

**THE ZOOLOGICAL SOCIETY
OF LONDON**



**REPORT OF THE COUNCIL AND
AUDITORS FOR 1958**

Prepared for the Annual General Meeting, at 4 p.m.
on Wednesday 29 April 1959

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 for the introduction of new and curious subjects of the Animal Kingdom, and was incorporated by Royal Charter in 1829. A supplementary Charter, extending and modifying the original Charter to meet modern needs, was granted in 1948.

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 down land at Whipsnade and has developed them into a Zoological Park where there is a minimum of housing and a maximum of open spaces for the animals. Part of the Park is used as a farm which produces much of the fodder for the animals both at Whipsnade and Regent's Park.

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. The Society owns one of the finest zoological libraries in the world containing approximately 95,000 volumes including many complete sets of scientific journals.

The Society publishes two journals, *Proceedings* and *Transactions*. The *Proceedings*, published eight times a year, in octavo, form the main organ of the Society for the publication of the papers read at the Scientific Meetings and also notices of all business transacted at these meetings. The papers cover all fields of zoology and are fully illustrated with plates and text figures. The *Transactions* are published at irregular intervals, and contain such of the communications made to the Scientific Meetings as are better adapted for publication in quarto form by reason of the illustrations required.

The *Zoological Record*, a comprehensive bibliography of zoological literature with subject and systematic indices, is published annually by the Society; it is available either as a complete bound volume or separately in 19 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 5 volumes.

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HER MAJESTY THE QUEEN

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1958-59

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THE ZOOLOGICAL SOCIETY OF LONDON

REPORT OF THE COUNCIL FOR 1958

The Council has pleasure in presenting its one hundred and thirtieth Annual Report to the Annual General Meeting of the Society, to be held on Wednesday, 29th April, 1959, at 4 p.m., in the Society's offices in Regent's Park.

GENERAL

In spite of very poor weather over the period of Easter, and of a 'bus strike which lasted six weeks during the early summer, gate receipts at Regent's Park in 1958 were only £952 less than in 1957. This decline was more than counterbalanced by attendances at Whipsnade, which were well above average. Birth and mortality rates in the Society's collections continue to set new standards of excellence. Our Scientific Meetings and publications flourish. As well as the educational programme for schoolchildren which was instituted in 1957, the Council has now launched a Young Zoologists Club. We have set up additional advisory committees of Fellows during the course of the year. Plans for the rebuilding and re-landscaping of Regent's Park Gardens, work on which was started by Sir Hugh Casson in association with Mr. F. A. Stengelhofen in 1956, are almost completed. With the building operations now proceeding, the first phase of the new plan is well under way.

This record of progress in 1958 formed a background to a campaign of dissension in the Society which was kept alive by the same small group of Fellows whose reaction to the opening of the Regent's Park Gardens to the public on Sunday mornings in November, 1957, attracted so much notice in the national press at the time. This dissension, led by Mr R. J. Knowles, a Fellow who described himself as Chairman of an unofficial F.Z.S. Committee, has held up the Council's endeavour to adjust the structure of the Society in conformity with present day realities.

PROPOSED AMENDMENTS TO THE BYE-LAWS

In January 1958 Council proposed amendments to the Bye-laws and, in accordance with the prescribed procedure, a vote on these

amendments was taken at the Ordinary General Meeting of 16th April 1958. There then voted, in person or by proxy, 1,788 Fellows in favour of the amendments and 1,227 against.

Council had been advised that a simple majority satisfied the provisions of Section 3 of Chapter 13 of the 1948 Bye-laws. This had been the intention when the Bye-law was introduced in 1948. Mr Knowles, who had been elected to the Society in September 1955, challenged this construction and took the question to the Courts. At the time at which this Report goes to press, the validity of this vote is still *sub judice*.

ATTENDANCES AT REGENT'S PARK GARDENS ON SUNDAY MORNINGS

During the course of 1958, 57,796 members of the public entered the Gardens on Sunday mornings by paying at the turnstiles, as compared with 14,645 Fellows and their guests. Receipts for Sunday mornings totalled £12,343.

Sunday afternoons continue to be very popular. The total number of paying visitors after 1 p.m. amounted to 311,491, the gross revenue being £40,324.

During 1958, when the Gardens were first open to the public on Sundays throughout the year, Sundays accounted for 22¼ per cent. of all visitors who paid at the turnstiles. The corresponding figure for 1957 was 19 per cent. Between 1948 and 1956 the figure fluctuated between 15 and 18 per cent.

ATTENDANCES AT REGENT'S PARK GARDENS OVER THE YEAR

Over the period of Easter, when London was visited by snowstorms, and during the six-week 'bus strike which followed, attendances at Regent's Park were 21 per cent. below the average for the previous five years, and 17 per cent. below those for 1957. Attendances started picking up in July and rose very sharply early in September, when the Society acquired a giant panda on hire with a view to subsequent purchase. The animal proved a major attraction, so that in spite of a very poor start, final attendances in Regent's Park as a whole were only 8 per cent. below the average for the previous five years, and 4 per cent. below the figure for 1957.

As observed in previous Reports, it is difficult, if not impossible, to devise any standard by which to assess the significance of the fluctuations which occur from year to year in the numbers of visitors who pass through the turnstiles. Comparisons with other Gardens are often of little value, because conditions, whether we are dealing with weather or alternative attractions, are never the same. In the present year, the 'bus strike affected Regent's Park but not Whipnade or any other Zoological Gardens in the country. At five of seven of the major

Zoological Gardens in the British Isles for which we have information, attendances in 1958 were higher than in 1957. At the other two (one of them being Regent's Park) they were lower. Figures for thirteen famous Continental gardens show a different trend. When one adds together all the attendances, 1958 turns out to have been worse than 1957. In six of the seven cases in which attendances were markedly lower in 1958 than in 1957, the drop was far greater than at Regent's Park. Kew Gardens provides as useful a comparison with Regent's Park as any, since it too was affected by the break-down in public transport. Here, attendances for 1958 were 11 per cent. lower than in 1957, as compared with a drop of 4 per cent. at Regent's Park.

Visitors to the Aquarium numbered 371,367 in 1958, as compared with 377,361 in 1957. The corresponding figures for the Children's Zoo were 194,530 and 247,015. The decline in visits to the Aquarium was thus proportionately less, and to the Children's Zoo greater, than the decline in numbers at the gates. As a result of the decreasing attraction of the Children's Zoo, plans have now been completed for its reconstruction and reorganization, and these will be put into effect in the early part of 1959.

STANDARDS OF ANIMAL HUSBANDRY

The results of a preliminary analysis of the Society's vital statistics were presented in last year's Annual Report. This analysis has been repeated in considerable detail, and the results submitted for publication in the Society's Proceedings. The new analysis, by Dr E. H. Ashton, B.Sc., Ph.D., and Dr H. G. Vevers, M.B.E., M.A., D.Phil., corroborates and extends the conclusions stated last year. Birth and mortality rates in the Society's collections are now better than ever, the index of mortality continuing to fall at the same time as that for births rises. There can be no clearer or more satisfactory indication of the value of the new clinical and pathological services which were introduced three years ago, and for which planning began five years back. The work of the Society's veterinary officer and pathologist is referred to on pages 20 and 21 in greater detail.

Last year's Report included a reference to allegations made to the press by Fellows who were concerned in the attack on the Council and Society, that the standard of the Regent's Park Gardens and of the Society's animal husbandry was continuously falling. These allegations culminated in the charge by Mr George Cansdale, a former employee of the Society, that the Society's prestige had fallen so low in the eyes of the Directors of Continental zoological gardens that they were associating themselves with our domestic critics in the disparagement of the Society and its staff.

After a denial by a number of Directors of Continental zoological gardens that they had ever made any statements derogatory to the Society, the matter was referred officially to the Annual Meeting of the International Union of Directors of Zoological Gardens, which

was held in Frankfurt in August of 1958. At this meeting the following Resolution was unanimously passed:

“The International Union of Directors of Zoological Gardens has considered certain defamatory statements made by Mr George Cansdale about the Zoological Society of London, and about its officials, with which he has associated certain Directors who are members of this International Union. The International Union regards Mr Cansdale’s observations as reprehensible and irresponsible. In dissociating themselves completely from them, they also wish to express their full confidence in the management of the Zoological Gardens at Regent’s Park and Whipsnade.”

Frankfurt. 30th August 1958.

(Signed) W. Van den bergh (President).

Council is gratified by this testimonial, not only to its own work but also to that of the Society’s officials, from the only international body which represents those who are professionally concerned with the running of Zoological Gardens. It also hopes that this public refutation will decisively reassure those Fellows whose anxiety may have been aroused by vague and unjust imputations as well as by ill-informed criticism about the state of the Regent’s Park Gardens and its standards of animal husbandry. Constructive observation or questions on such matters, whether from Fellows or the general public, are of course always welcomed, not only by the Council but also by the Council’s advisory Committees and by the Society’s officials.

PENSION SCHEME

For years the Council has paid pensions to retired employees out of current revenue. During the post-war period, when gate receipts were high, and, because of licensing restrictions, expenditure on buildings and maintenance low, a start was made in accumulating a capital pension fund. About four years ago it became clear that it was completely beyond the Society’s resources to raise this fund to an adequate level; and at the same time an actuarial analysis revealed that the burden of pensions which was implicitly assumed by the Society’s service arrangements was well beyond what could be carried on revenue account. For these reasons, the Council decided to revise completely the Society’s pension scheme, and to put it on a secure basis. This revision was carried out under professional guidance, and after it had been modified in consultation with representatives of the staff, the new approved Pension Fund was set up under Trust Deed and was accepted by all members of the staff eligible to enter it. Those not eligible by age or service to enter the new fund will receive pensions under the previous scheme, if qualified.

COMMITTEES

While the Charter lays upon the Council the responsibility for managing the Society's affairs, Council has always been assisted in its work not only by committees of its own members but also by a series of expert committees on which Fellows not on Council have served. Over the years the most important of these have been the Scientific Committee, the Prosectorial Committee, and the Zoological Record Committee. As the Society's educational activities have increased, and as its plans for rebuilding have developed, Council decided to establish two additional committees, and at the same time to reconstitute the previous Gardens and Whipsnade Committee. A list of the committees on which Fellows not on Council serve is given at Appendix I. The Prosectorial Committee has been invited by the Council to consider ways in which it can extend its work to cover the general field of research.

The Council wishes to express its thanks to the members of all its Committees for the great help they have provided over the past year.

RESOLUTION CONGRATULATING COUNCIL ON THE ESTABLISHMENT OF ADDITIONAL ADVISORY COMMITTEES

At the Ordinary General Meeting on the 16th July, Mr E. P. F. Field gave notice of the following Resolution:

"This Meeting expresses its approval of the Council's proposal to establish Committees to assist them in their consideration of matters of Gardens and Park development, policy with regard to animal collections and welfare, and educational matters."

This was discussed at the Ordinary General Meeting on the 15th October and passed *nem. con.*

RESOLUTION TO SET UP A SPECIAL COMMITTEE

At the Ordinary General Meeting of 16th April, Mr Knowles gave notice of the following Motion, to be considered at the Ordinary General Meeting to be held on the 16th July, 1958,

"that the Council be requested to establish a special Committee consisting of an equal number of Members of Council and Fellows to consider the Charter, Bye-laws and Regulations of the Society and to make recommendations for any changes which they consider desirable or necessary. The Fellows' representatives to be elected at an Ordinary General Meeting of the Society, in a manner to be determined by the President of the Society in consultation with the Chairman of the existing unofficial F.Z.S. Committee."

This Motion was duly debated, but lost by a vote of 75 to 38. Before the meeting Mr Knowles had issued a printed appeal to Fellows, calling on them to attend the meeting and vote in his favour.

POLICY ON THE ACQUISITION OF RARE ANIMALS

The Collections Policy Committee has produced schedules of animals which are rare or geographically limited, or which it is especially desirable to have in the Society's collections.

Following on an earlier study made under the directions of Council, the Committee has also closely examined the problems involved in the acquisition of rare animals. Its recommendations have since been endorsed by the Council in the statement of policy reproduced at Appendix XII.

EDUCATION

A programme of lecture-demonstrations arranged for schoolchildren in the Gardens at Regent's Park began in January, 1958. The first term was necessarily experimental both in subject-matter and organization, but nevertheless proved very popular. The lectures were designed for schoolchildren of three different levels of academic ability; those in the sixth forms of grammar schools, those about to take the Ordinary Level of the General Certificate of Education, and those who do not intend to take an external examination in a biological science. For the advanced students subjects such as "Geographical Distribution of Animals" and "Reptiles" were presented, and, at the more elementary levels, "Animal Locomotion" and "Camouflage" proved very popular.

In the ten-week term from January to March over 10,000 children from 159 schools attended. This was only a proportion of those who wished to attend, and when the courses started again in October, 1958, the number of lectures was increased from two to three a day. This enabled the number of children attending each lecture to be reduced.

After each lecture there is a guided tour around those houses exhibiting animals which illustrate the lecture topic, and this part of the scheme is considered to be most important.

The educational authorities of the Greater London area continue to give enthusiastic support to the scheme, and the Technical Committees, on which representatives of the schools co-operate with our own staff, keep the courses under close review.

The scheme is definitely filling a gap in the teaching of zoology. Schools have attended from all over the Greater London area and from as far away as Wolverhampton, Colchester and Maidstone. The response of the accompanying teachers has been most encouraging, and there are a number of schools which now include the lectures as a normal part of their teaching timetable.

Steps are now being taken to facilitate the use of the Society's resources by University students of Zoology.

The Council again wishes to express its gratitude to the Nuffield Foundation for its generous help in launching the scheme.

YOUNG ZOOLOGISTS CLUB

As a further extension of its educational programme, the Council decided to form a Junior Section, to be known as The Young Zoologists Club, and to be launched early in 1959. The need to interest children and young people in the work of the Society has long been recognised, but the decision to start a club specifically for junior members was not practically possible until the Education Scheme had been established, as interest in the one was necessary in order to build up interest in the other. It was decided to start in a modest way and to allow the growth of the Club to stem from real interest in Natural History. A programme of competitions, news magazines and meetings, which it is hoped will be of value to young people, has been devised.

THE REBUILDING AND RE-LANDSCAPING OF THE REGENT'S PARK GARDENS

After a reappraisal of the financial and other difficulties which were holding up Mr Stengelhofen's 1951 plans for rebuilding the Regent's Park Gardens, and after preliminary talks with some of the public authorities concerned, the Council in 1956 commissioned Sir Hugh Casson, through the Royal College of Art, to prepare, in co-operation with Mr Stengelhofen, a new overall plan which, while controlling developments, would be elastic in its operation in relation to the resources which the Society could command. At the same time the plan had to take into account the desirability and need to lay out the Gardens in a way which conformed with the landscaping of the rest of Regent's Park. By the end of the year the plan had reached its final stages of discussion with the public authorities concerned.

In the meantime, the first phase of the actual plan, the rebuilding of the area behind the Mappin Terraces, is well under way. As soon as it is completed it will be possible to move the Works Department from its present site in the Middle Gardens, and to clear the area there to accommodate a large section of animals now in the Main Gardens. When that is done, a site will become available for an elephant house.

The large building now going up behind the Mappin Terraces is the new Works Building which was mentioned in last year's report, and which was half finished by the end of the year. The area between it and the present pony stables to the east will be filled by the new Supplies Building, which Council hopes will be started without delay.

Other major undertakings during the year were the rebuilding and restoration of the antelope paddock, and alterations to the rhino den and paddocks. The latter are still in hand.

THE FELLOWSHIP

OFFICERS AND COUNCIL

At the Annual General Meeting held in the Society's Offices on Tuesday, 29th April, 1958, the following members of Council retired:

Professor E. C. Amoroso, M.B., B.Ch., Ph.D., F.R.S.

Capt. Keith F. T. Caldwell

Professor A. J. E. Cave, M.D., Ch.B., D.Sc., F.L.S.

Col. The Rt Hon. The Lord Forester

H. W. Parker, Esq., C.B.E., M.A., D.Sc.

The following were elected as Members of Council to fill the five vacancies:

Professor J. D. Boyd, M.A., M.D., M.Sc.

J. N. Ritchie, Esq., C.B., B.Sc., F.R.C.V.S.

Air Chief Marshal Sir James Robb, G.C.B., K.B.E., D.S.O.,
D.F.C., A.F.C., F.S.A.

Peter Scott, Esq., C.B.E., D.S.C., M.A.

Professor J. Eric Smith, M.A., Sc.D., F.R.S.

ROLL OF FELLOWS

The estimated number of Fellows at 31st December, 1958, was 6,630 as compared with 7,834 at the end of 1957.

Field Marshal The Rt Hon. Viscount Alanbrooke of Brookeborough, K.G., G.C.B., O.M., G.C.V.O., D.S.O., was elected an Honorary Fellow of the Society.

Dr Fairfield Osborn, President of the New York Zoological Society, was elected a Foreign Fellow of the Society.

The following were elected Corresponding Members of the Society:

Professor Dr Hjalmar Broch of the Zoologisk Museum,
Oslo.

Dr Bengt Hubendick of the Naturhistoriska Riksmuseet,
Stockholm.

Senhor João de Freitas Martins, C.M.Z.S., was awarded the Silver Medal of the Society on 19th November, 1958, for services to the Aquarium.

OBITUARY

The Council regrets to report the death of a number of the Society's Fellows, among them:

Capt. Keith F. T. Caldwell who was a member of Council from 1944 to 1947, 1949 to 1953, 1954 to 1958, and a Vice-President from 1952 to 1953.

Dr Malcolm A. Smith, M.R.C.S., L.R.C.P., who for many years was the Editor of the Zoological Record.

William Stone, M.A., F.L.S., who was elected to the Fellowship in 1905.

Cecil Warburton, M.A., who was elected to the Fellowship in 1900.

Professor Guillaume Grandidier and Professor Maurice Caullery, who were Foreign Fellows of the Society.

Dr E. W. Gudger, Dr A. Urbain, Dr Karl P. Schmidt, Professor W. Rowan, The Venerable Archdeacon Shaw and Dr J. A. Bierens de Haan, all of whom were Corresponding Members of the Society.

MEMORIAL TO MR ALFRED EZRA

To commemorate the services of Mr Alfred Ezra, O.B.E., who served on Council for 30 years and who was a most generous benefactor of the Society, the Council has erected a bronze plaque at the entrance to the Bird House. Mr Ezra was the recipient of the Gold Medal of the Society.

STAFF

At the end of the year the Staff of the Society excluding the Catering Departments, where the numbers fluctuate considerably, totalled 345, as compared with 357 in 1957. Further details are given in Appendix II.

APPOINTMENTS

Dr Desmond Morris, who since 1956 had been Head of the Television and Film Unit established jointly by the Society and Granada T.V. Network, was appointed Curator of Mammals, the appointment to commence on 1st January, 1959. For some years the post of Curator of Mammals had been combined, because of expediency, with that of Veterinary Officer, but the increased work associated with the new hospital, which was opened in 1957, made a joint appointment no longer practicable.

RETIREMENTS

The following members of the staff retired during the year:

Regent's Park

Senior Head Keeper S. J. Hexter—retired 30th September, 1958. He joined the staff in 1917 and worked for many years in the Ostrich House.

Head Keeper C. E. Hitchcock—retired 15th November, 1958. He joined the staff in 1924 and for many years was Head Keeper in Charge of the Lion House.

Mr T. King—retired 15th January, 1958. He joined the staff in 1930 and served as a Timekeeper.

Mr W. E. Lawrence—retired 30th September, 1958. He joined the staff in 1914 and when he retired was Chief Scientific Assistant in the Prosectorium. He was awarded the British Empire Medal in the Coronation Honours in 1953.

Senior Head Keeper J. W. Shelley—retired 30th September, 1958. He joined the staff in 1913 and worked for many years in the Antelope Section.

Head Keeper E. L. Stimpson—retired 15th January, 1958. He joined the staff in 1919 and at the time of his retirement was Head Keeper in Charge of the Pheasantry.

Whipsnade Park

Head Keeper A. Rogers—retired 15th January, 1958. He joined the staff in 1929 and when he retired was Head Keeper of the Giraffe Section.

Mr A. Sharp—retired 15th January, 1958. He joined the staff in 1931 and was for many years Head Gatekeeper.

OTHER STAFF MATTERS

An increase in the wages of all the staff, other than the senior scientific and administrative staff and the executive, clerical and secretarial grades (and excluding the Catering Departments whose wages are governed by the Catering Wages Acts), was awarded as from 16th January, 1958. The incentive principle was extended by the creation of new grades, and at the same time adjustments were made in the rates of pay for certain appointments.

GRANT OF ARMS

During the year the Council decided that it would be in keeping with the dignity of our Royal Charter if the Society possessed its own Armorial Bearings. Application for a Grant of Arms was made accordingly by the President, and discussion took place with the College of Arms on design. Although the formalities had not been completed by the end of the year, notification has since been received that Garter King of Arms has approved the grant, and as it is intended to use the arms on the Society's stationery and publications and to incorporate the shield on flags to be flown at the entrance gates, it was felt that a note of them should be included in this Report.

The correct heraldic description of the Coat, which is reproduced on the cover, is as follows:

Arms: Gules a Lion passant guardant Or armed and langued Azure holding in the dexter Paw a Torch Gold enflamed proper the Flame irradiated also Gold.

Crest: On a Wreath Or and Sable an Osprey Wings extended perched upon and grasping in the talons a Fish fesswise proper.

Supporters: On either side a Zebra proper collared Or.

Badge: A Lion passant guardant Or armed and langued Gules holding in the dexter Paw a Torch Gold enflamed proper.

Motto: Curae genus omne animantium.

The motto is an adaptation from Lucretius (*De Rerum Natura*) and may be translated as "Every kind of living thing is our concern".

TELEVISION AND FILM UNIT

During the first half of 1958 the activities of the T.V. and Film Unit, established jointly by the Society and Granada T.V. Network in 1956, were mainly directed to the production of live television broadcasts, given in the programme "Zoo Time", from Regent's Park Gardens and from Whipsnade. During the latter half of the year the Unit was expanded with a view to concentrating on films rather than on live broadcasts, and films are now being made on many aspects of animal biology.

Dr Desmond Morris resigned from his appointment as Director of the T.V. and Film Unit at the end of the year, and Mr Nicholas Guppy was appointed Zoological Adviser to the Unit.

INFORMATION

During the year an attempt was made to revise and to bring up to date various general publications of the Society. The Zoo Guide has been re-designed and re-written; a new series of Animal Charts has been started; the series of leaflets on pets is being republished and a Newsletter providing information for the Press, particularly in London and the suburbs, has been initiated.

CATERING

During the spring the old Bear Bar was remodelled as a Milk Bar, specialising in the sale of fresh milk and pure dairy ice-cream. In spite of the poor summer this proved a popular venture.

The Pavilion Cafe was redecorated and refurnished and provided with modern cafeteria equipment, resulting in increased use.

The experimental installation of a few automatic vending machines for the supply of coffee and soft drinks proved successful, and an extension of the system is under consideration.

Zoo Restaurants Limited had a successful year.

Bronze medals were gained by Mr L. R. F. Spanner, the Society's Chef de Cuisine, and by Mr F. Clark, Pastry Chef, for their entries in the Salon Culinaire at the International Hotel and Catering Exhibition at Olympia in January, 1958, at which the exhibits were of a particularly high standard.

ZOOLOGICAL GARDENS, REGENT'S PARK

VISITORS

The number of visitors to the Gardens at Regent's Park during 1958 was 1,879,163, compared with 1,965,260 in 1957. The number of visitors to the Aquarium during 1958 was 371,367 compared with 377,361 in 1957. The Children's Zoo was open from 31st March to 5th October, the number of visitors being 194,530 compared with 247,015 in the previous season.

OCCURRENCES OF SPECIAL INTEREST

During the year the principal addition to the Society's collection at Regent's Park was a specimen of the Giant Panda, *Ailuropoda melanoleuca*. This animal, known as Chi-Chi, arrived in September and was acquired with the generous assistance of Granada Television Network Limited.

In July His Excellency the Brazilian Ambassador presented a very fine collection of 25 Humming Birds belonging to nine species, of which three were new to the collection.

The Society has recently renewed its exchanges with the Moscow Zoo and during the year Regent's Park received from this source a pair of Snow Leopards, *Panthera uncia*, two Saiga Antelopes, *Saiga tatarica*, and also two Marco Polo's Sheep, *Ovis ammon polii*, which have not previously been exhibited by the Society.

At the end of the year Mr David Attenborough returned from an expedition to South America and brought with him a valuable and varied collection of mammals, birds and reptiles. These animals have been presented to the Society by the British Broadcasting Corporation and they include four Paraguayan Ring-tailed Coatis, *Nasua nasua aricana*, new to the collection, as well as four species of Armadillo, some Capybaras, and a number of parrots, terrapins, caymans and toads.

The Gardens at Regent's Park were opened in the evening on two occasions during the summer for Fellows and their friends.

AQUARIUM

Considerable attention has been paid to the lighting of certain tanks in all parts of the Aquarium. This has not only enhanced the appearance of the tanks but has improved conditions for the fishes and other animals living in them.

In the tropical marine section it has now been found possible to keep coral fishes in good condition. These brilliantly coloured fishes are not only attractive to visitors but they represent a group not previously shown with any success.

New methods have been developed for keeping a wide range of marine invertebrates in good condition. In particular the collection of sea anemones has been greatly improved, eight species now being represented instead of the single species kept in former years.

In the temperate sea water section a special tank has been set up to show the colour change of flatfishes according to the tone of the background. This has proved very successful and is much appreciated by visitors.

FLOWER GARDENS

Soon after its formation in April the new Gardens and Park Committee appointed a sub-committee to advise it on horticultural matters. One of the recommendations of this body was to remove the remaining hedges inside the boundary railings except where these were filling a useful function, such as masking an ugly building. A start has been made on this work which has already done much to open up the view into the Gardens from the Outer Circle road.

Work has also begun on rehabilitating the waste ground near the apiary site.

WORKS DEPARTMENT

Reference has already been made to the progress made in the Development Plan for Regent's Park Gardens and to the programme of major works. Among the lesser works undertaken were improvements to the Zoo Shop and the starting of a programme of repairs and renovations to the Keepers' messrooms. Alterations to the basement of the office building were carried out which will result in more library space. In addition, the Works Department was heavily occupied during the year in carrying out normal maintenance and security work.

SIGNS AND NOTICES

One of the important matters to which the new Gardens and Park Committee were asked to give attention during the year was the standardization of design of all the signs and notices in Regent's Park Gardens (other than scientific labels). Some progress was made in this complex matter and new prototype signs were ordered for trial during 1959.

SUPPLIES SECTION

During 1958 two unusual food problems were presented to the Supplies Section.

On the arrival of the Giant Panda in September, Mr T. P. Vandeleur, J.P., of Par, Cornwall, very kindly undertook to supply fresh bamboo, as he had done for previous Giant Pandas in the Collection. Many other members of the public also supplied bamboo of various types but "Chi-Chi" proved very selective in her tastes. The Society, therefore, appealed to the public, through the press and radio, for samples of bamboo so that adequate sources of supply could be established. Over 200 samples and offers of help were received during the following week and the staff at Kew Gardens identified those which met with "Chi-Chi's" approval. A roster was compiled, and

with the addition of consignments twice weekly from Mr Vandeleur and the William Cornish Estates a regular daily supply of fresh bamboo, the majority of it generously contributed free, was assured.

The Kiwi, which arrived from New Zealand in October, presented a similar problem, since it eats over 100 large earthworms a day. This amount of worms cannot be provided from within the Society's own resources and it was necessary therefore to call on a commercial earthworm breeder.

ANIMALS AT REGENT'S PARK

Animals of all kinds (except Fish and Invertebrates) on 1st January, 1958	2,900
Animals of all kinds (except Fish and Invertebrates) received in 1958 by presentation, exchange, deposit and purchase (and transferred from Whipsnade)	870
Animals of all kinds (except Fish and Invertebrates) born in the Menagerie during 1958	376
	<hr/>
	4,146
Animals of all kinds (except Fish and Invertebrates) dead, sold, sent in exchange or returned to depositors (and transferred to Whipsnade) during 1958	1,232
	<hr/>
Animals of all kinds (except Fish and Invertebrates) in the Gardens on 31st December, 1958	<u>2,914</u>

WHIPSNADE PARK

VISITORS

The number of visitors to Whipsnade Park during 1958 was 599,730 compared with 552,869 in 1957.

H.R.H. The Prince of Wales and H.R.H. The Princess Anne visited the Park on 18th April, 1958.

H.R.H. The Princess Margaret visited the Park on 25th June, 1958.

H.H. Shaikh Ali Bin Abdullah Al Thani, Ruler of Qatar, visited the Park on 15th August, 1958.

Alhaji Sir Muhammadu Sanusi, c.m.g., the Emir of Kano, The Hon. Alhaji Usman Nagogo, c.m.g., the Emir of Katsina and Mallam Aliyu, o.b., a.j.a., the Attah of Igale visited the Park on 5th October, 1958.

The Children's Zoo attracted 153,642 visitors compared with 107,488 in the first year and 102,330 in the second year, indicating the increasing popularity of this section. The figures show that one in every four of the total visitors to the Park also visited the Children's Zoo.

More visitors than ever brought their cars into the Park during 1958, the number being 24,836 cars compared with 20,326 in 1957.

Photo : Sport & General Press Agency Limited.



"CHI-CHI," The Giant Panda



Photo : Fox Photos.

A Snow Leopard, "Nina", received in exchange from Russia.

"Nocturne", the baby Hippopotamus born at Whipsnade on the 1st July, 1958, with his mother "Belinda".

Photo : Fox Photos.



OCCURRENCES OF SPECIAL INTEREST

H.R.H. The Princess Margaret graciously presented two Burchell's Zebras which had been given to her during her visit to Tanganyika and had been placed on deposit with the Society. Unfortunately one of them died subsequently from a chronic aneurism of great severity due to helminth larvae, probably therefore acquired in Africa.

The notable births included one Hippopotamus and one Brazilian Tapir.

WORKS SECTION

This year has again largely been occupied with maintenance and renewal of existing buildings. In addition a ditch and low fence was made at the western end of Cut Throat Paddock, which contains the Yak, Swamp Deer and White-tailed Deer. This has greatly improved the view across the valley to Woodfield Paddock occupied by the Llamas and Rheas. Two additional enclosures for small carnivores were constructed on the edge of the old Wolf Wood. The boundary fence was completed in the early months of 1958 and should last for a good many years.

WHIPSNADE GREEN

A charge of 2s. 6d. per car was again made during the summer season for parking on that part of the Green adjoining the Park. This yielded over £600, part of which was expended on cleansing and improving the whole of Whipsnade Green.

FARM, GARDEN AND FORESTRY

The Old Wolf Wood was felled after many trees had been blown down in the gales. It has been replanted with oak, beech, European larch and Douglas fir.

The Whipsnade nursery supplied over 10,000 wallflower plants to Regent's Park.

ANIMALS AT WHIPSNADE PARK

Animals of all kinds (except Fish and Invertebrates) on 1st January, 1958	1,989
Animals of all kinds (except Fish and Invertebrates) received in 1958 by presentation, exchange, deposit and purchase (and transferred from Regent's Park)	216
Animals of all kinds (except Fish and Invertebrates) born in the Park during 1958	328
	<hr/>
	2,533
Animals of all kinds (except Fish and Invertebrates) dead, sold, sent in exchange or returned to depositors (and transferred to Regent's Park) in 1958	576
	<hr/>
Animals of all kinds (except Fish and Invertebrates) on 31st December, 1958	<u>1,957</u>

MEETINGS AND LECTURES

Four Ordinary General Meetings were held during 1958.

Scientific Meetings were held on eight occasions during the year and were well attended by the Fellows and their friends. The papers communicated at these meetings, together with those read in title, have been published in the Society's *Proceedings* and in the *Transactions*. In addition to the papers read, many other interesting communications were made at these meetings. These included: an account by Dr Hugh B. Cott of the ecology of the Nile crocodile, *Crocodylus niloticus*; a demonstration with tape recordings by Mr A. E. Smith of the voices and sounds of bats; a discussion of the behaviour of cephalopods, in the course of which the following contributions were made:—Professor J. Z. Young, F.R.S.—New aspects of learning in the *Octopus*; and the feeding and other behaviour of *Argonauta*; Dr H. G. Vevers—Observations on the laying and hatching of *Octopus* eggs in the Society's Aquarium; Dr J. H. Oliver—A film of newly-hatched *Octopus* from the Society's Aquarium; Dr W. J. Rees—the dispersal of octopod larvae; a review by Professor David Steven of the marine laboratories in the Caribbean; an illustrated survey by the President, Sir Landsborough Thomson, of the Serengeti and other East African National Parks; a description by Professor E. C. Amoroso, F.R.S., of the vascular architecture in the placenta of the hyaena, *Crocuta crocuta* Erxleben; an account of the biology of the swamps of Uganda by Professor L. C. Beadle; the presentation of a film by Dr Desmond Morris demonstrating the behaviour of the chimpanzee in captivity, and a film illustrating the shell-smashing behaviour of certain vertebrates; the projection of a film of the Gyr-Falcon in Iceland by Mr P. L. Wayre; and the screening of a coloured film of the fauna of Ruwenzori, the Mountains of the Moon, by Mr John Hillaby.

CONFERENCES AND VISITS

The XV International Congress of Zoology was held in London in July, and the Society entertained the members of the Congress on two occasions. On 22nd July an evening reception was held at Regent's Park and was attended by 1,500 guests who greatly enjoyed their visit to the Gardens and were most appreciative of the arrangements made by the Catering Department for their refreshment. On 20th July many members of the Congress, accompanied in some cases by their families, spent the day at Whipsnade Park. The Secretary and other members of the Council as well as the Scientific Director were members of the Advisory Committee, and took the chair at several of the meetings. The Curator of the Aquarium was Recorder for the Marine Zoology Section.

The Society was represented at the Darwin-Wallace-Linnaeus Centenary celebrations at the University of Malaya by Professor R. D. Purchon, the head of the Department of Zoology, University of Malaya, and a Fellow of the Society.

Dr H. G. Vevers gave a paper at the Annual Conference of the Directors of Zoological Societies of Great Britain and Ireland held in Edinburgh in September.

Dr L. Harrison Matthews and Mr E. H. Tong paid visits to ten Zoos and Aquaria on the Continent in the Summer of 1958.

CHRISTMAS LECTURES

Three lectures for the children of Fellows and their friends were given in the Meeting Room during the Christmas holidays.

The lectures, illustrated by films and slides, were well received by appreciative audiences. The subject of the lecture by Mr Maxwell Knight, O.B.E., was "Some curious pets"; the title of the lecture by Mr Theodore Savory, M.A., was "Tarantulas and scorpions" and that of Dr Peter Crowcroft's lecture "Mammals at Christmas time".

RESEARCH BY SOCIETY'S OWN STAFF

During the year the Curator of the Aquarium and Dr J. H. Oliver, the Honorary Hydrologist, have continued their investigations on the sea water circulations in the Aquarium. The basis for this work has been provided by a paper by Dr Oliver published in the *Proceedings*, Vol. 129. It has now been possible to follow the accumulation of nitrate in the aquarium sea water, and to relate its production to the amount of animal tissue in a given volume of water. This work has allowed a more accurate control to be kept of the living conditions of some of the more delicate marine invertebrates.

Dr Vevers is also continuing his work with Professor N. Millott of Bedford College on the morphology and histochemistry of the axial organ in sea urchins. In collaboration with Dr E. H. Ashton of Birmingham University he has prepared a paper on "The number of exhibits, births and deaths in the menagerie at Regent's Park 1835 to 1957 and in Whipsnade Park 1931 to 1957" which will be published in the *Proceedings*, Vol. 133, and which is referred to on page 5 of this Report.

The Curator of Mammals undertook several investigations during 1958 when he was head of the T.V. and Film Unit, including one on egg-smashing by mongooses. The jaws of mongooses are too small to enable the animals to crack open large eggs with their teeth. Instead, this group has evolved a special smashing action, in which the egg is held firmly with the front legs and then hurled against a hard surface, the details of the action varying from species to species. These various actions have been filmed at Regent's Park and analysed by "single frame projection" to obtain accurate measurements of the shapes of the various movements. It is hoped to continue this work and eventually to compare the records obtained for many species of this group with their current taxonomic arrangement to ascertain whether the distri-

bution of the various types of movement correlates with any other factors.

Dr Morris also carried out a detailed study of the extent and nature of pattern-formation present in the scribblings of chimpanzees. Several hundred specimens have been obtained from the chimpanzee "Congo" at Regent's Park and data are being collected from other zoos on the continent and in America. A film has been made illustrating this work and papers have been read to the XVth International Congress of Zoology in London and to the Zoological Society. A brief report has been published in the *New Scientist* (August, 1958) and a full-length study is being prepared for future publication.

A number of matters have been the subject of research by the Pathologist during the year. In particular, a study undertaken in collaboration with the Veterinary Officer of a disease in young lions was completed; this proved to be a disease of the skeleton associated with a dietary imbalance known as *osteodystrophia fibrosa*. Further studies were made on the so-called rickets of New World monkeys; this proved to be a false rickets, the deformity of the skeleton being due not to lack of vitamin, but to disease of the kidneys. Research was also undertaken into the causes of death in the case of the Polar Bear "Brumas". This was due to an acute septicaemic condition of the kidneys associated with a chronic rheumatoid condition of the heart which may have been of long standing. The results of these studies will be published in full in due course.

The Prosector has completed a paper on the anatomy of *Callimico*, an aberrant platyrrhine Primate, for publication in the *Transactions of the American Philosophical Society*. In addition several problems in the morphology of the Cebidae have been studied, among others certain vascular and cutaneous specializations. A survey of the cutaneous glands in Primates is being undertaken.

Developmental stages in *Cebus*, *Alouatta* and *Aotes* have been studied revealing many interesting points of phylogenetic interest; a preliminary communication has already been made to one of the Society's Scientific Meetings. During the year the Prosector has also published a paper on the "Scientific name of the Weeper Capuchin" in the Society's *Proceedings*.

CLINICAL DEPARTMENTS

VETERINARY SECTION

The end of the year 1958 completes the second year since the new Hospital was opened. The total number of cases admitted was 147 with a recovery rate of 75 per cent. As before, the Pathologist has assisted with all bacteriological diagnoses and has made a number of clinical examinations in addition.

The Out-Patients' Department has completed its first full year's work. It is conducted daily from 12 noon to 1 p.m., Monday to Friday, for the examination of those non-domestic animals referred to it by practising veterinary surgeons. During the year the total number of out-patients seen was 149.

The Veterinary Officer is most grateful to the many specialists in animal and human medicine who have been of such great assistance from time to time over a variety of matters. Their help, coupled with the facilities available in the new building, have resulted in an appreciable decline in the death rate of the animals in the collection.

PATHOLOGY LABORATORY

During the year 723 necropsies were performed on animals which had died in the Gardens, made up as follows: Mammals 192, Birds 310, Reptiles and Amphibians 221. The death rate is again the lowest recorded. On the diagnostic side 920 clinical and bacteriological investigations of specimens have been made from 150 cases. The results, as reflected in the death rate, show that a satisfactory control of pathological conditions is being achieved.

WHIPSNADE

At Whipsnade, Mr Martin Senior carried out 275 necropsies, 139 on birds, 130 on mammals and 6 on reptiles. The Ministry of Agriculture, Fisheries and Food carried out 2 necropsies on birds.

PUBLICATIONS

PROCEEDINGS

Two volumes of the *Proceedings*, the 130th and 131st in the series, were published during the year. Volume 130 was completed on the 20th June, 1958, and Volume 131 on the 1st December, 1958.

The 55 papers presented in the two volumes, which comprised 1,257 pages and 71 plates, covered a wide range of subjects in the zoological sciences. Each being a valuable contribution to zoological knowledge, it is difficult to select any for special mention, but attention may be drawn to the following: S. A. Barnett, "An analysis of social behaviour in wild rats"; J. B. Buchanan, "The bottom fauna communities across the continental shelf off Accra, Ghana (Gold Coast)"; A. H. Schultz, "Cranial and dental variability in Colobus monkeys"; G. M. Ardran, F. H. Kemp and W. D. L. Ride, "A radiographic analysis of mastication and swallowing in the domestic rabbit: *Oryctolagus cuniculus* (L.)"; E. H. Ashton and T. F. Spence, "Age changes in the cranial capacity and foramen magnum of hominoids"; W. Nigel Bonner, "Notes on the Southern Fur Seal in South Georgia"; A. W. Crompton, "The cranial morphology of a new genus and species of ictidosauran"; P. A. J. Ryke, "South

African mites of the superfamily Uropodoidea (Acarina)"; E. C. Amoroso, N. A. Hancock and L. Kellas, "The foetal membranes and placenta of the hippopotamus (*Hippopotamus amphibius*) (Linnaeus)"; R. E. Moreau and H. N. Southern, "Geographical variation and polymorphism in *Chlorophoneus* shrikes"; P. H. Greenwood, "Reproduction in the East African Lung-fish, *Protopterus aethiopicus* Heckel"; John R. Hendrickson, "The Green Sea Turtle, *Chelonia mydas* (Linn.) in Malaya and Sarawak"; W. J. Rees, "The relationships of *Moerisia lyonsi* Boulenger, and the family Moerisiidae, with capitate hydroids"; E. H. Ashton and C. E. Oxnard, "Variation in the maxillary nerve of certain mammals"; D. Atkins, "A new species and genus of Kraussinidae (Brachiopoda) with a note on feeding"; A. R. Paul, "Eastbourne marine shore fauna"; R. D. Purchon, "The stomach in the Eulamellibranchia; Stomach Type IV"; C. J. Duncan, "The anatomy and physiology of the reproductive system of the freshwater snail *Physa fontinalis* (L.)"; R. A. Hinde, "The nest-building behaviour of domesticated canaries"; D. H. S. Davis and A. G. Oetlé, "The multimammate mouse *Rattus (Mastomys) natalensis* Smith: a laboratory-adapted African wild rodent"; G. Owen Evans, "A revision of the British Aceosejinae (Acarine: Mesostigmata)"; Anne C. Innis, "The behaviour of the giraffe, *Giraffa camelopardalis*, in the Eastern Transvaal"; E. H. Ashton and C. E. Oxnard, "Some variations in the maxillary nerve of Primates"; E. H. Ashton and S. Zuckerman, "The infraorbital foramen in the Hominoidea"; Peter Crowcroft and F. P. Rowe, "The growth of confined colonies of the wild house-mouse (*Mus musculus* L.): the effect of dispersal on female fecundity"; E. Elkan, "Further contributions on the buccal and pharyngeal mucous membrane in urodeles"; N. B. Marshall and G. L. Thines, "Studies of the brain, sense organs and light sensitivity of a blind cave fish (*Typhlogarra widdowsoni*) from Iraq"; B. Morris, "The yolk-sac of the mole *Talpa europaea*"; Desmond Morris, "The comparative ethology of grassfinches (Erythrurae) and mannikins (Amadinae)".

TRANSACTIONS

An important monograph entitled, "Reproduction in the European Badger (*Meles meles* L.)" by E. G. Neal and R. J. Harrison, published on the 5th November, 1958, formed Part 2 of Volume 29 of the *Transactions*.

NOMENCLATOR ZOOLOGICUS

As the names of the new genera and subgenera in zoology for the year 1955 have now been recorded, a supplementary volume of the *Nomenclator Zoologicus* containing the names of the new genera and subgenera in the literature for 1946-1955 is in preparation, with Dr A. Tindell Hopwood as Honorary Editor.

ZOOLOGICAL RECORD

Volume 92, the record of the zoological literature published mainly in the year 1955, was completed and the bound volume issued on the 1st July, 1958.

Of Volume 93, recording the literature for 1956, fifteen sections have been published, the sections Coelenterata, Bryozoa and Reptilia are in the press, and the compilation of Amphibia, the remaining section, is nearing completion.

Of Volume 94, the current volume, recording the 1957 literature, four sections, Comprehensive Zoology, Brachiopoda, Arachnida and Aves have been published, and the sections Echinoderma, Crustacea, Trilobita, Insecta, Pisces and Mammalia are in the press.

The photolithographic reprinting of Volumes 21 to 25 (1885-1889) having been completed during the year, the first twenty-five volumes of the *Record*, which have long been out of print, are now available in this edition.

The income received from sales of the *Record* increased slightly during the year, but as the revenue from this source is insufficient to cover the cost incurred in the publishing of a volume of the bibliography, its continued production depends to some extent on the donations to the Zoological Record Fund. A complete list of donations to the Fund during 1958 is given in Appendix X.

The compilation of the *Record* is a heavy task and the Society is deeply indebted to the Recorders of the individual sections for the invaluable service they generously provide in preparing the material for this most important bibliography of zoological literature.

LIBRARY

The reference facilities provided were extensively used by Fellows and by the Society's staff. Several thousand volumes were consulted in the library, 3,966 were issued on loan and 749 were made available to other scientific societies and institutions.

The accessions to the library (excluding the presentation by Dr H. M. Vickers) were 135 books and 4,691 parts of 872 periodicals. A further 86 photographs, chiefly of animals exhibited for the first time in the Society's Gardens, were added to the photographic collection.

The number of volumes bound was 509 and repairs were made to 256 others.

Owing to the large number of new entries which have had to be incorporated, it has become necessary to replace the reference copy of the Author Catalogue in the library, and a start has been made on retyping the four volumes.

A unique and valuable addition to the library was the presentation by Dr H. M. Vickers of a "Bibliography of Animal Reproduction". The bibliography, on which Dr Vickers had worked for a number of years, records some 70,000 references to the literature on animal reproduction. Several hundred reprints and a number of separate works and published bibliographies were also included in this notable presentation.

ACKNOWLEDGMENTS

The Society is indebted for gifts of specimens to: His Excellency The Brazilian Ambassador, Mr A. W. Cookson, Mr C. Findlay, Dr W. M. Fitzsimmons, Mr S. W. Gorham, Mr E. H. Hawke, Dr Harry Hoogstraal, Mr C. J. P. Ionides, c.m.z.s., Mr Terry Jones, Mr J. S. Kenny, Dr L. S. B. Leakey, c.m.z.s., Mr G. H. Newmark, Mr. J. H. Newmark, the Government of New Zealand for the gift of a Mantell's Kiwi, Mr A. A. Prestwich, Captain R. S. de Q. Quincey, Mr G. Randau, Mr J. D. Romer, c.m.z.s., Dr K. C. Searle, c.m.z.s., and Monsieur P. Staner. In addition the following Zoological Societies and Institutions have made valuable gifts or sent interesting animals to Regent's Park and Whipsnade on an exchange basis: The Royal Zoological Society of Antwerp, the Central Texas Zoological Society, the Dudley Zoological Society Limited, the Zoological Gardens at Helsingfors, the Leckford Estates Limited, the Zoo Centre at Moscow, the Paignton Zoological and Botanical Gardens Limited, The National Zoological Gardens of South Africa, the South Australian Zoological & Acclimatization Society and the Wildfowl Trust. Complete lists of donors of animals to Regent's Park and to Whipsnade are contained in Appendices IV and VII.

Mr David Attenborough and Mr Charles Lagus undertook a "Zoo Quest" journey to Paraguay. The Society would like to thank the British Broadcasting Corporation's Television Service for presenting the interesting collection of animals brought home by these two gentlemen.

Senhora Hermione Blandy de Freitas Martins and Senhor João de Freitas Martins, c.m.z.s., who have continued to take a lively interest in the Society's Aquarium, sent several valuable collections of marine animals from Madeira.

The following have rendered valuable assistance to the Society's Veterinary Officer in the field of animal health: The Eastman Dental Hospital, The Institute of Orthopaedics, The Royal National

Orthopaedic Hospital, Stanmore, The Royal Veterinary College, Dr K. Tolderlund of the Statenseruminstitut, Copenhagen, The Wellcome Foundation and the Pfizer Laboratories Limited.

The Society is grateful to the following for assistance at Whipsnade: Mr J. E. Nigel Sloan, B.Sc., Parasitologist of the Cooper, McDougall & Robertson Field Research Station at Berkhamsted for identification of parasites, Dr H. D. Holt, M.R.C.S., L.R.C.P., D.P.H., Director of the Public Health Laboratory Service, Luton, for bacteriological investigation and Dr J. Brian Shaw, M.D., D.P.H., of the Luton Chest Clinic.

The Society's thanks are due to the following Ministries and Public Institutions for their assistance in a variety of ways: The Admiralty, the Ministries of Agriculture, Fisheries and Food, Education, Fuel and Power, Health, Transport and Works, the Board of Trade, H.M. Customs & Excise, the British Museum (Natural History), the Royal Botanic Gardens, Kew, the Botanical Gardens, Cambridge, the Public Health Departments of the Corporation of the City of London, and of the Metropolitan Boroughs of Acton, Hampstead, Holborn, St Marylebone and St Pancras.

In the sphere of shipping and transport the following companies and corporations have given valuable co-operation: Air France, the American Express Company Incorporated, the Antwerp Steamship Company Limited, Ben Line Steamers Limited, the Booker Line, the British European Airways Corporation, the British India Steam Navigation Company Limited, the British Overseas Airways Corporation, British Railways, Brown, Jenkinson & Company Limited, the Canadian Pacific Steamships Limited, the Donaldson Line Limited, the Elder Dempster Lines Limited, T. & J. Harrison Line, Hernu Peron & Stockwell Limited, Houlder Brothers & Company Limited, Hunting Clan Air Transport Limited, Killick Martin & Company Limited, the London Transport Executive, McAndrews & Company Limited, S. W. Morland & Company Limited, Wm. H. Muller & Company Limited, Munro Transport, J. F. Obree & Son Limited, Pacific Steam Navigation Company, Pan American World Airways, the P. & O. Steam Navigation Company Limited, the Port Line Limited, Qantas Airways, the Royal Dutch Airlines, the Royal Mail Lines Limited, Sabena Belgian World Airlines, the Shaw Savill Line, Frank Strick & Company Limited, the Union-Castle Mail Steamship Company Limited, the United Shipping Company Limited, and Mark Whitwill & Son Limited.

As in the past, the Society is grateful to the Rt Hon. The Earl of Leicester for his kindness in providing evergreen oak for the giraffes, and grateful thanks are also due to the following who have presented quantities of bamboo for the Giant Panda: Dr Frank Alberts, Mrs C. L. Arnold, Miss Ashenhurst, Mrs E. Avery, Miss M. Bankes, Mr H. A. Bartlett, Miss F. M. Bennett, Mr E. W. S. Berry, Mrs E. M. Blake, Miss S. Bradburn, the Rev. F. Britnell, Mr A. Cake, Miss J. Cant, Mr M. C. Clark, Mr C. Cokes, Miss W. A. Daniels, Mrs M.

Davidson, Mrs E. H. Eckersley, Mr C. H. Glover, Mr R. Harrison, Mr A. B. Holyoak, Mrs K. Horwood, Mrs P. Jackman, Miss D. Leschallas, Mr W. K. McDermott, Mr H. N. Mackin, Miss P. K. Macleod, Mrs G. Matthews, Lady Norman, Miss W. Pater, Mrs E. F. Perkins, Mr E. W. Pike, Mrs R. A. Price, Mrs N. Probyn, Mrs K. Rutter, Mrs B. Sessions, Mrs Shaw, Miss M. M. Sibthorp, Mrs A. C. Siddall, Miss J. E. Simpson, Mrs M. Stanton, Dr E. L. Lee, H. Tempest Limited, Mrs K. Terry, Mrs E. E. Thomas, Master John Thomas, Mr T. P. Vandeleur, Mrs K. E. Williams and Williams Cornish Estates Company.

Mr Ivan Seymour has rendered valuable assistance in procuring a continuous supply of earthworms for the Kiwi.

FINANCE

LEGACIES

The following legacy was received during the year:—£110 from the late Mrs Beatrice Rosa Stanwell (balance of a legacy of £200).

INCOME AND EXPENDITURE

The total income was £482,847 (an increase of £9,004) and the expenditure amounted to £444,259 (an increase of £40,744). The net surplus (after charging the net cost of pensions paid and making appropriations to funds to meet future liabilities) carried to the General Purposes Account amounted to £6,485 as compared with £7,600 for 1957.

ASSETS, LIABILITIES AND BALANCE

As reported on page 6, an approved Pension Fund has been set up under a Trust Deed. Provision has therefore been made in the Balance Sheet for the initial payment to the Trustees of £75,000 and an additional £100,000 has been set aside as a reserve for future annual contributions. As a result of these provisions, we have been able to include the remaining balance of £134,625 in the old Pension Fund in the Society's excess assets and this sum has accordingly been transferred to the Rebuilding Fund.

The market value of the Society's securities at the end of the year was in excess of their original cost and it has therefore been possible to dispense with the Depreciation of Investments Reserve Fund and to transfer the Fund liability of £73,043 to the General Reserve Fund.

Consequently, the Society's liabilities have been reduced to £202,951, a decrease of £206,793 on the corresponding figure for 1957.

At the end of the year, the Society's assets amounted to £1,156,053, an increase of £27,335 over 1957, and thus the balance, being surplus of assets over liabilities, amounted to £953,102, an increase of £234,128 on the corresponding figure for 1957.

Signed (for the Council)

S. ZUCKERMAN,

Secretary

March, 1959

APPENDIX I

COMMITTEES ON WHICH FELLOWS NOT ON COUNCIL
SERVE

1958-59

ANIMAL WELFARE AND HUSBANDRY COMMITTEE

- PROFESSOR E. C. AMOROSO, M.B., B.Ch, Ph.D., F.R.S.
 PROFESSOR D. V. DAVIES, M.A., M.B., B.S.
 SIR GARRARD TYRWHITT DRAKE, D.L., J.P.
 RAYMOND GREENE, M.A., D.M., F.R.C.P.
 PROFESSOR R. J. HARRISON, M.A., M.D., B.Ch., D.Sc.
 CECIL A. HOARE, D.Sc., F.R.S.
 PROFESSOR A. ST. G. HUGGETT, M.B., B.S., Ph.D., D.Sc., F.R.S.
 MAJOR C. W. HUME, M.C., B.Sc.
 J. R. NAPIER, M.R.C.S., L.R.C.P.
 W. LANE-PETTER, M.A., M.B., B.Chir.
 J. N. RITCHIE, C.B., B.Sc., F.R.C.V.S.
 SIR MALCOLM SARGENT, Mus.D., LL.D., F.R.C.M., F.R.S.A.
 PROFESSOR A. N. WORDEN, M.A., B.Sc., M.R.C.V.S., F.R.I.C., F.L.S.

COLLECTIONS POLICY COMMITTEE

- PROFESSOR W. S. BULLOUGH, D.Sc.
 THE RT HON. THE EARL OF CRANBROOK, C.B.E., M.A., D.L., J.P.
 W. P. CROWCROFT, M.Sc., D.Phil.
 CAPTAIN CYRIL DIVER, C.B., C.B.E., M.A., F.L.S.
 SIR GARRARD TYRWHITT DRAKE, D.L., J.P.
 MAXWELL KNIGHT, O.B.E., F.L.S., F.R.M.S.
 N. B. MARSHALL, M.A.
 H. W. PARKER, C.B.E., M.A., D.Sc.
 N. D. RILEY, C.B.E.
 PETER SCOTT, C.B.E., D.S.C., M.A.
 PROFESSOR J. ERIC SMITH, M.A., Sc.D., F.R.S.
 IOLO A. WILLIAMS

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 JAMES FISHER, M.A.
 SIR FRANCIS KNOWLES, M.A., D.Phil.
 SIR ALLEN LANE, M.A.
 DESMOND MORRIS, B.Sc., D.Phil.
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 D. M. ROSS, M.A., Ph.D.
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 GEOFFREY SCHOMBERG
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 D. J. STANBURY, B.Sc., A.R.C.S., F.R.E.S.
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 SIR ALLEN LANE, M.A.
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 H. W. PRATTEN
 AIR CHIEF MARSHAL SIR JAMES ROBB, G.C.B., K.B.E., D.S.O., D.F.G.,
 A.F.C., F.S.A.
 COLONEL H. E. ROBERTS
 SIR MALCOLM SARGENT, Mus.D., LL.D., F.R.G.M., F.R.S.A.
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 PROFESSOR D. V. DAVIES, M.A., M.B., B.S.
 FRANCIS C. FRASER, D.Sc.
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FRANCIS C. FRASER, D.Sc.

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E. O. PEARSON, M.A.

N. D. RILEY, C.B.E.

CYRIL J. STUBBLEFIELD, D.Sc., F.R.S.

APPENDIX II

STAFF

HEADQUARTERS

Scientific Staff

Scientific Director	L. Harrison Matthews, M.A., Sc.D., F.R.S.
Curator of the Aquarium (Acting Curator of Reptiles, Acting Curator of Invertebrates)	H. Gwynne Vevers, M.B.E., M.A., D.Phil.
Curator of Birds	J. J. Yealland
Curator of Mammals	D. J. Morris, B.Sc., D.Phil.
Veterinary Officer	O. Graham-Jones, M.R.C.V.S.
Prosector	W. C. Osman Hill, M.D., F.R.S.E., F.L.S.
Pathologist	R. N. Fiennes, M.A., M.R.C.V.S.
Librarian and Clerk of Publications	G. B. Stratton, M.B.E., A.L.S.
Education Officer	D. G. Lambert, B.A.

Consulting Staff

Consulting Architect	Sir Hugh Casson, M.A., F.R.I.B.A., F.S.I.A.
Honorary Parasitologist	Mrs H. G. Fantham (Dr Annie Porter), D.Sc., F.L.S.
Honorary Apiarist	H. J. C. Farmiloe
Honorary Hydrologist	J. H. Oliver, Ph.D., F.R.I.C.
Honorary Herpetologist	A. d'A. Bellairs, M.A., D.Sc., M.R.C.S.
Honorary Consulting Ophthalmologist.	B. W. Rycroft, O.B.E., M.D., Ch.B., D.O.M.S., F.R.C.S.
Honorary Veterinary Surgeon (Whipsnade)	Martin Senior, M.R.C.V.S.
Honorary Consultant	Geoffrey M. Vevers, F.R.C.S.

Administrative Staff

Controller	Major-General C. J. G. Dalton, C.B., C.B.E.
Accountant and Clerk to the Council	S. A. Westwood
The Private Secretary	Miss Grace E. Gay
Architect	F. A. Stengelhofen, L.R.I.B.A.
Establishments Officer and Chief Clerk	W. N. Pickford, M.M., A.C.I.S.
Head of General Department	Miss E. Owen, O.B.E., B.A.

REGENT'S PARK

Catering Manager	W. N. Hill, F.H.C.I.
Supplies Officer	C. G. Nicholls
Gardens Executive Officer	C. G. Harwood
Head Gardener	H. Hemmings
Senior Overseer	L. M. Flewin
Overseers	
Aquarium	F. C. Akhurst
Insect House	G. J. Ashby
Carnivores and Small Mammals	L. M. Flewin
Birds	A. D. J. Gregory
Reptile House	A. R. Lanworn
Ungulates	H. Vinall
Senior Head Keepers	
North Mammal House	J. C. T. Alldis
Cattle Sheds	J. Pullen
Bears	B. W. Smith
Pheasantry	J. Ward
Head Keepers in Charge	
Antelope, Zebra and Ponies	A. J. Cotterill
Rodent House	P. R. Dalby
Reptiles	E. W. Dexter
Insect House	R. P. Humphrys
Elephant House	F. E. G. Jones
Bird House	D. G. Newson
Aquatic Birds	G. F. Newson
Children's Zoo and T.V. Unit	W. E. Peckett
Giraffe and Hippo	H. G. N. Robinson
Lion House	T. W. Sangster
Ostrich House and Eastern Aviary	A. E. Scrivener
Parrot House and Birds of Prey	A. F. Shambrook
Monkey House	L. G. Smith
Camel House and Mappin Terrace	R. S. Smith
Small Mammal House	H. W. Styles
Aquarium	H. L. Ward
Head Keepers	
	H. C. Dean
	J. Lambden
	E. A. Marsh
	W. A. Swain
	S. Troy

Head Nursing Attendant, Hospital
and Quarantine Station . . . A. T. Wilson

WHIPSDADE PARK

Director E. H. Tong, F.L.A.S.
Catering Manager E. G. Rhodes
Assistant to the Director E. D. Day
Head Gardener R. Tully
Senior Overseer P. S. Bates
Overseer A. E. Cole
Deputy Overseer O. Chamberlain
Head Attendant, Children's Zoo . . . Miss G. Impey

Head Keepers

Elephant Section L. Gladman
Bird Section R. Hazzard
Bear Section A. Matthews
Carnivores Section F. Meakins
Giraffe Section L. Warner
Pheasant and Parrakeet Aviaries . . . B. Simmons
Camel Section G. Stanbridge

APPENDIX III

LIST OF GENERA, SPECIES AND SUBSPECIES NEW TO THE COLLECTION.—70 new genera, species and subspecies were added to the collection in the year as compared with 51 for 1957. (The figures placed before each name indicate its approximate position in the current Vertebrate List.)

GENERA NEW TO THE COLLECTION

Birds

ORDER PSITTACIFORMES

1131a *Psilopsiagon aurifrons aurifrons* (Lesson). Golden-fronted Parrakeet

ORDER APODIFORMES

991c *Clytolaema rubricauda* (Boddaert). Brazilian Ruby Humming Bird

988d *Calliphlox amethystinus* (Boddaert). Amethyst Humming Bird

ORDER PASSERIFORMES

- 893b *Pyroderus scutatus* (Shaw). Red-breasted Fruit Crow
 525a *Saltatricula multicolor* (Burmeister). Many-coloured Ground Finch

SPECIES AND SUBSPECIES NEW TO THE COLLECTION

Mammals

- 76a *Aotes trivirgatus azarae* (Humboldt). Azara's Douroucouli. Paraguay
 173a *Sorex minutus* Linné. Lesser Shrew. (Europe and parts of Asia)
 202b *Panthera pardus japonensis* (Gray). Chinese Leopard. (Northern China)
 *249a *Paradoxurus hermaphroditus musanga* (Raffles). Malayan Palm Civet. (Malaya)
 375b *Nasua nasua aricana* Vieira. Paraguayan Ring-tailed Coati. Paraguay
 479a *Claviglis crassicaudatus dorotheae* (Dollman). Cameroons Bushy-tailed Dormouse. Tiko, British Cameroons
 511b *Acomys cahirinus dimidiatus* Cretzschmar. Arabian Spiny Mouse. (Arabia, Palestine & Persia)
 670a *Ovis ammon polii* Blyth. Marco Polo's Sheep. (Pamir Plateau & Tian Shan Mountains)

Birds

- 1971b *Treron australis granviki* Grote. Uganda Green Pigeon. (East Africa)
 1131a *Psilopsiagon aurifrons aurifrons* (Lesson). Golden-fronted Parrakeet. (Peru)
 989g *Thalurania glaucopis* (Gmelin). Brazilian Wood Nymph Humming Bird. (East and South-east South America)
 991c *Clytolaema rubricauda* (Boddaert). Brazilian Ruby Humming Bird. (South-eastern Brazil)
 988d *Calliphlox amethystinus* (Boddaert). Amethyst Humming Bird. (South America: Ecuador to North Argentina)
 893b *Pyroderus scutatus* (Shaw). Red-breasted Fruit Crow. (South-eastern Brazil & Paraguay)
 853c *Pycnonotus luteolus* (Lesson). White-browed Bulbul. (India)
 841a *Microscelis nigerrimus* (Gould). Formosan Black Bulbul. (Formosa)
 761a *Erithacus pectoralis pectoralis* (Gould). Himalayan Ruby-Throat. (Himalayan Region)
 525a *Saltatricula multicolor* (Burmeister). Many-coloured Ground Finch. (Argentina)
 219c *Coccygia melanotis quartinia* (Bonaparte). Ethiopian Yellow-bellied Waxbill. (Abyssinia, Eritrea & Southern Sudan)
 265a *Ploceus vitellinus uluensis* (Neumann). Kenya Vitelline Weaver Bird. (East Africa)

* This subspecies must have been exhibited before, but this is the first occasion on which it has been recorded as such.

Reptiles

- 18a *Chrysemys picta dorsalis* Agassiz. Southern Painted Terrapin. (South-central North America)
 297g *Brookesia brachyura* Guenther. East African Pygmy Chameleon. (East Africa)
 329a *Riopa fernandi* (Burton). Red-and-black Skink. British Cameroons
 353b *Nucras intertexta ornata* (Gray). Ornate Scrub Lizard. Nyasaland
 435b *Liasis childreni* Gray. Banded Rock Python. (Australia)
 472a *Natrix natrix astreptophora* Seoane. Iberian Grass Snake. Spain

Amphibians

- 148b *Hyperolius marginatus* Peters. Bordered Sedge Frog. Nyasaland

Fishes

- Polypterus ornatipinnis* Boulenger. Congo
Anoptichthys jordani Hubbs & Innes. Blind Cave Characin. Mexico
Astyanax bimaculatus (Linné). Two-spot Astyanax. South America and Trinidad
Cheirodon axelrodi Schultz. Cardinal Tetra. South America (Amazon)
Curimata argentea Gill. Trinidad and South America
Hemigrammus pulcher Ladiges. Pretty Tetra. South America (Amazon)
Hemigrammus caudovittatus Ahl. Buenos Aires Tetra. Argentina
Hoplerythrinus unitaeniatus (Spix). Yarrow. Trinidad and South America
Hyphessobrycon pulchripinnis Ahl. Lemon Tetra. South America (Amazon)
Hyphessobrycon scholzei Ahl. Black-lined Tetra. South America (Lower Amazon)
Neolebias ansorgei Boulenger. Ansorge's Characin. West Africa
Odontostilbe pulcher (Gill). Trinidad and Venezuela
Pyrrhulina vittata Regan. Striped Pyrrhulina. South America (Amazon)
Serrasalmus spilopleura Kner. Dark-banded Piranha. South America (La Plata, Orinoco & Amazon)
Tetragonopterus chalceus Agassiz. Trinidad, Venezuela and Guianas
Puntius tetrazona (Bleeker). Tiger Barb. Sumatra and Borneo
Puntius vittatus (Day). Kooli Barb. India and Ceylon
Rasbora trilineata Steindachner. Scissors-tail Rasbora. Malaya, Borneo and Sumatra
Tanichthys albonubes Lin. White Cloud Mountain Minnow. Canton, China
Synodontis nigriventris David. Upside-down Catfish. Congo
Ompok bimaculatus (Bloch). Butter Catfish. S.E. Asia, India and Ceylon

- Hoplosternum littorale* (Hancock). Cascadura. Trinidad, Venezuela & Guiana
- Corydoras aeneus* (Gill). Bronze Corydoras. Eastern South America and Trinidad
- Otocinclus vittatus* Regan. Dwarf Otocinclus. Southern Brazil (Rio Paraguay)
- Dermogenys pusillus* Van Hasselt. Half-beak. Siam, Malaya, Indonesia and Philippines
- Aphyosemion australe* (Rachow). Cape Lopez Lyretail. Gaboon, West Africa
- Rivulus harti* (Boulenger). Hart's Rivulus. Trinidad and Venezuela
- Hippocampus kuda* Bleeker. Golden Sea Horse. Indo-Pacific
- Gaidropsarus maculatus* (Risso). Spotted Rockling. East Atlantic and Mediterranean
- Apogon thermalis* Cuvier. Translucent Cardinal Fish. Indian Ocean
- Chaetodon vagabunda* Linné. Vagabond Coral Fish. Indo-Pacific
- Nandus nandus* (Hamilton-Buchanan). The Nandus. India, Burma and Siam
- Aequidens maronii* (Steindachner). Keyhole Cichlid. South America (Guiana)
- Cichlasoma meeki* (Brind). Firemouth Cichlid. Yucatan, Mexico
- Crenicichla saxatilis* (Linné). Ringtail Pike Cichlid. Trinidad and North-eastern South America
- Amphiprion sebae* Bleeker. Anemone Fish. Indian Ocean
- Centrolabrus exoletus* (Linné). Rock Cook. North East Atlantic
- Philypnus dormitor* (Lacepede). Giant Goby. Trinidad
- Awaous tajasica* (Lichtenstein). Trinidad
- Ctenopoma fasciolata* (Boulenger). Striped Climbing Perch. Congo
- Sphaerichthys ophromenoides* Canestrini. Chocolate Gourami. Malaya and Sumatra
- Trichogaster pectoralis* (Regan). Snakeskin Gourami. Malaya and Siam

APPENDIX IV

LIST OF DONORS OF ANIMALS TO REGENT'S PARK

- Adgo, Mrs D., 2 Goldfish
- Agriculture, Fisheries & Food, The Ministry of, 1 Moreau's Gecko, 1 Margouillat Lizard
- Amery, P. H., 1 Paradise Whydah Bird
- Ansell, A. W., 1 Tinsel Barb
- Ansell, W. F. H., 1 White-naped Weasel
- Anti-Locust Laboratories, The, *Locusta*, *Schistocerca*, etc.
- Arnold, Master J., 1 Miller's Thumb
- Atchison, P. W., 1 Mirror Carp (25½ lbs.)
- Auge, E. H., 1 Spectacled Cayman

- Bailey, R. Shackleton, 1 Natterjack Toad, 2 Edible Frogs
 Bamberger, Mrs C. D. Woodburn-, 2 European Hares
 Barker, Mrs, 3 Greek Tortoises
 Batten, E. J., 1 Cockatiel
 Baxter, Charles, 1 Kestrel
 Baxter, L. N., Eggs of Stick Insects and Mantids
 Bayliss, R. M., 2 Helmeted Terrapins, 1 Bridled Soft-shelled Turtle
 Beckett, W. H., 1 Chimpanzee
 Beven, D., *Blaberus discaloides* and egg capsules
 Beverley, Miss J., 1 Spotted Salamander
 Blunt, W., 30 Larvae of *Phalera bucephala*
 Boosey, E. J., 1 Ringed Plover
 Bradshaw, P. J. S., 1 Marica Gazelle
 Braham, H. M., 1 White-throated Capuchin Monkey
 Braithwaite, Lady, 2 Greek Tortoises
 Brazilian Ambassador, His Excellency The, 1 Brazilian Swallow-tailed Humming Bird, 1 Pied Jacobin Humming Bird, 4 Frilled Coquette Humming Birds, 10 Brazilian Wood Nymph Humming Birds, 1 White-throated Humming Bird, 1 Short-billed Emerald Humming Bird, 1 Sombre Humming Bird, 5 Brazilian Ruby Humming Birds, 1 Amethyst Humming Bird
 Bristow, W., 1 Patas Monkey
 British Broadcasting Corporation Television Service, The, 1 Paraguayan Fox, 1 Maned Wolf, 4 Paraguayan Ring-tailed Coatis, 3 Pampas Cavies, 4 Capybaras, 4 Nine-banded Armadillos, 4 Seven-banded Armadillos, 1 Six-banded Armadillo, 2 La Plata Three-banded Armadillos, 4 White-crested Guans, 1 Crested Cariama, 2 Canary-winged Parrakeets, 2 Maximilian's Parrots, 1 Magellan Eagle Owl, 2 St Hilaire's Terrapins, 2 Broad-snouted Cayman, 1 Great Tegu, 3 Giant Toads
 Broadley, D. G., 6 Sand Lizards, 1 *Opisthophthalmos* sp., 6 *Hetrodes* pupa, 10 *Phymateus purpurascens*
 Bromborough Estate Company Limited, The, 3 Tamworth Red Pigs
 Burke, E. H., 1 American Kestrel
 Butterworth, H. D., 1 Ocelot
- Cadogan, Commander Francis, Mayfly larvae
 Carsons, Miss Doris B., 1 Senegal Galago, 1 Greater White-crested Cockatoo
 Central Texas Zoological Society, The, 1 Copperhead, 1 Western Diamond-back Rattlesnake
 Clama, Mrs J., 1 Patas Monkey
 Clark, Miss A. M., 2 Cornish Suckers
 Cleveland, S., 4 Snake-heads
 Cockerell, J. L. Pepys-, 1 Chimpanzee
 Cole, L., 1 Senegal Galago
 Cookson, A. W., 2 Malayan Palm Civets
 Cossy, Mrs D., 1 Crab-eating Monkey, 1 Humboldt's Woolly Monkey
 Coulter, William, 1 *Phoneutria fera*
 Cox, Miss G., 2 Greek Tortoises

Cranbrook, The Rt Hon. The Earl of, 1 European Hedgehog
 Crawford, Master Trevor, 1 Budgerigar
 Criswick, J., 1 Moorish Gecko

Dagleish, Mrs M., 1 Marmoset
 Davy, Master Charles, 1 Humboldt's Woolly Monkey
 Denis, Armand, 1 East African Pygmy Chameleon
 Dimelow, Mrs E. J., 1 King Crab
 Donaldson, Dr W. S., 3 Pygmy Chameleons
 Downes, J., 1 Moorish Gecko
 Downes, Mr, *Latroductus tredecemguttatus*
 Drake, Mr & Mrs G. E., 1 Indian Otter
 Dumbleton, G., 2 *Barbus filamentosus*

East, Masters David & Derek, 1 Water Rail
 Emmens, Professor C. V., 3 Bearded Lizards, 2 Lesueur's Water Lizards
 Ertel, J., 1 European Hedgehog
 Evans, Mrs Jean, 2 African Long-nosed Crocodiles
 Everitt, Mrs C. M., 1 Lesser Short-toed Lark

Farner, H., Tettigonid grasshoppers and centipede (*Scolopendra*)
 Findlay, C., 8 Flap-necked Chameleons, 6 Fischer's Chameleons, 4 Meller's Chameleons, 1 Schlegel's Blind Snake, 5 African Lined Snakes, 5 Oldham's Snakes, 1 Egg-eating Snake, 3 Herald Snakes, 3 Kirtland's Tree Snakes, 1 Boomslang, 1 Common Green Mamba, 2 Night Vipers, 2 Puff Adders
 Fitzsimmons, Dr W. M., 16 Bell's Hinged Tortoises, 1 Blackish Terrapin, 1 Bridled Soft-shelled Turtle, 3 Moreau's Geckoes, 4 Black-necked Agama Lizards, 23 Flap-necked Chameleons, 38 Meller's Chameleons, 1 Five-lined Skink, 2 Robust Plated Lizards, 1 Ornate Scrub Lizard, 2 Variable Blind Snakes, 2 African Lined Snakes, 1 Cape Wolf Snake, 4 Oldham's Snakes, 4 Herald Snakes, 2 Rhomb-marked Snakes, 2 African Sand Snakes, 2 Kirtland's Tree Snakes, 5 Boomslang, 1 Black-necked Cobra, 1 Night Viper, 1 Reinhardt's Mole Viper, 16 Bordered Sedge Frogs, 1 Bocage's Tree Frog, *Pseudocreobotea wahlbergi*, 2 Leaf Mantids, 3 *Tapesia griseus*, 1 Cockroach, 1 Solifugid, 4 *Enyaliopsis* sp., 15 *Anthia* sp., 20 Chafers, 2 *Batrachotetrix* sp.

Forbes, Mrs E., 1 Red-faced Lovebird
 Foster, Mrs R. M., 1 American Catfish, 3 Angel fish, 3 Platies
 Fox, Professor H. Munro, 1 Connemara Sucker
 Fox, M. R. C., 1 Red-footed Squirrel

Gale, G., 1 Tinsel Barb
 Galvin, Mrs, *Leptophyes punctatissima*
 Garner, Mrs L., 1 Grass Snake
 Gates, The Reverend R., 1 Green Fruit Pigeon, 1 Broad-fronted Crocodile
 Gemmel, Mrs, 1 Canary
 Gibbs, T. H., 1 *Brachypelma vagans*
 Gill, W. H., 1 Rufous-necked Weaver Bird

- Gorham, S. W., 2 Painted Terrapins, 3 Red-bellied Snakes, 1 Chicken Snake,
5 Green Newts, 4 Dusky Salamanders, 8 Two-lined Salamanders, 2
American Spotted Salamanders, 8 American Toads, 11 Spring Peepers,
6 Common American Tree Frogs, 8 Swamp Tree Frogs, 2 American Bull
Frogs, 1 Pickerel Frog, 1 Spring Frog, 3 Eastern Wood Frogs, 1 Mink Frog
- Granada/Zoological Society Television and Film Unit, The, 1 European
Hedgehog, 2 European Hares
- Grant, Mrs, 1 Vervet Monkey
- Green, P. C., 1 Monteiro's Galago
- Greenwood, J. R., 1 European Badger
- Gregson, G., *Anacridium aegyptium*
- Griffiths, A. V., 5 Baikal Teal, 7 Falcated Teal
- Haddow, Dr A. J., c.m.z.s., 1 Abyssinian Spotted Eagle Owl, 1 Black-and-
white Casqued Hornbill
- Halliday, L., 2 Bushy-tailed Dormice
- Hanson, R., 1 British Blue Titmouse
- Hardwick, Mrs, 1 European Hedgehog
- Harris, M., 2 British Goldfinches, 1 Crimson Finch, 1 Napoleon Weaver Bird
- Hawke, E. H., 3 Eastern Little Purple-banded Sunbirds, 2 White-bellied
Sunbirds, 1 Kirk's Amethyst Sunbird, 2 Scarlet-breasted Sunbirds, 3 South
African Olive Sunbirds
- Haynes, B. B., 1 Smooth Snake
- Hedges, D. R., 1 Little Owl
- Henderson, H., 1 Isabelline Sun Squirrel
- Hill, H., 1 Green Monkey
- Hill, Mr, 1 Cameroons Bushy-tailed Dormouse
- Holden, J., 1 Lesser Shrew
- Hoogstraal, Dr Harry, 3 Libyan Striped Weasels
- Hooper, Mrs B., 1 Jackson's Chameleon, 1 Sundevall's Skink
- Hopkins, Peter, 2 Iberian Grass Snakes, 1 Viperine Snake, 1 Stag Beetle
- Horsham, Ronald J. E., 4 Black-footed Penguins
- Howard, Mrs A., 1 Greek Tortoise
- Hurst, Alexander, 1 Rabbit (albino)
- Ibbotson, Mrs R., 8 Smooth Clawed-Toads
- Ionides, C. J. P., c.m.z.s., 2 Storm's Water Cobras
- Jackson, Miss F., 1 Greek Tortoise
- Jeffery, S. E., 1 Tench
- Johnstone, Mrs P., 2 Spectacled Cayman
- Jones, Mrs Ray, 1 Budgerigar
- Jones, Terry, 1 Stoat
- Kenny, J. S., 7 Scorpion Mud Terrapins, 4 Rough Terrapins, 1 Brazilian
Tortoise, 1 Spix's Terrapin, 3 Spectacled Cayman, 3 Marbled Syrclop
Lizards, 1 Cooke's Tree Boa, 1 Emperor Boa, 3 Three-lined Snakes
- Kinsey, Eric C., 2 Varied Thrushes

- Leakey, Dr L. S. B., c.m.z.s., 1 Gaboon Viper, 1 Nose-horned Viper
 Leckford Estates Limited, The, 1 Elliot's Pheasant, 1 Mikado Pheasant
 Lee, H., 1 *Torania variata*
 Lindsey, Dr Edwin, 1 Kenya Vitelline Weaver Bird, 1 Red-headed Weaver
 Bird
 Lissman, Dr H. W., 1 Mississippi Alligator
- MacCallum, Mrs J. B., 1 Rufous-necked Weaver Bird
 McDermott, Miss C. A., 2 *Paratenodera* sp.
 Macoun, Brian, 2 Jackson's Chameleons
 Maidment, F. H., 1 European Pond Tortoise
 Marshall, Master Albert, 1 Adder
 Miller, J., 13 Rockling, 5 Butterfish, 3 Two-spotted Sucker Fish, 1 Pipe fish,
 2 Yellow Gurnards, 3 Corkwing Wrasse, 1 Bass, 6 Plaice, 9 Sole, 5 Spider
 Crabs, 1 Hermit Crab, Cuttlefish eggs
 Montague, T., 1 Marbled Cichlid
 Moore, N. H. D., 1 Many-coloured Ground Finch, 1 Black Tanager, 1 Golden-
 bellied Grosbeak, 1 Black-headed Siskin
 Morris, Master David, 1 European Hedgehog
 Mount, Mrs E., 2 Saffron Finches
- Newmark, G. H., 1 Chinese Painted Quail, 2 Southern White-breasted
 Crakes, 1 White-browed Bulbul, 1 White-capped Redstart, 1 Yellow-
 checked Titmouse, 2 Red-crested Finches, 2 Nonpareil Buntings, 1 Golden-
 bellied Grosbeak, 1 Crimson Finch
 Newmark, J. R., 1 Uganda Green Pigeon, 1 Red-breasted Fruit Crow, 1
 Formosan Black Bulbul, 1 Purple Sunbird, 1 Golden-winged Sunbird,
 1 Virginian Cardinal, 2 Rainbow Buntings, 1 Cuban Finch, 2 Dufresne's
 Waxbills, 2 Ethiopian Yellow-bellied Waxbills, 2 Diamond Sparrows,
 12 European Tree Frogs
 New Zealand, The Government of, 1 Mantell's Kiwi
 North, R., 2 Red-faced Lovebirds
 Northover, J., 2 Chimpanzees
 Nosworthy, Miss Christine, 1 Common Lizard
- Osmundson, Malcolm, 1 Orange-cheeked Waxbill, 1 Crimson-eared Waxbill,
 1 Lavender Finch, 2 Nutmeg Finches
 Oxford, Miss J. and Hooper, Mrs B., 1 *Nephila*, 20 Millepedes, various Lepi-
 doptera and Coleoptera, Mantids and Mantid egg capsules
- Payne, E. M., 1 Humboldt's Woolly Monkey
 Pengelly, Mrs, 1 Zebra Finch
 Peppiatt, G. C., 1 Water Rail
 Phillips, J., 3 Pike Cichlids, 11 Orange Chromides
 Powell, R. J., 3 Elegant Terrapins
 Prestwich, A. A., 1 Bronze-winged Pigeon, 1 Cactus Conure, 1 Golden-winged
 Parrakeet
 Price, C. J., 1 Banded Mongoose
 Purnell, J. S., 2 Red-beaked Weaver Birds
- Quincey, Captain R. S. de Q., 1 Common Babbler

- Randau, G., 2 Red-throated Sapphire Humming Birds
 Read, E. C., 1 *Anacridium aegyptium*, 3 *Argiope trifasciata*, 3 Ant Lions, 2 *Araneus citricolor*, Spider cocoons, Larvae of *Saturnia pavonia*, 1 Pupa of Psychid moth, 1 Tettigoniid grasshopper
 Redston, J. E., 1 Golden-fronted Fruitsucker
 Reed, Mrs R. W., 1 White-crowned Mangabey
 Reilly, P. J., 1 Pig-tailed Monkey
 Rex, Mrs G. M., 1 Humboldt's Woolly Monkey
 Roberts, John, 1 Manx Shearwater
 Robinson, Dr D. L. H., 1 Guinea Baboon, 1 Drill
 Roche, Miss, 2 Goldfish
 Rose, H. E., Centipede *Scolopendra morsitans*
 Royal College of Nursing, The, 12 Rainbow Trout
 Royal Engineers, 12th Independent Field Squadron, and Fiji Military Forces, 17 *Cardisoma carnifex*, 12 *Coenobita rugosa*
 Royal Society for the Prevention of Cruelty to Animals, The, 1 Olive Baboon
 Ruxton, Miss D., 2 Greek Tortoises
- St Mary's Hospital Medical School, 1 Pygmy Chameleon
 Scales, Dr J. T., 1 European Hare
 Scott, Dr E., 2 *Heteropoda venatoria*, 2 *Periplaneta australasiae*
 Scott, Miss R., 1 *Phoneutria fera* and cocoon
 Searle, Dr K. C., c.m.z.s., 1 Leopard, 1 Clouded Leopard, 1 Raccoon-like Dog, 2 Yellow-throated Martens, 1 Finlayson's Squirrel, 1 Prevost's Squirrel, 2 Eastern Spot-billed Ducks, 2 Baikal Teal, 3 Falcated Teal, 1 Great Barbet, 1 Mongolian Lark, 1 Japanese Waxwing, 1 Eastern Lesser Scimitar Babbler, 1 Grey Thrush, 2 Lesser Black-tailed Hawfinches, 1 Silky Starling
 Seccombe, George D., 1 Kenya Blotched Genet
 Shephard, Mrs, 1 Gouldian Finch
 Simper, Master T., 1 Basilisk Chameleon
 Simpkins, R., 3 American Sunfish
 Sing, Mrs F., 1 Rhesus Monkey
 Smith, C. H., 1 Black-headed Plover
 Smith, Mr Dunmore-, Yugoslav Spiders
 Smith, Mrs E. B. Hall-, 1 Festive Tanager
 Smith, Master W. H., 2 *Copris lunaris*
 Snow, Mrs G. E., 1 Squirrel Monkey
 South Australian Zoological & Acclimatization Society, The, 3 Red Kangaroos
 Squires, Mr, 1 Water Vole (part albino)
 Staner, Monsieur P., 2 Black-casqued Hornbills
 Stell, Mrs C. I., 1 European Tree Frog
 Stephenson, J. W., 2 Roofed Terrapins
 Store, Mrs Y. A., 1 Hooded Skunk
 Sweetland, Mrs, 1 Quaker Parrakeet
- Tabelin, A., 3 Paradise Fish
 Taplin, Mrs T. C., 1 Vervet Monkey
 Teagle, W. G., 1 British Tawny Owl

- 1 Llama
- 1 Alpaca

- 1 Short-tailed Wallaby

Birds

- 7 Black-footed Penguins
- 2 Cormorants
- 1 African Cattle Egret (1)
- 2 Cereopsis Geese
- 1 Upland Goose
- 1 Australian Grey Duck
- 2 Temminck's Tragopans
- 1 Impeyan Pheasant
- 5 Black-breasted Kalij Pheasants
- 2 Hybrid White-crested × Black-breasted Kalij Pheasants
- 6 Swinhoe's Pheasants (2)
- 1 Ceylon Jungle Fowl
- 3 Sonnerat's Jungle Fowl
- 3 Reeve's Pheasants
- 1 Lady Amherst's Pheasant
- 6 Common Peafowl
- 1 Black-winged Peafowl
- 3 Gough Island Moorhens
- 1 Herring Gull
- 1 Hybrid Herring × Lesser Black-backed Gull

- 5 Great Black-backed Gulls (1)
- 2 Silver Gulls
- 2 Collared Turtle Doves
- 2 Crested Pigeons
- 1 Greater Sulphur-crested Cockatoo
- 3 Cockatiels (1)
- 2 Quaker Parrakeets (1)
- 1 Guiana Parrotlet
- 5 Rosy-faced Lovebirds (3)
- 1 Masked Lovebird (Green)
- 10 Masked Lovebirds (Blue bred green)
- 2 Masked Lovebirds (Blue variety)
- 6 Greenfinches
- 6 Zebra Finches
- 1 Malayan Glossy Starling
- 2 Superb Glossy Starlings

APPENDIX VI

LIST OF ANIMALS RECEIVED AT REGENT'S PARK

(Presented, Purchased, Received in Exchange, Born or Deposited in the Menagerie)

Mammals

Order Primates

- 6 Chimpanzees
- 1 Mona Monkey
- 1 Green Monkey
- 2 Vervet Monkeys
- 3 Patas Monkeys
- 1 White-crowned Mangabey
- 1 Crab-eating Monkey
- 1 Rhesus Monkey
- 1 Pig-tailed Monkey
- 3 Guinea Baboons
- 1 Olive Baboon
- 1 Mandrill

- 3 Drills
- 1 Azara's Douroucoulis
- 2 Feline Douroucoulis
- 1 Squirrel Monkey
- 1 White-throated Capuchin Monkey
- 4 Humboldt's Woolly Monkeys
- 1 Marmoset
- 1 Black-pencilled Marmoset
- 4 Pinché Marmosets
- 2 Senegal Galagoes
- 1 Monteiro's Galago
- 1 Malay Tree Shrew

Order Insectivora

- 5 European Hedgehogs
- 1 Algerian Hedgehog
- 1 Lesser Shrew

- 3 Variegated Agoutis
- 6 Chinchillas
- 3 Pampas Cavies
- 4 Capybaras

Order Carnivora

- 1 Leopard
- 2 Chinese Leopards
- 1 Snow Leopard
- 1 Clouded Leopard
- 1 Ocelot
- 2 Margays
- 2 Cheetahs
- 1 African Civet
- 3 Kenya Blotched Genets
- 2 Malayan Palm Civets
- 1 Banded Mongoose
- 1 Brown Hyaena
- 1 Paraguayan Fox
- 2 Maned Wolves
- 1 Raccoon-like Dog
- 1 Indian Otter
- 1 Stoat
- 2 Yellow-throated Martens
- 2 Wolverines
- 1 European Badger
- 3 Libyan Striped Weasels
- 1 White-naped Weasel
- 1 Hooded Skunk
- 1 Raccoon
- 4 Paraguayan Ring-tailed Coatis
- 1 Giant Panda
- 2 Syrian Bears

Order Lagomorpha

- 5 European Hares

Order Artiodactyla

- 1 Big-horned Sheep
- 5 Four-horned Sheep
- 7 Mouflon
- 2 Marco Polo's Sheep
- 11 Barbary Wild Sheep
- 1 White-bearded Gnu
- 1 Grey Duiker
- 1 Impala
- 2 Saiga Antelopes
- 1 Blackbuck
- 1 Marica Gazelle
- 1 Giraffe
- 1 Hog Deer
- 1 Elk (Moose)
- 1 Llama
- 1 Alpaca

Order Edentata

- 4 Nine-banded Armadillos
- 4 Seven-banded Armadillos
- 1 Six-banded Armadillo
- 2 La Plata Three-banded Armadillos

Order Pinnipedia

- 1 Californian Sea Lion

Order Marsupialia

- 3 Red Kangaroos
- 1 Short-tailed Wallaby

Order Rodentia

- 1 Red-footed Squirrel
- 1 Isabelline Sun Squirrel
- 1 Finlayson's Squirrel
- 1 Prevost's Squirrel
- 2 Bushy-tailed Dormice
- 1 Cameroons Bushy-tailed Dormouse
- 1 Golden Hamster
- 2 Arabian Spiny Mice
- 2 North African Field Mice
- 5 Lesser Egyptian Gerbils
- 1 Water Vole (part albino)
- 1 Great Cane Rat

Domestic Animals

- 5 Dingoes
- 92 Guinea Pigs
- (Guinea Pig × Pig-like Cavy) ♂
- 1 Hybrid Pampas Cavy ♀
- 1 Rabbit
- 1 Guernsey Calf
- 1 Dexter Calf
- 1 Hybrid Dexter × Guernsey Calf
- 12 Goats
- 3 Tamworth Red Pigs

Birds

Order Apterygiformes

- 1 Mantell's Kiwi

Order Sphenisciformes

- 11 Black-footed Penguins

Order Procellariiformes

- 1 Manx Shearwater

Order Pelecaniformes

- 2 Cormorants

Order Ciconiiformes

- 1 African Cattle Egret
- 1 Bittern

Order Anseriformes

- 2 Cereopsis Geese
- 2 Bar-headed Geese
- 1 Upland Goose
- 2 Ashy-headed Geese
- 22 White-faced Tree Ducks
- 2 Eastern Spot-billed Ducks
- 1 Australian Grey Duck
- 6 Yellow-billed Ducks
- 7 Baikal Teal
- 10 Falcated Teal
- 6 Red-billed Pintails

Order Falconiformes

- 1 Kestrel
- 1 American Kestrel

Order Galliformes

- 4 White-crested Guans
- 2 Chinese Painted Quail
- 2 Temminck's Tragopans
- 1 Impeyan Pheasant
- 1 Pallas's Eared Pheasant
- 2 Hybrid White-crested × Black-breasted Kalij Pheasants
- 5 Black-breasted Kalij Pheasants
- 6 Swinhoe's Pheasants
- 1 Edwards's Pheasant
- 1 Ceylon Jungle Fowl

- 3 Sonnerat's Jungle Fowl

- 3 Common Pheasants

- 1 Ring-necked Pheasant

- 3 Reeves's Pheasants

- 1 Elliot's Pheasant

- 2 Mikado Pheasants

- 1 Lady Amherst's Pheasant

- 7 Common Peafowl

- 1 Black-winged Peafowl

- 3 Grey-breasted Helmet Guinea-fowl

Order Gruiformes

- 2 Water Rails

- 2 Southern White-breasted Crakes

- 3 Gough Island Moorhens

- 1 Crested Cariama

Order Charadriiformes

- 1 Black-headed Plover

- 1 Ringed Plover

- 1 Herring Gull

- 1 Hybrid Herring × Lesser Black-backed Gull

- 5 Great Black-backed Gulls

- 2 Silver Gulls

Order Columbiformes

- 1 Green Fruit Pigeon

- 1 Uganda Green Pigeon

- 3 Speckled Pigeons

- 2 Collared Turtle Doves

- 1 Bronze-winged Pigeon

- 2 Crested Pigeons

Order Psittaciformes

- 1 Greater Sulphur-crested Cockatoo

- 1 Greater White-crested Cockatoo

- 4 Cockatiels

- 1 Yellow-cheeked Conure

- 1 Cactus Conure

- 3 Quaker Parrakeets

- 2 Golden-fronted Parrakeets

- 1 Guiana Parrotlet

- 2 Canary-winged Parrakeets

- 1 Golden-winged Parrakeet

- 2 Maximilian's Parrots
- 1 Cuban Parrot
- 2 Ruppell's Parrots
- 2 Grey Parrots
- 3 Red-faced Lovebirds
- 5 Rosy-faced Lovebirds
- 1 Masked Lovebird (Green)
- 10 Masked Lovebirds (Blue-bred Green)
- 2 Masked Lovebirds (Blue variety)

Order Strigiformes

- 1 Magellan Eagle Owl
- 1 Abyssinian Spotted Eagle Owl
- 1 Little Owl
- 1 British Tawny Owl
- 1 Short-eared Owl

Order Apodiformes

- 1 Brazilian Swallow-tailed Humming Bird
- 1 Pied Jacobin Humming Bird
- 4 Frilled Coquette Humming Birds
- 9 Blue-breasted Humming Birds
- 10 Brazilian Wood Nymph Humming Birds
- 2 Red-throated Sapphire Humming Birds
- 1 White-throated Humming Bird
- 1 Short-billed Emerald Humming Bird
- 1 Lesson's Emerald Humming Bird
- 1 Sombre Humming Bird
- 5 Brazilian Ruby Humming Birds
- 1 Amethyst Humming Bird

Order Coraciiformes

- 1 Black-and-white Casqued Hornbill
- 2 Black-casqued Hornbills

Order Piciformes

- 1 Great Barbet

Order Passeriformes

- 1 Red-breasted Fruit Crow
- 1 Lesser Short-toed Lark
- 1 Mongolian Lark
- 1 White-browed Bulbul
- 1 Formosan Black Bulbul
- 1 Golden-fronted Fruitsucker
- 1 Japanese Waxwing
- 1 Common Babbler
- 1 Eastern Lesser Scimitar Babbler
- 1 Himalayan Ruby-Throat
- 1 White-capped Redstart
- 2 Varied Thrushes
- 1 Grey Thrush
- 1 British Blue Titmouse
- 1 Yellow-cheeked Titmouse
- 1 Purple Sunbird
- 1 Golden-winged Sunbird
- 3 Eastern Little Purple-banded Sunbirds
- 2 White-bellied Sunbirds
- 1 Kirk's Amethyst Sunbird
- 2 Scarlet-breasted Sunbirds
- 3 South African Olive Sunbirds
- 1 Yellow Bunting
- 1 Virginian Cardinal
- 1 Many-coloured Ground Finch
- 2 Saffron Finches
- 2 Red-crested Finches
- 2 Nonpareil Buntings
- 2 Rainbow Buntings
- 1 Black Tanager
- 1 Festive Tanager
- 2 Lesser Black-tailed Hawfinches
- 2 Golden-bellied Grosbeaks
- 1 British Chaffinch
- 1 Brambling
- 6 Greenfinches
- 2 British Goldfinches
- 1 Black-headed Siskin
- 2 Linnets
- 1 Cuban Finch
- 2 Dufresne's Waxbills
- 2 Ethiopian Yellow-bellied Waxbills
- 1 Orange-checked Waxbill
- 1 Crimson-eared Waxbill
- 1 Lavender Finch
- 2 Nutmeg Finches
- 7 Zebra Finches
- 1 Gouldian Finch
- 2 Diamond Sparrows
- 2 Crimson Finches
- 3 Rufous-necked Weaver Birds
- 1 Kenya Vitelline Weaver Bird

- 2 Red-beaked Weaver Birds
- 1 Red-headed Weaver Bird
- 1 Napoleon Weaver Bird
- 1 Paradise Whydah Bird
- 1 Silky Starling
- 1 Malayan Glossy Starling
- 2 Superb Glossy Starlings

Domestic

- 5 Barbary Turtle Doves
- 111 Budgerigars
- 8 Canaries

Reptiles

Order Testudines

- 1 Pennsylvanian Mud Terrapin
- 7 Scorpion Mud Terrapins
- 2 Roofed Terrapins
- 3 Painted Terrapins
- 1 Southern Painted Terrapin
- 2 Serrated Terrapins
- 1 Troost's Terrapin
- 3 Elegant Terrapins
- 3 Ornate Terrapins
- 1 Florida Terrapin
- 1 Erie Map Terrapin
- 1 European Pond Tortoise
- 6 Carolina Box Tortoises
- 4 Rough Terrapins
- 16 Bell's Hinged Tortoises
- 18 Greek Tortoises
 - 1 Bowsprit Tortoise
 - 1 Brazilian Tortoise
 - 1 Blackish Terrapin
 - 2 Helmeted Terrapins
 - 1 Matamata Terrapin
 - 2 St Hilaire's Terrapins
 - 1 Spix's Terrapin
- 2 Bridled Soft-shelled Turtles

Order Crocodilia

- 2 African Long-nosed Crocodiles
- 1 Nile Crocodile
- 1 Cuban Crocodile
- 1 Broad-fronted Crocodile
- 2 Mississippi Alligators
- 2 Broad-snouted Cayman
- 6 Spectacled Cayman

Order Sauria

- 4 Moreau's Geckoes
- 2 Moorish Geckoes
- 3 Marbled Syrclop Lizards
- 1 Iguana
- 1 Margouillat Lizard

- 4 Black-necked Agama Lizards
- 3 Bearded Lizards
- 3 Lesueur's Water Lizards
- 1 Frilled Lizard
- 2 Bell's Dabb Lizards
- 1 Basilisk Chameleon
- 31 Flap-necked Chameleons
- 6 Fischer's Chameleons
- 3 Jackson's Chameleons
- 4 Pygmy Chameleons
- 42 Meller's Chameleons
 - 1 East African Pygmy Chameleon
- 3 Northern Blue-tongued Skinks
 - 1 Five-lined Skink
 - 1 Red-and-black Skink
 - 1 Sundevall's Skink
- 2 Algerian Skinks
- 2 Robust Plated Lizards
- 1 Ornate Scrub Lizard
- 6 Sand Lizards
 - 1 Green Lizard
 - 1 Common Lizard
 - 1 Great Tegu

Order Serpentes

- 1 Schlegel's Blind Snake
- 2 Variable Blind Snakes
- 1 Banded Rock Python
- 1 African Python
- 2 Indian Pythons
- 1 Indian Python (albino)
- 1 Royal Python
- 1 Rainbow Boa
- 1 Cooke's Tree Boa
- 1 Anaconda
- 3 Boa Constrictors
- 1 Emperor Boa
- 1 Grass Snake
- 2 Iberian Grass Snakes
- 1 Viperine Snake
- 3 Red-bellied Snakes
- 7 African Lined Snakes
- 1 Cape Wolf Snake

- | | |
|--------------------------|--|
| 2 Corais Snakes | 6 Egyptian Cobras |
| 7 Four-lined Snakes | 1 Black-necked Cobra |
| 1 Chicken Snake | 1 Common Green Mamba |
| 1 Red Racer | 3 Night Vipers |
| 1 Bull Snake | 1 Adder |
| 9 Oldham's Snakes | 2 Puff Adders |
| 1 Smooth Snake | 1 Gaboon Viper |
| 1 King Snake | 1 Nose-horned Viper |
| 3 Three-lined Snakes | 1 Reinhardt's Mole Viper |
| 1 Egg-eating Snake | 3 Cotton-mouth Moccasins |
| 7 Herald Snakes | 1 Copperhead |
| 2 Rhomb-marked Snakes | 3 Pygmy Rattlesnakes |
| 2 African Sand Snakes | 3 Western Diamond-back
Rattlesnakes |
| 5 Kirtland's Tree Snakes | 1 Eastern Diamond-back
Rattlesnake |
| 6 Boomslang | |
| 2 Storm's Water Cobras | |

Amphibians

- | | |
|--------------------------------|------------------------------|
| Order Caudata | 3 Giant Toads |
| 5 Green Newts | 15 European Tree Frogs |
| 1 Spotted Salamander | 11 Spring Peepers |
| 4 Dusky Salamanders | 7 Common American Tree Frogs |
| 8 Two-lined Salamanders | 8 Swamp Tree Frogs |
| 2 American Spotted Salamanders | 2 Edible Frogs |
| | 2 American Bull Frogs |
| Order Salientia | 1 Pickerel Frog |
| 8 Smooth Clawed-Toad | 1 Spring Frog |
| 1 Natterjack Toad | 3 Wood Frogs |
| 8 American Toads | 1 Mink Frog |
| | 16 Bordered Sedge Frogs |
| | 1 Bocage's Tree Frog |

APPENDIX VII

LIST OF DONORS OF ANIMALS TO WHIPSNADDE PARK

- Air India International, 1 Lion
- Banks, M., 1 European Hare
- Bromborough Estates Limited, The, 2 Tamworth Red Pigs
- Child, Mrs, 1 Common Pheasant (dark variety), 1 Golden Pheasant
- Ferber, Mrs, 1 Blue-fronted Parrot
- Gigg, O., 1 European Hare
- Hutton, Mrs D., 1 Greek Tortoise
- Jannis, Mrs, 1 European Hare
- Lawton, Mrs M., 11 Greek Tortoises

- Pearson, R. G., 2 Cockatiels
 Riley, J. J., 1 Greek Tortoise
 Smith, Mrs, 3 Woolly Monkeys
 Tanner, Mrs A. L., 2 Domestic Cats (Siamese), 1 Dexter Ox
 Turnbull, Mrs Vair-, 1 Southern Hill Myna
 Whiting, R., 1 Bushy-tailed Galago
 Williams, Mr, 2 Greek Tortoises
 Woodley, Mr, 1 Ring-necked Pheasant
 Wools, P., 1 Pygmy Marmoset

APPENDIX VIII

LIST OF ANIMALS (EXCLUDING DOMESTIC VARIETIES) BORN AT WHIPSNAD PARK

(The figure in brackets following an item indicates the number which have died)

Mammals

- | | |
|----------------------------|--------------------------|
| 5 Rhesus Monkeys (2) | 2 East African Eland (2) |
| 8 Timber Wolves | 7 Nylghaie (2) |
| 7 Brown Bears | 6 Fallow Deer (1) |
| 1 Prairie Marmot | 1 Sambar Deer |
| 5 Alpine Marmots | 1 Swamp Deer |
| 1 Crested Porcupine | 3 Sika Deer (3) |
| 1 Patagonian Cavy (1) | 10 Formosan Deer (2) |
| 1 Brazilian Tapir | 13 Red Deer (3) |
| 3 Yak (1) | 4 Wapiti Deer (1) |
| 2 North American Bison (1) | 4 Père David's Deer |
| 5 Mouflon | 7 Chinese Water Deer |
| 2 Blesbok | 2 Bactrian Camels (1) |
| 2 White-tailed Gnus (1) | 8 Llamas (2) |
| 3 White-bearded Gnus (1) | 3 Collared Peccaries |
| 1 Northern Waterbuck | 1 Hippopotamus |
| 4 Thomson's Gazelles (1) | 50 Bennett's Wallabies |

Birds

- | | |
|------------------------|---------------------------------|
| 1 Black-footed Penguin | 6 South African Sheld-Ducks (1) |
| 1 Humboldt's Penguin | 1 Carolina Duck |
| 1 Whooper Swan | 9 Common Pheasants |
| 2 Black-necked Swans | 3 Golden Pheasants |
| 6 Greater Snow Geese | 23 Common Peafowl |
| 2 Blue Snow Geese (1) | 16 North American Turkeys |
| 1 Barnacle Goose | 3 Yellow-headed Conures |
| 11 Canada Geese | 2 Barraband's Parrakeets |
| 10 Red-breasted Geese | 2 Fischer's Lovebirds |
| 6 Upland Geese | 3 Masked Lovebirds |
| 2 Egyptian Geese | 5 Red-rumped Parrakeets |

APPENDIX IX

LIST OF ANIMALS RECEIVED AT WHIPSNADDE PARK

(Presented, Purchased, Received in Exchange, Born or Deposited in the Park)

Mammals

Order Primates

- 5 Rhesus Monkeys
- 4 Woolly Monkeys
- 1 Pygmy Marmoset
- 1 Bushy-tailed Galago
- 2 Peters' Bushy-tailed Galagoes

Order Carnivora

- 1 Lion
- 1 Leopard
- 2 Snow Leopards
- 1 Northern Lynx
- 8 Timber Wolves
- 2 Raccoon-like Dogs
- 7 Brown Bears

Order Rodentia

- 1 Prairie Marmot
- 5 Alpine Marmots
- 1 Crested Porcupine
- 5 Patagonian Cavies

Order Lagomorpha

- 1 European Hare

Order Perissodactyla

- 1 Brazilian Tapir

Order Artiodactyla

- 3 Yak
- 2 North American Bison

- 5 Mouflon
- 2 Blesbok
- 2 White-tailed Gnus
- 3 White-bearded Gnus
- 1 Northern Waterbuck
- 4 Thomson's Gazelles
- 2 East African Eland
- 7 Nylghaie
- 6 Fallow Deer
- 1 Sambar Deer
- 1 Swamp Deer
- 3 Sika Deer
- 10 Formosan Deer
- 13 Red Deer
- 4 Wapiti Deer
- 4 Père David's Deer
- 2 White-tailed Deer
- 2 Elk (Moose)
- 7 Chinese Water Deer
- 2 Bactrian Camels
- 8 Llamas
- 3 Collared Peccaries
- 1 Hippopotamus

Order Marsupialia

- 50 Bennett's Wallabies

Domestic

- 2 Domestic Cats (Siamese)
- 2 Chartley Cattle
- 4 Ankole Cattle
- 1 Dexter Ox
- 2 Tamworth Red Pigs

Birds

Order Casuariiformes

- 4 Emus

Order Sphenisciformes

- 1 Black-footed Penguin
- 1 Humboldt's Penguin

Order Ciconiiformes

- 43 Rosy Flamingoes

Order Anseriformes

- 2 Crested Screamers
 1 Whooper Swan
 2 Black-necked Swans
 6 Greater Snow Geese
 2 Blue Snow Geese
 4 Dark-breasted Brent Geese
 1 Barnacle Goose
 11 Canada Geese
 10 Red-breasted Geese
 2 Hawaiian Geese
 6 Upland Geese
 2 Egyptian Geese
 6 South African Sheld-Ducks
 3 Yellow-billed Ducks
 4 Red-billed Ducks
 1 Carolina Duck
 1 Mandarin Duck

Order Galliformes

- 4 Impeyan Pheasants
 10 Common Pheasants

Order Testudines

- 15 Greek Tortoises

- 6 Golden Pheasants
 29 Common Peafowl
 5 Black-winged Peafowl
 16 North American Turkeys

Order Gruiformes

- 2 Demoiselle Cranes
 2 Great Bustards

Order Psittaciformes

- 2 Cockatiels
 3 Yellow-headed Conures
 1 Dufresne's Parrot
 1 Blue-fronted Parrot
 2 Brown-headed Parrots
 2 Barraband's Parrakeets
 2 Fischer's Lovebirds
 3 Masked Lovebirds
 5 Red-rumped Parrakeets

Order Passeriformes

- 1 Southern Hill Myna
 2 Spanish Blue Magpies

Reptiles

APPENDIX X

DONATIONS TO ZOOLOGICAL RECORD

received during 1958

	£	s.	d.
American Entomological Society for Vol. 93	8	16	1
" " " for Vol. 94	8	16	7
American Museum of Natural History	177	1	7
American Society of Ichthyologists and Herpetologists	44	14	4
American Society of Mammologists	35	9	3
Anonymous	100	0	0
Auckland Institute and Museum	3	0	0
Bombay Natural History Society for Vol. 93	5	0	0
" " " " for Vol. 94	5	0	0
British Museum (Natural History)	450	0	0
British Ornithologists' Club	5	5	0
British Ornithologists' Union	15	15	0
British Trust for Ornithology for Vol. 93	2	0	0
" " " " for Vol. 94	2	0	0
Brooklyn Entomological Society for Vol. 92	3	10	4
" " " " for Vol. 93	3	10	0
California Academy of Sciences for Vol. 92	10	0	0
" " " " for Vol. 93	10	0	0
Chace, Dr F. A.	8	15	0
Challenger Society for Vol. 94	5	5	0
" " for Vol. 95	5	5	0
Chicago Natural History Museum	17	13	8
Conchological Society of Great Britain	2	0	0
Darlington, P. J. Junior	6	8	
Duke University, Department of Zoology	17	12	1
Entomological Society of America	36	9	2
Geological Society of London for Vol. 93	15	0	0
" " " " for Vol. 94	15	0	0
International Council of Scientific Unions	571	8	7
Kennicott Club of Chicago	8	15	10
Linnean Society of London for Vol. 93	15	0	0
" " " " for Vol. 94	15	0	0
Linnean Society of New South Wales for Vol. 93	11	19	1
" " " " " " for Vol. 94	11	19	0
Liverpool School of Tropical Medicine	3	3	0
London School of Hygiene and Tropical Medicine for Vol. 93	2	2	0
" " " " " " " for Vol. 94	2	2	0

Malacological Society of London for Vol. 93	.	.	.	.	.	2	2	0
" " " " for Vol. 94	.	.	.	.	.	2	2	0
Marine Biological Association of the United Kingdom	.	.	.	.	.	5	10	0
Michigan, University of	.	.	.	.	.	35	9	3
Naples Zoological Station	.	.	.	.	.	10	0	0
New York Entomological Society for Vol. 93	.	.	.	.	.	17	13	4
" " " " for Vol. 94	.	.	.	.	.	17	13	4
New York Zoological Society for Vol. 93	.	.	.	.	.	35	8	0
" " " " for Vol. 94	.	.	.	.	.	35	7	11
Palaeontological Society	.	.	.	.	.	17	13	8
Royal Entomological Society of London	.	.	.	.	.	25	0	0
Royal Society of Tropical Medicine and Hygiene for Vol. 92	.	.	.	.	.	5	5	0
" " " " " " " " for Vol. 93	.	.	.	.	.	5	5	0
Smithsonian Institution of Washington for Vol. 92	.	.	.	.	.	35	8	0
" " " " " " " " for Vol. 93	.	.	.	.	.	35	7	11
Society of Systematic Zoology	.	.	.	.	.	1	13	9
Transvaal Museum for Vol. 93	.	.	.	.	.	5	0	0
" " for Vol. 94	.	.	.	.	.	5	0	0
Wellcome Research Institution for Vol. 93	.	.	.	.	.	17	10	0
" " " " for Vol. 94	.	.	.	.	.	17	10	0
						£1,986 13 5		

APPENDIX XI

BOOKS PRESENTED TO THE LIBRARY

The following were presented to the Library during the year:—

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- | | | |
|------------|--------------------|----------|
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APPENDIX XII

FUTURE POLICY ON THE ACQUISITION OF
RARE ANIMALS

(Referred to on page 8)

1. With the help of its Collections Policy Committee the Council of the Zoological Society has been considering policy regarding the keeping of rare animals, bearing in mind the Society's purpose as defined in its Charter. A central problem is the extent to which it is proper for the Society to receive rare animals that are, or may shortly be, facing extinction. This issue will become increasingly urgent as more species are affected by the rapidly growing pressures of human populations in those parts of the world that still remain in an undeveloped state.

2. Policy on this subject should harmonise with the aims and objects of the Society as defined in its Charter, by the terms of which the Society was incorporated "for the purpose of the advancement of zoology and animal physiology and the introduction of new and curious subjects of the animal kingdom".

3. A distinction must be drawn between the Society's zoological collections (at Regent's Park and Whipsnade Park) and some other 'zoos' in this country, which are mainly commercial undertakings catering for the public's perennial interest in wild animals of all kinds, but without any legal or moral obligations to zoology as such. The Society, on the other hand, is by its Charter a non-commercial, scientific institution specifically founded to discharge such obligations. Its menageries are an essential and unique part of the instrument whereby it discharges its scientific and educational obligations.

4. During the course of its long life the Zoological Society has become an important public institution and has succeeded in holding a fair balance between the interests of scientific zoology on the one hand, and the promotion of a general cultural appreciation of animals by the public on the other. Its status as an educational charity is being increasingly justified by various new developments, including the institution of educational programmes in co-operation with the schools of the Greater London area. The valuable services which the Society provides to science and education are, however, essentially dependent upon an income derived from gate-receipts at Regent's Park and Whipsnade. Visitors naturally expect to be able to see and study there as varied a collection of animals as possible, and the high regard in which the public holds the Zoo is largely dependent upon its continued maintenance of a range of species which is without rival elsewhere.

5. With very rare animals, difficulties arise. It is certainly not conducive to "the advancement of zoology" for the Society to countenance collecting which will accelerate the extinction of a rare

species. On the other hand, when it is plain that nothing can be done to save a species, the Society clearly has an obligation to see that sufficient material is available for detailed studies of its behaviour, physiology and anatomy before the species is lost for ever. It is not easy to steer a course between these conflicting obligations.

6. Considered in relation to acquisition by zoos, rare animals fall into at least three different groups in relation to programmes of animal conservation:

- (a) Those species such as grazing herbivores that are not exacting in their dietary or climatic requirements and that could be expected to be established as self-perpetuating breeding units in semi-domesticated (*e.g.* parkland) conditions, or even in conditions of closer captivity.
- (b) Those species the populations of which lie wholly or almost within reserved territories or are otherwise strictly protected and can be acquired only from, or by leave of, the protecting power. Species in this group may fall also in (a) or (c), but the point of putting them into a separate class as well is that they are already protected.
- (c) Those species that, in the light of existing knowledge, are exacting in their requirements, do not respond successfully to captivity and have in the past, owing to uninformed methods, suffered a heavy death-rate in transit or have been captured only after wasteful slaughter.

7. Group (a) already contains a very few species which no longer exist in a wild state and which have been saved from extinction because breeding stocks had been established in captivity before the wild population died out, *e.g.* Père David's Deer and Przewalski's Horse.

In Group (b), the Okapi is perhaps the best known example. The Belgian Government recognises a responsibility for safeguarding the continued existence of this rare animal, and specimens are made available only occasionally, and then only to reputable scientific institutions. Other examples are the Tuatara, a reptile which is strictly protected by the New Zealand Government, the Hawaiian Goose and the Koala.

Rare animals that are properly protected under scientific control need present no problem to the Society, and specimens made available can obviously be accepted.

8. It is only species that fall into Group (c) that present any real difficulty. Fortunately legislation in many parts of the world is rapidly transferring animals from this category to category (b).

When such protective legislation becomes generally effective, the Society could pursue its scientific obligations without any fear of damaging wild stocks. In the meantime when rare animals come into the Society's keeping, it is not enough merely to provide conditions that will keep the animals fit for showing, or to take only such opportunities as may present themselves to study their biology and

physiology. Positive action should be taken to promote detailed studies from every possible angle. Such studies should primarily include, of course, the nature of the conditions which would enable Group (c) animals, *e.g.* the Orang-utan, to lead in captivity a sufficiently natural and healthy life for normal mating and the rearing of enough viable young to give rise to a captive stock.

9. The difficulty now facing the Society is due to two main reasons; first, that emphasis has been placed in the past mainly on the acquisition of exhibits and the anatomical use that can later be made of their dead bodies; and second, that until recently biological knowledge had not provided an adequate base for the experimental study of the behaviour and natural needs of the living animals. There is here a vast field for scientific work, and the Council intends that wherever possible attention should be directed, by means of special grants or otherwise, to the study of the conditions under which a sound breeding stock of threatened species can be maintained without raiding wild populations.

10. While carrying out the obligations imposed upon it by the Charter, the Society will strongly support the efforts of oversea governments and other bodies to safeguard the existence of disappearing species, and will recognise an obligation to do what it can towards this end within the limits of its normal functions. This it will do by the building up of breeding stocks; but in cases where successful breeding of an animal in captivity is unlikely, and where its capture is held to constitute a threat to the continued existence of that species, the Society will give public leadership in urging the importance of its protection.



Photo : " The Times ".

A pair of Black-necked Swans with their cygnets which were hatched at Whipsnade in August 1958.

The Brazilian Tapir " Jill " with her baby " Janette " born at Whipsnade on 5th November, 1958.

Photo : Fox Photos.





Photo : Fox Photos.

A Brown Bear and her cubs at Whippsnade. Seven were born there during 1958.



Photo : Fox Photos

"Pampas" one of the two Maned Wolves which arrived at Regent's Park during 1958.

REPORT OF THE AUDITORS OF THE ACCOUNTS

OF THE

ZOOLOGICAL SOCIETY

OF LONDON

To the Council and Fellows,
The Zoological Society of London,
Regent's Park, N.W.1.

In accordance with Chapter V of the Bye-laws, we hereby certify that we have audited the Accounts of the Society for the year ended 31st December, 1958, as shown by our certificate attached to the accompanying Accounts. We report to the Society that at that date the total Assets included in the Balance Sheet amounted to £1,156,053, and the Liabilities and Pensions Contributions Reserve Fund to £202,951, showing a surplus of Assets over Liabilities amounting to £953,102, subject to the estimated values of some of the Assets.

(Signed) W. B. KEEN & Co.,
Chartered Accountants.

Finsbury Circus House,
Blomfield Street,
London, E.C.2.

26th February, 1959.

Comp. Figures 1957	LIABILITIES AND SURPLUS			
£	£	£	£	£
	Sundry Creditors—			
29,165	Provisions, Materials and General Expenses	25,712		
	Trustees of Pension Fund	75,000		
			100,712	
	Reserves and Suspense Account—			
954	Receipts in Advance (Subscriptions, etc.)		2,239	
	Pension Contributions Reserve Fund	100,000		
	Pensions Fund—			
	Balance at 1st January, 1958	309,625		
	<i>Deduct</i>			
	Amount payable to Trustees of Pension Fund	75,000		
	Transfer to Pension Contribution Reserve Fund	100,000		
	Transfer to Rebuilding Fund	134,625		
	(see below)			
		309,625		
309,625	Depreciation of Investments Reserve Fund—			
	Balance at 1st January, 1958	70,000		
	Add Profit on Sale of Investments... ..	3,043		
		73,043		
	<i>Deduct</i> Transfer to General Reserve Fund, Regents Park			
70,000		73,043		
			100,000	
£409,744			202,951	
	Balance being Excess of Assets over Liabilities—			
	Heer Bequest—			
91	Balance at 1st January, 1958		91	
	Composition Fund—			
	Balance at 1st January, 1958... ..	20,600		
	Add Fees received during year	740		
		21,340		
	<i>Deduct</i> Transfer to General Reserve Fund—Regent's Park—Fees of deceased Compounders			
20,600		630	20,710	
	Rebuilding Fund—			
	Balance at 1st January, 1958	67,428		
	<i>Add</i>			
	Interest on Investments	2,270		
	Donations	100		
	Seven year Covenants and Adoption Scheme Donations	1,323		
	Legacy from the late Mrs. Beatrice R. Stanwell (Balance)	110		
	Transfer from Pensions Fund (see above)	134,625		
	„ „ Income and Expenditure Account	16,000		
		221,856		
	<i>Deduct</i> Transfer to Income and Expenditure Account			
67,428		28,963	192,893	
£497,863	Carried forward	£213,694	£202,951	

Comp. Figures 1957	ASSETS			
£	£	£	£	£
	Freehold Property—			
	Whipsnade Park—			
	Cost of Land and Buildings, Enclosures, etc., including Redemption of Land Tax and Tithes at 1st Jan., 1958	106,645		
	<i>Deduct</i> Fee for Grant of Easement	21		
		106,624		
	Regent's Park—31, Prince Albert Road			
121,119		14,474	121,098	
	Plant, Vehicles, Fittings and Furniture—			
	At Regent's Park and Whipsnade Park and in Catering Departments (not valued)			
—		—	—	
	Zoo Restaurants Ltd.—			
	2 Ordinary £1 shares (fully paid)	—	—	
	Stock Accounts—			
*162,008	Animals belonging to the Society	*174,618		
*100,000	Books in Library	*100,000		
*1,000	Scientific Publications	*1,000		
	Guides, Maps, Films, Books, and Souvenirs, etc. (at or under cost)	15,760		
10,896				
*5,330	Farm and Garden : Crops, Implements, etc. (Whipsnade)	*5,940		
8,808	Catering Departments—Provisions, etc. (at cost)	8,764		
		306,082		
	Sundry Debtors—			
16,448	Miscellaneous Accounts since received or considered good		15,912	
	Suspense Accounts—			
2,702	Rates, Insurances, etc., paid in advance		4,025	
	Investments (at cost)—			
	<i>British Government Securities—</i>			
	£97,000 3 per cent. British Gas Gtd. Stock 1990-95 ...	69,370		
	£99,063 6s. 8d. 3 per cent. Funding Loan 1959-69 ...	81,735		
	£80,992 18s. 10d. 3½ per cent. Funding Stock 1999-2004	51,888		
202,993		202,993		
	<i>Canadian—</i>			
	460 Algoma Steel Corporation Ltd., Common Shares	5,732		
	600 Common Shares, British American Oil Co. ...	10,816		
	500 " B " Shares MacMillan and Bloedel Ltd. ...	8,327		
	600 Common Shares, Power Corporation of Canada ...	15,486		
	720 \$10 Shares Royal Bank of Canada	16,617		
	200 Common Shares Steel Co. of Canada	5,265		
	500 Shares of the Capital Stock, Westcoast Transmission Co. Ltd.	5,585		
66,101		67,828		
£697,405	Carried forward	£270,821	£447,717	

* As per valuations by Society's Officials.

Comp. Figures 1957	LIABILITIES AND SURPLUS				£	£	£
£							
497,863	Brought forward...				213,694	202,951	
	Balance being Excess of Assets over Liabilities—continued—						
	Regent's Park Catering Department Capital Improvements Fund—						
	Balance at 1st January, 1958			6,604			
	Add Interest on Investments			269			
6,604	Transfer from Income and Expenditure Account			5,000			11,873
	Whipsnade Park Catering Department Capital Improvements Fund—						
	Balance at 1st January, 1958			6,099			
	Add Interest on Investments			249			
6,099	Transfer from Income and Expenditure Account			800			7,148
	Staff Compensation and Sick Benefit Fund—						
	Balance at 1st January, 1958			1,353			
	Add Interest on Investments			58			
1,353	Transfer from Income and Expenditure Account			100			1,511
	Allen Bequest—						
	Regent's Park—Balance at 1st January, 1958			16,182			
	Add Interest on Investments			660			
16,182							16,842
	Hance Bequest—						
	Balance at 1st January, 1958			13,484			
	Add Interest on Investments			551			
13,484							14,035
	Salisbury Bequest—						
	Balance at 1st January, 1958			3,058			
	Add Interest on Investments			125			
3,058							3,183
	Kime Bequest—						
	Regent's Park—				£		
	Balance at 1st January, 1958			642			
	Add Interest on Investments			26			
642							668
	Whipsnade Park—						
	Balance at 1st January, 1958			385			
	Add Interest on Investments			15			
385							400
							1,068
16,966	Zoological Record Fund						18,402
6,824	Neave-Lloyd Nomenclator Zoologicus Fund						7,503
	Barrington Bequest—						
	Balance at 1st January, 1958			1,045			
	Add Interest on Investments			42			
1,045							1,087
£570,505	Carried forward				£296,346	£202,951	

Comp. Figures 1957	ASSETS				£	£	£
£							
697,405	Brought forward				270,821	447,717	
	Investments (at cost)—continued—						
	<i>American—</i>						
	78 Shares of Common Stock, American Telephone and Telegraph Company			5,088			
	800 Shares of Common Stock, Puget Sound Power and Light Company			9,208			
	400 Shares of Common Stock, Pacific Gas and Electric Company			8,402			
	\$15,000 Burroughs Corporation 4½ per cent. Convertible Subordinated Debentures 1981			6,690			
	500 Chase Manhattan Bank Shares of Capital Stock			9,562			
	350 Shares of Common Stock, Dover Corporation			3,217			
	150 Shares of Common Stock, Eastman Kodak Co.			5,744			
	600 \$3 Common Shares El Paso Natural Gas Co.			6,751			
	\$5,000 El Paso Natural Gas Co. 5½ per cent. Convertible Debentures 1977			2,164			
	51 Shares of Capital Stock, International Business Machines Corporation			5,785			
	200 Common Shares, Shell Oil Company			7,318			
	\$15,000 Sinclair Oil Corporation 4½ per cent. Convertible Subordinated Debentures 1986			6,519			
	2,200 Shares of Common Stock, Tri-Continental Corporation			23,823			
	200 Shares of the Class "A" Stock, Union Oil and Gas Corporation of Louisiana			4,631			
	150 Shares of Common Stock, Youngstown Sheet and Tube Co.			7,334			
109,884							112,236
	<i>Industrials, etc.—</i>						
	£2,400 Associated Portland Cement Manufacturers Ltd., Ordinary Stock			6,015			
	£3,000 Australian Guarantee Corporation Ltd., Ordinary Stock			5,744			
	£500 Borax Holdings Ltd., Deferred Stock 5s. Units			2,777			
	£4,000 John Brown & Co. Ltd., Ordinary Stock			7,337			
	1,500 English & Dutch Investment Trust Ltd., Participation Certificates			5,539			
	1,600 Guardian Assurance Co., 5s. Shares			5,025			
	2,500 Hawker Siddeley Group Ltd., Ordinary £1 Shares			4,832			
	£8,100 Imperial Chemical Industries Ltd., Ordinary Stock			11,670			
	600 Legal and General Assurance Society Ltd., Ordinary Shares 5s. each			4,942			
	£10,000 London and Overseas Freighters Ltd., 6 per cent. First Mortgage Debenture Stock (45% paid)			4,500			
	2,000 Marks and Spencer Ltd., "A" Ordinary Shares 5s. each			4,710			
	1,600 Northern Assurance Co. Ltd., Ordinary £1 Shares			5,661			
	4,000 C. A. Parsons & Co. Ltd., Ordinary £1 Shares			9,760			
	£10,000 Associated Chemical Companies Ltd., 6% Debenture Stock 1973/83 (20% paid)			2,000			
	1,350 Atlas Assurance Co. Ltd. £1 shares (10s. paid)			4,986			
	£5,000 Consolidated Gold Fields of South Africa Ltd., 6% Convertible Unsecured Loan Stock 1977-82			5,446			
	City of Tokyo 5% Loan 1912—Arrears Coupons from £6,100 Bonds			1,092			
	5,000 Central and District Properties Ltd., 4s. Ordinary Stock Units			5,256			
£ 807,289	Carried forward				£97,292	£383,057	£447,717

Comp. Figures 1957	LIABILITIES AND SURPLUS		
£	£	£	£
570,505	Brought forward	296,346	202,951
Balance being Excess of Assets over Liabilities—continued—			
General Reserve Fund—Regent's Park—			
	Balance at 1st January, 1958	30,016	
	Add Interest on Investments	4,497	
	War Damage Claim	252	
	Special Donation	100	
	Transfer of Fees of deceased Compounders	630	
	Transfer from Depreciation of Investments Reserve Fund	73,043	
30,016		108,538	
General Reserve Fund—Whipsnade Park—			
	Balance at 1st January, 1958	22,662	
	Add Interest on Investments	926	
22,662		23,588	
General Purposes Account—			
	Balance at 1st January, 1958	505,535	
	Add Increase in value of Animals	12,610	
	Surplus from Income and Expenditure Account	6,485	
505,535		524,630	
		953,102	
<u>£1,128,718</u>		<u>£1,156,053</u>	

Comp. Figures 1957	ASSETS		
£	£	£	£
807,289	Brought forward	97,292	383,057
Investments (at cost)—continued—			
<i>Industrials, etc.—continued</i>			
	£10,000 London County Council 6% Stock 1975-78	10,042	
	£5,000 Richardsons, Westgarth & Co. Ltd., 6% Convertible Unsecured Loan Stock 1976-81	5,210	
	1,000 Selection Trust Ltd. Ordinary Stock Units of 10s. each	4,179	
	South Manchurian Railway Co., Arrears Coupons from £10,000 Bonds	1,526	
	1,700 Philips Incandescent Lamp Works Holdings Co., Bearer Shares 10 florins each	5,013	
	650 Prudential Assurance Co. Ltd., "A" Shares, 4s. each	4,455	
	3,000 A. E. Reed & Co. Ltd., "A" Ordinary Shares £1 each	7,462	
	£1,103 Shell Transport & Trading Co. Ltd., Ordinary Stock	9,998	
	£3,850 H. C. Sleigh Ltd., "A" Ordinary £1 Shares	5,320	
	£700 United Dominions Trust Ltd., Ordinary Stock	3,424	
	£1,100 United Drapery Stores Ltd., Ordinary Stock	5,278	
	£4,200 Vickers Ltd., Ordinary Stock	8,810	
135,801		168,009	
		551,066	
Loan on Mortgage—			
600	Balance at 1st January, 1958	600	
		551,666	
Short Term Loans, Deposits, Cash at Bank and in Office			
165,212	General and Fund Accounts	146,100	
19,816	Catering Accounts	10,570	
		*156,670	
<u>£1,128,718</u>		<u>£1,156,053</u>	

* £127,000 on Short Term Loan and Deposit Accounts.

The Market Value of the Securities held on 31st December, 1958, was £576,517 showing an Appreciation of £25,449 on original cost.

**INCOME AND EXPEN
DITURE ACCOUNT**
FOR THE YEAR ENDED

31ST DECEMBER, 1958

Comp.
Figures
1957

INCOME

REGENT'S PARK

£		£	£
FELLOWS			
2,512	Entrance Fees	10	
21,740	Subscriptions	18,956	
3,898	Fellows Tickets—Sale of	815	
		19,781	
GARDENS (including General Scientific Income)			
214,335	Admission of Visitors to Gardens	213,369	
14,665	do. do. to Aquarium	14,549	
8,736	do. do. to Children's Zoo	6,854	
200	Film and Broadcasting Permits, etc.	221	
3,500	Television Unit (Granada Television Ltd.)	3,500	
907	Chimpanzees' Tea Party	968	
1,786	Lavatories	1,876	
4,609	Riding Receipts	5,432	
2,465	Bath and Push Chairs, Hire of	2,338	
1,405	Animals, etc., Sale of	195	
13,455	Books, Souvenirs, etc., Sale of	18,553	
1,867	Maps, Sale of	2,258	
11,749	Guides—Sale of	11,147	
121	Photography—Children's Zoo	—	
68	Miscellaneous Receipts	279	
23,383	Catering Department—Net Receipts	13,392	
4,500	Zoo Restaurants Ltd.—Fee	6,000	
		300,931	
SCIENTIFIC (Special Income)			
198	Library Photographs, Copyright Fees	129	
188	Prosectorium Specimens, Sale of	505	
6,170	Scientific Publications— Subscriptions and Sales	5,906	
23	Zoo Life Magazine— Sales in the Gardens	3	
	Educational Scheme— Grants	3,500	
	Visits	1,747	
		5,247	
		11,790	
INTEREST			
829	Composition Fund and Heer Bequest	861	
6,674	Short Term Loans and Deposits (General Account)	4,948	
2,959	de Arroyave Trust Fund	2,918	
57	Davis Trust Fund	57	
		8,784	
£352,999	Carried forward	£341,286	

Comp.
Figures
1957

EXPENDITURE

REGENT'S PARK

£		£	£
GARDENS (including General Scientific Expenditure)			
6,933	Rent, Rates and Insurance	7,244	
90,272	Salaries—Menagerie Staff, Keepers, etc.	96,669	
3,598	Animals, Cost and Carriage of	7,503	
24,858	Provisions	25,015	
29,739	Fuel, Light, Water, Cleaning, Utensils, Transport and Other Expenses	31,197	
36,770	Works Department—Salaries, Wages, Repairs, Maintenance, Minor Alterations and Improvements (excluding Aquarium, and Catering Department)	47,625	
13,247	Gardeners' and Sweeping Dept. Expenses— Salaries, Wages, Seeds, Plants, Implements, etc.	15,717	
10,998	Aquarium— Salaries, Wages, Exhibits, Provisions, Fuel, Light, General Maintenance, etc.	10,583	
3,861	Advertising	4,166	
9,424	Books, Souvenirs, etc., Cost of	13,230	
731	Maps, Cost of	676	
6,469	Guides, Cost of	8,115	
—	Young Zoologists' Club	328	
£236,900		£268,068	
SCIENTIFIC (Special Expenditure)			
7,387	Salaries and Sundry Expenses	9,228	
6,512	Library— Salaries, Wages, Books and Binding, etc.	7,590	
2,754	Prosectorium Expenses— Salaries, Wages, Chemicals, Apparatus, etc.	2,750	
6,197	Scientific Publications, Cost of	6,807	
965	Education Department Salaries, wages and other expenses	3,379	
—	International Congress of Zoology	1,190	
277	Zoo Life Magazine	18	
—	Grants— Fauna Preservation Society	£250	
—	Less Rent for use of Offices	250	
378	Other Grants	403	
		31,365	
£261,370	Carried forward	£299,433	

INCOME AND EXPENDITURE ACCOUNT—continued

FOR THE YEAR ENDED 31ST DECEMBER, 1958

Comp. Figures 1957	INCOME						£	£
£	REGENT'S PARK						£	£
352,999	Brought forward	...	...	...	...	...	341,286	
<u>£352,999</u>	Total Income, Regent's Park	...	...	...	...	...	<u>£341,286</u>	

£	WHIPSDADE PARK						£	£	£
GARDENS (including General Scientific Income)									
67,689	Admission of Visitors to Park	...	...	...	...	...	73,008	
3,810	do. do. Children's Zoo	...	...	...	...	...	5,848	
12,456	do. Cars to Park	...	...	...	...	...	15,418	
							94,274		
5,303	Car Parks—Parking Fees	...	...	...	...	...	6,228	
2,425	Train Receipts	...	...	...	...	...	2,975	
49	Film and Broadcasting Permits, etc.	...	...	...	...	...	35	
2,809	Riding Receipts	...	...	...	...	...	3,243	
593	Bath and Push Chairs, Hire of	...	...	...	...	...	588	
3,841	Animals, etc., Sale of	...	...	...	...	...	4,503	
7,176	Farm—Sale of Produce, etc.	...	...	...	...	...	10,029	
146	Garden and Forestry	...	...	...	...	...	424	
8,325	Books, Souvenirs, etc., Sale of	...	...	...	...	...	10,632	
1,736	Maps, Sale of	...	...	...	...	...	2,027	
186	Miscellaneous Receipts	...	...	...	...	...	165	
76	Zoo Life Magazine—Sales	...	...	...	...	...	1	
4,224	Catering Department—Net Receipts	...	...	...	...	...	6,437	
							141,561		
<u>£120,844</u>	Carried forward	...	...	...	...	...	<u>£141,561</u>	

Comp. Figures 1957	EXPENDITURE						£	£	£
£	REGENT'S PARK						£	£	£
261,370	Brought forward	...	...	...	...	...	299,433	
ADMINISTRATION									
25,600	Salaries, Wages, Fuel, Light, Stationery and Printing, Telephones, Postages, etc.	...	...	...	...	...	35,080	
NEW BUILDINGS, ETC.									
8,495	Construction and Equipment of Hospital and Sanatorium	...	...	...	...	...	4,963	
—	New Works Buildings	...	...	...	...	...	13,462	
91	Meeting Room Alterations and Construction of Basement (Balance)	...	...	...	...	...	—
12,898	Construction of New Lavatories	...	...	...	...	...	10,538	
21,484							28,963		
21,484	Less Transfer from Rebuilding Fund	...	...	...	...	...	28,963	
							—		
778	Aquarium Roof Reconstruction	...	...	...	...	...	3,172	
4,329	Prosecutorium Buildings Alterations	...	...	...	...	...	1,003	
5,707	Old Sanatorium Alterations	...	...	...	...	...	769	
1,500	Old Quarantine Station—Dilapidations	...	...	...	...	...	—
—	Rhinoceros Den—Alterations	...	...	...	...	...	2,203	
12,314							7,147		
<u>£299,284</u>	Total Expenditure, Regent's Park	...	...	...	...	...	<u>£341,660</u>	

£	WHIPSDADE PARK						£
GARDENS (including General Scientific Expenditure)							£
2,919	Rates and Insurance	...	...	...	...	...	2,669
34,461	Salaries, General, Menagerie Staff, Keepers, etc.	...	...	...	...	...	35,303
1,735	Animals, Cost and Carriage of	...	...	...	...	...	2,090
17,292	Provisions	...	...	...	...	...	15,621
11,671	Fuel, Light, Water, Cleaning, Utensils, Transport and Other Expenses	...	...	...	...	...	11,793
19,955	Works Department—Salaries, Wages, Repairs, Maintenance, Minor Alterations and Improvements (excluding Farm and Catering Department)	...	...	...	...	...	16,411
1,060	Advertising	...	...	...	...	...	1,561
5,611	Farm—Salaries, Wages and other expenses	...	...	...	...	...	6,369
3,853	Garden, Forestry and Care of Paddocks—Salaries, Wages and other expenses	...	...	...	...	...	3,736
5,152	Books, Souvenirs, etc., Cost of	...	...	...	...	...	6,487
470	Maps, Cost of	...	...	...	...	...	558
52	Zoo Life Magazine—Cost of copies for sale	...	...	...	...	...	1
<u>£104,231</u>	Carried forward	...	...	...	...	...	<u>£102,599</u>

Comp. Figures 1957	INCOME	Comp. Figures 1957
	DE ARROYAVE TRUST FUND	
	<i>Trustees—The Official Trustees of Charitable Funds</i> £103,305 7s. 9d.—3 per cent.	
£ 3,099	Interest on Investment (per Official Trustees of Charitable Funds) ...	£ 3,099
<u>£3,099</u>		<u>£3,099</u>

Comp. Figures 1957	EXPENDITURE	£	£
	DE ARROYAVE TRUST FUND		
	<i>Charitable Funds</i> <i>Funding Stock, 1959-69</i>		
	Expenses re Upkeep of the de Arroyave Grave at Highgate and Mausoleum at Westbury ...	82	
	Tax on Income expended on Upkeep of de Arroyave Grave at Highgate and Mausoleum at Westbury ...	99	
			181
	Balance of Income transferred to Income and Expenditure Account ...		2,918
			<u>£3,099</u>

Comp. Figures 1957	INCOME	Comp. Figures 1957
	DAVIS TRUST FUND	
	<i>British Transport Guaranteed Stock 1978-88</i> £1,891 9s. 0d.—3 per cent.	
£ 57	Interest on Investment ...	£ 57
<u>£57</u>		<u>£57</u>

Comp. Figures 1957	EXPENDITURE	£	£
	DAVIS TRUST FUND		
	<i>British Transport Guaranteed Stock 1978-88</i>		
	Transfer to Income and Expenditure Account ...		57
			<u>£57</u>

£	INCOME	£
	ZOOLOGICAL RECORD FUND	
16,673	Balance at 1st January, 1958 ...	16,966
1,533	Donations received during year ...	1,987
6,682	Subscriptions and Sales ...	7,853
61	Royalties on Reprints ...	19
653	Interest on Investments ...	717
<u>£25,602</u>		<u>£27,542</u>

£	EXPENDITURE	£
	ZOOLOGICAL RECORD FUND	
	<i>Preparation and Printing, etc.</i>	
	Preparation and Printing, etc. ...	9,140
	Balance at 31st December, 1958... <i>Note.—Publication of Vols. 93-94 delayed.</i>	18,402
		<u>£27,542</u>

£	INCOME	£
	NEAVE-LLOYD NOMENCLATOR ZOOLOGICUS FUND	
6,225	Balance at 1st January, 1958 ...	6,824
369	Subscriptions and Sales ...	409
264	Interest on Investments ...	286
<u>£6,858</u>		<u>£7,519</u>

£	EXPENDITURE	£
	NEAVE-LLOYD NOMENCLATOR ZOOLOGICUS FUND	
	<i>Distribution Expenses, etc.</i>	
	Distribution Expenses, etc. ...	16
	Balance at 31st December, 1958...	7,503
		<u>£7,519</u>

TERENCE C. S. MORRISON-SCOTT,
Treasurer.

We hereby certify that we have examined the Books and Accounts of the Society for the year ended 31st December, 1958, and have found them to be in order. Having received all the information and explanations we have required, we report that in our opinion the above Balance Sheet and accompanying Income and Expenditure Accounts show a true and fair view of the position as shown by the books of the Society. We have verified the Investments and the Cash Balances.

Finsbury Circus House,
Blomfield Street,
London, E.C.2.
26th February, 1959.

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

THE ZOOLOGICAL SOCIETY OF LONDON

MEETINGS DURING 1959

Scientific Meetings at 5 p.m.

Tuesday, 10th February

„ 10th March

„ 14th April

„ 12th May

„ 9th June

„ 13th October

„ 10th November

„ 8th December

Ordinary General Meetings at 4.30 p.m.

Wednesday 21st January

„ 15th April

„ 15th July

„ 21st October

Annual General Meeting at 4 p.m.

Wednesday 29th April

These Meetings are held at the Offices in the Outer Circle of Regent's Park, and Fellows are invited to attend.

THE ZOOLOGICAL RECORD

THE annual volumes of this comprehensive bibliography of zoological literature, with subject and systematic indices, are prepared and published under the auspices of The Zoological Society of London. They deal mainly with publications that interest the systematist, the comparative anatomist, the embryologist, and the field naturalist, but those that are concerned in a general way with genetics, ecology, etc., are also included.

COMPLETE BOUND VOLUMES

£8 0s. 0d.

SEPARATE PARTS

	<i>s.</i>	<i>d.</i>
COMPREHENSIVE ZOOLOGY	3	0
PROTOZOA	10	0
PORIFERA	2	0
COELENTERATA	4	0
ECHINODERMA	4	0
VERMES	10	0
BRACHIOPODA	4	0
BRYOZOA	2	6
MOLLUSCA	10	0
CRUSTACEA	6	6
TRILOBITA	5	0
ARACHNIDA	10	0
*INSECTA	50	0
PROTOCHORDATA	2	0
PISCES	8	6
AMPHIBIA	6	0
REPTILIA	7	6
AVES	10	0
MAMMALIA	10	0
LIST OF NEW GENERA AND SUBGENERA	4	0

*Obtainable only from the Commonwealth Institute of Entomology, 56 Queen's Gate, London, S.W.7.

$\frac{42}{2}$







