Trust. He made a contribution to a Symposium on hypotensive polypeptides held in Florence in October, and gave a lecture on Comparative Pharmacology to the Pharmaceutical Society of Great Britain.

The Pathologist and Head of the Pathology Department of the Nuffield Institute of Comparative Medicine, Mr R. N. Fiennes, visited Zürich in April to attend the International Symposium on 'Diseases in zoo animals'.

Dr G. R. Smith, the Head of the Infectious Diseases Department, Nuffield Institute of Comparative Medicine, visited Scarborough to attend the Annual Conference of the Association of Veterinary Teachers and Research Workers; and

the Head of the Biochemistry Department, Dr M. A. Crawford, gave a lecture at Slough College on the renal excretion of drugs by active, passive and metabolic processes.

The Senior Research Fellow, Wellcome Institute of Comparative Physiology, Dr I. W. Rowlands, has served on the Committees of the Society of Endocrinology and the Society for the Study of Fertility, becoming the Programme Secretary of the latter Society. He took part in a Ciba Foundation Study Group on 'Physico-chemical and immunological properties of Gonadotropins' and contributed to the University of London Inter-Collegiate Course in Physiology. He has edited the Proceedings of the Symposium on 'Comparative biology of reproduction in mammals' held in November 1964.

Dr P. A. Jewell, Research Fellow, Wellcome Institute of Comparative Physiology, has acted as Scientific Secretary of the Mammal Society and was invited to attend a Symposium of the International Biological Programme on 'Wild and tame herbivores' in Aberdeen and Cambridge. He gave a short series of lectures on mammalian ecology to the Conservation Course at University College, London, and organized, with the Curator of Mammals, the Society's Symposium on 'Play, exploration and territory in mammals'.

Research

Dr H. G. Vevers was elected to an Honorary Research Fellowship at Bedford College. He has continued his work, in collaboration with Professor N. Millott of Bedford College, on the structure and function of the axial organ of echinoids.

While a member of the Royal Society Expedition to the Solomon Islands 1965 he had opportunities to study a number of echinoderms from the rich coral-reefs of that area. Special attention was paid to the feeding mechanisms of certain ophiuroids and to the state of the gonads in the asteroids and echinoids. He also collected material for the study of echinoid pigments.

Ethology Considerable progress was made with animal behaviour research projects: Mrs Christine King completed her study on 'Imitation in mammals' and this work is now being prepared for publication. Dr Frances Reynolds continued her research into the analysis of the conditions eliciting and satisfying the hoarding behaviour of rats and hamsters; this work is now nearing completion and a report is being prepared. She is also investigating the scatter-hoarding of the Grey Squirrel. Miss Devra Kleiman completed her preliminary survey of the comparative aspects of the behaviour of the 14 species of the dog family that have been on exhibition in the Gardens: comparisons were made in connexion with their social, maternal, eliminative and sexual behaviour. A new behaviour research project, supported by a Medical Research Council scholarship, is the study by Mrs Caroline Loizos of the causation and function of so-called 'play' in mammals. In particular, she is concentrating on play in young chimpanzees and relating it to questions of investigation and exploration.

THE NUFFIELD INSTITUTE OF COMPARATIVE MEDICINE

The building was occupied at the end of February, and was inaugurated by H.R.H. The Duke of Edinburgh on 29th April 1965 in the presence of members of Council, many distinguished scientists and representatives of the organizations that had so generously contributed towards the Appeal Fund of the Institute.

By the end of the year all Heads of the Departments had joined the staff, one Research Assistant had been appointed, and 8 visiting graduates were working in the laboratories; the total staff being 31.

The research projects supported by grants received from the British Heart Foundation, Medical Research Council, Ministry of Overseas Development (acknowledged in last year's Report) are outlined below. The Council is also grateful to the Wellcome Trust for a grant £2,636 to enable a reference library of comparative radiographs to be built up.

Pathology The Head of the Department, Mr R. N. Fiennes, has continued his work on the anatomy of the caudal vena cava in relation to other abdominal structures and the return of blood to the heart; investigations are now being carried out in collaboration with Dr G. du Boulay by cine radioangiography. General investigations on the pathology of osteodystrophic diseases in animals, particularly primates, are now being extended. Dr R. Finlayson's survey of atheroma in wild animals in captivity has continued and his results have been published.

Miss S. K. Sikes (British Heart Foundation Grant) has continued the collection of material in East Africa, concentrating mainly on elephants and selected primates. Detailed examination of the tissues by histological and X-ray techniques is now in progress. It is hoped to elucidate the normal development of the heart and aorta of the elephant as a function of age, and to describe and evaluate the arterial lesions in all the species collected, not only structurally but also in relation to ecological and behavioural background.

Dr Christine Hawkey (British Heart Foundation Grant) is investigating blood coagulation, fibrinolytic and platelet aggregating mechanisms in a wide variety of animals. This study is being carried out on a comparative basis in collaboration with Dr C. Symons, Consultant Physician to New End and the Royal Free Hospitals. Subsidiary projects include a study of the coagulant activity of *Vipera russelli* venom on the blood of animals of various species and an investigation of the haemorrhagic properties of saliva from *Desmodus rotundus*. Miss Hawkey was awarded the Ph.D. degree of the University of London during the year.

Professor W. Landauer and Mr N. Wakasugi (National Science Foundation Grant) are studying the biochemical basis of congenital malformations in chick embryos. They are investigating the effect of drugs that uncouple oxidative phosphorylation at different points in the sequence of reactions during the course of development, and are also testing the effects of competitors and analogues of nicotinamide and of p-aminobenzoate on the appearance of physical defects, as well as the teratogenic actions of acetazolamide and D- and L-threo-chloramphenicol.

Infectious diseases The Head of the Department, Dr G. R. Smith, is studying the organisms responsible for contagious pleuropneumonia in goats and cattle, *Mycoplasma mycoides* var. *capri* and *Mycoplasma mycoides* var. *mycoides*.

The Research Assistant, Mr D. Bidwell, has prepared and cultivated new cell lines and strains from the organs of exotic animals, including the chimpanzee, Arabian Oryx, and Asiatic Black Bear. It is likely that some of the isolates will form continuous cell lines which will be of use for the investigation of viruses. Variation in the sensitivity of strains of vaccinia virus to antiviral agents in tissue culture is also being studied.

Dr P. A. J. Ball (Medical Research Council Grant) has developed a satisfactory immunological test of previous infection with hookworms in man. A haemagglutination reaction, using as antigen a saline extract of third-stage larvae, has been found to be sufficiently specific and sensitive; large numbers of sera are being tested in an attempt to show whether it provides any useful indication of the intensity of infection in a community.

Studies designed to show whether the presence of antibody in serum is related to any effect on the metabolism of larvae *in vitro*, are being made.

Dr A. Voller (Medical Research Council Grant) spent 5 months at University College Hospital, Ibadan, Nigeria. Studies were conducted on malarial antibody levels of Nigerians with special attention to changes during pregnancy. Comparative work is now being undertaken with rodent malaria in relation to pregnancy in rats.

In collaboration with Dr M. W. Turner, University of Birmingham, and Dr H. Macfarlane, University College Hospital, Ibadan, the immunoglobulin levels for adult Nigerians were established and the effects of antimalarial prophylaxis on these is now being studied.

Serological and vaccination methods are being studied in rodent malaria.

An arrangement has been made with the World Health Organization to examine the sera of a large sample of the population of N. Nigeria for malaria antibodies.

Pharmacology Mr P. Boreham (Ministry of Overseas Development Grant) has investigated the effects of trypanosome infections. Rabbits which are chronically infected with *Trypanosoma brucei* showed increased kinin concentrations in the urine and plasma. Haematological changes also occurred, including falls in erythrocyte count, packed cell volume and haemoglobin and an increase in reticulocytes. No increase in urinary kinin occurred in rats which were infected with the non-pathogenic trypanosome *T. lewisi*, suggesting that the formation of kinins may be associated with the pathogenicity of trypanosomes.

Radiology Dr G. du Boulay. The X-ray Department has now completed the installation of major apparatus and is probably the best equipped experimental radiology unit in Britain. It has already assisted in several projects, including: flow of blood in the inferior vena cava of mammals (with R. N. Fiennes); bone diseases in captive primates (with R. N. Fiennes); masticatory movements of marsupials (with D. A. Ride); distribution of atheromatous calcification in the aortas of wild elephants (with S. K. Sikes); gastrointestinal movements in vagotomized rats (with F. Starrer); pulsatile movements of the cerebro-spinal fluid in mammals.

The X-ray Department is accumulating a valuable reference collection of radiographs and is developing new techniques.

Biochemistry The Head of the Department, Dr M. A. Crawford, has continued his studies on human nutrition in collaboration with Mrs I. L. Hansen and Mr A. Lopez in East Africa. Analysis of material obtained from examination of the El Molo tribe is in progress; it should indicate the extent of mineral abnormalities to reveal whether the unique bone and dental deformities of this tribe are due to genetic or dietary factors. The diet is rich in phosphorus, low in calcium and the only drinking water available contains 7.9 p.p.m. fluoride. Guinea pigs fed on the same deficient diets develop endo- and myocardial fibrosis, and the process is being studied.

A study comparing the acid-secreting mechanisms of the carnivore with those of the herbivore is in progress, but has been confined recently to renal structure in relation to function.

A grant generously provided by A. Wander Ltd will support one of the research workers in this department.

Surgery Under the supervision of Mr O. Graham-Jones, the operating-theatre

equipment is now installed and it is hoped soon to begin a project in collaboration with Professor R. Calne of Cambridge University.

THE WELLCOME INSTITUTE OF COMPARATIVE PHYSIOLOGY

Mr G. Clough took up his appointment as Research Assistant to the Senior Research Fellow on 1st January 1965 and on 1st October Miss B. J. Weir, a research student (Ph.D. Cambridge), replaced Mr J. J. R. Grimsdell, who left to continue his studies on reproduction in the African Buffalo in Uganda. From 1st September one laboratory was occupied by Mr E. A. Smith, working by arrangement with the Natural Environment Research Council.

In October a grant of about 14,500 dollars per annum for 2 years, with possible renewal for a further 3 years, was received from the World Health Organization to enable studies to be made of certain species of hystricomorph rodents, bats, mustelids and insectivores that display peculiarities of the reproductive processes not found in the commonly available animals (e.g. superovulation, delayed fertilization and delayed implantation). Miss D. Kleiman has been appointed Research Assistant to study the reproductive behaviour of these animals.

Dr A. D. Woodhead's grant from the Development Commission Natural Environment Research Council was extended for a further year from October, but she resigned at the end of the year, in order to accompany her husband and family to Australia.

Much of the scientific work of the Institute recorded in the previous Report has been continued. Dr Rowlands visited Skomer Island in early August to examine the breeding state of the Skomer vole to confirm certain observations made from a histological study of the reproductive organs collected earlier. In collaboration with Dr R. B. Heap of the Agricultural Research Council Institute of Animal Physiology, Babraham, he has extended his observations on the endocrine control of gestation to a study of the role of the pituitary gland in the regulation of progesterone secretion by the ovary of the guinea-pig. Work is in progress, with the assistance of Mr Clough, on the reproductive organs of a variety of bats collected by Mr J. N. Davies in British Guiana, and on a similar collection from baboons made by the Cambridge (Clare College) Medical Students' expedition to East Africa.

Dr P. A. Jewell's studies on the feral Soay sheep on St Kilda have been intensified by having Mr P. Grubb stationed on the island, thus enabling observations to be made throughout the mating and lambing seasons. Dr Jewell has also carried out intensive trapping procedures on Skomer Island at various times of the year to observe the movements of the Skomer voles, to confirm the shortness of their breeding season, and to discover age and weight-classes of voles that survive the winter to form the breeding stock of the following year.

Dr G. H. Manley and Dr R. M. Sadleir have jointly tackled problems of infertility in a selection of the animals in the Collection. Dr Manley has examined mating behaviour in several of the large carnivores (Tiger, Jaguar and Snow-Leopard) and the sexual cycle and reproductive and social behaviour in chimpanzees, *Arctocebus* and *Loris*. Dr Sadleir in collaboration with the Senior Veterinary Officer has investigated methods of semen collection and these have been used to test the fertility of several males in the Collection. Methods for the preservation of spermatozoa at -196°C have been determined by him and some success has been achieved with these cells obtained from the chimpanzee, Grevy's Zebra and Chinchilla.

With the co-operation of the Director and the Veterinary Officer, Whippsnade Park, attempts have been made to improve the fertility of the unique Norfolk-horned sheep in the Gene Bank. These have involved the assessment of fertility among the rams, and the induction of superovulation and transference of fertilized eggs to recipient ewes of other breeds.

Mr Clough, in addition to assisting the Senior Research Fellow, has collected and preserved the reproductive and endocrine organs of about 150 animals sent during the year to the Pathology Department for post-mortem examination; all have been stored and a few of particular interest have been prepared for histological examination.

Dr Woodhead has completed her studies on seasonal changes in the activity of the Spur-dog (*Squalus acanthias*) and has related thyroid activity to the reproductive mechanisms and migratory behaviour in other elasmobranch species. She has also studied the effect of the level of nutrition and the process of ageing in the thyroid gland of the Guppy (*Lebistes reticulatus*). Dr Woodhead has assisted Drs How and Butt (Birmingham) by contributing a large number of fish pituitary glands for fractionation and bio-assay of gonadotrophins.

Educational Activities

EDUCATION PROGRAMME FOR SCHOOLS

The number of pupils attending lecture-demonstrations organized under the Society's education programme continues to increase each year.

During 1965 attendances were as follows:

Spring Term - Regent's Park (Secondary Schools)	10,492
Summer Term - Whipsnade Park (Secondary Schools)	3,107
Summer Term - Regent's Park (Primary Schools)	12,681
Autumn Term - Regent's Park (Secondary Schools)	11,426
	<hr/>
	37,706
	<hr/>

This represents an increase of 7% on the 1964 total. The attendance at Regent's Park during each term was a record, but at Whipsnade, because the term was one week shorter, the total was marginally lower than that for 1964. The numbers attending the Advanced Level lecture-demonstrations for sixth form pupils maintained the steady increase which they have shown over the years, the total number attending these lectures in the Autumn and Spring Terms being 5,084.

OTHER COURSES

Active co-operation with colleges of education and technical colleges has been maintained, and several short courses for their students were organized. Two short courses for university students of zoology were held during the Easter vacation, and were very well attended.

Members of the menagerie staff both from Regent's Park and Whipsnade attended courses of instruction for the Society's Diploma in the care and management of Animals.

YOUNG ZOOLOGISTS' CLUB

Despite the increased subscription which was introduced in January, membership of the Young Zoologists' Club has remained steady at a total of approximately 4,200.

As in the past years, the Club meetings held during the school holidays were very well attended. Guided tours of the London Zoo and Whipsnade also proved popular. The two specialist groups within the Club, the Entomologists' and Herpetologists' Sections, have an active and enthusiastic membership.

Under the guidance of Mr Maxwell Knight a field trip to the Frensham Ponds was organized, and the members were able to observe several species of British reptiles

Acknowledgments

in their natural habitat. A party of Club members also visited Bristol Zoo, where the Director, Mr R. E. Greed, very kindly arranged for the party to be shown round by a head keeper.

Three issues of the *Zoo Magazine* appeared during the year; the policy of publishing articles written by Club members has been maintained, and the standard of these articles has been high.

The Council is grateful to those Members and friends of the Society who have assisted and encouraged the Club during the year.

CHRISTMAS LECTURES

During the Christmas holidays three meetings were held for the children and young friends of Members of the Society.

Dr Bruce Campbell gave a talk entitled 'Scilly to Sutherland; a tour of some British nature reserves', and Mr Alfred Leutscher spoke on the subject 'Animal detective'. At the third meeting two films, 'Water Birds' and 'Beaver Valley', were shown. Each of these meetings had a large and appreciative audience.

Staff

At the end of the year the permanent staff of the Society totalled 574. Of these, 142 were employed at the headquarters of the Society, 43 in the Research Institutes, 275 in the management and Menagerie of the London Zoo, and 114 were employed at Whipsnade Park.

A list of the senior members of the staff is given in Appendix 2.

APPOINTMENTS

Dr G. R. Smith was appointed Head of the Infectious Diseases Department, and Dr M. A. Crawford Head of the Biochemistry Department of the Nuffield Institute of Comparative Medicine.

Mr I. Keymer was appointed Assistant Pathologist to the Society.

RETIREMENTS

Mr A. J. Myers, Wireworker, retired after 38 years' service; Mrs E. Read, Cashier, after 33 years' service, and Mr F. J. Grizzell, Handyman at Whipsnade Park, after 33 years' service.

DEATHS

It is with regret that the Council reports the death of Mr A. E. Matthews, Head Keeper at Whipsnade Park.

BRONZE MEDALS

The Bronze Medal was awarded to Mr W. E. Peckett, Head Keeper of the Children's Zoo at Regent's Park, and to Mr J. C. T. Aldis, Head Keeper of the North Mammal House, Regent's Park, both of whom have given long and meritorious service to the Society.

OTHER STAFF MATTERS

A 40 hour working week for the menagerie and ancillary employees has been agreed and will be introduced early in 1966. This will enable most employees to have a complete week-end off duty in alternate weeks, and in order to supplement the staff available in the Menagerie on Saturdays and Sundays auxiliary keepers are being recruited.

Acknowledgments

The Council records its gratitude for the invaluable assistance given by the members of its committees, whose unfailing help and expert advice are of great assistance to the Council.

The Society is indebted to the many Fellows and others who have sent specimens for the Collection. The gifts received are recorded in Appendix 5. Many other interesting animals have been received in exchange from zoological societies and institutions. The Council is grateful for their valuable co-operation, and also acknowledges the assistance of Mr R. W. Hayman and Mr J. E. Hill of the Natural History Museum, who on a number of occasions have been extremely helpful with the identification of difficult new arrivals.

Senhora Hermione Blandy de Freitas Martins and Senhor João de Freitas Martins of Madeira, a Corresponding Member of the Society, have continued to take a lively interest in the Aquarium and have sent valuable collections of marine animals.

The Council is grateful to the following who have rendered valuable assistance to the Veterinary Officer: Dr J. T. Abrams, Department of Clinical Studies, University of Cambridge; Dr N. S. Barron, Vitamealo Advisory Service; Professor F. R. Bell, Professor of Experimental Veterinary Medicine, Royal Veterinary College; Professor R. Y. Calne, Professor of Surgery, University of Cambridge; Dr Phyllis G. Croft, Royal Veterinary College/U.F.A.W.; Professor G. Howe, Professor of Oral Surgery, University of Newcastle upon Tyne; Sir Benjamin Rycroft, the Society's Honorary Ophthalmologist; Mr Kenneth Till, Neurosurgeon, Children's Hospital, Great Ormond Street, London; Professor I. D. P. Wotton, Postgraduate Medical School, Hammersmith Hospital.

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The Council is grateful for assistance at Whipsnade Park from: Mr J. E. N. Sloan, Parasitologist of the Cooper, McDougall and Robertson Field Research Station at Berkhamsted, for the identification of parasites; Dr H. D. Holt, Director, The Public Health Laboratory Service, Luton, for bacteriological investigation; Dr J. Kelsall Thomas, Dunstable; the Ministry of Agriculture, Fisheries & Food, Weybridge; the

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S. Zuckerman
SECRETARY

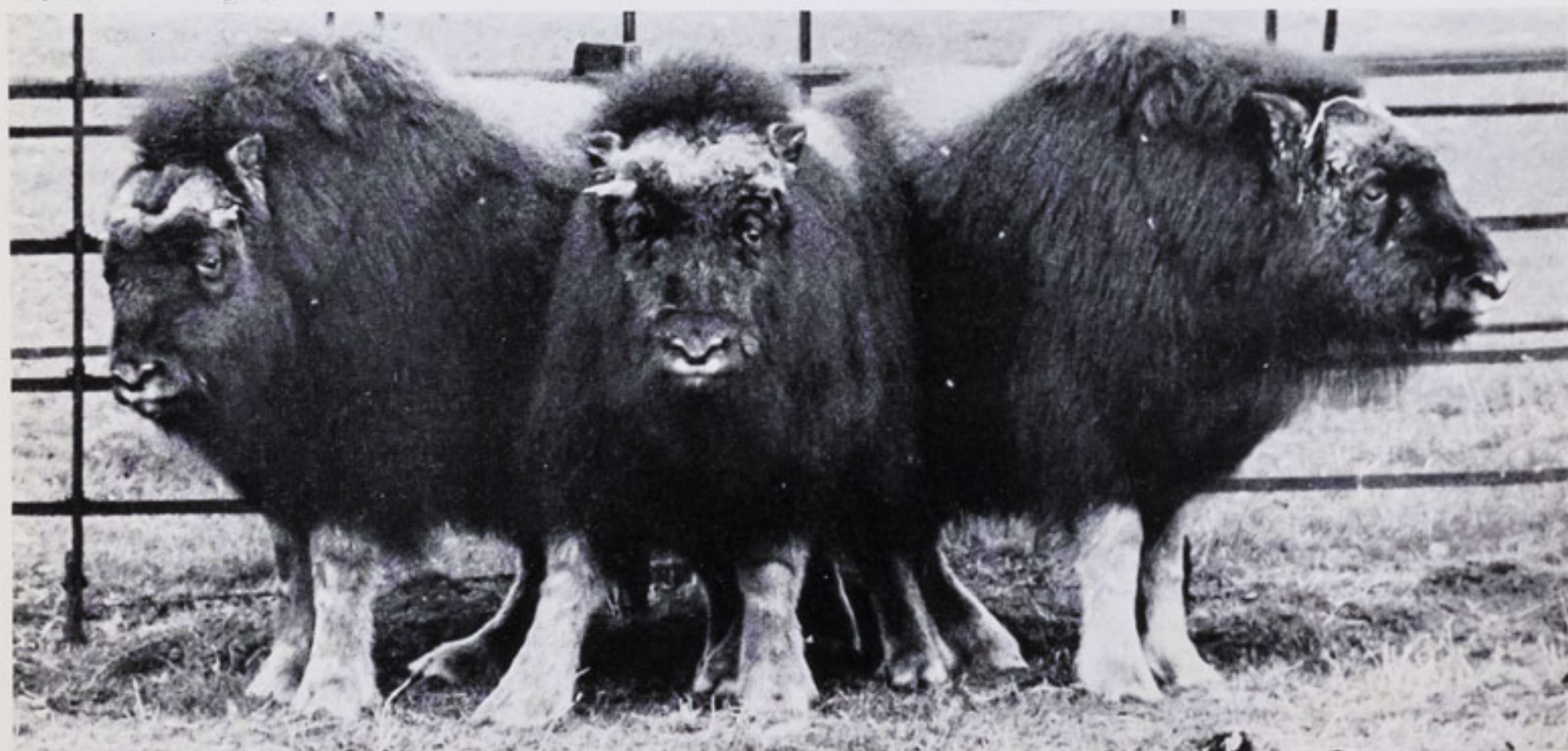
Bruijn's Echidna, presented to the Secretary
of the Society by Sir Edward Hallstrom
Zoological Society of London



The new Elephant Paddock, Whipsnade Park
Fox Photos Ltd



Musk Oxen in Whipsnade Park
Keystone Press Agency



Kenya Eagle Owls, hatched in the London Zoo, March 1965

Associated Press



Barn Owls,
hatched in the London Zoo,
July 1965

*Zoological Society
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Sickle-billed Bird of Paradise
Zoological Society of London



Committees 1965-1966

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Terms of reference: To consider matters relating to the layout, appearance, animal housing, and amenities other than catering, of the Society's Gardens, Regent's Park, and Whipsnade Park; to consult where necessary with other committees and to report to Council, so that the advice of the Committee can be taken into account in planning future maintenance and development.

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Collections Policy Committee

Terms of reference: To make proposals to Council on the distribution of animals as between the Collections at Regent's Park and Whipsnade Park; to consult where necessary with other committees, and to advise on new purchases.

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Terms of reference: To advise on all matters relating to research in comparative medicine; to receive and approve the Director's Annual Report to Council and the Statement of Accounts; and to advise on the appointment of research staff.

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Camels, Antelopes : J. Lambden
Children's Zoo : W. E. Peckett
Elephant Pavilion : W. G. Crompton
Giraffes and Cattle : H. G. N. Robinson
Insects : R. P. Humphreys
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Carnivores Section : F. Meakins
Children's Zoo : L. Conway
Elephant Section : C. H. Bailey
Giraffe Section : L. Warner
Pheasant and Parrakeet Aviaries : B. Simmons

Publications by Society's Staff and Research Workers

(including those published in collaboration)

- DU BOULAY, G. H. (1965). Some observations on the natural history of intracranial aneurysms. *Br. J. Radiol.* 38, 721-757.
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List of animals received

(presented, purchased, received in exchange, deposited or born in the Menagerie)

Key

- G Genus new to the Collection
 S Species new to the Collection
 SS Subspecies new to the Collection

Note The author and the geographical distribution are given only in the case of genera, species and subspecies new to the Collection.

In the column 'Number born or hatched in the menagerie', the figures in brackets indicate the number which have died.

Mammals, Birds, Reptiles and Amphibians

		Total number acquired	Number born or hatched in the Menagerie
REGENTS	Mammals		
PARK	MONOTREMATA		
	<i>Zaglossus bruijni</i>	Bruijn's Echidna	1
	MARSUPIALIA		
	<i>Protemnodon agilis</i>	Agile Wallaby	1 (1)
	<i>Macropus robustus</i>	Walleroo	1 (1)
	INSECTIVORA		
	<i>Erinaceus europaeus</i>	European Hedgehog	1
	<i>Erinaceus frontalis</i>	Cape Hedgehog	2
	CHIROPTERA		
	<i>Cynopterus brachyotis</i>	Malaysian Fruit Bat	1 (1)
	<i>Desmodus murinus rotundus</i>	Vampire Bat	2
G	<i>Diaemus youngi</i> (Jentink) Tropical South America	White-winged Vampire	1
	PRIMATES		
	<i>Arctocebus calabarensis</i>	Angwantibo	10
SS	<i>Perodicticus potto edwardsi</i> A. Bouvier West Africa.	Edward's Potto	1
	<i>Galago alleni</i>	Allen's Bushbaby	2
	<i>Galago demidovi</i>	Demidoff's Bushbaby	3
G	<i>Euoticus e. elegantulus</i> (Leconte) West Africa	Needle-clawed Bushbaby	1
	<i>Aotus trivirgatus</i>	Douroucouli	1 (1)
	<i>Cebus apella</i>	Tufted Capuchin	1 (1)
	<i>Ateles p. paniscus</i>	Black Spider Monkey	1
	<i>Macaca nemestrina</i>	Pig-tailed Macaque	3
	<i>Cercocebus torquatus lunulatus</i>	White-crowned Mangabey	1
	<i>Papio anubis</i>	Anubis Baboon	1 (1)
	<i>Mandrillus sphinx</i>	Mandrill	1 (1)
	<i>Cercopithecus aethiops pygerythrus</i>	Vervet Monkey	1

		Total number acquired	Number born or hatched in the Menagerie
<i>Cercopithecus cephus erythrotis</i>	Sclater's Spot-nosed Monkey	1	
<i>Cercopithecus nictitans signatus</i>	Jentink's Monkey	1	
<i>Hylobates moloch funereus</i>	Black and Grey Gibbon	1	
<i>Pan troglodytes</i>	Chimpanzee	7	2 (1)
RODENTIA			
SS <i>Callosciurus erythraeus centralis</i> Bonhote Central Formosa.	Pallas's Formosan Squirrel	4	
SS <i>Callosciurus finlayson nox</i> Wroughton N.E. Thailand.	Finlayson's Siamese Squirrel	6	
<i>Glaucomys volans</i>	American Flying Squirrel	1	
S <i>Dipodomys ordi</i> Woodhouse North America	Ord's Kangaroo Rat	1	
<i>Castor fiber canadensis</i>	Canadian Beaver	2	
S <i>Rhizomys sumatrensis</i> Blyth South-east Asia	Large Bamboo Rat	1	
<i>Graphiurus crassicaudatus</i>	Bushy-tailed Dormouse	1	
<i>Hydrochaerus hydrochaeris</i>	Capybara	8	
<i>Dasyprocta aguti</i>	Orange-rumped Agouti	4	4
<i>Myoprocta pratti</i>	Green Acouchy	10	10
<i>Myocastor coypus</i>	Coypu	2	2
CARNIVORA			
<i>Alopex lagopus</i>	Arctic Fox	9	7 (3)
<i>Vulpes vulpes</i>	Fox	1	
<i>Fennecus zerda</i>	Fennec Fox	1	
<i>Nyctereutes procyonoides</i>	Raccoon Dog	2	
<i>Chrysocyon brachyurus</i>	Maned Wolf	1	
<i>Ursus americanus</i>	American Black Bear	2	
<i>Thalarctos maritimus</i>	Polar Bear	2	
<i>Helarctos malayanus</i>	Malay Sun Bear	2	
<i>Procyon cancrivorus</i>	Crab-eating Raccoon	4	
<i>Nasua nasua</i>	Ring-tailed Coati	5	
<i>Potos flavus</i>	Kinkajou	3	
<i>Martes flavigula</i>	Yellow-throated Marten	1	
<i>Melogale moschata</i>	Chinese Ferret Badger	1	
<i>Mephitis mephitis</i>	Striped Skunk	1	
<i>Lutra perspicillata</i>	Indian Otter	1	
<i>Genetta tigrina</i>	Blotched Genet	1	
SS <i>Arctogalidia trivirgata stigmatica</i> Temminck Borneo	Bornean Small-toothed Palm Civet	3	
<i>Arctictis binturong</i>	Binturong	1	
<i>Herpestes auropunctatus rufifrons</i>	Rufous-faced Mongoose	3	
<i>Herpestes urva</i>	Crab-eating Mongoose	4	
<i>Felis bengalensis</i>	Indian Leopard Cat	1	
<i>Felis caracal</i>	Caracal Lynx	3	3 (2)
<i>Felis pardalis</i>	Ocelot	2	
<i>Felis concolor</i>	Puma	7	7
<i>Panthera leo</i>	Lion	4	4 (1)
<i>Panthera tigris</i>	Tiger	2	2
<i>Panthera pardus japonensis</i>	Chinese Leopard	1	1
<i>Panthera onca</i>	Jaguar	1	1
PINNIPEDIA			
<i>Zalophus californianus</i>	Sealion	1	
<i>Pusa sibirica</i>	Baikal Seal	2	
<i>Halichoerus grypus</i>	Grey Seal	1	1 (1)

		Total number acquired	Number born or hatched in the Menagerie
ARTIODACTYLA			
<i>Sus scrofa</i>	Wild Boar	7	7
<i>Lama glama</i>	Llama	2	
<i>Cervus timorensis</i>	Timor Deer	2	2 (2)
<i>Cervus elaphus</i>	Red Deer	3	3
<i>Rangifer tarandus</i>	Reindeer	1	1 (1)
<i>Giraffa camelopardalis</i>	Giraffe	4	
<i>Bosephalus tragocamelus</i>	Nilgai	1	1 (1)
<i>Bos banteng</i>	Banteng	1	1 (1)
<i>Bison bison</i>	Bison	1	1
<i>Antilope cervicapra</i>	Blackbuck	7	7 (1)
<i>Gazella dorcas</i>	Dorcas Gazelle	1	
<i>Ammotragus lervia</i>	Barbary Wild Sheep	5	5 (3)
<i>Ovis musimon</i>	Mouflon	6	6
<i>Ovis ammon polii</i>	Marco Polo Sheep	2	1 (1)
<i>Ovis canadensis</i>	Bighorn Sheep	1	1 (1)
DOMESTIC			
	Dingos	9	
	Yak	1	
	Goats	21	
	Sheep	2	
Birds			
SPHENISCIFORMES			
<i>Spheniscus demersus</i>	Black-footed Penguin	2	2 (1)
CICONIIFORMES			
<i>Ardea melanocephala</i>	Black-headed Heron	1	
<i>Ardea c. cinerea</i>	Heron	1	
<i>Ardeola ralloides</i>	Squacco Heron	2	
<i>Ardeola grayi</i>	Pond Heron	1	
<i>Bubulcus i. ibis</i>	African Cattle Egret	2	2
s <i>Demigretta sacra</i> Gmelin	Eastern Reef Heron	1	
E. Asia and S. Pacific area			
<i>Nycticorax n. nycticorax</i>	Night Heron	6	3
ANSERIFORMES			
<i>Dendrocygna bicolor</i>	Fulvous Whistling Duck	2	
<i>Cygnus atratus</i>	Black Swan	4	4
<i>Anser erythropus</i>	Lesser White-fronted Goose	2	
<i>Branta leucopsis</i>	Barnacle Goose	3	3
<i>Tadorna cana</i>	South African Shelduck	1	
<i>Anas falcata</i>	Falcated Teal	2	
<i>Anas erythrorhyncha</i>	Red-billed Pintail	2	
<i>Anas capensis</i>	Cape Teal	2	
<i>Aix galericulata</i>	Mandarin Duck	2	
<i>Somateria m. mollissima</i>	Eider Duck	3	
<i>Aythya americana</i>	American Pochard	2	
<i>Aythya nyroca</i>	Ferruginous Duck	2	
FALCONIFORMES			
<i>Aviceda leuphotes</i>	Black-crested Baza	1	
<i>Accipiter badius</i>	Shikra	1	
<i>Aquila rapax</i>	Tawny Eagle	1	
<i>Microhierax caerulescens burmanicus</i>	Red-thighed Falconet	2	
<i>Falco c. cherrug</i>	Saker Falcon	1	
<i>Falco ardosiaceus</i>	Grey Kestrel	1	
<i>Falco t. tinnunculus</i>	Kestrel	1	

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GALLIFORMES			
s	<i>Ortalis canicollis</i> (Wagler) S. America	Grey-headed Chachalaca	1
	<i>Tetrao u. urogallus</i>	Capercaillie	2
	<i>Lophortyx californica</i>	Californian Quail	2
	<i>Alectoris rufa</i>	Red-legged Partridge	2
	<i>Francolinus erckeli</i>	Erckel's Francolin	1
	<i>Coturnix coturnix japonica</i>	Japanese Quail	2
	<i>Excalfactoria chinensis</i>	Painted Quail	4
	<i>Gallus gallus jabouillei</i>	Tonkinese Jungle Fowl	2
	<i>Gallus sonnerati</i>	Sonnerat's Jungle Fowl	2
	<i>Lophura swinhoii</i>	Swinhoe's Pheasant	3
	<i>Lophura diardi</i>	Siamese Fire-backed Pheasant	2
	<i>Catreus wallichi</i>	Cheer Pheasant	1
	<i>Syrmaticus h. humiae</i>	Hume's Bar-tailed Pheasant	2
	<i>Phasianus colchicus torquatus</i>	Ring-necked Pheasant	1
	<i>Chrysolophus pictus</i>	Golden Pheasant	5
GRUIFORMES			
	<i>Grus a. antigone</i>	Sarus Crane	1
	<i>Laterallus leucopyrrhus</i>	Southern White-breasted Crake	8
	<i>Porphyrio p. poliocephalus</i>	Grey-headed Gallinule	1
CHARADRIIFORMES			
	<i>Vanellus vanellus</i>	Lapwing	1
	<i>Hoplopterus spinosus</i>	Spur-winged Plover	2
	<i>Recurvirostra avosetta</i>	Avocet	2
	<i>Larus a. argentatus</i>	Herring Gull	3
	<i>Larus marinus</i>	Great Black-backed Gull	2
	<i>Larus cirrocephalus poiocephalus</i>	Grey-headed Gull	7
	<i>Larus novae-hollandiae</i>	Silver Gull	1
COLUMBIFORMES			
	<i>Treron waalia</i>	Bruce's Green Pigeon	1
	<i>Ptilinopus s. superbus</i>	Purple-crowned Fruit Pigeon	1
s	<i>Ducula badia cuprea</i> (Jerdon) S.W. India	Jerdon's Imperial Pigeon	6
	<i>Columba arquatrix</i>	Olive Pigeon	1
	<i>Streptopelia decipiens</i>	Mourning Dove	1
	<i>Streptopelia capicola</i>	Ring-necked Dove	2
	<i>Streptopelia vinacea</i>	Vinaceous Dove	1
	<i>Streptopelia s. senegalensis</i>	African Palm Dove	2
	<i>Streptopelia c. chinensis</i>	Chinese Necklace Dove	2
	<i>Geopelia cuneata</i>	Diamond Dove	1
	<i>Oena c. capensis</i>	Cape Dove	1
	<i>Turtur a. afer</i>	Blue-spotted Wood Dove	1
	<i>Ocyphaps lophotes</i>	Crested Pigeon	2
PSITTACIFORMES			
	<i>Nymphicus hollandicus</i>	Cockatiel	12
	<i>Ara ararauna</i>	Blue and Yellow Macaw	1
G	<i>Rhynchopsitta pachyrhyncha</i> (Swainson) Pine forests of N. Mexico and S. Arizona	Thick-billed Parrot	1
	<i>Myiopsitta monacha</i>	Quaker Parrakeet	1

		Total number acquired	Number born or hatched in the Menagerie
<i>Poicephalus meyeri</i>	Brown Parrot	1	
<i>Polytelis alexandrae</i>	Queen Alexandra's Parrakeet	1	1
<i>Agapornis personata</i>	Masked Lovebird	2	
<i>Agapornis fischeri</i>	Fischer's Lovebird	3	
<i>Agapornis pullaria</i>	Red-faced Lovebird	1	
<i>Neophema splendida</i>	Scarlet-chested Grass Parrakeet (Blue mut.)	2	
CUCULIFORMES			
<i>Tauraco l. leucotis</i>	White-checked Turaco	1	
<i>Tauraco hartlaubi</i>	Hartlaub's Turaco	2	
<i>Centropus sinensis</i>	Indian Coucal	1	
STRIGIFORMES			
<i>Tyto a. alba</i>	Barn Owl	6	6
<i>Bubo b. bubo</i>	Great Eagle Owl	2	2
<i>Bubo a. africanus</i>	Spotted Eagle Owl	4	4
<i>Bubo capensis mackinderi</i>	Kenya Eagle Owl	4	4
<i>Otus bakkamoena glabripes</i>	Bare-footed Scops Owl	2	
<i>Athene noctua plumipes</i>	Swinhoe's Owlet	2	
APODIFORMES			
S <i>Campylopterus villaviscensio</i> (Bourcier) Ecuador	Villaviscensio's Sabre-wing	1	
<i>Colibri c. coruscans</i>	Violet-eared Humming Bird	1	
<i>Amazilia saucerrottei</i>	Blue-tailed Humming Bird	1	
G <i>Coeligena wilsoni</i> (Delattre and Bourcier) Colombia and Ecuador	Brown Inca Humming Bird	1	
CORACIIFORMES			
S <i>Tockus deckeni</i> (Cabanis) E. Africa	Von der Decken's Hornbill	2	
PICIFORMES			
S <i>Megalaima viridis</i> (Boddaert) Hills of S. India	Little Green Barbet	2	
<i>Selenidera maculirostris</i>	Spot-billed Toucanet	1	
S <i>Picus xanthopygaeus</i> (J. R. and G. E. Gray) S.E. Asia	Little Scaly-bellied Green Woodpecker	1	
PASSERIFORMES			
G <i>Xipholena atropurpurea</i> Wied Brazil	Brazilian Chatterer	1	
<i>Melanocoryphus mongolicus</i>	Mongolian Lark	1	
<i>Pycnonotus cafer bengalensis</i>	Red-vented Bulbul	1	
SS <i>Pycnonotus melanicterus gularis</i> (Gould) S.W. India	Ruby-throated Bulbul	4	
<i>Pycnonotus barbatus</i>	Dusky Bulbul	2	
<i>Pycnonotus zeylanicus</i>	Yellow-crowned Bulbul	1	
<i>Garrulax leucolophus</i>	White-crested Laughing Thrush	1	
<i>Garrulax rufogularis</i>	Rufous-chinned Jay Thrush	1	
<i>Garrulax sukatschewi</i>	Kansu Babbler	2	
<i>Garrulax pectoralis picticollis</i>	Collared Jay Thrush	2	
<i>Heterophasia capistrata</i>	Black-headed Sibia	1	
<i>Leiothrix lutea</i>	Pekin Robin	1	

		Total number acquired	Number born or hatched in the Menagerie
<i>Paradoxornis gularis fokiensis</i>	Fohkien Grey-headed Crow Tit	6	
S <i>Turdus dissimilis hortulorum</i> Sclater E. Asia	Grey-backed Thrush	2	
<i>Turdus naumanni</i>	Red-tailed Thrush	2	
<i>Zoothera citrina cyanotus</i>	White-throated Ground Thrush	4	
<i>Monticola rufiventris</i>	Chestnut-bellied Rock Thrush	2	
<i>Cyanoptila cyanomelaena</i>	Blue and White Flycatcher	1	
<i>Dicaeum</i> sp.	Flowerpecker	1	
<i>Anthreptes malacensis</i>	Brown-throated Sunbird	1	
<i>Chalcomitra senegalensis</i>	Scarlet-breasted Sunbird	1	
<i>Zosterops</i> sp.	White-eye	1	
<i>Emberiza bruniceps</i>	Red-headed Bunting	3	
<i>Emberiza c. citrinella</i>	Yellow Bunting	1	
<i>Tanagrella velia</i>	Blue-bellied Tanager	2	
<i>Tangara fastuosa</i>	Superb Tanager	2	
<i>Tangara flava</i>	Yellow Tanager	5	
<i>Tangara guttata</i>	Spotted Emerald Tanager	1	
<i>Tangara nigrocincta franciscae</i>	Mrs Wilson's Tanager	2	
<i>Thraupis ornata</i>	Ornate Tanager	2	
<i>Thraupis bonariensis</i>	Blue and Yellow Tanager	2	
<i>Ramphocelus bresilius</i>	Scarlet Tanager	2	
<i>Ramphocelus carbo</i>	Maroon Tanager	2	
<i>Ramphocelus nigrogularis</i>	Masked Crimson Tanager	1	
<i>Tachyphonus rufus</i>	Black Tanager	1	
<i>Xanthocephalus xanthocephalus</i>	Yellow-headed Blackbird	1	
<i>Icterus galbula</i>	Baltimore Oriole	1	
SS <i>Eophona personata magnirostris</i> (Hartert) E. Asia	Chinese Masked Hawfinch	2	
S <i>Poospiza torquata</i> (d'Orbigny and Lafresnaye) S. America	Ringed Warbling Finch	1	
<i>Rhodospingus cruentus</i>	Crimson Finch	2	
<i>Pyrrhula pyrrhula pileata</i>	Bullfinch	2	
<i>Poephila gouldiae</i>	Gouldian Finch	1	
<i>Taeniopygia castanotis</i>	Zebra Finch	11	10
<i>Estrilda caerulescens</i>	Lavender Finch	2	
<i>Estrilda subflava</i>	Golden-breasted Waxbill	2	
<i>Ortygospiza atricollis</i>	Quail Finch	1	
<i>Erythrura prasina</i>	Pin-tailed Nonpareil	1	
<i>Padda oryzivora</i>	Java Sparrow	2	
<i>Vidua macroura</i>	Pin-tailed Whydah	2	
SS <i>Bubalornis albirostris intermedius</i> (Cabanis) E. Africa	Red-billed Buffalo Weaver	2	
<i>Plocepasser mahali melanorhynchus</i>	Black-billed Sparrow Weaver	1	
<i>Passer montanus</i>	Tree Sparrow	1	
S <i>Malimbus m. malimbicus</i> (Darwin) Tropical Africa	Crested Malimbe	1	
<i>Euplectes progne delameri</i>	Delamere's Giant Whydah	2	
S <i>Cosmopsarus unicolor</i> Shelley E. Africa	Ashy Starling	1	
<i>Lamprocolius purpureus</i>	Purple-headed Glossy Starling	1	
<i>Lamprotornis p. purpuropterus</i>	Ruppell's Glossy Starling	1	
<i>Spreo superbus</i>	Superb Glossy Starling	19	

		Total number acquired	Number born or hatched in the Menagerie
	<i>Spreo hildebrandti shelleyi</i>	2	
	<i>Creatophora cinerea</i>	2	
	<i>Sturnus burmanicus leucocephalus</i>	1	
	<i>Leucopsar rothschildi</i>	2	
	<i>Gracula religiosa intermedia</i>	1	
G	<i>Loria loriae</i> (Salvadori) Mts. of New Guinea	1	
S	<i>Astrapia mayeri</i> Stonor Central New Guinea	5	
	<i>Astrapia stephaniae ducalis</i>	4	
	<i>Epimachus meyeri bloodi</i>	4	
	<i>Paradisaea apoda raggiana</i>	4	
	<i>Lophorina superba minor</i>	1	
	<i>Diphylloides magnificus</i>	4	
	<i>Cyanopica cyana</i>	2	
S	<i>Dendrocitta leucogastra</i> (Gould) S. India	4	
	<i>Pica p. pica</i>	1	
	<i>Garrulus glandarius rufitergum</i>	2	
	<i>Pyrrhocorax g. graculus</i>	6	
S	<i>Corvus torquatus</i> Lesson S.E. Asia	1	
	<i>Corvus c. corone</i>	1	

Reptiles

ORDER TESTUDINES

	<i>Emys orbicularis</i>	4	
	<i>Testudo graeca</i>	18	
	<i>Testudo hermanni</i>	2	
	<i>Testudo horsfieldi</i>	3	
	<i>Malacochersus tornieri</i>	3	
	<i>Geochelone pardalis</i>	1	
	<i>Geochelone (Aldabrachelys) gigantea</i>	1	
	<i>Geochelone elephantopus</i>	2	
	<i>Geochelone elephantopus nigrita</i>	2	
S	<i>Kachuga smithii</i> (Gray) India, Upp. Ganges	3	
	<i>Hardella thurjii</i>	1	
	<i>Pseudemys scripta scripta</i>	1	
	<i>Pseudemys scripta elegans</i>	16	
	<i>Pseudemys ornata callirostris</i>	2	
	<i>Clemmys caspica leprosa</i>	3	

ORDER CROCODILIA

	<i>Osteolaemus tetraspis</i>	1	
	<i>Alligator mississippiensis</i>	3	
	<i>Caiman crocodilus</i>	1	

ORDER SAURIA

	<i>Teratoscincus scincus</i>	4	
	<i>Hemitheconyx caudicinctus</i>	1	

		Total number acquired	Number born or hatched in the Menagerie
<i>Hemidactylus brooki</i>	Brook's Gecko	1	
<i>Eublepharis macularius</i>	Leopard Ground Gecko	4	
s <i>Anolis sagrei stejnegeri</i> Barbour, Florida	Key West Anole Lizard	3	
<i>Basiliscus basiliscus</i>	American Basilisk	4	
<i>Basiliscus vittatus</i>	Banded Basilisk	4	
<i>Iguana iguana</i>	Iguana	2	
s <i>Sceloporus cyanogenys</i> Cope, Texas and N.E. Mexico	Blue Spiny Lizard	2	
<i>Phrynosoma cornutum</i>	Texas Horned Lizard	1	
<i>Agama stellio</i>	Starred Agama	17	
<i>Uromastyx microlepis</i>	Small-scaled Dabb Lizard	1	
<i>Uromastyx hardwicki</i>	General Hardwicke's Dabb Lizard	10	
<i>Chamaeleo chamaeleon</i>	Common Chameleon	1	
<i>Chamaeleo dilepis</i>	Flap-necked Chameleon	1	
<i>Chamaeleo bitaeniatus hoehneli</i>	High-casqued Chameleon	1	
<i>Chamaeleo jacksoni</i>	Kikuyu Three-horned Chameleon	3	
<i>Microsnura pumilis</i>	Pygmy Chameleon	1	
<i>Tiliqua scincoides</i>	Common Blue-tongued Skink	1	
<i>Riopa fernandi</i>	Fernand's Red-and-black Skink	2	
<i>Eumeces fasciatus</i>	Five-lined Skink	1	
s <i>Eumeces inexpectatus</i> Taylor, N. America	Southern Five-lined Skink	1	
<i>Lacerta trilineata</i>	Giant Emerald Lizard	3	
<i>Lacerta viridis</i>	Green Lizard	26	
<i>Lacerta vivipara</i>	Common Lizard	3	
<i>Lacerta taurica</i>	Taurican Lizard	15	
<i>Lacerta peloponnesiaca</i>	Peloponnesian Lizard	4	
<i>Lacerta erhardii</i>	Aegean Lizard	35	
<i>Bipes biporus</i>	Ajolote or Two-handed Worm-lizard	1	
<i>Ophisaurus ventralis</i>	Eastern Glass Lizard	1	
<i>Anguis fragilis</i>	Slowworm	12	
<i>Ceratophrys ornata</i>	Painted Escuerzo	1	
ORDER SERPENTES			
<i>Python reticulatus</i>	Reticulated Python	1	
<i>Python regius</i>	Royal Python	2	
<i>Chondropython viridis</i>	Papuan Tree Python	6	
<i>Epicrates cenchris</i>	Rainbow Boa	1	
<i>Epicrates striatus</i>	Fischer's Tree Boa	1	
<i>Corallus enydris</i>	Cook's Tree Boa	5	
<i>Boa constrictor occidentalis</i>	Western Boa	1	
<i>Eryx conicus</i>	Russell's Sand Boa	1	
<i>Eryx jaculus</i>	Javelin Sand Boa	1	
<i>Eryx johnii</i>	John's Sand Boa	2	
<i>Storeria occipitomaculata</i>	Red-bellied Snake	2	
<i>Natrix natrix</i>	Grass Snake	29	
<i>Natrix tessellata</i>	Diced Water Snake	3	
<i>Natrix maura</i>	Viperine Snake	1	
<i>Natrix piscator</i>	Checkered Keelback Snake	1	
<i>Natrix rhombifera</i>	Diamond-backed Water Snake	3	

		Total number acquired	Number born or hatched in the Menagerie
	<i>Natrix taxispilota</i>	1	
SS	<i>Thamnophis sirtalis sirtalis</i> Linnaeus. Eastern N. America	14	
SS	<i>Thamnophis sirtalis annectans</i> Brown E. Central Texas	1	
SS	<i>Thamnophis sauritus sauritus</i> Linnaeus. Eastern N. America	1	
	<i>Elaphe quatuorlineata</i>	1	
	<i>Elaphe obsoleta quadrivittata</i>	2	
S	<i>Coluber constrictor priapus</i> Dunn & Wood. Florida and S.E. U.S.A.	1	
	<i>Masticophis flagellum flagellum</i>	1	
S	<i>Masticophis flagellum testaceus</i> Say. N.E. Mexico, S. Central U.S.A.	1	
	<i>Coluber gemonensis</i>	1	
	<i>Coluber hippocrepis</i>	1	
	<i>Spalerosophis diadema</i>	2	
	<i>Heterodon platyrhinos</i>	2	
	<i>Sonora episcopa</i>	5	
	<i>Lampropeltis getulus floridana</i>	1	
	<i>Lampropeltis zonata</i>	1	
	<i>Opheodrys vernalis</i>	1	
	<i>Dasypeltis scabra</i>	1	
	<i>Boiga dendrophila</i>	1	
	<i>Boiga blandingi</i>	1	
G	<i>Aparallactus capensis capensis</i> Smith. E. & S. Africa	1	
	<i>Psammophylax rhombeatus</i>	1	
	<i>Malpolon monspessulana</i>	3	
	<i>Thelotornis kirtlandi</i>	5	
	<i>Oxybelis acuminatus</i>	3	
	<i>Naja haje</i>	1	
	<i>Naja nivea</i>	1	
	<i>Hemachatus haemachatus</i>	2	
	<i>Dendroaspis viridis</i>	1	
	<i>Dendroaspis angusticeps</i>	2	
	<i>Vipera berus</i>	19	
	<i>Vipera ammodytes</i>	3	
	<i>Vipera lebetina</i>	2	
	<i>Bitis arietans</i>	1	
	<i>Bitis nasicornis</i>	4	
	<i>Atheris squamigera</i>	1	
	<i>Agkistrodon piscivorus</i>	1	
	<i>Crotalus miliarius</i>	7	
	<i>Crotalus atrox</i>	4	
	<i>Crotalus horridus</i>	4	
Amphibians			
	<i>Bombina bombina</i>	4	
	<i>Bufo americanus</i>	3	
	<i>Bufo melanostictus</i>	1	
	<i>Hyla arborea savignii</i>	5	

		Total number acquired	Number born or hatched in the Menagerie	
s	<i>Hyla maxima</i> Laurenti. Tropical America	Giant Tree Frog	3	
s	<i>Hyla punctata</i> Schneider. Tropical America	Spotted Tree Frog	5	
s	<i>Hyla geographica punctatissima</i> . Reinhardt and Luiken. Tropical America	Tree Frog	3	
	<i>Hyla gratiosa</i>	Barking Tree Frog	7	
	<i>Hyla albomarginata</i>	Spix's Hyla	1	
	<i>Rana cyanophlyctis</i>	Water Skipper	6	
	<i>Rana latastei</i>	Italian Frog	2	
	<i>Rana clamitans</i>	Spring Frog	3	
	<i>Rana limnocharis</i>	Rice-paddy Frog	2	
s	<i>Amphodes auratus</i> Girard. Trinidad	Trinidad Golden Frog	8	
s	<i>Nototheca fitzgeraldi</i> Parker. Tropical America	Fitzgerald's Marsupial Frog	2	
	<i>Salamandra salamandra</i>	European Fire Salamander	7	
	<i>Plethodon cinereus</i>	Red-backed Salamander	2	
	<i>Eurycea bislineata</i>	Two-lined Salamander	3	
	<i>Desmognathus fuscus</i>	Dusky Salamander	5	
	<i>Ambystoma jeffersonianum</i>	Jefferson Salamander	2	
	<i>Ambystoma maculatum</i>	Spotted Salamander	1	

WHIPSNADE Mammals
PARK

MARSUPIALIA

Protemnodon rufogrisea frutica
Macropus rufus
Macropus canguru melanops

Bennett's Wallaby 83 83 (7)
Red Kangaroo 1 1
Black-faced Kangaroo 1 1

PRIMATES

Galago crassicaudatus lasiotis

Macaca mulatta
Hylobates lar

Peter's Thick-tailed
Bushbaby 1
Rhesus Macaque 3 3 (2)
Lar Gibbon 4

RODENTIA

Cynomys ludovicianus
Hydrochoerus hydrochaeris

Prairie Marmot 32
Capybara 4

CARNIVORA

Canis lupus occidentalis
Ursus arctos
Thalarctos maritimus
Ailurus fulgens
Herpestes auropunctatus
Felis lynx
Panthera leo

Canadian Timber Wolf 9 9 (2)
Brown Bear 5 5
Polar Bear 2 2
Red Panda 2
Small Indian Mongoose 3 3
Northern Lynx 1
Lion 4

PINNEPEDIA

Zalophus californianus

Californian Sealion 1

PERISSODACTYLA

**Equus hemionus*
Equus onager

Kulan 1 1
Onager 3 3

*There is some doubt as to whether any Kulans at present in captivity are *E. h. hemionus*; it is thought more likely that they are Turkmenian Onagers, *E. h. onager*. Veselovsky, Z. (1965): 'Breeding and care of rare Asian equids at Prague Zoo', *Int. Zoo. Yearb.* 5: 36-37. Veselovsky, Z. (1965), pers. comm.

		Total number acquired	Number born or hatched in the Menagerie
<i>Equus zebra hartmannae</i>	Hartmann's Mountain Zebra	1	
<i>Equus burchelli</i>	Common Zebra	2	2
ARTIODACTYLA			
<i>Sus scrofa</i>	Wild Boar	3	
<i>Hippopotamus amphibius</i>	Hippopotamus	1	1 (1)
<i>Choeropsis liberiensis</i>	Pygmy Hippopotamus	1	
<i>Lama glama</i>	Llama	7	7 (1)
<i>Lama guanicoe</i>	Guanaco	4	4
<i>Camelus bactrianus</i>	Bactrian Camel	1	1
<i>Camelus dromedarius</i>	Arabian Camel	3	1
<i>Dama dama</i>	Fallow Deer	16	16 (4)
<i>Axis axis</i>	Spotted Deer	9	9
<i>Axis porcinus</i>	Hog Deer	6	6 (3)
<i>Cervus duvauceli</i>	Swamp Deer	1	1
<i>Cervus nippon taiouanus</i>	Formosan Deer	11	11
<i>Cervus elaphus</i>	Red Deer	19	19
<i>Cervus canadensis</i>	Wapiti	5	5 (1)
<i>Elaphurus davidianus</i>	Père David's Deer	8	5
<i>Odocoileus virginianus</i>	White-tailed Deer	4	4 (2)
<i>Alces alces</i>	Moose	2	2 (2)
<i>Antilocapra americana</i>	Pronghorn	2	2 (2)
<i>Taurotragus oryx pattersonianus</i>	East African Eland	1	1 (1)
<i>Boselaphus tragocamelus</i>	Nilgai	3	3 (1)
<i>Bos banteng</i>	Banteng	3	1 (1)
<i>Bos grunniens</i>	Yak	2	2
<i>Bison bison</i>	American Bison	4	4
<i>Connochaetes taurinus albojubatus</i>	White-bearded Gnu	4	3
<i>Aepyceros melampus</i>	Impala	1	1 (1)
<i>Gazella thomsoni</i>	Thomson's Gazelle	11	11 (2)
<i>Ovibos moschatus</i>	Musk Ox	3	
<i>Ovis musimon</i>	Mouflon	12	12 (1)
DOMESTIC			
	Ponies	5	5
	Donkey	1	1
	Ankole Oxen	6	6 (1)
	Four-horned Sheep	29	29 (9)
Birds			
RHEIFORMES			
<i>Rhea americana albescens</i>	Common Rhea	3	3
CICONIIFORMES			
<i>Guara rubra</i>	Scarlet Ibis	13	
<i>Phoenicopterus r. ruber</i>	Rosy Flamingo	16	
ANSERIFORMES			
<i>Cygnus atratus</i>	Black Swan	3	3
<i>Cygnus melanocoryphus</i>	Black-necked Swan	3	2 (1)
<i>Cygnus c. cygnus</i>	Whooper Swan	2	2
<i>Anser a. anser</i>	Grey Lag Goose	11	11 (1)
<i>Anser caerulescens atlanticus</i>	Greater Snow Goose	20	20 (1)
<i>Branta leucopsis</i>	Barnacle Goose	5	5
<i>Branta ruficollis</i>	Red-breasted Goose	9	9
<i>Chloephaga picta</i>	Upland Goose	11	11
<i>Alopochen aegyptiacus</i>	Egyptian Goose	3	3

		Total number acquired	Number born or hatched in the Menagerie
<i>Tadorna cana</i>	South African Shelduck	6	6
<i>Netta rufina</i>	Red-crested Pochard	1	
<i>Aix sponsa</i>	Carolina Duck	6	6
GALLIFORMES			
<i>Lophura n. nycthemera</i>	Chinese Silver Pheasant	3	1 (1)
<i>Lophura swinhoii</i>	Swinhoe's Pheasant	2	2 (1)
<i>Syrmaticus reevesi</i>	Reeves's Pheasant	5	5
<i>Pavo cristatus</i>	Common Peafowl	21	18
<i>Meleagris gallopavo silvestris</i>	North American Turkey	48	48
GRUIFORMES			
<i>Grus a. antigone</i>	Sarus Crane	2	
<i>Anthropoides virgo</i>	Demoiselle Crane	2	2
<i>Anthropoides paradisea</i>	Stanley Crane	2	
<i>Balearica p. pavonina</i>	Black-necked Crowned Crane	12	
<i>Balearica pavonina regulorum</i>	South African Crowned Crane	1	
<i>Psophia l. leucoptera</i>	White-winged Trumpeter	6	
CHARADRIIFORMES			
<i>Larus marinus</i>	Great Black-backed Gull	1	1 (1)
PSITTACIFORMES			
<i>Nymphicus hollandicus</i>	Cockatiel	6	3
<i>Amazona ochrocephala</i>	Yellow-fronted Parrot	1	
<i>Psittacula krameri manillensis</i>	Indian Ring-necked Parrakeet	4	
<i>Polytelis swainsoni</i>	Barraband's Parrakeet	1	1
PASSERIFORMES			
<i>Gracula r. religiosa</i>	Southern Hill Mynah	1	
DOMESTIC			
<i>Melopsittacus undulatus</i>	Budgerigar	2	
Reptiles			
SERPENTES			
<i>Python regius</i>	Royal Python	1	

Fishes New to the Collection

- Polypterus bichir* Geoffroy. Nile Bichir. N.E. Africa.
Hyphessobrycon herbertaxelrodi Gery. Black Neon. South America.
Rasbora vaterifloris Deraniyagala. Pearly Rasbora. Ceylon.
Clarias batrachus (L.) Ceylon and S.E. Asia.
Lates niloticus (L.) Nile Perch. Tropical Africa.
Datnioides quadrifasciatus (Sevastianov). S.E. Asia and New Guinea.
Trichogaster chuna Buchanan-Hamilton. Bengal and Hindustan.
Telmatherina ladigesi Ahl. Celebes Rainbowfish. Celebes.

List of donors of animals to the Society

REGENT'S PARK

- Abrahams, R., 2 Californian Quail
 Albany Street Police Station, 1 Diced Water Snake
 Antwerp Zoo, 2 Red-thighed Falconets
 Ashken, Mrs D., 1 Blue-tailed Humming Bird,
 1 Violet-eared Humming Bird, 1 Blue-and-
 White Flycatcher, 1 Baltimore Oriole, 1 Purple-
 headed Glossy Starling, 1 Superb Glossy
 Starling.
 Astles, F. C., 1 Tree Sparrow, 2 Bullfinches
 Aubrey, E., 1 Chimpanzee
 Baker, Mr, 1 Adder
 Baldock, H. R., 2 Striped Chanchito
 Balkwill, Mrs, 2 Japanese Quail
 Bambridge, J., 1 Ornate Terrapin
 Bartle, M. E., 1 Greek Tortoise
 Bartrop, J., 1 Red-vented Bulbul, 1 Yellow
 Tanager
 Beard, A. J., 1 Crab-eating Raccoon
 Beatson, Miss S. H., 1 Click Beetle
 Bedford College, 2 Hybrid (Roach-Bream), 100
 Axolotls
 Beldham, R., 1 Longhorn Grasshopper, 1 Rhino
 Beetle
 Bethan, J., 1 Hunting Spider
 Bettinelli, Mrs V., 1 Striped Skunk
 Bird, David, Various Beetles, Beetle larvae,
 Caddis larvae
 Bird, Miss S., 1 Serrated Terrapin
 Blaxill, Dr B., 1 Heron
 Bloemfontein Zoo, 5 Cape Hedgehogs
 Bloom, R., 2 Masked Lovebirds
 Bowden, Dr J., 2 Yellow Tanagers, 1 Spotted
 Emerald Tanager, 2 Mrs Wilson's Tanagers,
 1 Masked Crimson Tanager, 1 Black Tanager
 Boyd, B., 1 Bird-eating Spider
 Brading, H., 1 Jackdaw
 Brinks, I., 1 Pekin Robin
 British Banana Co. Ltd, 1 Spider, 1 Tortoise
 Beetle, 1 Spix's Hyla, 1 Harlequin Snake
 British Railways, 1 Diced Water Snake
 Brock, E., 1 Diamond Dove
 Brookmarsh, Mrs, 1 White-winged Parrakeet
 Budapest Aquarium, 5 *Acipenser ruthenus*, 6
Hypophthalmichthys molitrix, 6 *Lucioperca lucio-
 perca*
 Burke, P., 1 Tawny Eagle
 Butt, P. S., 1 Stag Beetle
 Calgary Zoo, 2 American Black Bears
 Carlisle, Dr, 4 Fire-bellied Toads
 Cater, J., 12 Swan Mussels
 Chaplin, The Rt Hon. the Viscount, F.L.S., 2
 Vampire Bats, 1 White-winged Vampire, 1
 Villaviscensio's Sabre-wing, 1 Black-headed
 Sibia, 1 *Peripatus trinidadensis*, 1 Cooke's Tree
 Boa, 1 Fischer's Tree Boa, 1 Pike-headed
 Snake, 8 Trinidad Golden Frogs, 2 Fitz-
 gerald's Marsupial Frogs, 3 Giant Tree Frogs,
 5 Spotted Tree Frogs, 3 Tree Frogs
 Chapman, B. K., 1 Reticulated Python
 Christoargy & Co. Ltd, 14 Canadian Lobsters,
 2 Common Lobsters
 Clarke, R., 2 Daudin's Vipers, 3 Long-nosed
 Vipers, 3 Montpellier Snakes, 12 Adders, 8
 Slowworms, 35 Aegean Lizards, 12 Taurican
 Lizards, 4 Peloponnesian Lizards, 3 Major
 Green Lizards, 17 Starred Agama, 1 Javelin
 Sand-boa, 2 Spiders
 Clarkson, Cpl, 10 Hermit Crabs, 6 Land Crabs,
 3 Land Snails
 Claypole, R., 7 Voracious Water Beetles, 1 Great
 Green Grasshopper
 Cloet, Miss S., 1 American Flying Squirrel
 Coles, Mrs M. D., 2 Red-eared Terrapins
 Collenette, Mr and Mrs P., 3 Bornean Small-
 toothed Palm Civets
 Coombes, R. G., 1 Egyptian Locust
 Cowlard, D., 1 Chimpanzee
 Curtis, Miss C., 2 Red-eared Terrapins
 Davy, A. F., 1 Albino Catfish
 de Q. Quincey, Capt. R., 1 Crested Malimbe
 de Rosso, Miss D., 2 Red-headed Buntings, 1
 Gouldian Finch, 2 Lavender Finches, 1 Pin-
 tailed Nonpareil, 2 Java Sparrows, 2 Golden-
 breasted Waxbills
 des Moulins, Master A., 1,000 Stick Insect Eggs
 Duane, Mr, 1 Yellow Bunting
 Durrant, R., 1 European Hedgehog
 Durrell, G., 1 Trigger Fish
 Dykes, C., 1 Hoehneli's Two-banded Chameleon,
 1 Flap-necked Chameleon

- Eales, J., 1 Carrion Crow
 Edge, Miss E., 1 Bruce's Green Pigeon
 Elliott, D., 1 Horseshoe Snake
 Ellis, Mrs, 2 Red-eared Terrapins
 Eustace, Mrs, 1 Longhorned Grasshopper
 Far, R., 1 Crayfish
 Faulkner, S., 1 Greek Tortoise
 Ferreira, Dr H. T., 2 Blue-bellied Tanagers, 2
 Superb Tanagers, 2 Yellow Tanagers, 2 Ornate
 Tanagers, 2 Blue-and-yellow Tanagers, 2
 Scarlet Tanagers, 2 Maroon Tanagers
 Firminger, G., 1 Common Tench
 Fitzgibbons, M., 23 Scorpions
 Flynn, D., 6 Dragonfly larvae, 3 Diving Beetles
 Foster, J. M., 1 Common Chameleon
 Frakes, Miss J., 1 Red-eared Terrapin
 Fry, E., 4 Painted Quail
 Fulham Police Station, 1 Grass Snake
 Garrett, P. J., 1 Ferret
 Gentry, W. R., 1 Greek Tortoise
 Ghiggini, A., 1 Purple-crowned Fruit Pigeon
 Gorham, S. W., 3 Spring Frogs, 1 American Toad,
 2 Jefferson's Salamanders, 1 American Spotted
 Salamander, 2 Red-backed Salamanders,
 3 Northern Two-lined Salamanders, 5 Dusky
 Northern Salamanders, 2 Red-bellied Snakes,
 1 Eastern Smooth Green Snake, 1 Eastern
 Garter Snake, 12 newly born Garter Snakes
 Graham, Miss J., 1 Cooke's Tree Boa, 1 Northern
 Blue-tongued Skink
 Green, Martin M., 2 Red-eared Terrapins
 Griffin, Capt. P. R., 1 Fat Dormouse
 Halls, Mrs I., 1 Golden-fronted Fruitsucker
 Hallstrom, Sir Edward, 6 Green Tree Pythons,
 1 Lady McGregor's Bird of Paradise, 5 Ribbon-
 tailed Birds of Paradise, 4 Sickle-billed Birds of
 Paradise, 4 Princess Stephanie's Birds of
 Paradise, 4 Raggi's Birds of Paradise, 1 Lesser
 Superb Bird of Paradise, 4 Magnificent Birds
 of Paradise, 1 Bruijn's Echidna
 Halstead, J. E., 1 Adder
 Harold, J. P., Caddis larvae
 Harris, M., 1 Mourning Dove, 2 Ring-necked
 Doves, 1 Vinaceous Dove, 1 African Palm Dove,
 1 Cape Dove, 2 Red-billed Buffalo Weavers,
 1 Black-billed Sparrow Weaver, 1 Ashy
 Starling
 Hatton & Cookson, 1 Leaf Viper
 Herod, W. F., 7 Tench, 5 Mirror Carp, 2 Golden
 Carp
 Hewitson, D., 1 Fox
 Hodge, Mrs, 1 Magpie
 Homan, K., 1 Dark-green Snake, 1 Grass Snake
 Horn, Mr and Mrs, 1 Cockatiel
 Horniman Museum, 1 Mississippi Alligator
 Howard, R., 1 Fennec Fox
 Howlett, L., 1 European Pond Tortoise
 Hudson, Miss A., Chrysalid of Tortoiseshell
 Butterfly
 Hufnagel, Dr E. J., 1 Tenebrionid Beetle
 Hussey, Mrs I., 7 European Spotted Salamanders
 Huxley, Dr, 1 Crowned Crane
 Ikin, D., 2 Scarlet-chested Parrakeets (blue mut.)
 Ionides, C. J. P., 2 Common Green Mambas
 Iredale, R. M., 10 Common Goldfish
 Jefferys, Mr, 2 Sail-finned Fish
 Job, D., 2 Ferrets
 Johnson, C. R., 1 African Fat-tailed Gecko
 Johnson, J. B., 1 Spider
 Jones, A. M., 1 Bushy-tailed Dormouse
 Jones, M., 5 Golden Pheasants
 Joshi, P. N., 2 Jackson's Chameleons, 2 Fernand's
 Skinks, 1 Hallowell's Mamba, 1 Blanding's
 Tree Snake, 1 Egg-eating Snake, 1 Broad-
 fronted Crocodile, 1 Chameleon, 1 Blue-spotted
 Wood Dove, 2 Dusky Bulbuls, 10 Angwantibos,
 3 Demidoff's Bushbabies, 1 Blotched Genet
 Keightley, Mrs, 1 Red-eared Terrapin
 Kent, Miss M., 2 Red-eared Terrapins, 1 Ornate
 Terrapin, 1 Spanish Terrapin
 King, Mrs, 1 Red-headed Bunting
 King's College, 2 Plumose Anemones
 Knight, Miss J., 2 Red-eared Terrapins
 Latter, G. A., 1 Cardinal Spider
 Lee, D., 1 Bird-eating Spider
 Leonard, B. W., 5 Savigny's Hylas, 2 Lataste's
 Frogs
 Locker Lampson, Miss B., 1 Pond Heron
 Love, Mrs, 1 Pygmy Chameleon
 Marques, A. V., 1 Brazilian Chatterer
 Marsack, Wg Cdr A. H., 2 General Hardwicke's
 Dabb Lizards, 2 Green Lizards
 Messenger, J. L., 1 Hunting Spider
 Midgley, Mrs N., 2 Mandarin Ducks
 Miller, Jon, 30 Land Hermit Crabs
 Millis, Mrs V., 2 Greek Tortoises
 Milne, Miss, 1 Sclater's Spot-nosed Monkey
 Mole, Mrs, 1 Scarlet-breasted Sunbird
 Moon's Motors, 1 Grass Snake
 Moore, Miss J., 2 Java Sparrows
 Moran, D., 1 Vervet Monkey
 Morgan-Davies, A. M., 3 Soft-shelled Land
 Tortoises
 Munday, S., 5 Plumose Anemones, 1 Beadlet
 Anemone
 Mutchers, Maurice, 1 Tortoise Beetle
 Neill, S. R. St J., 1 John's Sand Boa, Latreille
 Spiders
 Newcombe, P., 2 Cockatiels
 Newfield, Mrs E., 1 Chimpanzee
 Newmark, G. H. and J. R., 1 Ringed Warbling
 Finch, 39 Lubber Locusts, 5 *Latrodectus mac-*
tans, 1 Lycosid Spider, 1 Sparassid Spider,
 4 Argiopid Spiders, 4 Rhino Beetles, 1 Chafer
 Beetle, 1 Mantis, 1 Katydid Grasshopper, 3
 Carabid Beetles, 2 *Anisomorpha buprestoides*,
 2 Stick Insects, 5 Millipedes, 7 Pygmy Rattle-
 snakes, 2 Eastern Hog-nosed Snakes, 1 Brown
 Water Snake, 3 Diamond-backed Water Snakes,
 1 Southern Black Racer, 1 Eastern Coach-
 whip Snake, 1 Florida King Snake, 1
 Eastern Ribbon Snake, 1 Eastern Garter

- Snake, 2 Yellow Rat Snakes, 3 Key West Anolis Lizards, 1 Five-lined Skink, 1 South Eastern Five-lined Skink, 1 Coal Skink, 2 Common American Toads, 1 Eastern Glass Snake
- Nicholls, J. R., 1 Spectacled Cayman
 Nicholls, Mrs V., 1 Greek Tortoise
 Noel, Capt., 1 Horsfield's Tortoise
 Norminton, H. C., 1 Spot-billed Toucanet
 O'Brian, D., 2 Greek Tortoises
 O'Flynn, Mr, 1 Leopard Moth
 Ogilvie, P. W., 1 Red Rattlesnake, 5 Smooth Earth Snakes, 1 Texas Garter Snake, 1 Western Coachwhip Snake, 2 Scorpions
 O'Grady, J. M., 1 Cockroach
 Pargeter, Mrs, 2 Greek Tortoises
 Patterson, Mrs M., 3 Kinkajous
 Pawley, B. J., 1 White-crested Jay Thrush
 Payne, F. W. H., 6 Axolotls
 Peat, R., 1 Four-lined Snake, 1 Western Boa, 1 Blue-tongued Skink (Northern)
 Peet, W. J., 1 Blue and Yellow Macaw
 Pimm, J. H., 1 Puss Moth
 Pinewood Film Studios, 10 Goldfish, 2 Green Tench, Common Eels, Crawfish
 Pope, F., 1 Brooks' Gecko, 1 Common Asiatic Toad, 2 Common Malayan Frogs
 Price, Mrs, 1 Long-horned Grasshopper
 Pritchard, P., 1 Leopard Tortoise
 Ralley, T. R. W., 1 Cockroach
 Rea, Mr and Mrs, 1 Jentink's Monkey
 Redmire, F. L., 2 Tinfoil Barbel
 Redwood, Miss J. C., 1 Long-horned Grasshopper
 Restall, R., 1 Quail Finch
 Richardson, Miss A., 1 Greek Tortoise, 2 Hermann's Tortoises, 2 European Pond Tortoises
 Roberts, D., 1 Shikra
 R.S.P.C.A. Headquarters, 1 Jackson's Chameleon
 R.S.P.C.A., Animal Rescue League, 1 European Pond Tortoise
 Runnymede Film Services, 5 Porcupine Fish, 2 Puffer Fish, 3 Lesser Scorpion Fish
 Ryan, Mrs J., 1 Stag Beetle
 Sankey, J., 1 Puff Adder
 Schlesinger, S., 1 Ferret
 Scott, Miss, 1 White-crowned Mangabey
 Sear, A. B., 1 Little Owl
 Searle, Dr K. C., 3 Pig-tailed Macaques, 1 Black and Grey Gibbon, 4 Pallas's Formosan Squirrels, 6 Finlayson's Siamese Squirrels, 1 Large Bamboo Rat, 2 Raccoon Dogs, 2 Malay Sun Bears, 1 Yellow-throated Marten, 1 Chinese Ferret Badger, 1 Indian Otter, 3 Rufous-faced Mongooses, 4 Crab-eating Mongooses, 1 Indian Leopard Cat, 2 Falcated Teal, 1 Black-crested Baza, 1 Reef Heron, 2 Bare-footed Scops Owls, 2 Swinhoe's Owlets, 1 Mongolian Lark, 1 Yellow-crowned Bulbul, 2 Kansu Babblers, 2 Collared Jay Thrushes, 6 Fohkien Grey-headed Crow Tits, 2 Red-tailed Thrushes, 2 Grey-backed Thrushes, 1 Flower-pecker, 1 Brown-throated Sunbird, 1 White-eye, 2 Chinese Masked Hawfinches, 1 Collared Crow
 Seignol, Miss F., 1 Small-scaled Dabb Lizard
 Serbell, J., 1 Viperine Snake
 Shingler, R., 4 Bird-eating Spiders, 1 Centipede, 4 Hermit Crabs, 1 Cooke's Tree Boa, 1 Rainbow Boa, 1 Pike-head Snake
 Ship's Co. of S.S. *City of Leeds*, 1 Kestrel
 Sibly, J., 3 Crab-eating Raccoons
 Simmonds, D. T., 1 Spider, 1 Tortoise Beetle
 Simon, N., 1 Grass Snake
 Spence, T., M.R.C.V.S., 3 Eider Ducks, 1 Grey Kestrel, 1 White-headed Starling
 Spurling, Miss C., Stick Insect Eggs
 Steinhart Aquarium, 1 Mountain King Snake, 1 Two-handed Worm-lizard
 Steven, G., 1 Saker Falcon
 Stevens, Mrs D., 1 Serrated Terrapin, 2 Red-eared Terrapins
 Stevenson, Miss, 1 Zebra Finch
 Strange, R., 2 American Basilisks
 Strelly, S., 2 Tinsel Barbel
 Tarbet Miss M. L., 2 Greek Tortoises
 Thompson, Master R., 1 Viviparous Lizard
 Thorne, Mrs J., 1 Greek Tortoise
 Troughton, D., 1 Black-and-gold Tree Snake
 Tyssen-Gee, Master P., 3 Common Starfish
 University of West Indies, 4 Lycosid spiders
 University College Expedition to West Africa, 1 Edward's Potto, 2 Allen's Bushbabies, 1 Needle-clawed Bushbaby
 Viner, Mrs B., 1 Greek Tortoise
 Wakefield, Lady, 1 Sulphur and White-breasted Toucan
 Warner, H. R., Miss, Stick Insects
 Warner, N. K., 1 Sucking Catfish
 Watts, Mrs, 1 Black Spider Monkey
 Watts, Miss S., 2 Ocelots
 Wayte, Mrs, 3 Fischer's Lovebirds
 Webb, R. W., 1 Mantis
 Webber, Mr, 1 Barbel
 Weston, Miss E., 1 Spanish Terrapin
 Whalley, T. R., 2 Bird-eating Spiders
 Wheeler, W., 3 Burbot
 Whimster, Dr I. W., 1 Bird-eating Spider, 4 Beetles, 1 Scarab beetle, 3 Scorpions
 Whitaker Carr, Mrs V., 1 British Jay
 White, Miss P. Y., 3 Greek Tortoises
 Whitehouse, J. W., 1 Dorcas Gazelle
 Wimpster, Dr, 5 Kirtland's Tree Snakes
 Winterbottom, J. C. and G. P., 2 Royal Pythons
 Wood, Mrs W. M., 1 Spanish Terrapin
 Worby, Mrs E. A., 1 Red-tailed Labeo
 Yealland, J. J., 3 Ampullaria snails, 1 Mussel, 1 Ground Cricket, 1 Oil Beetle

WHIPSNADE PARK

Bruun, Mrs O. H., 1 Southern Hill Mynah
Buchanan, W., 2 Common Peafowl (white variety)
Delmont, M., 2 Budgerigars
Golding, Mrs L. F., 1 Yellow-fronted Parrot
Hancox, W., 1 Common Peafowl
Kenya National Parks, Trustees of, 4 Lions

Miller, J. L., 1 Ring-necked Parrakeet
Murchie, Mrs P., 1 Ring-necked Parrakeet
de Rosso, Miss D., 2 Ring-necked Parrakeets, 3
Cockatiels
Phillimore, Mrs M., 2 Chinese Silver Pheasants
Vital, F. G., 1 Peter's Thick-tailed Bushbaby

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Bulletin of the British Museum (Natural History) Entomology, Vol. 14, no. 8; Vol. 15, no. 10; Vol. 16, nos. 1-3; Vol. 17, no. 1. Supplements 1-3; Geology, Vol. 10, nos. 3-7; Vol. 11, no. 1; Zoology, Vol. 11, no. 9; Vol. 12, nos. 2-9; Vol. 13, nos. 1-6
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World list of scientific periodicals, published in the years
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Burder Stratton. Volume 3: Q-Z and Periodic inter-
national congresses. 1965

Meetings during 1966

Scientific Meetings at 5 p.m.

Tuesday, 8th February

Tuesday, 8th March

Tuesday, 12th April

Tuesday, 10th May

Tuesday, 14th June

Tuesday, 11th October

Tuesday, 8th November

Tuesday, 13th December

Symposia

Wednesday and Thursday, 23rd–24th March, 'The biology of deep sea animals'.

The symposium announced for 16th–17th June has had to be cancelled and its place is taken by one to be held:

Wednesday and Thursday, 25th–26th May, 'The modern approach to Echinoderms'.

A symposium on 'Nutrition in wild animals' will be held in November on dates to be arranged.