

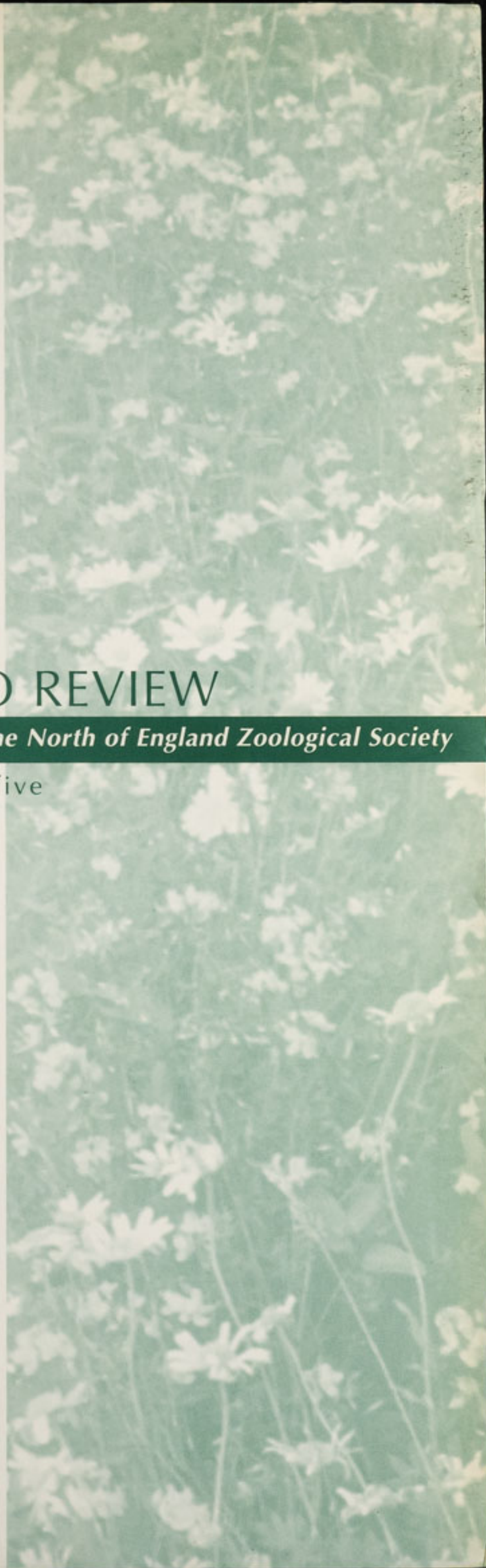


zoological gardens
CHESTER

1995 ZOO REVIEW

Annual Report of the North of England Zoological Society

nineteen ninety five



MISSION OF CHESTER ZOO

Mission

The Mission of Chester Zoo is to promote conservation by breeding of rare and endangered animals and by educational, recreational and scientific activities.

Strategy

Chester Zoo will consolidate its position as the pre-eminent UK Zoo, and further develop its leading position in the international field of conservation of endangered species. It will select, breed, exhibit and promote an understanding of those animals in its care in co-operation with like-minded organisations. To make a positive and constructive contribution to this work, Chester Zoo will operate as a commercially successful visitor attraction.

These functions are mutually supportive, and for each to facilitate the success of the other, certain strategic steps are required:

- A consistent policy of species selection and exhibition giving greater focus on relevant geographical areas and utilising and integrating the zoological, botanical and horticultural expertise of the Zoo.
- The number of species kept to be a secondary consideration to the size of their enclosures and the quality of life of the animals. Land outwith the Zoo perimeter to be taken into the Zoo if and when necessary.
- The North of England Zoological Society to achieve a higher profile for its work with the international zoo network and to integrate its own efforts with those of conservation authorities and governments of countries of origin.
- Zoo interpretation and information services to visitors to be developed in terms of better quality, wider use of available technologies, greater visitor participation and interaction. The Society to work towards setting up an Institute of Zoological Interpretation at the Zoo.
- The Society to maintain a high quality Educational Service aimed at increasing the understanding of the principles and issues involved in its operation.
- Financial management of the Zoo may include use of overdraft facilities for growth and development as and when this is considered prudent.
- Development and promotion of the 'green' image of Chester Zoo by implementation of appropriate recycling and energy efficient policies and programmes.
- Increased provision of all weather facilities to encourage a more even distribution of visitor numbers over the year.
- Improvement of general services to the public, including innovation in retailing, catering and public relations.
- Utilization of non-zoo land, only for the purposes that complement and have synergy with the Society's principles of operation.

SUMMARY

The implementation of the Mission, through the ten strategic steps outlined above, will promote and clarify the conservation policy of Chester Zoo, improve and expand both animal and visitor facilities and lead to growth in visitor numbers. The Zoo will be able to build upon the high reputation it holds within the Zoo community to one of wider public recognition for its work. A focused exhibition policy, a green image and better public facilities will assist this. Above all, the Zoo will maintain and develop its role as a leading centre for the encouragement and fostering of greater understanding and enjoyment of the animal world.

Beatrice J. Jones
Chairman
18th May 1995

Chester Zoo (the North of England Zoological Society) is a Charitable Trust, independent of the Government and the Local Authority. Its main source of income is from paying visitors.

PARTNERS IN CONSERVATION

The zoo is a member of:



Federation of Zoological Gardens of Great Britain and Ireland.



World Zoo Organisation

Member of
IUCN
The World Conservation Union

International Union for the Conservation of Nature.

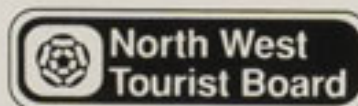


Joint Management of Species Programmes.

PARTNERS IN TOURISM

The Zoo is a member of

North West Tourist Board



Yorkshire & Humberside Tourist Board



Welsh Borderlands Consortium. Favourite Days Out Consortium. Vale Royal Tourism. North Shropshire Tourism. South Cheshire Tourism Development Association.

North Wales Tourism



ALVA
ASSOCIATION OF LEADING VISITOR ATTRACTIONS

Annual Report of the North of England Zoological Society

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1995 was a year of great change and challenge for Chester Zoo. We saw major changes in staffing, infrastructure and animal exhibits, and faced, towards the end of the year, a significant commercial challenge from the proposed *Deep Sea World* development

nearby at Cheshire Oaks. Despite this period of change, Chester Zoo performed well in an increasingly competitive world of leisure attractions. Our visitor numbers at 760,580 were 1.4% above budget and just 1.7% down on 1994, indicating that we are holding up well in a tough marketplace. We are now poised to achieve a year-on-year increase.

The achievement of this goal will be helped by the new improved access to the Zoo from the A41, better and brighter retailing facilities, but above all, continuing investment and innovation in our animal exhibits and our interaction with the public. The Zoo is also conscientious in its pursuit of the various external funds for which it has eligibility.

The most significant change of all occurred on 1 September when the Zoo welcomed Dr Gordon McGregor Reid as its new Director. Dr Reid of course is no stranger to us. His three years as Curator-in-Chief were marked by an increased international recognition of the conservation and scientific value of Chester Zoo's animal collection. Added to this are his

management and organisational skills which will be of great service to Chester Zoo in the future.

I referred earlier to the potential problems posed by *Deep Sea World* and at the time of writing, we await the decision regarding the awarding of European Grant Aid to this proposal. However, whichever way the decision goes, Chester Zoo must face the challenges that lie ahead. It will only do so by responding to the expectations of a more demanding public who are presented with an ever greater choice of leisure activities.

We believe Chester Zoo provides a unique insight into the world of nature and an unforgettable experience of the sight, sound and smell of the living animal. We shall continue to promote vigorously our very special appeal to the public.

Nowhere is this better illustrated than by the wonderful new arrival of our baby elephant towards the end of 1995. The years of patience on the part of the Zoo were rewarded when *Thi'* gave birth on 19 December. Our thanks go to the tireless dedication of the elephant keeping staff who have given round the clock care to baby *Karha*.

Together with the 143,000 callers to BBC TV's *Blue Peter*, we wish baby *Karha* well. She gives us all great confidence and hope for the continuing success of Chester Zoo.

Beatrice J Jones
Chairman.

North of England Zoological Society

Chairman's **PREFACE**



Dr Michael Brambell, Zoo Director since 1978, retired at the end of August. The Director received the *Gold Medal of the North of England Zoological Society* at a gala event, hosted by the zoo. There was a civic dinner, hosted by the Lord Mayor of Chester in the splendour of the Town Hall. The 150 diners included City councillors, dignitaries, and officers together with senior zoo staff.

Mr Alan Du Cros, Deputy Director and Financial Controller also retired in December and Miss Brenda Norgain, Head of Education retired in February. For fuller tributes, see page 38.

asiatic elephant

The highspot of the animal year was the birth of *Karha*, a female Asiatic elephant who has made this annual report by 12 days, being born on 19th December. As we go to press, she is being successfully hand reared by the elephant house staff, and already exceeds 180 kilos.

This picture shows her just 12 hours old.



pelicans

Pelicans made a most welcome return to the collection in 1995, with both the White and the Dalmatian subspecies now well established on the waterfowl lake in West Zoo.



bornean orang utans



In a remarkable season for the Bornean Orang utans, four youngsters have been born, bringing the total to 21. *Jorong* was the 18th orang utan born in the Zoo, and he featured in his own TV commercial as well as being the 'cover' illustration for the zoo leaflets and new guide. No zoo has a better record for breeding orang utans.

We opened the new entrance gate and car parks, with the associated entry roadway from the Park and Ride roundabout on the A 41, just before the Whitsuntide Bank holiday and half term. It functions very well and, with eight entry gates, has cut queues. The associated works inside the zoo include extensions to the Oasis cafeteria, additional toilets and the spacious new Ark shop which opened in December.

new entrance





Karha the baby Elephant has quite rightly been the most happy and exciting zoological event of the year: eclipsing almost everything else, including radical changes in the staffing of the zoo! Previously Curator-in-Chief of the Animal Division, I took up my appointment as the new Director of Chester Zoo at the beginning of September 1995, succeeding Dr Michael Brambell. The impending retirement of Michael was appropriately signalled by major events in his honour, organised by the Zoo and wider zoo community and also by the City of Chester and reported on in full in *Zoo Life* magazine. To further mark Michael Brambell's distinguished contributions to Chester Zoo, and to zoology and veterinary medicine in general, he was awarded the prestigious *Gold Medal of the North of England Zoological Society*.

Other key members of staff also left in 1995, notably Alan Du Cros our Deputy Director and Financial Controller; Brenda Norgain, Head of the Education Division; Jill Lunsford, Secretary to the Director and Arnold Johnson, Security Officer (refer to page 38 for a warm acknowledgement of their valuable contributions to Chester Zoo). These departures have created an additional need in recruitment and reorganisation. Michael Johnson was appointed as the new Financial Controller and Julie Whitear as Personal Assistant to the Director. The post of Head of Education Services will be advertised in 1996 to return the management team to full strength.

On behalf of the Zoo, I attended the World Zoo Organisation and World Conservation Union Meetings (28 September-5 October in Dublin: International Union for Directors of Zoological Gardens or IUDZG;

and IUCN Conservation Breeding Specialist Group). An important new WZO publication *Zoo Future 2005* was circulated at this meeting, which outlines a strategic future for all zoos and so allows our management team and Council to set in context the planning and development of Chester Zoo. The mood of continuing change within the zoological community was heightened by the sad news this year of the death of Gerald Durrell, founder of Jersey Zoo and close collaborator with Chester Zoo staff.

Exceptionally hot summer weather, coupled with the most severe drought in Britain for perhaps 300 years, made its mark on the Zoo. The dry conditions were not favourable for growing grass on paddocks or flowers in the gardens or for topping up our penguin and sealion pools: and the breeding seasons for our animals were, in some cases, extended or disrupted. Economy in water recycling and management became critical, but somehow we managed. Visitors stayed away in high season only to turn out in large numbers in the mild Autumn, providing the best late season figures in the history of the Zoo.

A prospective £11 million *Deep Sea World* private enterprise development scheme - located nearby at Cheshire Oaks, Ellesmere Port - likely represents a major business challenge to the Zoo in terms of immediate 'novelty' impact and longer term visitor retention. The Zoo, amid much media publicity, has expressed its genuine concerns to the Government Office Northwest over a perceived distortion in competition represented by a proposed £3.1 million European Regional Development Fund award for the scheme which is not equally available to the Zoo; and over particular legal and planning aspects, notably traffic management (the new attraction would share the same main arterial access road). We understand that the final decision on the Deep Sea World scheme has been referred back to Central Government.

On a positive note, this year sees - mainly as the result of exceptional efforts by staff - the completion of a major new entrance complex, including access road, car parking, gate reception and shopping facilities. This shift in the orientation of the Zoo (the old entrance was on the east side) is reflected in an entirely new *Zoo Guide & Map*. This guide was produced in-house and is, I believe, the best of its kind to be seen anywhere. Another expression of positive change is the production of this *Annual Report* in a new format; and with the *Ark* as a fresh Zoo logo symbolising a renewed commitment to our mission in conservation, education and scientific study.

Dr Gordon McGregor Reid
Zoo Director.

PERFORMANCE

DIRECTIONS FOR 1996

- Award from the Federation of Zoos for significant advances in husbandry and welfare for our part in the co-operative programme on Pacific island land snails.
- Foreign Bird Federation Award for breeding successes.
- Eight awards to candidates for the City & Guilds Animal Management course, representing the best set of the results in the UK.
- Successful field expedition to Nigeria by Curator of Mammals surveying chimpanzees on behalf of the WWF/Nigerian Government.
- More than 50 scientific papers/reports produced by staff, students and associates of the zoo.
- Completion of first stage of collaborative EC Genome Resource Bank (frozen zoo) project.

- Review Divisional Structure.
- Full specification and plans, and work to begin for the Monkey Islands exhibit.
- Full specification and plans, and work to begin on Elephant Zero-Handling facility.
- Major new aviary project to be completed.
- Conferences on Aquatic Animal Management and Breeders (Genetics) Workshop planned, together with the Elephant Keepers' Workshop and several Taxon Advisory Group (TAG) meetings.
- New Sand Lizard project to be completed, with the help of English Nature and other conservation groups.

- Information and help given to over 60,000 pupils and teachers admitted to the zoo.
- Commendation from Federation of Zoos for *Story Time* interpretative project, involving use by 5,000 children.
- Successful utilisation of over 8,867 hours of volunteer work.
- Major publications including *Role of Chester Zoo in the Captive Breeding of Endangered Species*; *Faisons du Français au Zoo*, teaching material for Key Stage 3/4 and 'A' level French studies, and *Have fun finding out* activity and quiz booklet for younger visitors.
- Numerous interpretation projects completed in co-operation with the Animal Division, including lion and tiger panels and pilot audioguide system.

- Recruit new Head of Education Services.
- Formulate plans for the implementation of an interactive, PC based, information and interpretation scheme.
- Review of the volunteer scheme, with additional recruitment and extension of activities.
- Review resource material to bring it closer to the present needs of the National Curriculum and new examination syllabi.
- Upgrading of interpretational signage throughout the zoo.

- Gardens Department win the *Chester in Bloom* award yet again.
- Mersey Basin Campaign *Business and Environment Achievement Award* for the new sewage treatment plant and associated paddock drainage scheme.
- Divisional Secretary has gained Level III NVQ qualifications.
- Effective planned maintenance systems have been introduced for boilers and portable electrical equipment.

- Continue steady progress towards wholly planned maintenance.
- Enhanced levels of training / qualifications for technical staff.
- Safe working within the Health & Safety at Work legislation.
- Make steady progress with the Zoo improvement programme, in particular the major works on the Monkey Islands and zero-handling facilities within the Elephant Breeding Centre.
- Development of the 5-year forward planning process

- Timely presentation of accounting reports, and prompt payment of all suppliers and creditors.
- Preparatory work completed for the new style presentation of accounts for 1995 in line with new charities accounting procedures or 'SORP'.
- Smooth transfer of visitor admissions to the new entrance. Attention to enhanced gate security.
- Recruitment and training of appropriate seasonal staff across the zoo.
- Liaison with universities, colleges and schools to provide valuable 'work-experience' for students.

- Develop team approach to securing substantial external funding from presently available sources.
- Implement local area network (LAN) for PCs.
- Inter-departmental responsibility review.
- Review office accommodation.
- Control progress in capital expenditure budgets for the year.

- Overall visitor attendance figures 1.4% above budget.
- Best late season (autumn) attendances in zoo's history.
- Year end membership the highest to date (7,386)
- Both catering departments exceeded budget profits.
- Over 600 recorded press cuttings in the year and 73 features on radio /TV.
- Marketing 'Think Tank' for Council and selected staff, led by Dr Michael Parslow to determine directions and approaches for 1996 and beyond.

- Maximise the commercial benefits and advantages of the baby elephant.
- Introduce new zoo logostyle.
- Upgrade the catering facilities at *Oasis* and *Rainbow* outlets, and organise kiosk relocations to suit changed visitor flows.
- Enhance substance and appeal of members' magazine *Zoo Life*.
- Prepare new Membership leaflet, new Functions/Lecture Hall planner and write and commission new general Zoo souvenir video.
- Plan for international conference, 1997.

The President.

His Grace,
The Duke of
Westminster,
OBE, TD, DL

The 6th Duke continues the longstanding Grosvenor family support for the Society.

Vice Presidents

Dinah, Lady
Tollemache

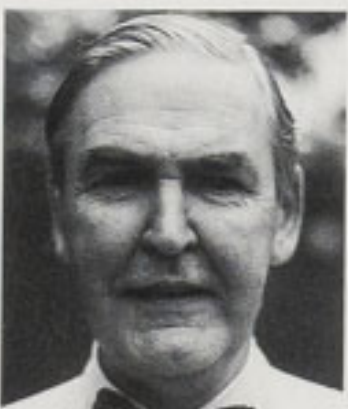
A former Member of Council until 1983, and a lifelong zoo enthusiast. Lady Tollemache became a Vice President in 1987.



Professor Emeritus
J O L King
BSc(Agric), PhD,
DSc, MVSc,
FRCVS, F I Biol
Chairman of Council 1972-
1986. Former Dean of the
University of Liverpool's
Veterinary Faculty at
Leahurst. He became a Vice
President in 1987.

The Council

Chairman.
Mrs B J Jones
BSc
Chairman since
1991. Lecturer in
Chemistry at
West Cheshire
College,
Ellesmere Port.

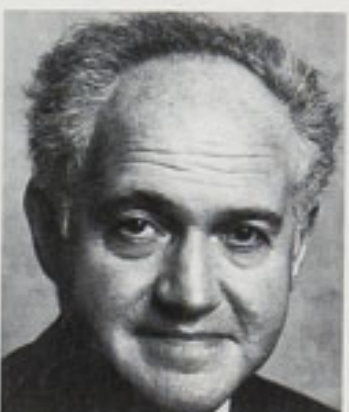


Vice Chairman
Mr J H Howatt
FCA

Vice Chairman
since 1986.
Northwich-based
executive
recruitment
consultant.



Dr J R Baker PhD, BVSc,
FSA (Scot), MRCVS
Retired Senior
Lecturer at The
University of
Liverpool's
Veterinary Faculty at
Leahurst. Lives
in Flintshire.



Mr AR Barnes
BA, FCA, CPA
(Scot)
Chairman of the
Finance
Committee.
Managing
Director of
business based in
Hawarden, Wales.



Mrs E M
Livingstone
Chairman of the
Programmes and
Membership
Committee. Senior
nursing sister in
Greater
Manchester.



Mr B H Coles BVSc,
MRCVS
Chairman of
Scientific
Committee. Retired
Veterinary Surgeon.



Mr N K
Maybury MA,
DM, FRCS
Consultant
Surgeon in
Greater
Manchester.



Dr D A P Cooke
FRCGP, FRPS
Retired General
Practitioner in
Ellesmere Port.
Wildlife
photographer.
Advisor Olympic
swimming team.



Mr T Williams
Assistant General
Manager,
Chester-based
finance company.



Miss J P Dixon
C Chem, FRSC
Retired Research
Chemist.
Wildlife
photographer.



Mr N J W Wilson
Continues a long-
standing family
link with the
Society. Managing
Director of
company in
Winsford,
Cheshire.



Mrs J R Jardine
School teacher with
Cheshire County
Council.



Mr P J
Wisniewski
BSc, MSc
Zoologist. Centre
Manager of the
Wildfowl and
Wetlands Trust,
Martin Mere,
Burscough,
Lancs.



Mr G K Jump
Solicitor in
practice in
Liverpool and
Manchester.

Mr A.L.B Thomson and
Mrs M.C. Parslow
resigned from Council in 1995.

*Council Committees and their Terms of Reference**Finance Committee*

Recommends financial policy to Council, this includes reviewing pricing policy, revenue and capital budgets, long term forecasts, long and short term borrowing and lending, the allocation of financial surpluses and, at least annually, to meet the external auditors to discuss audit findings.

Mr A R Barnes (Chairman)
Mr J H Howatt
Mrs B J Jones
Mr G K Jump
Mr T Williams
Mr N J W Wilson

Dr G McGregor Reid (Director)
Mr M A R Johnson (Staff)
Mr A Sykes (Staff)
Mr C M N. Vere (Staff)

Remuneration Committee

Determines remuneration and conditions of service of the Director, Financial Controller and other Heads of Division.

Mrs B J Jones (Chairman)
Mr J H Howatt
Mr A R Barnes

Programmes & Membership Committee.

Responsible for the programme of meetings, talks, lectures and other events for members and the general public. To concentrate on achieving an identifiable formula for NEZS meetings and to pursue the goal of achieving the status of NEZS as a forum for debate and discussion of appropriate conservational and biological issues. Advises Council on membership policy.

Mrs E M Livingstone (Chairman)
Miss J P Dixon
Mrs J R Jardine
Mrs B J Jones
Mrs M Warrington

Dr G McGregor Reid (Director)
Mr C M N Vere (Staff)
Mr A Woodward (Staff)
Mrs M M A Allsopp (Secretary)

Pension Fund Trustees

To manage the superannuation funds scheme and authorise payments there from in accordance with its deed and the instructions of Council. To advise Council on matters concerning Pension policy.

Dr G McGregor Reid (Chairman)

Mrs B J Jones

Mr T Williams

Miss J P Dixon

Mr A Du Cros

Mr M A R Johnson (Staff)

Advisors Mr W R F Bowman Mr P Challons

Scientific & Veterinary Committee

Members

Mr B H Coles
(Chairman)

Dr J R Baker

Dr J E D Charles-Jones

Dr D A P Cooke

Mr. D B Edwards

Mr B Livingstone

Dr J S Madden

Mr N K Maybury

Mr P J Wisniewski

Staff

Dr G McGregor Reid
(Director)

Mr K W Brown

Mr M C Crumpler

Mr D C Dinning

Mr N G Ellerton

Mr M Pilgrim

Mr N Spooner

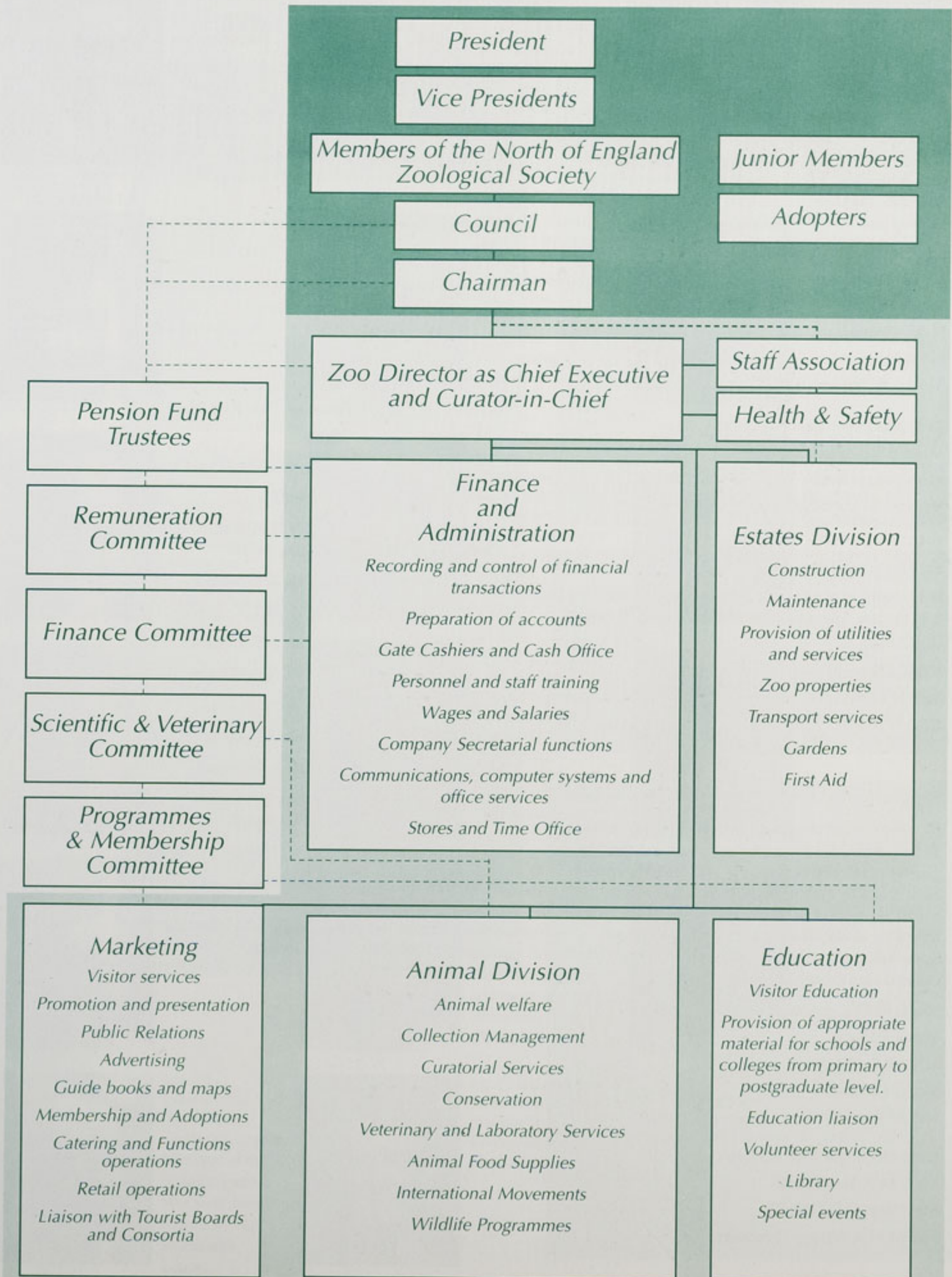
Dr R Wilkinson

Mrs P A Rudd
(Secretary)

Mr D G Lyon (consultant) Mr N Walker (consultant)

To advise Council on the exhibition and conservation policy of the Society, to monitor animal husbandry and veterinary care of the animal collection, and to advise on Health and Safety matters.

North of England Zoological Society
MANAGEMENT ORGANISATION



North of England Zoological Society MANAGEMENT COMMITTEE

These members of staff are the Management Committee which meets every week. There is a complete staff list on page 12.



Director's Assistant
Mrs J. Whitear
Dip Anim Mgt.



Financial Controller & Company Secretary
Mr M A R Johnson, MA, FCA, FCMA, MIMC



Personnel Officer, Assistant to the Curators and International Movement Co-ordinator
Mrs P A Rudd, BA, Dip RSA



Deputy Financial Controller
Mr A R Sykes, FCA, Dip BA



Zoo Director, Chief Executive & Curator-in-Chief
Dr G McGregor Reid
BSc, PhD, C Biol, FI Biol



Curator of Mammals
Mr N G Ellerton



Curator of Birds
Dr R Wilkinson
BSc, PhD



Estate Engineer
Mr S O'Brien



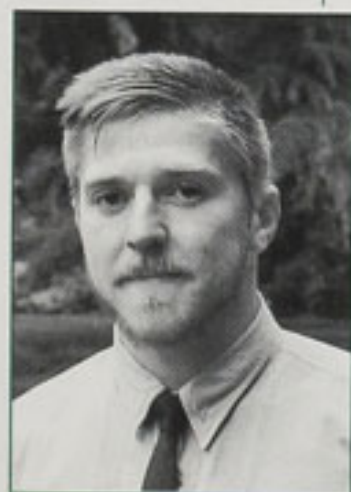
Head Gardener
Mr E J Rudman



Head of Education
Post presently vacant



Education Staff
Mrs S Ruks BSc
Mr M Powleson BA
Mrs J Butler
Miss L Davenport LLB



Security Officer
Mr M Boardman
(from 1 Feb 96)



Marketing Manager
Mr C M N Vere
MBE TD MA



Public Relations Officer
Mrs P Cade,
MIPR



North of England Zoological Society STAFF LIST

Staff as at 31st December 1995

Director's Section

Director of Chester Zoo
Dr. G. McGregor Reid, BSc PhD
CBiol FIBiol +

Director's Assistant
Mrs. J. Whitear, Dip Anim Mgt

Computer Systems Analyst
Mr. K.W. Brown +

Librarian
Mrs. L. Wilkinson, ALA*

Pest Controller
Mr. C. Humphries *

Finance & Administration

Financial Controller
Mr. M.A.R. Johnson, MA (Cantab)
FCA FCMA MIMC

Deputy Financial Controller
Mr. A.R. Sykes, FCA Dip BA

Personnel Officer
Mrs. P.A. Rudd, BA Dip RSA+

Security Officer
Mr. T.A. Johnson

Assistant Security Officers
Mr. M. Boardman +
Mr. K.N. Done +

Accounts Supervisor
Miss C. Campion

Accounts & Cashiers
Mrs. C. Capner
Mrs. S. Davies
Mrs. W. Davies *
Mrs. S. Delves *
Mrs. D. Farnell
Mrs. C.M. Pearson
Mrs. L. Richardson
Mrs. C. Shyne

Stores & Time Office Manager
Mr. P.J. Thompson +

Store Keepers
Mr. J. Andrewes +
Mr. M. Fallon +
Mr. J. Green +

Telephonists
Mrs. E.M. Lewis
Mrs. E.C. Manning

Timekeepers
Mr. J. Andrewes +
Mr. M. Fallon +
Mr. J. Green +
Mr. P.T. Hutchins +

Office Cleaner
Miss S. Read +

Education

Administration & Teachers
Mrs. J. Butler *
Miss L. Davenport, LLB
Mr. M. Powleson, BA
Mrs. S. Ruks, BSc *

Animal Division

Curator-in-Chief & Head of Division
Dr. G. McGregor Reid, BSc PhD
CBiol FIBiol +

Assistant to the Curators & International Movement Co-ordinator
Mrs. P.A. Rudd, BA Dip RSA+

Lab Technician & Safety Officer
Mr. D.C. Dinning

Divisional Secretary
Mrs. K. King-Sharp

Curator of Mammals
Mr. N.G. Ellerton

Mammal Section Co-ordinator
Mr. N. Spooner

Research Associate
Mr. A. Britt, BSc MSc Dip Anim Mgt

Mammal Keeping Staff
Mr. S.A. Blake
Mr. M. Boardman +
Mr. G. Bouchier Dip Anim Mgt
Mr. D. Brunger Dip Anim Mgt
Mr. I. Cardiff
Mr. M. Cleave Dip Anim Mgt
Miss J. Dodd
Mr. G. Easton Dip Anim Mgt
Mr. J. Frost Dip Anim Mgt
Mr. R. Green Dip Anim Mgt
Mr. D.I. Hall
Mr. S. Hogarth, BSc MSc Dip Anim Mgt
Mr. P. Howse, BA Dip Anim Mgt
Mr. P.M. Jones
Mr. C.G. Lavender
Mr. A. Lenihan
Mr. C.J. MacKenzie Dip Anim Mgt
Mr. R. Meredith Dip Anim Mgt
Mr. P. Molyneux Dip Anim Mgt
Mr. N.W. Ormerod
Mr. R. Packwood Dip Anim Mgt
Miss R. Parker Dip Anim Mgt
Miss B. Ramsay
Mr. M. Roberts Dip Anim Mgt
Mrs. R. Roberts Dip Anim Mgt
Mr. C. Romer
Mr. T.L. Rowlands
Mr. P. Whalley
Mr. J.A. Willis
Mr. A.R. Woodward

Curator of Birds
Dr. R. Wilkinson, BSc PhD

Avicultural Deputy
Mr. M. Pilgrim, BSc

Bird Keeping Staff
Miss K.E. Davies
Mr. D. Langford Dip Anim Mgt
Mr. D.N. Manning
Mr. W.D. McLeod
Mr. R. Merry
Mr. P. I. Morris Dip Anim Mgt
Miss C. Veltkamp Dip Anim Mgt
Mr. B. West
Mr. S.R. Williams Dip Anim Mgt
Mr. A. Woolham

Herpetologist
Mr. K.W. Brown +

Reptile Keeping Staff
Miss I.A. McGeorge
Miss C. Morris Dip Anim Mgt

Aquarist
Mr. M.C. Crumpler

Aquarium Keeping Staff
Mr. J.T. Bell Dip Anim Mgt

Animal Supplies Officer
Mr. J.A.C. Forrest, BEd

Animal Supplies Staff
Mr. A. Foxall
Mr. A.B. Hutchinson
Mr. K.J. Newey

Estates

Estate Engineer & Head of Division
Mr. S. O'Brien

Project Engineer
Mr. K. Roberts

Divisional Secretary
Miss H. Smith

Maintenance Foreman
Mr. R.J. Morrison

Planning Supervisor
Mr. P. Owens

Maintenance
Mr. I. Blythe
Mr. C.J. Bridges
Mr. D.C. Holder
Mr. D. Kinsella
Mr. A. Lennon
Mr. E.P. Lindop
Mr. J.E. Parry
Mr. R. Read
Mr. G.E. Scott
Mr. L.L. Shepherd
Mr. J. Spencer
Mr. N. Young

Head Groundsman
Mr. P. Hughes

Groundstaff
Mrs. J. Cole
Mrs. H. Dean
Mr. S. Gilyeat
Mr. R. Head
Mr. M. Hughes
Mr. P.T. Hutchins +
Mr. C. Jones
Mr. M. Lloyd
Mr. G. O'Connor
Mr. P. Powell
Miss S. Read +
Mr. C. Yarwood

Head Gardener
Mr. E.J. Rudman

Deputy Head Gardener
Mr. J.G. Johnson

Foreman Gardener
Mr. C. Williams

Gardens
Mr. C.P. Braithwaite
Mr. K.N. Done +
Mr. R. Duncan
Mr. M. Hargreaves
Mr. P. Harrison
Mr. G. Hewitt
Mr. R. Hoddinott
Mr. D.R. Jones
Mr. P. Leach
Mr. A. Millington
Mr. R.A. Newey
Mr. S.H. Newey
Mr. C. Pritchard
Mr. J.E. Richardson
Mr. J.F. Roberts
Mr. N.P. Wood

Plant Engineer
Mr. W.P. Bartley

Plant & Equipment
Mr. B. Goss
Mr. B. McCone

Monorail & Boats
Mr. D. Paech
Mr. P. Quayle
Mr. D.A. Toms

Retired - 1995

Dr. M.R. Brambell
MA Vet MB PhD MRCVS
Mr. E.A. Du Cros FCA
Miss B.M. Norgain BSc MA

Marketing

Marketing Manager & Head of Division
Mr. C.M.N. Vere MBE TD MA

Public Relations Officer
Mrs. P. Cade, MIPR

Divisional Secretary
Miss P.A. McKee

Membership Secretary
Mrs. M.M.A. Allsopp

Adoptions Secretary
Mrs. M. McManus *

Party Office Manager
Mrs. J. Lawson

Party Office Assistant
Mrs. S. Thomas *

Oakfield & Functions Manager
Mr. R. Casson

Oakfield Chef
Mr. L. Adamson

Oakfield Second Chef
Mr. D. Cowley

Catering Manageress
Mrs. S. Clews

Assistant Catering Manager
Mr. B.G. Lloyd

Jubilee Chef
Mr. I. Patten

General Catering
Miss R. Don *
Miss J. Glossop
Mr. M. Jones
Mr. D. Keay *
Mrs. P. Keay
Mrs. D. Lenihan
Mrs. B. Smith

Retail Sales Manager
Mr. A. Jones

Assistant Retail Sales Manager
Mrs. S. Stanton

Merchandise Controller
Miss W. Locker

Retail Supervisor
Mrs. C. Long

Retail Sales Assistants
Mrs. S. Bratchell *
Mrs. B. Jones *
Miss G. Robinson

* denotes Part-time
+ denotes Dual Responsibilities

Staff Association 1995 Committee

Chairman
Mr. C.J. MacKenzie Dip Anim Mgt

Vice Chairman & Gardens
Mr. J.E. Richardson

Groundstaff
Mr. P. Powell

Keepers
Mr. P.M. Jones
Mr. R. Merry

Retail & Catering
Miss W. Locker

Maintenance
Mr. B. Goss

Education & Administration
Miss L. Davenport, LLB

Staff Leaving in 1995

Mrs. J. Atkin BA
Mrs. L. Bell
Miss R. Buckle
Mrs. J. Cleave
Miss J. D. Lunsford

friends of the education division

(87 as at 31/12/1995)

- | | |
|-----------------------|-------------------------|
| Mrs. T. K. Ackroyd | Mr. W. Longworth |
| Mr. R. Ackroyd | Mrs. M. McManus |
| Miss C.M. Allen | Mrs. I. Markham |
| Miss C. Atkinson | Mrs. J. Mead |
| Mr. D. Banks | Mr. I. Mellor |
| Miss M. Bell | Mrs. M. Miles |
| Mrs. C. A. Bergstrand | Mr. B. Milner |
| Mrs. C. Borrows | Mrs. A. Milner |
| Mr. J. Borrows | Mrs. S. Molyneaux |
| Mrs. V. Brickland | Miss N. Murphy |
| Mrs. J. Byrne | Mrs. J. Needham |
| Mr. E. Chesworth | Mrs. M. Nevell |
| Mrs. M. Constable | Mrs. J. Norman |
| Mr. B. Cox | Mr. I. Ogden |
| Mrs. P. Cox | Mr. M. Panter |
| Miss S. Crossland | Mrs. B. Passey |
| Mrs. G. Crossley | Mrs. E. Perry |
| Mrs. M. Crudge | Mrs. J. Potter |
| Mr. P. Crudge | Mrs. L. Powell |
| Mrs. A. Darsey | Miss S. Price |
| Mr. J. Denerley | Mrs C. Ronaldson |
| Mr. P. Duxbury | Mrs. M. Rushton |
| Mrs. H. Edwards | Mrs. S. Ryan |
| Mrs. B. Ellwood | Mrs. J. Schofield |
| Mrs. M. Fairweather | Mrs J. Scovell |
| Mrs. M. Fazey | Mrs. J. Seddon |
| Mr. M. Fieldhouse | Mrs. V. Shepherd |
| Mrs. D. Fisher | Ms. M. Shilliday |
| Mrs. M. Fletcher | Mrs. G. Smethurst |
| Mr. W. Fletcher | Mr. J. Smith |
| Mrs. A. Grey | Mrs. J. Springett |
| Mr. H. Halliwell | Mr. N. Stuart |
| Mrs. G. Hanks | Miss J. Sutton |
| Mrs. H. Harrison | Mr. G. Taylor |
| Mrs. R. Harrison | Mrs. D. Thornton |
| Miss J. Henderson | Mrs. V. Turtle |
| Mrs D. Holbrook | Mr. A. J. Van Suchtelen |
| Mr. N. Holbrook | Mrs. J. Van Suchtelen |
| Ms. M. Huntingford | Mr. M. Whitehead |
| Mr. G. Knapp | Mrs. S. Whitehead |
| Ms. J. Knowles | Mr. A. Whitwell |
| Mrs. A. Lighten | Mrs. S. Wilkinson |
| Mrs M. Lister | Mr. N. Williams |
| Mr. D. Lloyd | Mrs. A. Young-Cannon |



STAFF ON EXTERNAL COMMITTEES

Dr Gordon McGregor Reid
 Director

- President, British Cichlid Association.
- Fellow of the Institute of Biology.
- Member of Council, The Linnean Society of London.
- Member of Council and Conservation Committee, Flora and Fauna International.
- Member of Captive Breeding Specialist Group (IUCN).
- Member of Fish Specialist Group, World Conservation Union (IUCN Species Survival Commission).
- Member of the Joint Management of Species Committee, The Federation of Zoological Gardens of Great Britain and Ireland.
- Member of Federation CERCI (Computerised Livestock Documentation Steering Committee).
- Member of European Union of Aquarium Curators.
- Member of the International Union of Directors of Zoological Gardens/World Zoo Organisation.
- Member of the World Zoo Organisation (IUDZG) Marketing Syndicate.
- Member of World Conservation Union (IUCN) Species Survival Commission.
- Council Member, Association of Leading Visitor Attractions (ALVA).

Dr Roger Wilkinson
 Curator of Birds

- Honorary Research Fellow, University of Keele.
- Member of Council, Avicultural Society.
- Member of the Joint Management of Species Committee, The Federation of Zoological Gardens of Great Britain & Ireland.
- Member of Research Group, The Federation of Zoological Gardens of Great Britain & Ireland.
- Member of World Conservation Union (IUCN) Species Survival Commission.
- Member of Pheasant Specialist Group (IUCN/Birdlife/WPA).
- Member of Committees of the World Pheasant Association and the Congo Peafowl Trust.
- Secretary to the West African Ornithological Society.

Mr Nicholas Ellerton
 Curator of Mammals

- Member of the Captive Care Committee, Primate Society.
- Member of Joint Management of Species Committee, The Federation of Zoological Gardens of Great Britain & Ireland.
- Chairman of the Flora and Fauna International North West Group.

Mr Mark Pilgrim
 Avicultural Deputy

- The Amazona Society UK Scientific Officer.

Mrs Penelope Rudd
 Personnel Manager, International Movement
 Co-ordinator and Assistant to the Curators

- Member of the Advisory, Conciliation and Arbitration Service (ACAS) Chester Personnel Group.
- Member of Reaseheath College of Agriculture's Animal Care Course Industrial Liaison Group.
- Secretary/Co-ordinator of the Flora and Fauna International North West Group.

Mrs Pat Cade
 Public Relations Officer

- Member of Marketing & PR Committee, The Federation of Zoological Gardens of Great Britain & Ireland.
- A Director of the North West Tourist Board.
- Council Member, Association of Leading Visitor Attractions (ALVA).

Miss Linda Davenport
 Education Officer

- Chairman, Zoo Volunteer Education Organisers' Forum.

In addition to those listed above, several staff are Chairmen or members of Taxon Advisory Groups (TAGs) and co-ordinators of European Endangered Species Programmes (EEPs), Joint Management of Species Programmes (JMSPs) or other conservation groups (see Conservation report).

General legislation affecting the Zoo

Main items of legislation affecting zoo operations are: the Zoo Licensing Act 1981, the Health and Safety at Work Act 1974, the Dangerous Wild Animals Act 1976, National Rivers Authority and other environmental legislation, Planning legislation, and various items of European law concerning, for example, tourism and animal quarantine.

The Zoo Licensing Act concerns the welfare of the animals and the safety of the visiting public. The NEZS was granted a licence to operate a zoo in 1984. Currently, such licences are for a period of six years and the Society's present licence extension is valid until 31 March 2001. Periodic licensing inspection is conducted by Statutory Inspectors in accordance with Section 10 of the ZLA, with interim compliance inspections, under the auspices of the Local Authority, taking place bi-annually. The last Statutory Inspection was on the 17-18 October 1994 when the present licence was issued, subject to conditions which required remedial works to be undertaken to comply with the Secretary of State's Standards. These works were completed to the required high standard during 1995.

Dr Gordon McGregor Reid
Zoo Director.



New sewerage treatment plant installed to meet NRA environmental standards.

Health & Safety at Work Act 1974 with respect to zoos

The Health and Safety at Work Act (*Zoos - Safety, Health and Welfare Standards for Employers and Persons at Work*) applies to the staff of the NEZS. The Society's commitment to the health, safety and welfare of its staff and those affected by its undertaking continues. The policy statement on health and safety, required in law, was re-issued on 1 September 1995 to coincide with the appointment of the new Director, Dr. G. McG Reid. To the best of its knowledge and beliefs, the Society is currently addressing all relevant legislation. A major programme of risk assessment, as required by the management of Health and Safety at Work Regulations 1992, is being undertaken and, where necessary, training programmes have been initiated.

The ultimate aim of reducing accidents and preventing industrial or occupational disease remains paramount. With this in mind, the Society is pleased to report that 1995 has been its best year to date in accident prevention. It was necessary only on two occasions to submit reports to the Society's enforcing authority (Chester City Council): one 'major' injury (admission to hospital) and 'one over three day' injury. A survey is being undertaken during 1996 whereby accident down time in hours is set against total hours worked. It is hoped that this will provide a baseline with which to monitor further years' statistics.

In order to meet the provisions of the First Aid At Work Regulations, the Society maintains a high profile first aid facility staffed by in-house qualified first aiders, ably supported in high season by the St. John Ambulance Brigade. First aid facilities are provided on a continuous basis whilst staff are at work or visitors are on the premises. With an annual visitor population during 1995 of 760,000 and an estimated 54,600 staff person shifts worked, the first aid statistics for 1995 represent a very low percentage and reflect a positive corporate attitude towards health and safety.

From a total of 1946 first aid responses, 295 were staff and 1651 were visitors. Seventy-one cases were referred to hospital for further treatment, leaving a total of 1875 minor injuries treated on site. Due to doctor/patient confidentiality (visitor), it is difficult to determine how many of the 71 referrals were detained, but the figure is believed to be not more than four. Follow-up investigations suggest that the four comprise one staff plus three visitors.

Donald Dinning
Safety Officer.

The veterinary work at the Zoological Gardens is contracted to the local veterinary practice at the Gatehouse Veterinary Hospital. Additional input on veterinary pathology is provided by the Leahurst Veterinary Hospital, University of Liverpool and regular veterinary audits are conducted via the Scientific Committee. Other diagnostic and analytical services are provided through the Veterinary Investigative Service, Ministry of Agriculture, Fisheries and Food (MAFF); Diagnostic Investigative Services (DIS) Chester, and the Institute of Zoology, London. Practical training is also provided for veterinary students, from Britain and abroad.

This review has been compiled from clinical case records, laboratory findings and autopsy reports for 1995. The computerised *MedArks* record keeping system has now been installed at the zoo.

Clinical Medicine

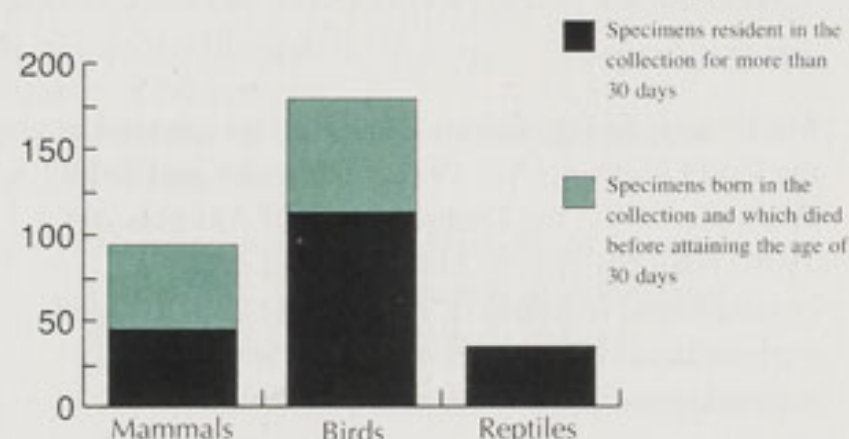
During 1995 the veterinary staff dealt with 202 mammal, 203 bird and 27 reptile clinical cases. Follow-up treatments to the case load total of 432 brought the total attendances to 1,566. This figure does not include advice given regarding husbandry, anthelmintic treatment or minor problems. Routine on-going preventative medicine procedures are detailed below.

It was necessary to use chemical restraint on 106 occasions to facilitate clinical or radiographic examination and/or surgical intervention. Routine procedures continue as previously. Weekly phlebotomy sessions in the elephant group to establish serum vitamin E and hormone levels continue. At the time of writing, this programme is at week number 377, the scheme having been initiated in November 1988.

Routine vaccinations continue against feline panleucopenia and viral rhino-tracheitis; and against clostridial infections in certain susceptible groups (Red Lechwe, *Kobus lechwe kafuensis* and Arabian Gazelles, *Gazella arabica*).

Current in-depth investigations are being undertaken in an attempt to identify the causative organism responsible for recurring first trimester abortion in the group of Scimitar-horned Oryx, *Oryx dammah* and in two Gemsbok, *Oryx gazella gazella*. In the former group of six affected females, one has aborted on four occasions, two on three occasions, one on two occasions and two once. Of the latter two, one is first generation progeny. As two sires have been used, it is thought unlikely that a male connection is involved. The abortions have occurred over a 13 month period. Prior to this present clinical entity, reproduction in the above Oryx and Gemsbok was normal.

Postmortem examinations carried out during 1995



Pathology

The main objects of carrying out postmortem examinations are:

- to ascertain the cause of death, to enable suitable action to be taken to prevent further losses.
- the acquisition of pathological data pertinent to exotic species

During the period 1st January to 31st December inclusive, 308 postmortem examinations were carried out. The above chart indicates three animal groups in two classes. From these, a total of 26 were destroyed for humane reasons.

Losses due to bacterial disease account for approximately 28% of deaths. Bacteria routinely encountered include: *Escherichia coli*, *Salmonella typhimurium*, *Aeromonas hydrophila*, *Pasteurella multocida*, *Yersinia pseudotuberculosis*, *Mycobacterium tuberculosis*, *Pseudomonas aeruginosa*, *Streptococcus pneumoniae* and *Staphylococcus aureus*. Fungal/yeast infections (<5% of total) are due to *Aspergillus fumigatus* and *Candida albicans*.

Deaths attributable to injury and/or accidental causes (17%) include intra- and interspecific aggression, collision or ensnarement with enclosure structures and losses to predatory mammals such as fox and stoat.

Parasitic losses were recorded at 4.5%. This low figure reflects the positive benefits derived from the programme of strategic preventative anthelmintic treatment routinely carried out by the veterinary and keeping staff. However, due to collection management in fixed locations, it is inevitable that some chronic losses will occur and these tend to be caused by certain endemic parasites such as *Syngamus trachea* and *Ascaridia galli*. During 1995, four cases of toxoplasmosis (*Toxoplasma gondii*) were recorded in mammals. The source of infection was believed to be hay/straw soiled by domestic or feral cats.

Disease due to nutritional or metabolic imbalances was involved in 7.5% of deaths. This figure continues to fall annually (cf. 20%+ during the 1980's), due largely to much improved dietary provision.

D. G. Lyon Consultant Veterinary Surgeon.

D. C. Dinning Veterinary Laboratory Officer.

A substantially revised and updated Conservationally Sensitive Species Register - representing nearly 50% of total species holdings - was produced in early 1995, listing the IUCN, CITES and other official status of Chester's species (please refer to separate document, including breeding and livestock records, to be read in conjunction with this Annual Report). Chester Zoo has originated this system of accounting for rare and endangered animals in zoological collections.

Breeding conservationally important animals in the Zoo remains at the heart of our activities. Zoo bred animals serve as an insurance against extinction in the wild and allow for the prospect of support and reintroduction programmes, where and when appropriate. The highlight of the year was undoubtedly the birth of *Karha* the Asiatic elephant on 19 December, the first cow to be reared in Britain. Unfortunately, mother *Thi* rejected her, but she is being hand-reared very successfully. The production of this baby is most significant with the global wild population of elephants now having severely declined. The ape section had their share of births too, with 2 Orang Utans and 1 Chimpanzee born during 1995. Rare Burmese Brow-antlered Deer were received in March and have already bred in the collection. The upgraded Asian Plains holding facilities will allow us to gradually substitute common, hardy kinds of deer with equally attractive but rare and endangered species which can be helped through zoo breeding programmes.

Following problems in recent years with breeding the conservationally sensitive Humboldt's Penguins, we successfully reared twenty-one in 1995. Other notable breedings for rare birds are: 4 Congo Peafowl; 1 Mauritius Kestrel; 4 Wrinkled Hornbills (UK first breeding); and 11 Bali Starlings (which represents about one third of the wild population of this critically endangered species!). We continue to collaborate with Keele University through Dr Carol Hackney on the Barn Owl Release Project (Barn Owls became extinct locally). We have, to date, raised 113 youngsters who have been passed on for the approved local release programmes in Staffordshire, the Wirral and Cheshire. Barn Owls seen in this region are likely to be Chester Zoo stock or their progeny.

The production of five new baby Tropical Rattlesnakes in May was another UK conservation first for Chester Zoo. The Tuatara - living fossil reptiles from New Zealand, juveniles of which were acquired in 1994 - are developing well, with all of them making good weight gains. The well-planted enclosure is now looking very attractive and we hope to breed with these animals as soon as they reach sexual maturity. A project is in progress with English

Nature (the governmental body for nature conservation) to build a vivarium for Sand Lizards at the Zoo in 1996. These are an endangered British species, and we will be taking an active part in a local breeding and release programme for the Merseyside region being coordinated by English Nature.

CERCI computer software was installed in the Aquarium, allowing for the development of a more comprehensive database for fish records and the genetic management of stocks. The breeding programme for endangered Lake Victoria Cichlid fishes goes from strength-to-strength with over 50 external members, many of them private hobbyists. Large numbers of cichlid fish, which are extinct or near-extinct in the wild, have been transferred to other zoological establishments around the world during 1995. Chester Zoo plays a leading role in the Zoo Federation Fish & Aquatic Invertebrate Taxon Advisory Group or 'TAG'. Through this, the Zoo has established and now co-ordinates conservation groups for cichlid fishes, livebearers and seahorses. A Tadpole Shrimp Conservation Group was also formed in 1995 which liaises with English Nature. The group has developed a Species Action Plan for this critically endangered freshwater crustacean, now found at only one small pond site in England.

Chester Zoo was the proud recipient of a Zoo Federation Award (in conjunction with Edinburgh, London and Jersey Zoos, and Martin Mere WWT) for significant advances in husbandry and welfare for cooperative work on Pacific Island Land Snails (*Partula* species) and their trial field release programme on the island of Moorea. The North of England Zoological Society supports many other general field conservation projects overseas. Among those which we contributed to in 1995 were: Buffy-headed Capuchin fieldwork in South America; White Rhino protection project in Garamba, Zimbabwe; Falklands Conservation project, including penguins; Red-vented Cockatoo field station, the Philippines; Education poster project for the Philippine Eagle Owl; The World Parrot Trust initiatives and various important activities in India through the Zoo Outreach Organisation.

Plant conservation is becoming increasingly important in the gardens of Chester Zoo. We are, for example, contributing to a Conifer Conservation project with the Royal Botanic Gardens, Edinburgh, Liverpool John Moores University and the gardens departments of Edinburgh and Paignton Zoos.

Dr Gordon McGregor Reid
Zoo Director.

This proved to be a very mixed year, from a wet and miserable spring to our hottest and driest summer on record. Seemingly rather too hot for most of our stock, many species sat out the hottest days in the shade. Nevertheless, we coped well and the only problem the drought gave us was no new growth of grass in our paddocks resulting in almost desertification of some of them.

Notable births amongst the primates have been two female Chimpanzees (though I would have preferred them to have been males) and two male Bornean Orang Utans which I would have preferred to have been females! Our chimp group now numbers 26 animals (5 ♂ 21 ♀) and our Orang Utan group 14 (4 ♂ 10 ♀). In 1996, our adult pair of Sumatran Orang Utans will be moved on to other collections within Europe as part of the EEP; and a young male will be arriving from Perth, Australia to pair with our young female Sumatran Orang utans. The Ring-tailed Lemurs produced 10 young this year, the Black and White Ruffed Lemurs had triplets (of which two females were reared) and the Red Ruffed Lemurs produced another male. Several (11 ♂ 9 ♀ 1 sex undetermined) Ring-tailed Lemurs were moved to other collections and our non-breeding group of White Fronted Lemurs were moved to another collection. In April, after much effort, 1 ♂ 2 ♀ Burmese Brow-antlered Deer arrived from Leipzig Zoo. These beautiful deer, whose wild population is in rapid decline, produced two young, one of which sadly died shortly after birth. There is at last greater interest in endangered deer species within the UK and it is hoped that Chester Zoo will play a leading role in increasing the number of endangered deer species managed in the UK.

Breeding success can bring its problems. Our Rodrigues Fruit Bat colony is growing at an alarming rate. Nocturnal space is at a premium and setting up new groups is becoming increasingly more difficult as potential collections become wary of taking on a problem. Nevertheless, this breeding programme involves the country of origin and the zoological community and is a superb example of success.



The Chester Chronicle's greeting to Karha

The young pair of Black Rhinos are now mature. Unfortunately, our male exchange with Port Lympne Zoo has not worked out at the Chester end. The male Black Rhino from Port Lympne has proved to be aggressive and will be returned this spring. However, *Parky* the male we sent to Port Lympne has covered three females; hopefully there will be more Black Rhinos within the UK as a result of these moves.



The supreme highlight of 1995 has been the birth of the female Asiatic Elephant *Karha*. She has had to be hand-reared and the Elephant House staff have put an extraordinary amount of hard work and dedication into ensuring that all of her requirements are met.

Asiatic Elephant births within the UK are frustratingly few and far between. When collections holding viable females can co-operate more fully, then and only then can we expect to see more births. There are only three proven Asiatic bulls within the UK and it is essential that young Asiatic females in other collections have access to these bulls.

Nicholas Ellerton
Curator of Mammals.

The highlights of the year were our first successful breedings of Congo Peafowl, Wrinkled Hornbills, Mauritius Kestrel and Golden Conures. In total, the young of 73 species were reared from 86 species that hatched.

Twenty-four Humboldt's Penguins were reared. Waldrapp Ibis, Red-crested Pochard and White-headed Ducks reared young in "Europe on the Edge". Other waterfowl reared included Black-necked Swans, Hawaiian Geese and West Indian Whistling Ducks. Dalmatian Pelicans, European Spoonbills and Black Storks are new to the collection. The Caribbean Flamingos reared four chicks and the Chilean Flamingos reared five chicks.



Photographs by Dr Roger Wilkinson

*Breeding success with Mauritius Kestrels,
a 'first' for Chester*

The Rheas hatched five chicks. Female Red-necked Ostriches arrived to join our male. The Mauritius Kestrels' eggs were removed for incubation and replaced by egg dummies. Two chicks hatched but one did not survive. The remaining chick was returned to its parents twice, but each time was rejected so subsequently had to be hand-reared.

Bare-faced Curassows, Variable Chachalaca, Temminck's Tragopan, Satyr Tragopan, Himalayan Monals and Edwards' Pheasants were all reared. New to the collection are Grey-headed Chachalacas, Malayan Crestless Firebacks, Green Peafowl and Ocellated Turkeys. Four Congo Peafowl were reared. Red-crowned Cranes again reared a chick but the Wattled and Demoiselle Cranes eggs were infertile.

Nicobar Pigeons, Superb Fruit Doves and a Jambu Fruit Dove were bred. Blue Crowned Pigeons laid for the first time at Chester but their eggs failed to hatch. A Violaceous Turaco was parent-reared and two more were hand-reared, as were a Schalow's Turaco and a Red-crested Turaco

Yellow-Backed Chattering Lories, Musschenbroek's Lorikeets and Stellas Lorikeets were bred. The female Palm Cockatoo spent several weeks in the nest-log but no eggs were laid. A second pair of Palm Cockatoos and two White-tailed Black Cockatoos were received on loan from HM Customs and Excise.

Six Blue-eyed Cockatoos were loaned to other collections and three bred. Other parrots reared included a Vosmaeri Eclectus Parrot, Greater Vasa Parrots, Derbyan Parakeets, Red-fronted Macaws, and Blue and Gold Macaws. Four Green-cheeked Amazons were parent-reared and three Cuban Amazons hand-reared. A female Blue-throated Macaw was received from Loro Parque Zoo to pair with Chester's male. A female Red-tailed Amazon, also from Loro Parque, has now been paired with a male loaned from Hayle Bird Gardens.

Two Golden Conures were hand-reared. Blue-throated Conures hatched but failed to rear chicks. Slender-billed Conures reared four chicks and a Thick-billed Parrot was also parent-reared.



Newly hatched Golden Conure, a 'first' for Chester

Owls bred included Spectacled, White-faced Scops, Snowy and Barn. As in previous years, the Barn Owls were donated to the Keele University local reintroduction project. Four Tawny Frogmouths were hand-reared but attempts at parent-rearing failed and returning hand-reared chicks to the parents also proved unsuccessful.

Chessington Zoo loaned a male Toco Toucan to pair with our female. Blue-crowned Motmots reared a chick for the first time at Chester. One Trumpeter Hornbill and two African Grey Hornbills were reared. The fledging of four Wrinkled Hornbills at Chester was a UK first.

Red-billed Magpies, Azure-winged Magpies, Superb Spree Starlings, Fairy Bluebirds, Plumbeous Redstarts and Gouldian Finches were all bred. Finally, one of the most important results for 1995 was the rearing of eleven Bali Starlings, representing one-third of the world population!

*Dr Roger Wilkinson
Curator of Birds.*

Generally, 1995 was a year of fresh developments for the Herpetology Department with the establishment of several new breeding programmes and also new exhibits. The successful breeding of Tropical Rattlesnakes is a UK first to be very pleased about. Two new Poison Arrow Frog breeding enclosures have been set-up for 'difficult' species that we have been working with off-show.

After the rare Tuatara arrived in November 1994 from New Zealand, we waited with some trepidation to see if they would settle into their new home; and, indeed, to see if the enclosure would develop into a suitable environment. Everything worked well, with the plants flourishing in improved lighting conditions and the hibernation chambers that we had buried in the substrate, doubling up as cooling areas for the Tuatara during some very warm summer days during 1995.

The warm summer also had some general effects on our lizards, as some species continued to lay eggs well into the late autumn resulting in youngsters hatching during the Christmas period. It will be interesting to see if they get back into their more normal seasonal cycle of reproduction during 1996.

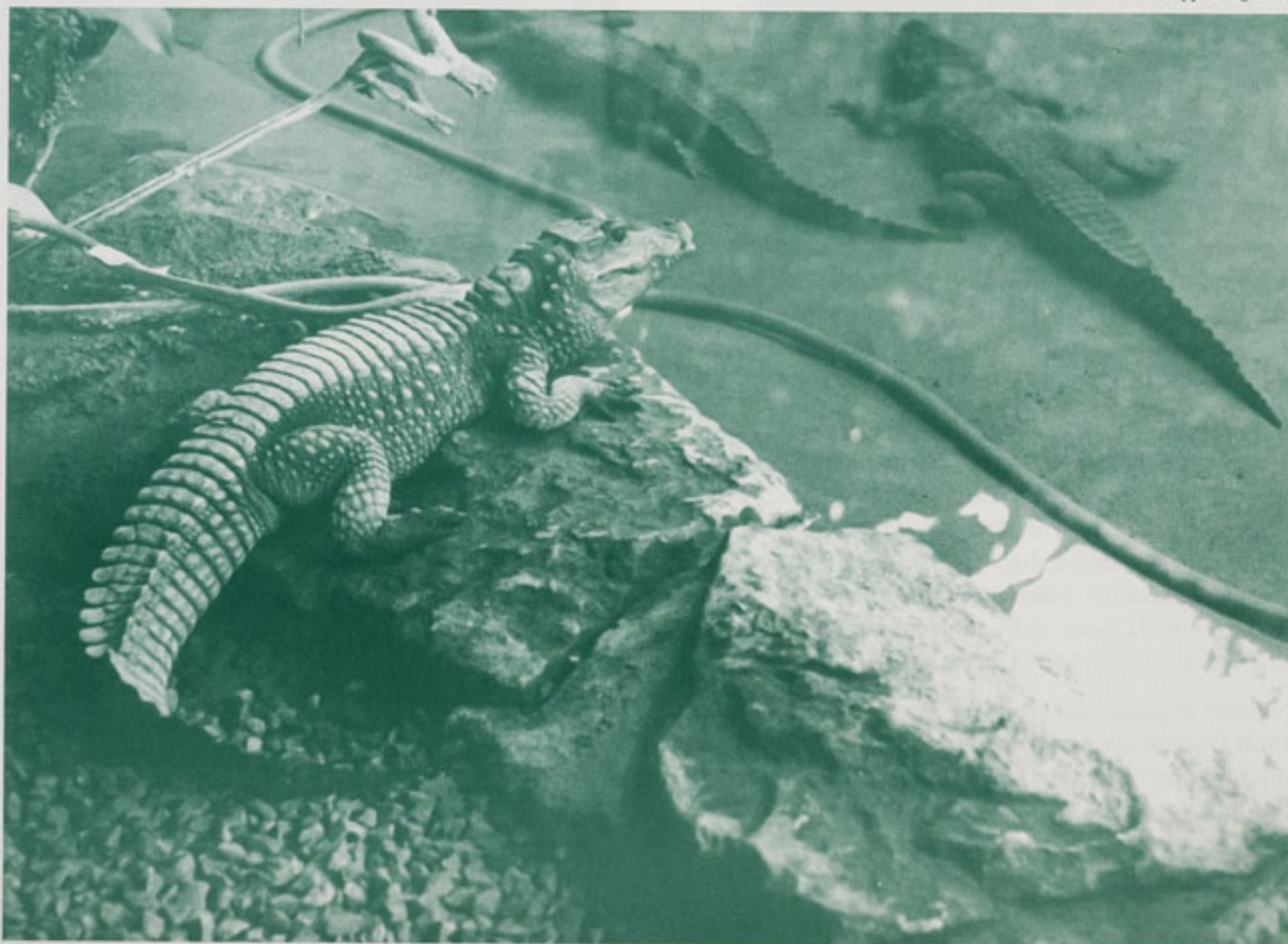
The Tropical Realm building now contains revamped

pool areas for various aquatic reptile species. In addition to upgraded enclosures for Mississippi Alligators and Dwarf Crocodiles, we have established a group of Matamata turtles in an aquatic environment. There is very little known about their natural biology and although we have worked with these turtles for many years, it has always been with small, young specimens in controlled environments. These have now grown into adult turtles that have a carapace length between 40 - 50 cm and weigh approximately 3 - 4 kg. A group of 5 Matamata specimens have been housed in a pool area for over 12 months and appear to be doing extremely well. Several nest sites are built into the 'land area' of the enclosure and we hope they will find them suitable for egg laying during 1996.

Interpretation of the collection has improved dramatically in co-operation with the Education Division. We look forward in 1996 to increased public interest and awareness through well-designed enclosures, positive results with breeding programmes and interesting, informative new interpretation.

Keith Brown
Zoo Herpetologist.

Mississippi Alligators



North of England Zoological Society
ANIMAL DIVISION **AQUARIUM**

Since the opening of the new zoo entrance, the aquarium - once the first exhibit on show to the public and, again, the last on their way out - now stands facing the empty former car park. Despite the new position the aquarium now finds itself in, public attendance does not seem to have been affected, and it remains as popular as ever. The aquarium frontage has changed quite dramatically this year with a 3D model of a marine scorpion fish hung centrally on the front of the building, along with a more descriptive and appropriate building title: 'conserving water life'. Inside there have also been many changes, including a new exhibit directly opposite the entrance, kindly sponsored by Aquarian (Pedigree Petfoods). This display has been set-up to show the public just what can be achieved in a home aquarium if a little time and money is put in to their hobby. With the support of Aquarian, progress has also been made on the production of an entirely new *Aquarium Guide* for publication in 1996.

Early in the year we installed five large protein skimmers on our marine tanks as part of an on going programme to upgrade our filtration systems. Improved water quality can bring benefit, in improved fish health and better

breeding results. Aquarium staff are actively involved with a number of aquatic conservation groups established under the *aegis* of the Fish and Aquatic Invertebrate Taxon Advisory Group (FAITAG), and have attended meetings up and down the country. These groups are for : Tadpole Shrimps, Cichlids, Seahorses and the endangered Livebearers. All species held co-operatively within these groups and maintained by Chester have been successfully bred.

Rare Surinam toads have now been put on public display and have subsequently bred, a number of females have produced eggs but, to date, none have hatched. This species is remarkable for the female incubating the eggs in pockets developed on her back. Staff have also attended aquatic festivals across the country, promoting Chester Zoo's contribution to aquatic conservation. This was achieved through lectures, leaflet distribution and large information displays set up around the Zoo Ark. These events were very successful, attracting aquatic societies to our aquarium for behind the scenes tours, and bringing in much needed revenue.

Mike Crumpler and Justin Bell
Zoo Aquarists.

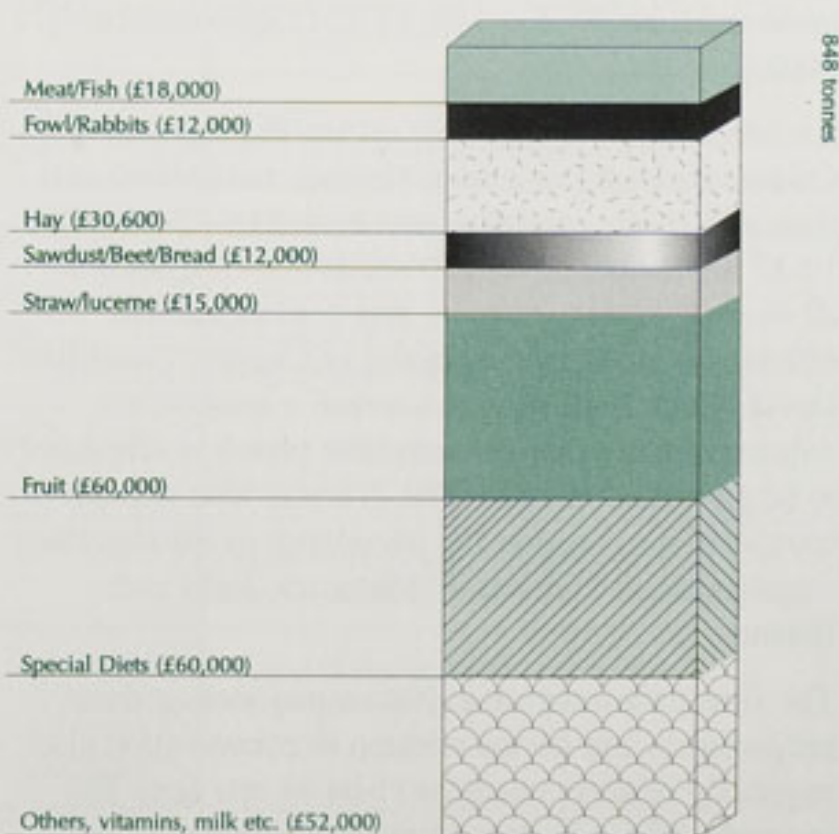
North of England Zoological Society
ANIMAL DIVISION **ANIMAL SUPPLIES**

We supplied 848 tonnes of food and associated bedding to the animals at an economical cost of about £700 per day. Home grown sweetcorn and kale, along with bulk deliveries of carrots, fodder beet and potatoes helped to keep costs down. Within the 78 tonnes of fruit were 37t of apples, 22t of bananas, 8t of pears, 6t of oranges, 3t tonnes of grapes, and 2t of tomatoes. This was supplemented with kiwi fruit, melons, pineapples, plums and coconuts as they became seasonally available. Vegetables totalled 187 tonnes, including 80t of beet, 58t of carrots, 32t of cabbage, 12t of potatoes and 5t of lettuce, with smaller amounts of leek, courgettes, celery and cucumber. Cereal supplies totalled 400 tonnes with 232t of hay, and 140t of lucerne and straw, fleshy foods amounted to 46t and included 24t of meat, 10t of sprats, and 12t of herring.

We distributed 157 tonnes of special diets (such as flamingo diet, reindeer diet, primate diet) which cost £60,000 for the year. We bred 91,040 locusts, 14,245 mice and 3,400 rats supplementing the 17,000 chickens, 1,300 rabbits, and 128,000 frozen units. There were 3,000,000 crickets and 0.5 tonne mealworms consumed in 1995. All of these nutritious food items were supplemented by the small, but equally important, vitamin and mineral supplements.

Jim Forrest
Animal Supplies Officer.

Foodstuffs, Weights/Costs 1995





Delegation of Chinese Zoo Directors
with Director (centre) and Curator of Mammals (extreme right)

The North of England Zoological Society has long had a high international standing, with extensive collaboration with zoologists and conservationists overseas. George Mottershead, our original Director, was a Chairman of the World Zoo Organisation (the International Union of Directors of Zoological Gardens or IUDZG) and Chester Zoo remains an active member. Dr Michael Brambell was recently elected to Honorary Membership. In October 1995, Dr Gordon Reid attended the 50th IUDZG Conference held in Dublin and joined with 140 other zoo and aquarium delegates representing 34 countries. Much of the conference centered around *Zoo Future 2005*, a strategic planning document resulting from an international workshop held earlier in the same year in Germany. Following the conference, several zoo directors visited Chester Zoo including Dr John Kelly, Director of the Zoological Parks Board of New South Wales, Australia (which includes Taronga Park Zoo with which we have had recent beneficial exchanges of zookeepers). A delegation of directors from the seven leading zoos in China also visited and kindly presented Chester Zoo with a Gold Commemorative Medal.

An International Conference on the Biology and Conservation of Prosimians (lemurs, bushbabies and their allies) was organised and hosted by Chester Zoo 13-17 September. Over 150 research biologists from all over the world attended. The conference was officially opened by the Sheriff of Chester, Councillor David Nield. Following this event, a symposium volume of more than 50 scientific papers is scheduled to be published in 1996. The Zoo was able to raise sponsorship to support the attendance of distinguished scientists from Vietnam, Madagascar, India and Poland.

The zoos wide-ranging exotic animal management programmes and global mission in conservation also regularly requires overseas visits by zoo staff. For example, Nick Ellerton, Curator of Mammals,

travelled to the Gashaka Gumti National Park in Nigeria in February for a one month field survey of primates. Nick Ellerton, Neil Spooner, Section Coordinator, and Steve O'Brien, Estates Engineer, travelled to various zoos in Europe to investigate different elephant breeding and holding facilities, with a view to up-dating Chester's. Roger Wilkinson, Curator of Birds, and Nick Ellerton attended the 1995 EEP (European Endangered Species Programmes) meeting in Poznan, Poland. Keith Brown, Herpetologist, and Isolde McGeorge, reptile keeper, gained valuable experience and contacts from attending the International Herpetology Breeders Convention in the USA, while Mike Crumpler and Justin Bell of our Aquarium attended, for the first time, the European Union of Aquarium Curator's Meeting in the Netherlands. Mark Pilgrim, Avicultural Deputy, Ross Meredith, primate keeper and zoology student Jo Mills travelled to the Republic of Czechoslovakia for an EEP research meeting; and Mark and Jo presented papers on parrot DNA and Black Rhino biology, respectively. Last but not least, Jonathan Cracknell student keeper in the Reptile Department travelled to Tahiti and Moorea, with Zoo support, to study native Pacific Island Land Snails (*Partula*) and the introduced 'problem' snails *Euglandina* and *Achatina*.



Professor Dang Huy Huynh,
Vietnam Centre for Natural Sciences and Technology

21 FIELD PROJECTS SUPPORTED BY CHESTER ZOO

| SUBJECT | NEZS COORDINATOR(S) | FUNDING / SUPPORTING BODY | COLLABORATING BODY |
|--|--|---|--|
| Chimpanzee field survey Gashaka Gumti, Nigeria. | N G Ellerton Dr C Harcourt | WWF / NEZS | WWF / Nigerian Conservation Foundation. |
| Pacific Island Land Snail Reintroduction Programme. | K Brown | NEZS | Financial support for expeditionary work to Jonathan Cracknell, Zoo student. |
| Philippine Spotted Deer Conservation. | N G Ellerton | NEZS | Financial support from NEZS (Dr W Oliver). |
| Tadpole Shrimp Species Recovery Programme, UK. | Dr G Reid / M Crumpler / J Bell, Aquarium Dept. | English Nature / NEZS | English Nature and Zoo Federation Fish and Aquatic Invertebrate Taxon Advisory Group. |
| Sand Lizard Species Recovery Programme. | Dr G Reid / K Brown Reptile Dept. | English Nature / Countryside Council for Wales / WWF. | English Nature with Herpetological Conservation Trust, Countryside Council for Wales and WWF. |
| Conifer Conservation Project. | Dr G Reid / E Rudman, Gardens Dept. | Sainsbury Trust Grant | Royal Botanic Gardens, Edinburgh, with Edinburgh and Paignton Zoos and Liverpool John Moores University. |
| Support for Zoo Outreach, India. | N G Ellerton | NEZS BAANC | CBSG / Zoo Outreach India (Dr S Walker). |
| Dormouse Reintroduction Programme. | N G Ellerton P Rudd | English Nature / NEZS | Cheshire Wildlife Trust. |
| Buffy-headed Capuchin fieldwork, S. America. | N G Ellerton | NEZS / Zurich and Mulhouse zoos | Financial Support from NEZS in collaboration with other zoos. |
| Captive Breeding Specialist Group. | Dr G Reid / Animal Division | NEZS | Financial Support from NEZS as one of many contributing zoos. |
| Save the Rhino International. | N G Ellerton | NEZS / Save The Rhino | Financial Support from NEZS for a Northern White Rhino reserve in East Africa. |
| Falklands Conservation-Penguins. | Dr R Wilkinson | NEZS / Penguin TAG | Financial Support from NEZS through the Membership and collection box. |
| Red-vented Cockatoo <i>in-situ</i> conservation. | Dr R Wilkinson | NEZS / EEP | Financial Support from NEZS through Red-vented Cockatoo EEP. |
| Philippine Eagle Owl <i>in-situ</i> education poster project. | Dr R Wilkinson | NEZS / Owl TAG | Financial Support from NEZS through JMSG Taxon Advisory Group. |
| World Parrot Trust. | Dr R Wilkinson | NEZS / World Parrot Trust | Financial Support from NEZS through interpretation display and collection box. |
| Harvest Mouse Conservation Programme. | P Rudd | NEZS | British Museum of Natural History, New Forest Quest, Vincent Wildlife Trust and others. |
| Chimpanzees Central Africa. | N G Ellerton, P Rudd A Woodward | FFI (NW) | Directed Funding from FFI Northwest Group based at Chester Zoo (Jane Goodall Institute). |
| Bonobos, Zaire | N G Ellerton, P Rudd A Woodward | FFI (NW) | Directed Funding from FFI Northwest Group based at Chester Zoo (Jo Thompson). |
| Orang Utans S. E. Asia. | N G Ellerton, P Rudd A Woodward | FFI (NW) | Directed Funding from FFI Northwest Group based at Chester Zoo (Orang Utan Foundation) SE Asia. |
| Elephant Seed Dispersal Ghana; Vultures-foraging ecology, Guyana; Margay-behaviour and breeding ecology. | Dr R Wilkinson | NEZS / Membership | Three NEZS Zoology Studentships funded through the Membership. |
| Prosimian Conference. | Animal Division | NEZS | Field biologists visits to UK funded for delegates from Madagascar, Vietnam, India and Poland. |

North of England Zoological Society

ANIMAL DIVISION CONSERVATION CO-ORDINATION

Chester Zoo continues to participate very actively in 15 federated national (Joint Management of Species Programme or JMSP) and international (European Endangered Species Programme or EEP) studbooks and registers for the co-ordination of breeding programmes:

| <i>Species</i> | <i>Coordinator</i> |
|---------------------------------------|--------------------|
| Chimpanzee | Nick Ellerton |
| De Brazza Monkey (JMSP) | David Brunger |
| Talapoin Monkey (JMSP) | David Brunger |
| Gemsbok (JMSP) | Charles MacKenzie |
| Palm Cockatoo (EEP) | Roger Wilkinson |
| Blue-eyed Cockatoo (European non EEP) | Roger Wilkinson |
| Spectacled Owl (JMSP) | Roger Merry |
| West African Crowned Crane (JMSP) | Roger Wilkinson |
| Green-cheeked Amazon Parrot (EEP) | Mark Pilgrim |
| Lilacine Amazon Parrot (EEP) | Mark Pilgrim |
| Cuban Amazon Parrot (JMSP) | Mark Pilgrim |
| Prehensile-tailed Skink (JMSP) | Keith Brown |
| Madagascan Tree Boa (JMSP) | Keith Brown |
| Philippine Sail-fin Lizard (JMSP) | Keith Brown |
| Lake Victoria Cichlid Fishes (JMSP) | Justin Bell |

At a higher level of co-ordination, Chester Zoo also provides Chairmen to lead 4 key Zoo Federation Taxon Advisory Groups or 'TAGs' as members of the UK Joint Management of Species Group (JMSG):

| <i>Taxon</i> | <i>Chairman</i> |
|-------------------------------------|-----------------|
| Elephants (JMSG) | Nick Ellerton |
| Deer & other Cervids (JMSG) | Nick Ellerton |
| Parrots (EEP, JMSG) | Roger Wilkinson |
| Fish & Aquatic Invertebrates (JMSG) | Gordon Reid |

Photo Justin Bell



Tadpole Shrimp shedding eggs

*16 POST-GRADUATE & POST-DOCTORAL PROJECTS SUPPORTED BY CHESTER ZOO
 (Supervisor/Coordinators indicated in brackets, if applicable)*

| SUBJECT | RESEARCHER | QUAL. | FUNDING/ SUPPORTING BODY | COLLABORATING BODY |
|---|-------------------------------|-------|---|--|
| Lemur behaviour in the context of reintroduction programmes. | A Britt (Dr G Reid) | PhD | Wingate Scholarship/ BAANC | University of Liverpool (Dr R Crompton). |
| Conservation biology & behavioural ecology. | R Meredith | MSc | NEZS/MMU | Manchester Metropolitan University (Dr B Stevens-Wood). |
| Chimpanzee behavioural study in Gashaka Gumti, Nigeria. | S Hogarth (Dr G Reid) | PhD | World Wide Fund for Nature (UK) & NCF | WWF & Nigerian Conservation Foundation / Manchester Metropolitan University (Dr B Stevens-Wood). |
| Influence of Spotted Hyaena kleptoparasitism on the large African predator guild, Zimbabwe. | Alistair Pole | PhD | NEZS / MMU | Manchester Metropolitan University (Dr B Stevens-Wood). |
| Brow-antlered Deer studies to conserve wild population. | N Ellerton | | NEZS | Liverpool John Moores University (Dr C McGregor Argos). |
| Taxonomic evaluation of rare Amazonian Parrots. | M Pilgrim (Dr R Wilkinson) | PhD | NEZS / Amazonian Society | Liverpool John Moores University (Dr S Dowell and others). |
| Survival and movement of captive bred Barn Owls in a local release programme. | I Mason (Dr R Wilkinson) | PhD | NEZS / LED Blond Trustees | Keele University (Dr C Hackney). |
| Behaviour and taxonomy of African starlings. | Dr R Wilkinson | | NEZS | |
| Behaviour of <i>Coracopsis</i> parrots. | Dr R Wilkinson | | NEZS | |
| Behaviour and ecology of Helmet Shrikes in Zambia. | R Stjemstedt (Dr R Wilkinson) | PhD | NEZS / MMU | Manchester Metropolitan University (Dr C Goldspink). |
| Ecology of African Grey Parrots in Cameroon. | A Tamungang (Dr R Wilkinson) | PhD | NEZS / WWF / WAOS | University of Ibadan, Nigeria (Prof. S S Ajayi) / World Wide Fund for Nature |
| Cichlid fish of Lake Tanganyika behaviour and taxonomy. | S Wheeler (Dr G Reid) | PhD | LJMU | Liverpool John Moores University (Dr P. Oakland) |
| Genome Resource Bank Cryobiology project. | Dr G Reid | | EU Biotechnology grant | University of Stirling, Scotland and Institute of Zoology, London (Dr K Rana, Dr B Holt) |
| Microsatellite DNA in determining parentage. | Dr G Reid | | Fisheries Society of Great Britain | London Zoo Aquarium (Dr H Hall) |
| Zoogeographical and other researches on fishes Nigeria / Cameroon / Guinea-Congo. | Dr G Reid | | World Wide Fund for Nature contract funding | WWF, Nigerian Conservation Foundation, Smithsonian Institute, Washington and American Museum of Natural History, New York. |
| Biomechanical studies on Chimpanzee locomotion. | Dr R Crompton and associates | | UL | Various research grants, to University of Liverpool (Dr R Crompton) |

60 Undergraduate and Postgraduate Research students engaged in research projects registered in the zoo

| | NAME | HOME | UNIVERSITY | SUBJECT | DEGREE |
|--|----------------------|-------------------|---------------------|-------------------------------|------------|
| | Susan Aitken | Formby | Liverpool | Psychology | BA |
| | Jinath Ali | Chester | Liverpool | Psychology | B Sc |
| | Jane Allnutt | Ipswich | Chester College | Biological Science | B Sc |
| | James Barrett | Norfolk | Chester College | Ecology | B Sc |
| | Sarah Bennett | Cannock | Liverpool | Zoology | B Sc |
| | Edward Bewsher | Morpeth | JMU Liverpool | Applied Biology | B Sc |
| | Deborah Booth | Wakefield | Liverpool | Zoology | B Sc |
| | Rachael Booth | Wirral | Bolton Institute | Psychology and Biology | B Sc |
| | Adam Britt | Chester | Liverpool | Zoology | Ph D |
| | Rachel Brocklehurst | Lincoln | Liverpool | Psychology | B Sc |
| | James Bulmer | Wigan | Liverpool | Psychology | B Sc |
| | Johanna Burfitt | Prestbury | Liverpool | Psychology | B Sc |
| | Dawn Cafferty | Leicester | Liverpool | Psychology | B Sc |
| | Linda Callender | Ludlow | Liverpool | Zoology | B Sc |
| | Kelly Campbell | Huyton | Liverpool | Psychology | B Sc |
| | Julia Casperd | Richmond | University College | Biological Anthropology | Ph D |
| | Helen Clark | Hull | Manchester Metro | Biological Sciences | B Sc |
| | Emily Collyer | Church Stretton | Chester College | Biology and Psychology | B Sc |
| | Tina Conbeer | Chester | Liverpool | Psychology | B Sc |
| | Simon Conchie | Manchester | Manchester Metro | Environmental Science | B Sc |
| | Joanna Cutting | Warwickshire | Manchester Metro | Applied Biological Sciences | B Sc |
| | Josephine D'Erlanger | Tiverton | Liverpool | Psychology | BA |
| | Louise Duncan | Chester | R Vet Coll, London | Veterinary Medicine | B Vet Med |
| | Genevieve Francis | Wrexham | Bolton Institute | Psychology and Biology | M Sc |
| | Claire Grundy | Hull | Chester College | Drama and Psychology | BA |
| | Lesley-Ann Highton | Chester | Liverpool Institute | Psychology/Sociology | BA |
| | Tamsin Hughes | Denbigh | Chester College | Biology and Geography | B Sc |
| | Toby Humphreys | Tarvin | Chester College | Biology | B Sc |
| | Louise Isherwood | Accrington | Liverpool | Zoology | B Sc |
| | Marie Jacques | Bolton | Bolton Institute | Psychology | PhD |
| | Robert Keane | Manchester | Manchester Metro | Biological Science | B Sc |
| | Susan Kelly | Wallasey | Liverpool | Psychology | B Sc |
| | Katherine Kinsella | Preston | Edge Hill, Ormskirk | Field Biology | B Sc |
| | Christianne Lambert | Wrexham | Chester College | Biology | B Sc |
| | Joanna Lawton | Warrington | Chester College | Environmental Biology | M Sc |
| | Juliet Leadbeater | Chester | Chester College | Biology | B Sc |
| | Claire Lister | Doncaster | Manchester | Applied Biological Sciences | B Sc |
| | Phillip Manning | Mossley | Sheffield | Earth Sciences | Ph D |
| | Joanne Martin | Bolton | Bolton Institute | Animal Behaviour | Ph D |
| | Lisa Mather | Bolton | Bolton Institute | Psychology and Biology | M Phil/PhD |
| | Fiona McCracken | Clwyd | Stirling | Psychology | B Sc |
| | Gordon McLeod | Glasgow | Edinburgh | Animal Behaviour/Welfare | M Sc |
| | Janet Morrow | Warrington | Bolton Institute | Psychology with Biology | B Sc |
| | Zoe Muller | Chalfont St Peter | Manchester Metro | Combined Studies/Biology | B Sc |
| | Joanne Ness | Liverpool | Liverpool Institute | Biology/Education | B Ed |
| | Emma Parker | Wheathampstead | Harper Adams UC | Agriculture | B Sc |
| | Helen Parker | Ellesmere Port | Liverpool Institute | Biology/Psychology | B Sc |
| | Angela Pitts | Chester | Bolton Institute | Biology/Psychology | Ph D |
| | Russell Rimmer | Southport | St Andrews | Psychology | MA |
| | Fiona Ross | Halesowen | Nottingham | Zoology | B Sc |
| | Zoe Selby | London | Liverpool | Psychology | BA |
| | David Stewart | Perthshire | R Vet Coll, London | Veterinary Medicine | BVM & S |
| | Susan Stulock | Bolton | Bolton Institute | Psychology | M Phil/PhD |
| | Susannah Thorpe | Leeds | Leeds | Biology | Ph D |
| | Simon Walker | Tattenhall | Leeds | Pure and Applied Biology | B Sc |
| | Gareth Walsh | Camberley | Brookes, Oxford | Human Biology | B Sc |
| | Michael Wardle | Liverpool | JMU Liverpool | Outdoor and Science Education | B Ed |
| | Danielle Williams | Malmesbury | Chester College | Biology | B Sc |
| | Paul Williams | Oldham | Manchester Metro | Combined Studies (Biology) | B Sc |
| | Larissa Young | Bury | Bolton Institute | Psychology and Biology | B Sc |

*58 Undergraduate, college and school students engaged in work experience projects registered in the zoo**Animal Division – Mammals*

| | NAME | ADDRESS | COUNTRY | SUBJECT | QUAL |
|-------------|---------------|------------------|-------------|----------------------|------------------|
| Lesley | Bellwood | Chester | | Psychology | BSc |
| Ross | Brodie | Portsmouth | | Veterinary Science | B Vet Med |
| Philip | Davis | Aberystwyth | | Animal Management | |
| David | Dawbin | Plymouth | | Animal Care | National Diploma |
| James | Dean | Staverton | | Microbiology | Graduate |
| Linda | Devine | Stockholm | Sweden | Animal Management | |
| Amy | Dickman | Exeter | | Zoology | BSc |
| Emily | Dukes | Frodsham | | | GCSE |
| Fiona | Edington | Clitheroe | | Zoology | Graduate |
| Paul | Garner | Portsmouth | | | GCSE |
| Myfanwy | Griffiths | Lyme Regis | | Zoology | BSc |
| Glyn | Hayes | Crewe | | Science | |
| Alexander | Holt | Southport | | | GCSE |
| Elizabeth | Lyon | Manchester | | Veterinary Science | B Vet Med |
| Emma | Mahony | Wrexham | | Animal Service | Duke of |
| | | | | Edinburgh's Awards | |
| Ron | Mannion | Wirral | | Biology/Physical Edn | BSc |
| Morna | McDowell | Cork | Eire | Veterinary Science | B Vet Med |
| Catherine | McLaughlin | Birkenhead | | Animal science | National Diploma |
| Jo-Ann | Mosley | Sutton Coldfield | | Biology | BSc |
| Samantha | Munroe | Hameln | Germany | | |
| Melissa | Murphy | Manchester | | Veterinary Science | B Vet Med |
| Amy | Nathan | Burton | | Animal Behaviour | BSc |
| Helen | Nichols | Hyde | | Animal Care | National Diploma |
| Paul | O'Donoghue | Wigan | | Biological Science | BSc |
| Rhian | Owens | Elton | | Animal Care | Diploma |
| Kate | Park | Glasgow | | Veterinary Science | B Vet Med |
| Emma | Pennington | Wirral | | | GCSE |
| Lisa | Pike | Knutsford | | Science | National Diploma |
| Holly | Ratcliffe | Ormskirk | | Veterinary Science | B Vet Med |
| Abigail | Rosenbloom | Tarporley | | Zoology | BSc |
| Christopher | Saul | Chester | | Veterinary Science | B Vet Med |
| Elizabeth | Seed | Settle | | | A Levels |
| Colin | Stubbs | London | | Microbiology | Graduate |
| Sophia | Swindlehurst | Lymm | | | A Levels |
| Bronya | Tate | Darwen | | | A Levels |
| Emma | Thorpe | Manchester | | Veterinary Science | B Vet Med |
| Marloes | Van det Vliet | Leeuwarden | Netherlands | Animal Management | BSc |
| Jenny | Vickers | Tattenhall | | | A levels |
| Emily | Witty | Birkenhead | | Veterinary Science | B Vet Med |
| Gayle | Wooton | Wirral | | Veterinary Science | B Vet Med |

Animal Division – Birds

| | | | | | |
|--------|----------|---------|--|--|------|
| Stuart | Davies | Chester | | | GCSE |
| John | Ellinson | Wrexham | | | GCSE |

Animal Division – Reptiles

| | | | | | |
|--------|-----------|------------|--|--|----------|
| Dawn | Bradshaw | Birkenhead | | | GCSE |
| John | Gill | Wigan | | | GCSE |
| Mark | Lowrie | Frodsham | | | GCSE |
| Angela | Masterson | Manchester | | | A Levels |

Animal Division - Aquarium

| | | | | | |
|-------------|-----------|----------------|--|-----------------|------------------|
| Joanna | Beal | Hampshire | | Fishery Studies | National Diploma |
| Angie | Gooderham | Ellesmere Port | | | GCSE |
| Christopher | Moss | Lechlade | | | GCSE |
| Emily | Strong | Yorkshire | | Marine Biology | BSc |

Offices

| | | | | | |
|---------|-----------|------------|--|------------------|----------|
| Joanna | Brannigan | Chester | | Adminstration | NVQ III |
| Teresa | Gibson | Llangollen | | Administration | Graduate |
| Maria | Pettman | Chester | | Business Studies | BTEC |
| Deborah | Williams | Warrington | | Business Studies | BA |

Estates Division

| | | | | | |
|-------------|---------|----------------|--|--|----------|
| Christopher | Dykes | Chester | | | |
| Mike | Hopkins | Ellesmere Port | | | A Levels |
| Neil | Jones | Chester | | | |
| Kevin | Lewis | Ellesmere Port | | | A Levels |

Selected Publications and Theses of Staff, Students and Associates of the North of England Zoological Society

- Bell, J. (1995) The Lake Victoria Cichlid Fish Breeding Programme in Britain. *Cichlidae* **16**(3): 1-4.
- Bell, J. (1995) The Lake Victoria Cichlid Fish Breeding Programme: An exercise in aquatic conservation. *City and Guilds Zoo Animal Management Thesis*. 24pp + 6pp appendices.
- Bewsher, E. (1995) *Investigating the behaviour of the Ring-tailed Coati (Nasau nasau) at Chester Zoo*. BSc Honours Degree Thesis Liverpool John Moores University. 51pp.
- Brunger, D. (1995) The Reproductive Behaviour of Female DeBrazza's Monkeys (*Cercopithecus neglectus*) at the North of England Zoological Society. *City and Guilds Zoo Animal Management Thesis*. 56pp + 173pp appendices.
- Cook, S. & Hosey, G. R. (1995) Interaction sequences between chimpanzees and human visitors at the Zoo. *Zoo Biology* **14**: 431-440.
- Easton, G. (1995) A Survey of Environmental Enrichment in Relation to the Mammals at Chester Zoo. *City and Guilds Zoo Animal Management Thesis*. 35pp + figures.
- Ellerton, N. G. (1995) *Guidelines for firearms within zoological collections*. Federation of Zoological Gardens of Great Britain and Ireland. London. 3pp.
- Ellerton, N. G. (1995) *Fly Fishing on the rivers of Gashaka Gumti National Park as an aid to sustainable income*. Gashaka Gumti National Park Project. World Wide Fund for Nature and Nigerian Conservation Foundation on behalf of Federal Ministry of Agriculture Water Resources and Rural Development, Nigeria. 8pp including colour plates.
- Ellerton, N. G. & Harcourt, C. (1995) *A brief look at the primates of Gashaka Gumti National Park, Nigeria*. Gashaka Gumti National Park Project. World Wide Fund for Nature and Nigerian Conservation Foundation on behalf of Federal Ministry of Agriculture Water Resources and Rural Development, Nigeria. 29pp.
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- Hill, A. (1995) Observations on *Haplochromis pyrrhocephalus*. *Cichlidae*. **16**(3):5-8
- Holt, W. V. et al. (1994) Development of genetic resource bank systems and guidelines, in Hoeveler, A. Ed. *European Commission Biotechnology Programme (1992-1994)*. *Progress Report 1994*. Vol 1:271-273, Vol 2:828-833.
- Holt, W. V. et al. (1995) Development of genetic resource bank systems and guidelines, in Hoeveler, A. Ed. *European Commission Biotechnology Programme (1992-1994)*. *Progress Report 1995*. 489-492.
- Hughes, I. (1995) *Notes and Observations: The Tadpole Shrimp Triops cancriformis (Bosc. 1801)*. Dudley & West Midlands Zoological Society for the Triops Conservation Group.
- Langford, D. (1995) Chilean Flamingos 1994: Artificial Incubation and Reintroduction of hatching eggs. *City and Guilds Zoo Animal Management Thesis*. 29pp.
- Maitland, P. S. (1995) *Species Action Plan: Tadpole Shrimp Triops cancriformis (Bosc, 1801)* (Crustacea, Notostraca). Prepared for English Nature in collaboration with the Triops Conservation Group.
- **Maitland, P.S. (1995) The role of zoos and public aquariums in fish conservation. *International Zoo Yearbook* (1995) **34**: 6-14.
- McCracken, F. J. (1995) *Facial expressions in captive chimpanzees (Pan troglodytes)*. BSc Psychology Honours Degree Thesis, University of Stirling.
- Molyneux, P. (1995) Asian Elephants at Chester Zoo: their Biology and Management with reference to Environmental Enrichment Techniques. *City and Guilds Zoo Animal Management Thesis*. 41pp.
- Morris, C. (1995) Breeding the Leopard Gecko (*Eublepharis macularius*) in a captive environment. *City and Guilds Zoo Animal Management Thesis*. 30pp.
- Morrow, J. (1995) *A comparison between the amount of information adults and children recall from information display signs in an Orang utan enclosure*. BSc Degree Thesis. Bolton Institute of Higher Education.
- Parker, E. (1995) Competitive advantage of Chester Zoo. BSc (Agriculture) Honours Degree Thesis (Marketing and Business Studies). Harper Adams University Sector College.
- Pilgrim, M. (1995) Lilacine Amazon (*Amazona autumnalis lilacina*) EEP Annual Report 1994. *EEP Yearbook 1994/1995*: 67-68
- Pilgrim, M. (1995) What's in a Name? *Just Parrots* (Feb/Mar 95). **2**: p11.
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- Pilgrim, M. (1995) Amazon Parrot Husbandry with reference to adaptation. *Paper presented at EEP Research Meeting*, Usti Nad Labem, Czechoslovakian Republic.

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- **Reid, G. McG. (1995) Conserving fishes and aquatic invertebrates: Chester Zoo Aquarium and the FAI Taxon Advisory Group. *International Zoo Yearbook*, **34**: 33-38 + table and photographic plates.
- Reid, G. M., Hughes, I., Whitear, J. A. & Wilkinson, L. (1995) *Tadpole Shrimp Conservation Group Scientific Literature Resource Manual* (two volumes). North of England Zoological Society.
- Reid, G. McG. & Whitear, J.A. (1995 eds) *1994 Report Fish and Aquatic Invertebrate Taxon Advisory Group*. North of England Zoological Society. 34 pp. + appendices.
- *Roos, C. (1995) European gene bank of primates. *Annual Report 1995*, pp.23.
- Sheppard, G. (1995) A behavioural study of Ring-tailed Lemurs in captivity. Oxford Brookes University. (*North of England Zoological Society Zoology Studentship Thesis for 1994*).
- Sheppard, G. (1995) A study of the diets of four captive groups of Ring-tailed Lemurs. *Ratel*, **22**(5): 163-166.
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* Chester Zoo is a participant in this programme.

** Publications prepared under the aegis of the Fish & Aquatic Invertebrate TAG.

Brenda Norgain, whose vision of zoo education substantially created the present Division and guided it through the formative years, decided it was time to retire. She left us early in the year to pursue her many and various interests. We miss her! A full tribute to her achievement is on page 38.

There were 67,021 persons in organised educational visits, a reduction on 1994. Nevertheless, in a year of change, we saw a consolidation of the key areas of activity. Links with the teaching profession were enhanced. Three hundred and thirty eight teachers and lecturers attended our courses and lectures. These included business studies, leisure and tourism, primate behaviour, evolution, technology and industrial and economic understanding (run in conjunction with the Cheshire Business and Education Partnership, based in Ellesmere Port).

Liaison with teacher training establishments led to three hundred and fourteen students benefiting from specifically designed programmes. We introduced courses for students taking business studies, leisure and tourism and travel and tourism for General Certificate of Secondary Education (GCSE), Advanced ('A') level of the General Certificate of Education (GCE) and General National Vocational Qualification (GNVQ), and other courses. The response was excellent. On several occasions, we had 'full houses' in the lecture theatre. In total, seven hundred and thirty five students and lecturers attended. The Marketing and Animal Divisions helped in the presentations.

Teacher consultations continued, with seventy eight teachers/students meeting at least one member of the education team to plan a visit. Jean Atkin extended her one year contract for a further quarter. She produced our first ever French language resource pack *Faisons du Français au Zoo*. Additionally, she forged links with 6th form general studies groups and helped with the *Christmas Journey* programme.

Major publications included *Where are the Gorillas?*, a comprehensive resource pack for 'A' level studies focusing on the role of Chester Zoo in breeding conservationally endangered species. *Have fun finding out* is a totally new publication designed for the younger visitor for in-zoo or home use. It offers a mine of information about the animals, and encourages observation of the major species that we hold. It is also on sale in the zoo's retail shops.

Additionally, we launched six different animal stained-glass window kits, sold through our *Things to Do* shop, and a handsome pair of 'colour your own' three-dimensional pictures of tigers and rhinoceroses. We designed a special gift for the *Christmas Journey* with a star/snowflake mobile and a 'pop up' Father Christmas!

Volunteer activities continued to flourish, with a full cycle of recruitment and training for the Friends of Education Division Services (FEDS). At the year end, we had eighty seven volunteers registered. We are extremely grateful for their work: approaching 9,000 hours of labour. Almost 10% of the zoo's visitors (73,952) enjoyed volunteer interpretative contact, which is most gratifying. This figure would be much higher if we included contact through the *Things to Do* Shop, which is now the principal visitor information point in East zoo.

The volunteers work in *Lets Make* the Craft Activity Centre, Brass Rubbing Centre, *Things to Do* shop and in producing materials for sale, both to the general public and to schools/colleges, - coupled with their involvement in *Storytime*, the Puppet Theatre, Evening Tours and Public Talks - enabled the Division to generate an income of £17,926 from these activities.

As ever, the *Christmas Journey* programme was a 'sell out', with 3,377 adults and children taking part in what has now become a well-loved part of the zoo's wintertime programme. We must thank everyone who took part in this most exacting activity on chill December evenings.

We are pleased to be able to offer special help to the disadvantaged. The new tactile 'trails' and animal information linked to associated audio tapes have helped increase the enjoyment of the zoo for those with visual disadvantages. The good work with sign language tours continues.

We are confident that we have a structure well capable of enriching the zoo experience. The success of the new courses and material, demonstrates the professional demand for zoo education. Equally, the rapt attention of groups who participate in practical interpretation and 'hands on' sessions with the volunteers demonstrates the general public's desire to know more.

We look forward to a year of further innovation and added value.

Sara Ruks
Education Officer.



The magic of the Christmas Journey



The new entrance gate complex, with the Ark shop.

In 1995 we welcomed Peter Owens as Planning Supervisor, Nick Young as Mechanic, Richard Read as Blacksmith and Sue Read to the Groundstaff and First Aid. The high point of our year was the completion and opening of the new gate complex on the north flank of the zoo. The majority of the work was carried out by zoo staff. We can be proud of the high standards of craftsmanship and the responsiveness of the team. The works included the construction of the two story, eight-gate entry building, the extended and refurbished *Oasis Cafeteria*, and the wholly new *Ark Shop*. There are also additional toilet facilities, both inside and outside the zoo. The Cheshire County Council work experience teams made a magnificent job of timber-lining the inside of the roof of the shop. These building projects, which are the largest to have been managed wholly within zoo resources, complete the earlier groundworks of roadways, car parks and site landscaping that have transformed the entry to the zoo. We are now relieved of the inadequate visitor handling facilities of the old entrance and the associated dusty/muddy car parks. With the new lined-out car parks, we have been able to reduce Groundstaff presence on all but the busiest days, giving more opportunity for maintenance and ground care within the site.

Our second major building project, which was completed just before the end of the year was the replacement of the outdated zebra and lechwe buildings. A handsome new timber-clad, steel framed single building was built, with associated hardstandings, improved drainage and fencing and much better keeper access facilities.

The Cheshire County Council work experience teams have also taken a leading role in the third major construction project close to the zebras in East zoo. The Talapoin monkeys will now have a large wooden building, with substantial outside areas, large enough to accommodate trees. There is a dedicated high level access to the middle island of the canal. This not only

provides them with their own island, but will also enhance the waterbus ride with a close view of the animals.

We completed 289 maintenance jobs and 10 'Minor Works' projects in 1995. Following the Zoo Licensing Act inspection, we have refurbished the inside of the Giraffe building, with new iron-work and internal gates. Additional safety gates have been added in the Orang Utan, Chimpanzee and Small Cat breeding centres. Major modifications to the drive systems of the four train sets of the Zoofari overhead railway have been most successful, and have cut maintenance downtime dramatically. New expansion joints have been installed on the 1.5 km of track after the very hot summer weather.

Planning ahead, we are preparing designs and specifications for the next wave of major constructional projects. These are the complete restructuring of the Monkey accommodation with large new outside 'islands' and a substantial refit of the building. New remote control door operations and additional fencing will help elephant keeping staff achieve the planned 'zero-handling'. There is also a planned conversion of the redundant Brown Bear area into a major Birds of Prey aviary using the flagpole-supported nylon mesh techniques developed for the Mauritius Kestrels and 'Europe on the Edge' We have bought a new JCB, which will be of major help in the 1996 construction programmes. Training on newly acquired plant and equipment has been of great benefit.

Eric Rudman's team of gardeners won the *Chester in Bloom* competition once again, and achieved well deserved national television honours with a major BBC *Gardener's World* programme. There was a full page feature on our gardens in the prestigious *Cheshire Life* magazine. We received many compliments on the colourful formal bedding displays. These were maintained in tip-top shape despite near tropical mid-summer temperatures.

Steve O'Brien
Estate Engineer.

The Estates office team - Steve O'Brien, Helen Smith and Ken Roberts - at the Effluent Treatment plant with a Business & Environment Achievement Award from the Mersey Basin Campaign, sponsored by MANWEB



North of England Zoological Society
FINANCE & ADMINISTRATION

In 1995 the Division successfully piloted the Zoo through the difficult channels of the opening of the new entrance on the far side of the gardens, and all the calls on cash resources needed to finish one of the largest construction projects in the zoo's history. Phasing of the opening eased the 'running in' problems, but there can now be no doubt at all that we have now one of the best zoo gate operations: with eight entry points capable of keeping queues down to acceptable levels. We now believe that we will no longer need the previous 'birds of prey overflow' entrance. The new *Ark Shop* opened just before Christmas, with an immediate and gratifying increase in 'take per head', helping to correct unresponsive earlier trading, with the main retailing operation too far from the entrance. The 'Portakabin' accommodation for the Information kiosk was a temporary expedient.

Divisional stalwart, Alan Du Cros, retired as Deputy Director and Financial Controller, and a full tribute to his contributions to the Society is on page 38.

Michael Johnson, a chartered accountant with many years of commercial experience has taken over as Financial Controller. He is, of course, no stranger to the Society, having served on Council for six years, and having had a brief tenure as *locum* Financial Controller in the early 1980's.

Financial control of the zoo requires careful monitoring of cash flows which, for us, are more important than the disciplines normally applied through profit and loss accounts, and balance sheets. Expenditure for the development of zoological attractions depends in the main on internal generation of funds through profits and depreciation - in other words net operating cash flow.

Interwoven with this generation and use of funds is the normal seasonal cash flow cycle, which can be seen in the graph. The management strategy in handling these large swings is to target to run into an overall positive cash situation every year in August, and then to remain well within overdraft facilities through the winter period. We did this in 1995. Timing of major expenditure must successfully be carefully controlled, so that payments are made when the visitor generated funds begin to flow.

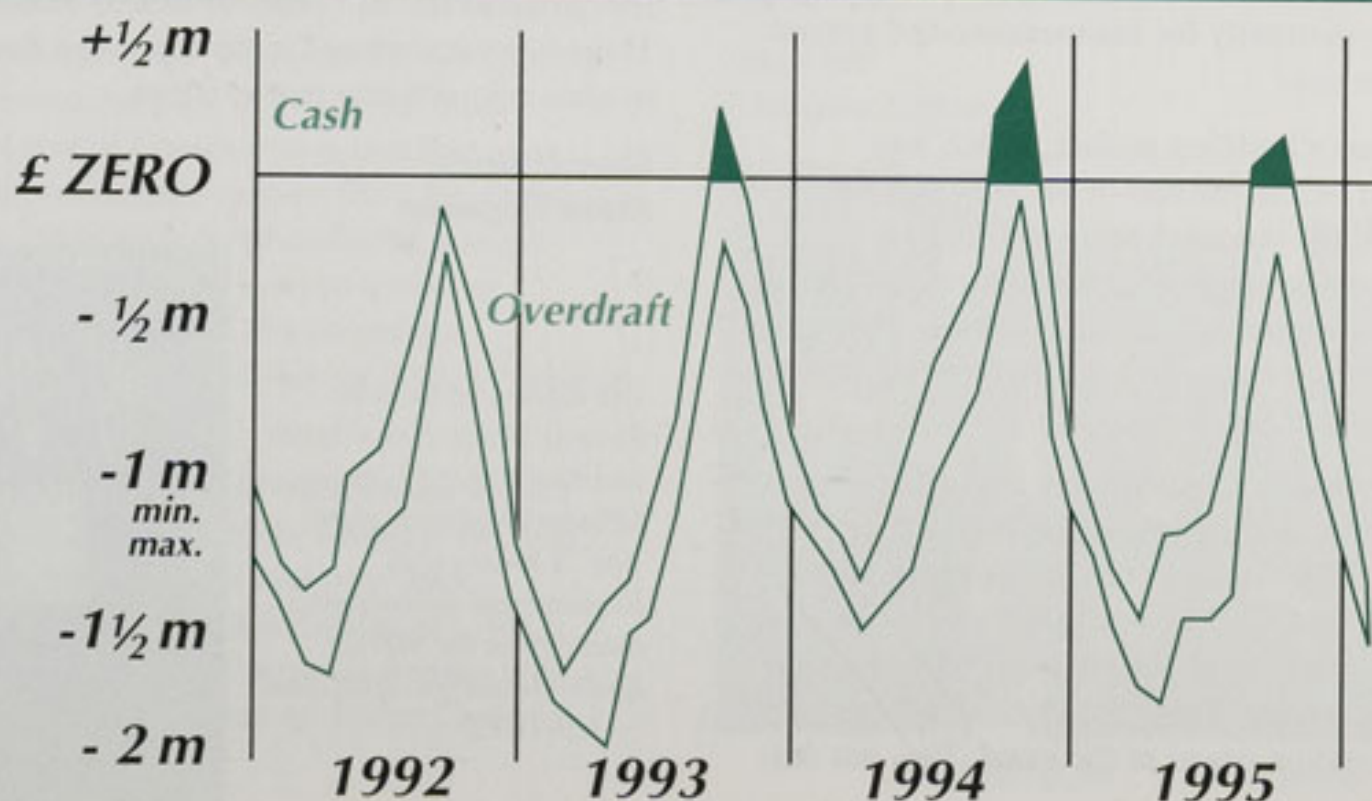
As a charity, we are grateful to understanding trading partners who allow extended credit until after Easter.

The overdraft of £1,368,000 shown in the balance sheet at the year end is only a snapshot at that date. The average across the year is somewhat lower at £1,150,000. In 1995, the heavy capital costs of the new entrance and associated works has meant greater use of bank facilities.

In the year, we continued to extend our use of PC based information technology, upgrading hardware and software and beginning the process of networking in the Oakfield after the successes within the Animal Division Offices. Membership and Adoptions are now fully on the new software designed in-house by Keith Brown in his systems analyst role. We are the first UK zoo to have its own Internet site and this makes us widely accessible to potential customers who are seeking information about the zoo.

Michael Johnson
Financial Controller

BANK FACILITIES 1992 - 1995



A record level of visitors in the Autumn enabled us to reach, and then overtake budget. As a result, year end financial results were markedly better than earlier projections. In the Summer holidays, with the near tropical temperatures, we believe that many potential zoo visitors were diverted to coastal resorts.

All through the year, our attentions were on the building work on the new entrance. Logistics prevented an Easter opening, but the gate and the refurbished *Oasis* cafeteria opened together in May, leaving the new shop and exterior toilet block to be finished later. The shop, now christened the 'Ark', was opened just in time for Christmas, with encouraging results. It is the most modern in the country, and we are very grateful indeed for the contributions towards the fitting-out costs made by Mr Barry Pape of Ravensden.

Other developmental changes are still being worked through. The Jubilee retail kiosk, and the wooden kiosks at the old gate and at the Monkey house are now superfluous. The Fountain shops will continue to be the main retail site in East Zoo, and we will monitor results carefully.

Overall retail trading results lacked any real buoyancy. This is understandable from the internal reason of our running for most of the year with the main retail outlet well away from the entrance, and externally from the unresponsive economy seen in many 'High St' retailing operations. Catering results were close to budget, but still show that leisure spending money is still tight. In particular, a substantial part of the Oakfield business is now function related, and the days of the traditional three course lunch may be drawing to a close!

The new entrance required a complete revision of zoo visitor signage, which was accomplished on time, together with new maps oriented to the new entrance. The publication of our completely new *Guide and Map* completed the changeover. The guide is much easier to use, with index tabs and animals in alphabetical order. We suggest routes around the gardens to suit all needs from the under 7's to an extended visit and includes a 'rainbuster' route. The map now covers three pages, and has a unique zoo grid reference system linked to the text. As a multi-disciplinary effort, the zoo can be proud of a team able to research, write, and illustrate a publication of this substance without recourse to significant outside resources. We are grateful to our printers, Rockliff of Liverpool for their unfailing patience and support.

Progress continues with computerisation, with memberships and adoptions now on the new databases. Program engineering is by Keith Brown in

his role as systems analyst. At 7,386, membership growth has been most encouraging, and is on target for 10,000 by the Millennium.

There have been staffing changes, and we have said 'goodbye' to Lesley Bell in Party Office, and Janet Cleave and Geraldine Foden from the Oakfield. We have been happy to promote Jane Lawson to run the Party Office. Liam Adamson is now the Oakfield Chef and we have created the separate post of Adoptions Secretary for Mary McManus.

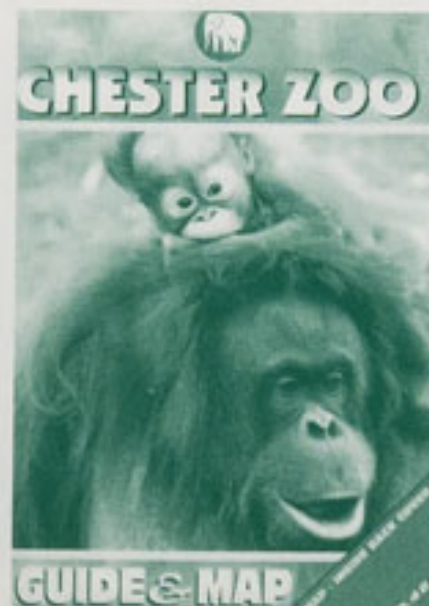
Two new TV commercials were produced, featuring the Asiatic Lion Cubs and *Jorong*, the 18th baby Orang Utan. They were screened on Granada. A wholly new, full colour adoptions leaflet was designed, featuring the diversity of the collection. We promoted the Zoo at leaflet exchanges, group organisers events and at the Chester *Business to Business* exhibition.

The Noah's Ark advertising float appeared in the Lord Mayor's Parades in Liverpool and Chester, at the Festival of Transport on the Roodee and at the Cheshire Show. We continue as active members of the *Great Days Out* tourism consortium. Pat Cade represents the Zoo as a Director of the North West Tourist Board, and as a Council member (with the Zoo Director) of the Association of Leading Visitor Attractions (ALVA) and as a member of the Zoo Federation Marketing and Public Relations Committee.

We have worked closely with the Education division in helping to provide material for their study pack, entitled *The Modern Ark* which supports General National Vocational Qualification (GNVQ), General Certificate of Secondary Education (GCSE) and Advanced level of the General Certificate of Education courses including Travel and Tourism, Leisure and Tourism, Business Studies and Marketing.

We support many of their courses with presentations on zoo marketing. Talks to schools, colleges and affinity groups continue - all adding to the increasing awareness of our work.

Chris Vere
Marketing Manager.



Membership

Our objective is the expansion of membership to 10,000 by the millenium, thus providing a strong and enthusiastic core of support for the Society. The package continues to be extremely attractive, with 3,384 new enrolments during 1995, bringing the year-end figure to 7,383 paid up members (all categories).

With the new entrance completed, the members now have a larger assigned parking area, with spaces for approximately 100 cars. This makes shopping at the newly completed *Ark Shop* particularly appealing, especially with the 10% members' discount.

The ticket sales for the annual members' draw were £3,270, with the surplus of £2,460 helping to fund our Zoological Studentships. The 100 Club has now 170 members, raising in excess of £5,000 annually for the Society. This support is much appreciated.

Members' meetings have been very well attended, and the year's programme concluded with a splendid Christmas lunch in the Oakfield restaurant.

The Society is extremely grateful for the many ways in which the members give us support, and I would like to thank our speakers and indeed everyone who helped with the successful running of our meetings throughout the year.

Maureen Allsopp *Membership Secretary.*

Junior Membership

Informal education combined with fun is our key objective. Our enthusiastic, ever-expanding Junior Members' Club had a busy 1995. Old favourites like the Contact Session in January and Christmas Party attracted over 150 Juniors, and equal support was shown for the messy and muddy Tracks and Signs day in March. February saw Juniors watching the birds at the Wildfowl and Wetlands Trust at Martin Mere preparing for the breeding season, and we had a new trip in April to Farm World at Erddig where Juniors were able to bottle feed

the lambs, as well as having a cart horse-drawn ride around the estate. We returned to see the rare breeds, and old-fashioned cheese making display at Shugborough Park Home Farm in May, before having a look around the house and kitchens. Visiting the caves and rock pools around Hilbre Island in the Dee Estuary in June was a highlight during the summer, as was the 'Day with a Keeper' in July - always a memorable event for Juniors. Senior Member Alan Marrow gave a brilliant 'Creepie, Crawlle' talk with the help of some of his own spiders, at our Summer Barbecue, and we started the Autumn with a lovely energetic walk around. The Follies at Hawkstone Park in Shropshire in brilliant September sunshine. The weather was also glorious for our warden-guided tour around Risley Moss and its surrounds in Lancashire in October, and thinking caps were required for the quiz and touch session at Rhyl's Sea Life Centre in November. Excellent support for every event from the Juniors, as ever. Many thanks to our volunteer helpers!

Penny Rudd *Junior Club Organiser.*

Adoptions

Our adoption scheme aims to harness the public's animal interests in a positive way, making a substantial contribution to the animal food costs. Income from Adoptions for the year was just under £80,000 (after VAT). There was a slight drop in Corporate adoptions as Companies continued to tighten their belts; however, numbers of individual adopters increased to 2,350 which was very encouraging. A big thank you is owed.

The highlight of the year was the two Adopta Days held in October. Approximately 1,000 people attended, most of whom took the opportunity to talk to the Keepers and positive feedback indicated that the Adopta days are as popular as ever. The Lecture Theatre talks, which were both entertaining and informative, were given by four members of the bird keeping staff (Mark Pilgrim, Bruce West, Wayne Mcleod and Roger Merry), were very well received by an enthusiastic audience.

Mary McManus *Adoptions Secretary.*

Juniors on the Rocks!



Penny Rudd (centre) led the Juniors over the sands of Dee to Hilbre Island in June.

Major Donations and Grants

- Legacy from the estate of Sally, Duchess of Westminster
- Ronald Pryor Charitable Trust covenant
- Aquarian / Pedigree Petfoods funding
- North West Securities covenant
- Mr R J M Blewitt covenant
- Membership appeal for Zoological Studentships
- EEC Biotechnology ('frozen zoo') research grant
- Microsatellite DNA Genetics project research grant

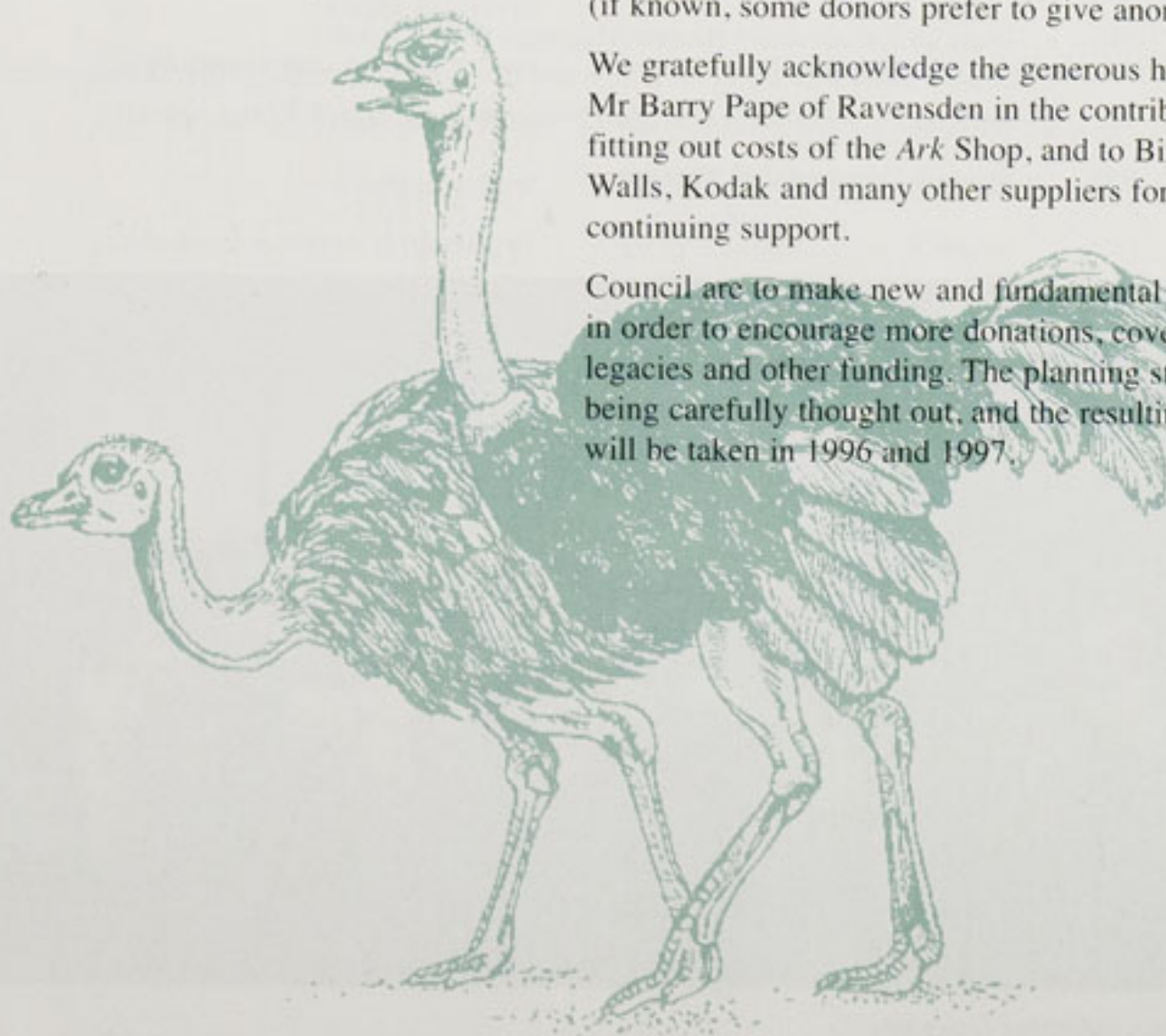


| | | |
|---|-------|----------------|
| | Total | £54,346 |
| ■ Donations under £1,000 | | £19,960 |
| GRAND TOTAL DONATIONS AND GRANTS | | £74,306 |

The Zoo's grateful thanks go out to these donors, not only publically in the Annual Report, but also by personal letter from the Director to each donor (if known, some donors prefer to give anonymously).

We gratefully acknowledge the generous help of Mr Barry Pape of Ravensden in the contribution to the fitting out costs of the *Ark* Shop, and to Birds Eye Walls, Kodak and many other suppliers for their continuing support.

Council are to make new and fundamental approaches in order to encourage more donations, covenants and legacies and other funding. The planning strategy is being carefully thought out, and the resulting actions will be taken in 1996 and 1997.



- 14 January *Focus on Bats* Mike Freeman, Cheshire Bat Group. (MM)
- 11 February *An Ambition Achieved* David Cooke, Council Member, NEZS. (MM)
- 24 February *Reflections of Eden - an evening of Orang Utans* Birute Galdikas, The Orang Utan Foundation. (FFI)
- 18 March *The Inconvenient Cat* Lena & Paul Bottriell, Wildlife Consultants. (MM)
- 22 March *Monkey Matters* Primate Day (including talks by representatives from NEZS, University of Liverpool and Bolton Institute of Higher Education). (SM)
- 24 March *An evening on extinction and survival* David Day, Author of various environmental books. (FFI)
- 30 March *Life above the jungle floor* Donald Perry, South American Biologist. (SM)
- 8 April *A Zoo Review* Michael Brambell, Director, NEZS. (MM)
- 28 April *An evening at Gashaka Gumti* Gordon McGregor Reid. (FFI)
- 13-16 September *Conservation and Biology of Prosimians* 46 presentations and 26 poster papers from among 150 international biologists.
- 22 September *Drills of Nigeria & the Cameroons* Liza Gadsby, Drill Rehabilitation Centre. (FFI)
- 14 October *Monster fish, monster problem!* Gordon McGregor Reid, Director, NEZS. (MM)
- 27 October *Bonobos - the fifth apes* Jo Thompson, Field Researcher, Oxford University. (FFI)
- 11 November *Plants as foods and poisons to animals* Hugh McAllister, Ness Gardens. (MM)
- 1 December *Return to Gombe* Jane Goodall, The Jane Goodall Institute. (FFI)
- 9 December *Preserving the Partula* Keith Brown, Zoo Herpetologist. (MM)

MM Members' Meetings

FFI Flora & Fauna International Meetings (NW Group)
(Funds raised at these meetings are donated to specific projects supported by the FFI such as the Mountain Gorilla Project and the Black Rhino Appeal).

SM Special Unscheduled Meeting



Prosimian Conference Delegates

| | |
|---|---|
| Advertising Agency | Williams, Barber & Bird, Liverpool |
| Annual Report Printing | Masons Design & Print, Chester |
| Auditors | Coopers & Lybrand, Liverpool |
| Audioguide Systems | Eurodigitech, Manchester |
| Bankers | Barclays Bank, Chester |
| Consultant Engineers | Giffords, Chester and Southampton |
| Consumer Research Consultants | John Adern Associates, Manchester |
| Environmental Consultants | Caldicott Morgan, Mold |
| Guide Book/Zoo Life Origination and Print | Rockliff Printing, Liverpool |
| Insurance Advisers | Lowndes Lambert (UK) Ltd, Manchester |
| Interpretation Consultants and Art Suppliers | Mr F Archer, Upton by Chester The Colour Copy Centre, Liverpool Mr M F Coupe, Heswall Elegy Design, Wrexham Mr G L Grandy, Heswall Miss H. Lawson, Meols Q E D Advertising & Marketing Ltd, Liverpool T & G, Bolton Mr C Tudge, London Turtle Graphics, Southampton Mr P Whalley, Chester |
|  | |
| Land Agents | Denton Clark & Co, Chester |
| Legal Advisers | |
| <i>Employment and Contract Law</i> | Mace, Jones, Grundy Kershaw, Liverpool |
| <i>European Law</i> | McKenna & Co, London and Brussels |
| <i>Company Law</i> | Walker, Smith & Way, Chester |
| Medical Adviser (Honorary) | Dr H. Charles-Jones, Chester |
| Pension Fund Actuaries | William M Mercer Ltd, Liverpool |
| Pension Fund Managers | Fraser, Green Ltd, London |
| Photographic Laboratories | Ness Visual Technology, Widnes, Cheshire The Colour Centre, Whitby, Ellesmere Port RPS Consultants, Chester |
| Planning Consultants | Cluttons, London |
| Property and Land Consultants | John Billing Associates, Southport |
| Television Production | Ventures Consultancy, Beaulieu, Hants |
| Tourism Consultants | The Gatehouse Veterinary Hospital, Rossett |
| Veterinary Advisers | University of Liverpool Veterinary Field Station, Leahurst, Wirral |
| Video Production Advisers | Hollywood Video, Formby, Merseyside |

Fond Farewells to senior colleagues.

It was a year of unprecedented administrative change as the zoo wished a happy retirement to the Director, the Deputy Director, the Head of Education and the Security Officer.

Dr Michael Brambell

Dr Michael Brambell retired in August 1995, as the zoo's second Director in 61 years. His many achievements for the zoo during his 17 year Directorship are well documented, and the national and international reputation that Chester Zoo has to-day, is due in a very large measure to his wise leadership.

The retirement was marked by many functions, both formal and informal. Zoo staff and colleagues from the zoo world paid warm tribute to him at a nostalgic event in July, in a marquee on the Jubilee Lawn. Directors and retired Directors from the UK's leading zoos told fascinating and often hilarious tales of 'Dr B's' varied zoological career. The highlight of the evening was the presentation to Dr Brambell of the *Gold Medal of the North of England Zoological Society*, by Council Chairman Beatrice Jones. Then - with a trumpet fanfare - his successor, Dr Gordon McGregor Reid, read out a formal citation.

Other farewell functions were given to Michael and Patricia Brambell by the Federation of Zoos, of which he was Treasurer and the Zoological Society of London, of which he was Chairman. He was also honoured with a Civic Banquet hosted by the Lord Mayor of Chester, in recognition of the contributions made to regional life (see page 4). Jill Lunsford who was the Director's Secretary left us too. We thank her and wish her well.

Alan Du Cros.

The zoo's Deputy Director and Financial Controller, Alan Du Cros, retired at the end of 1995, after 12 years of steering the Society's finances. He began his career with Coopers and Lybrand and worked for many years in Africa, with the US based company, Cross International. Under Alan's guidance, all departments of the zoo gradually became computerised. He introduced the computerised accounting systems which revolutionised the way the zoo's finances are organised and presented. He implemented strict financial controls, which kept the zoo in financially sound shape throughout the years of recession.



Dr Michael Brambell, (left) with members of staff in the Board Room.

Brenda Norgain

Senior Education Officer Brenda Norgain decided to take early retirement at the beginning of 1995. Brenda took up her post at the zoo in 1983 on secondment from Cheshire County Council, following a career which had taken her into two headships - first at the Girls' Grammar School in Crewe, and then at Kings Grove High School, Crewe. During her years in the zoo, she built an

education service for teachers which enabled tens of thousands of children each year to benefit from properly structured and informal visits to the zoo. Brenda was the originator of the *Christmas Journey*; the *Let's Make* centre; the puppet theatre and the *Story Time* sessions for children.. She also established the highly successful volunteer organisation - Friends of the Education Division Services (FEDS.)

Arnold Johnson

Another senior staff member who was due to retire at the end of 1995 was Arnold Johnson, the zoo's Security Officer, but typically, he extended his service by four weeks to cover his successor, Marc Boardman in the Elephant House. Arnold served for more than 30 years at the zoo, and for most of that time he and his family lived in the lodge, just inside the staff entrance. This meant he was 'on call' for 24 hours a day, dealing not only with all aspects of the zoo's security, but often taking phone calls late at night on all sorts of subjects - from opening times to help with animal related homework questions!

Arnold was the zoo's liaison with the local police, and maintained a close working relationship with them over the years. His calm manner diffused many awkward situations. His interpretation of the job went very much wider than the official job description, and included driving home people who had missed their last bus; helping to get cars started; ferrying injured children to the hospital - and keeping the staff amused with his many tales of zoo life in the early years!



Nicholas Ellerton, Curator of Mammals (right) pays tribute to Arnold Johnson (centre) in the Board Room. Alan Du Cros is seated on the left.



Details of plans of Sand Lizard Vivarium planned in 1995, and being constructed in 1996 with funding from English Nature and other conservation bodies.

THANK YOU

The Society would like to thank everyone who has helped in 1995 - Council, Members, Benefactors, and individual and corporate Adopters, permanent and seasonal Staff, members of the Employment Training Teams, Work Experience Students, Volunteers and Friends. We are also grateful to Suppliers and Contractors for often achieving that 'extra' for us that makes all the difference.

NORTH OF ENGLAND ZOOLOGICAL SOCIETY

Registered Charity No. 306077. Licenced under the Zoo Licensing Act 1981.

The 1995 Annual Report was designed and devised by the Zoo Marketing Department, with origination and printing by Masons Design & Print, Chester.

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E Mail address: info@chstrzoo.demon.co.uk Internet: <http://www.demon.co.uk/chesterzoo>



zoological gardens
CHESTER



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Fax: 01244 371273



zoological gardens
CHESTER



1995 FINANCIAL REVIEW

Annual Report of the North of England Zoological Society

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1995 COUNCIL REPORT

The following mandatory information, given in the manner required, reports certain data in the main Annual Report (refer to 1995 Zoo Review).

- The North of England Zoological Society owns a trading subsidiary, Chester Zoo Enterprises Ltd, the profits of which are covenanted to the Society. It is a registered charity (No 306077) and a company limited by guarantee (No 287902) regulated by its Memorandum and Articles of Association. The Trust is independent of the Government and Local Authority. Its main source of income is from paying visitors.
- Investment powers are limited to those available under charity legislation.
- The strategic direction and policies of the Society are determined by the elected Council as Trustees, with consultation and discussion with the Director of the Zoo as Chief Executive and his staff who implement policy. The Trustees have six formal meetings a year, together with an Annual General Meeting.
- *The Council as elected by the Members are:*

| Trustees Name | Sub committees | | | | |
|-------------------------------------|----------------|--------------|--------------|-------------------------|-------------------------|
| | Finance | Remuneration | Pension Fund | Programmes & Membership | Scientific & Veterinary |
| Mrs B J Jones (Chairman) | • | • | • | • | |
| Mr J H Howatt (Vice Chairman) | • | • | | • | |
| Dr J R Baker | | | | | • |
| Mr A R Barnes | • | • | | | |
| Mr B H Coles | | | | | • |
| Dr D A P Cooke (elected 5/95) | | | | | • |
| Miss J P Dixon | | | • | • | |
| Mrs J R Jardine | | | | • | |
| Mr G K Jump | • | | | | |
| Mrs E M Livingstone | | | | • | |
| Mr N K Maybury | | | | | • |
| Mrs M C Parslow (resigned 9/95) | | | | | |
| Mr A L B Thomson (resigned 5/95) | | | | | |
| Mr T Williams | | | • | | |
| Mr N J W Wilson | • | | | | |
| Mr P J Wisniewski | | | | | • |

- The registered address of the Society is Caughall Road Upton-by-Chester, Chester, CH2 1LH.
- Advisers to the Society are listed on page 37 of the Annual Report.

- The Mission of Chester Zoo is to promote conservation by breeding rare and endangered animals and by educational, recreational and scientific activities.
- The development, activities and achievements of the Zoo in 1995 are detailed fully in the Annual Report, principally in the reports of the Chairman and the Director.
- Financial Results 1995 (1994 comparative in brackets) are indicated below.

The company has introduced a new accounting format as required under the Charities Act 1993. This represents a radical change from the previous presentation. The accounting for donations and designated funds, together with the comprehensive re-allocation of all overheads across the activities listed in the Statement of Financial Activities (SOFA) are required by the new Statement of Recommended Practice (SORP). Chester Zoo Enterprises Limited's trading activities are disclosed in a single line on the face of the SOFA.

Because the accounts consist of eight pages of highly technical information, it has been decided to present an abbreviated format in the Annual Report in future. However as Members should be consulted and it will be necessary to hold an Extraordinary General Meeting, this simplification cannot be introduced until presentation of the 1997 Accounts.

The net incoming resources for the year of £136,000 (£325,000) resulted from higher turnover £5,984,000 (£5,745,000) less expenses rising to £5,848,000 (£5,420,000). These figures are derived from the consolidated figures for the entity. Chester Zoo Enterprises Limited did not trade as well as expected principally because of late completion of the new shop.

The Operating Activities generated a cash flow of £712,000. Fixed asset additions — mainly spent on the new gates and shop — totalled £819,000.

The net assets held reflect the normal fixed assets and working capital required for the Zoo's trading. Donations received during the year totalled only £48,000. The capital expenditure budget for 1997, targets principally on plans for a new 'Monkey Islands' development.

The possible *Deep Sea World* scheme opening at Ellesmere Port in 1997, with EC grants of £3.1m, would make large inroads into the Zoo's visitor numbers. Because the business trading of the zoo has a very high break-even point and the leisure market income is static, restrictions in activities may become necessary.

In accordance with Section 384 of the Companies Act 1985, resolutions proposing the re-appointment of Coopers & Lybrand as auditors of the Society and to authorise Council to fix their remuneration will be put to the Members at the Annual General Meeting.

M. A. R. Johnson
Secretary.

29 March 1996

**STATEMENT OF COUNCIL'S
RESPONSIBILITIES IN RELATION TO
FINANCIAL STATEMENTS.**

Members of Council are required by UK company law to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the Society and the group, as at the end of the financial year, and of the net incoming resources of the group for that period.

In preparing those financial statements, Council is required to:

- select suitable accounting policies and apply them consistently;
- make judgements and estimates that are reasonable and prudent;
- prepare the financial statements on the 'going concern' basis, unless it is inappropriate to presume that the Society will continue to operate.

Council is responsible for keeping proper accounting records which disclose with reasonable accuracy at any time the financial position of the Society and the group, and to enable it to ensure that the financial statements comply with the Companies Act 1985 and applicable accounting standards. It is also responsible for safeguarding the assets of the Society and the group, and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

**AUDITORS' REPORT TO THE MEMBERS
OF THE NORTH OF ENGLAND
ZOOLOGICAL SOCIETY**

We have audited the financial statements on pages 4 to 11.

Respective responsibilities of Council and auditors

As described above the Society's Council are responsible for the preparation of financial statements. It is our responsibility to form an independent opinion, based on our audit, on those statements and to report our opinion to you.

Basis of opinion

We conducted our audit in accordance with Auditing Standards issued by the Auditing Practices Board. An audit includes examination, on a test basis of evidence relevant to the amounts and disclosures in the financial statements. It also includes an assessment of the significant estimates and judgements made by Council in the preparation of the financial statements, and of whether the accounting policies are appropriate to the Society's circumstances, consistently applied and adequately disclosed.

We planned and performed our audit so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or other irregularity or error. In forming our opinion, we also evaluated the overall adequacy of the presentation of information in the financial statements.

Opinion

In our opinion the financial statements give a true and fair view of the state of affairs of the Society and the group at 31 December 1995, and of the net incoming resources and cash flows of the group for the year then ended, and have been properly prepared in accordance with the Companies Act 1985.

Coopers & Lybrand
Chartered Accountants and Registered Auditors
LIVERPOOL
29 March 1996

*CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES FOR THE YEAR ENDED
31 DECEMBER 1995*

| | | 1995 | | 1994 |
|---|-------|-------|--------------|--------------|
| | NOTES | | | RESTATED |
| INCOMING RESOURCES | 1 | £'000 | £'000 | £'000 |
| Turnover of charitable trading activities | 3 | | 3,538 | 3,315 |
| Other incoming resources | | | | |
| Members' subscriptions | | 136 | | 102 |
| Animal Adoptions | | 80 | | 87 |
| Donations & legacies | | 48 | | 75 |
| Profit on sale of property, held for charitable use | | 0 | | 22 |
| Property rents received - external | | 32 | | 29 |
| Property rents received - from trading subsidiary | 4 | 238 | | 238 |
| Net income of trading subsidiary | 4 | 186 | | 232 |
| | | | <u>720</u> | <u>785</u> |
| TOTAL INCOMING RESOURCES | | | <u>4,258</u> | <u>4,100</u> |
| RESOURCES EXPENDED | | | | |
| Gross expenditure of charitable trading activities | | | | |
| Direct charitable expenditure | 3 | | 926 | 872 |
| Animal welfare | | 1,643 | | 1,525 |
| Education | | 218 | | 209 |
| Gardens | | 302 | | 288 |
| Property maintenance | | 323 | | 305 |
| | | | <u>2,486</u> | <u>2,327</u> |
| Other expenditure | | | | |
| Fundraising and publicity | | 284 | | 255 |
| Management and administration | | 426 | | 321 |
| | | | <u>710</u> | <u>576</u> |
| TOTAL RESOURCES EXPENDED | | | <u>4,122</u> | <u>3,775</u> |
| NET INCOMING RESOURCES/MOVEMENT IN FUND | 5 | | 136 | 325 |
| Accumulated funds brought forward | | | <u>2,044</u> | <u>1,719</u> |
| ACCUMULATED FUNDS CARRIED FORWARD | | | <u>2,180</u> | <u>2,044</u> |

All activities are continuing.

There is no material difference between the result disclosed above and that on an unmodified historical cost basis.

All the Society's income is unrestricted except for animal adoptions of £80,000 (1994 £87,000) and donations & legacies of £26,000 (1994 £9,000) all held for, or expended on, specific animal welfare purposes (see note 15).

The Society has no recognised gains or losses other than the net surpluses above and therefore no separate statement of total recognised gains and losses has been presented.

The notes on pages 7 to 11 form part of these financial statements.

BALANCE SHEET AT 31 DECEMBER 1995

| | NOTES | CONSOLIDATED | | SOCIETY | |
|--|-------|----------------|----------------|----------------|----------------|
| | | 1995 | 1994 | 1995 | 1994 |
| | | | RESTATED | | RESTATED |
| | | £'000 | £'000 | £'000 | £'000 |
| FIXED ASSETS | | | | | |
| Tangible assets | 9 | 4,114 | 3,925 | 4,050 | 3,870 |
| Investment in subsidiary company | 10 | | | | |
| | | <u>4,114</u> | <u>3,925</u> | <u>4,050</u> | <u>3,870</u> |
| CURRENT ASSETS | | | | | |
| Stocks | 11 | 255 | 228 | 53 | 55 |
| Debtors | 12 | 142 | 135 | 192 | 236 |
| Cash at bank and in hand | | 24 | 72 | 22 | 39 |
| | | <u>421</u> | <u>435</u> | <u>267</u> | <u>330</u> |
| CREDITORS | | | | | |
| Amounts falling due within one year | 13 | 2,075 | 1,831 | 1,860 | 1,671 |
| NET CURRENT LIABILITIES | | <u>(1,654)</u> | <u>(1,396)</u> | <u>(1,593)</u> | <u>(1,341)</u> |
| TOTAL ASSETS LESS CURRENT LIABILITIES | | <u>2,460</u> | <u>2,529</u> | <u>2,457</u> | <u>2,529</u> |
| CREDITORS | | | | | |
| Amounts falling due from 2 to 5 years | | | | | |
| Finance leases - net obligations | | 168 | 335 | 168 | 335 |
| Corporation tax | 14 | 112 | 150 | 112 | 150 |
| | | <u>280</u> | <u>485</u> | <u>280</u> | <u>485</u> |
| NET ASSETS | | <u>2,180</u> | <u>2,044</u> | <u>2,177</u> | <u>2,044</u> |
| FUNDS EMPLOYED | | | | | |
| Income Funds - Restricted | 15 | 22 | 20 | 22 | 20 |
| Income Funds - Unrestricted | | | | | |
| Designated funds | | 410 | 594 | 410 | 594 |
| Other charitable funds | | 1,748 | 1,430 | 1,745 | 1,430 |
| | | <u>2,158</u> | <u>2,024</u> | <u>2,155</u> | <u>2,024</u> |
| TOTAL FUNDS EMPLOYED | | <u>2,180</u> | <u>2,044</u> | <u>2,177</u> | <u>2,044</u> |

The notes on pages 7 to 11 form part of these financial statements.

The financial statements on pages 4 to 11 were approved by Council and were signed on its behalf

Beatrice J. Jones
Chairman of Council.

A. Rennie Barnes
Chairman of Finance Committee.

29 March 1996

CONSOLIDATED CASHFLOW STATEMENT FOR THE YEAR ENDED 31 DECEMBER 1995

| | | 1995 | | 1994 RESTATED | |
|---|-------|-------|-------|------------------|-------|
| | NOTES | £'000 | £'000 | £'000 | £'000 |
| OPERATING ACTIVITIES | | | | | |
| Net incoming resources | | 136 | | 325 | |
| Net interest payable | | 156 | | 131 | |
| Loss/(Profit) on sale of fixed assets | | 10 | | (15) | |
| Depreciation charges | | 533 | | 461 | |
| Amortisation of capital grants | | (13) | | (10) | |
| (Increase) in stocks | | (27) | | (34) | |
| (Increase) / Decrease in debtors | | (8) | | 16 | |
| Increase in creditors due within 1 year | | 81 | | 21 | |
| Net cash inflow from operating activities | | | 868 | | 895 |
| SERVICING OF FINANCE | | | | | |
| Interest received | | 1 | | 1 | |
| Interest paid - bank and other | | (88) | | (64) | |
| Interest paid - finance leases | | (69) | | (69) | |
| Net cash outflow from servicing finance | | | (156) | | (132) |
| TAXATION | | | | | |
| Net cash outflow from taxation | | | (38) | | (38) |
| INVESTING ACTIVITIES | | | | | |
| Receipts of capital expenditure grants | | 76 | | 236 | |
| Receipts from disposal of tangible fixed assets | | 24 | | 55 | |
| Payments to acquire tangible fixed assets | | (819) | | (889) | |
| Net cash outflow from investing activities | | | (719) | | (598) |
| NET CASH (OUTFLOW) / INFLOW BEFORE FINANCING | | | (45) | | 127 |
| LESS FINANCING | | | | | |
| Repayments of finance leases | 16 | (167) | | (170) | |
| Net cash outflow from financing | | | (167) | | (170) |
| CASH AND EQUIVALENTS | | | | | |
| (Increase) in bank overdraft | | (164) | | (48) | |
| (Decrease) / Increase in cash in hand and at bank | | (48) | | 5 | |
| (DECREASE) IN CASH AND CASH EQUIVALENTS | | | (212) | | (43) |

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 1995**1. ACCOUNTING POLICIES**

These accounts are the first to be prepared in accordance with the new Statement of Recommended Practice (SORP) for Accounting by Charities, which prescribes a fundamentally different way of preparing the Society's financial statements. Reference is also made to this matter in the Council Report.

The following accounting policies have been applied in dealing with items which are considered material in relation to the Society's financial statements and, except where specified, are consistent with those of the 1994 financial statements. The figures for 1994 have been restated where necessary to accord with the SORP so as to provide meaningful comparisons.

The Society's systems analyse overhead costs departmentally. The SORP calls for expenses to be analysed on an operational basis and accordingly the overheads have been apportioned on this basis.

Basis of accounting

The financial statements have been prepared in accordance with applicable accounting standards in the United Kingdom under the historical cost convention.

Basis of consolidation

The consolidated statement of financial activities, the balance sheet and the cash flow statement include the financial statements of the Society and its subsidiary undertaking made up to 31 December 1995 and comply with recommended practice for accounting by charities.

One of the most fundamental changes introduced by the SORP relates to the method of consolidation. The net profit of the subsidiary trading company, covenanted to the Society, has been shown as a single line on the statement of financial activities. The turnover and expenses relating thereto are shown in the notes to the financial statements. Its net profit is shown after accounting for various intra-group charges. Rent paid by the subsidiary to the Society has been shown within incoming resources whereas the apportioned overheads, recharged by the Society, have been deducted from the appropriate expense line in the statement of financial activities.

Funds employed

Funds employed are expended in furtherance of the objects of the Society. Restricted income funds are used in furtherance of some specific aspect of those objects. Designated funds are those which have been set aside by Council, out of unrestricted funds, for identifiable future expenditure but the designation has an administrative purpose only and does not legally restrict Council's discretion to apply the funds.

Fixed assets

Council is of the opinion that the market value of the Society's land, property and buildings is in excess of the book values. For insurance purposes, the Society's buildings and house properties are valued at £7,546,008 replacement cost.

Freehold property

In accordance with the practice adopted in previous years, no depreciation has been provided on freehold land or property. It is the Society's policy to maintain its property in good condition, prolonging its useful life and making any depreciation provision immaterial. Repairs and maintenance costs are charged against income in the year in which they are incurred.

Special buildings, enclosures, equipment and monorail system

Depreciation is provided at rates varying between 4% and 25% per annum, estimated to write off each asset over the term of its useful life. The rates and method of depreciation are consistent with those used in previous years. Grants are amortised at a rate equal to the depreciation rate applied to the asset to which they relate.

Animals

No annual assessment is made of the value of the animal collection. It is valued consistently at a nominal sum and not depreciated. Purchases and sales during the year are treated as revenue transactions.

Leases

Where the Society enters into a lease which entails taking substantially all the risks and rewards of ownership of an asset, the lease is treated as a finance lease. The asset is recorded in the balance sheet as a fixed asset and is depreciated over its estimated useful life. Future instalments under such leases, net of finance charges, are included with creditors. Rentals payable are apportioned between the finance element, which is charged to the statement of financial activities as interest, and the capital element, which reduces the outstanding obligation for future instalments. All other leases are operating leases and the rental charges are taken to the statement of financial activities as incurred.

Stocks

Stocks are valued on a basis consistent with that used in previous years at the lower of cost and estimated net realisable value.

Turnover

Turnover represents cash and invoiced amounts of admission charges, goods sold and services provided (stated net of Value Added Tax).

Pensions

The Society operates a voluntary pension scheme covering the majority of permanent employees and provides benefits based on final pensionable pay. The assets of the scheme are held in trustee administered funds completely independent of the Society's finances. Contributions to the scheme are charged to the statement of financial activities so as to spread the cost of pensions over the employees' working lives with the Society.

2. STATUS

The North of England Zoological Society is a company limited by guarantee and has no share capital. Members have guaranteed the liabilities of the Society to the extent of £1 each. The Society is registered with the Charity Commission No. 306077. As a registered charity, The Society is entitled to claim exemption from the charge to tax on income and chargeable gains at Section 505 Income and Corporation Tax Act 1988 and Section 256 Taxation of Chargeable Gains Act 1992. In the opinion of Council no corporation tax liability arose in respect of the Society's activities in the year.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 1995

3. CHARITABLE TRADING ACTIVITIES

| | 1995 | | 1994 | |
|--------------------------|-------|--------------|-------|-------------------|
| | £'000 | £'000 | £'000 | RESTATED £'000 |
| Turnover | | | | |
| Zoo admissions | 3,109 | | 2,896 | |
| Monorail and boats | 250 | | 260 | |
| Guides and other | 179 | 3,538 | 159 | 3,315 |
| Gross expenditure | | | | |
| Zoo admissions | 445 | | 415 | |
| Monorail and boats | 376 | | 368 | |
| Guides and other | 105 | 926 | 89 | 872 |
| | | <u>2,612</u> | | <u>2,443</u> |

**4. TRADING SUBSIDIARY
- CHESTER ZOO ENTERPRISES LIMITED**

| | 1995 | | | 1994 |
|--|-------------------|----------------|----------------|-------------------|
| | Catering £'000 | Shops £'000 | Total £'000 | RESTATED £'000 |
| Turnover | 1,568 | 878 | 2,446 | 2,430 |
| Direct Costs | 1,108 | 555 | 1,663 | 1,610 |
| Gross profit | 460 | 323 | 783 | 820 |
| Indirect Costs - property rents paid to parent company | 164 | 74 | 238 | 238 |
| Indirect Costs - other | 248 | 111 | 359 | 350 |
| Net profit | 48 | 138 | 186 | 232 |
| Amount covenanted to The North of England Zoological Society | | | 183 | 232 |
| Retained in subsidiary | | | 3 | 0 |

Other indirect costs include £284,000 overheads and management costs recharged by the parent company.

5. NET MOVEMENT IN FUNDS

| | 1995 | | 1994 | |
|---|------------|-------|------------|-------|
| | £'000 | £'000 | £'000 | £'000 |
| This is after charging: | | | | |
| Auditor's remuneration - audit (Society: £7,000, 1994 £7,000) | | 10 | | 11 |
| - non-audit | | 19 | | 5 |
| Depreciation | | 533 | | 461 |
| Hire of equipment | | 13 | | 6 |
| Interest payable - bank | 88 | | 63 | |
| Interest payable - finance leases | 69 | | 69 | |
| | <u>157</u> | | <u>132</u> | |
| Less: Interest receivable | 1 | 156 | 1 | 131 |
| Operating lease rentals - plant and equipment | | 3 | | 3 |

As permitted by Section 230 of the Companies Act 1985, the Society's results are included in the consolidated statement of financial activities and no separate statement of financial activities is presented. The Society's surplus for the financial year, determined in accordance with the Companies Act, was £136,000 (1994 £325,000).

6. DIRECTORS

The members of Council, being charity trustees, received no remuneration (1994 Nil).

7. EMPLOYEES

| | 1995 | 1994 |
|------------------------------|--------------|--------------|
| | £'000 | £'000 |
| Aggregate staff costs | | |
| Wages and salaries | 2,512 | 2,353 |
| Social security costs | 213 | 206 |
| Other pension costs | 148 | 116 |
| | <u>2,873</u> | <u>2,675</u> |

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 1995**7. EMPLOYEES** (Continued)**Emoluments**

The number of employees, including those employed for only part of the year, whose emoluments for the year (excluding pension contributions) fell within each band of £10,000 from £40,000 upwards was as follows

| From £40,000 to £50,000 Number of persons employed Average full time equivalents | 1995 Number | | 1994 Number | |
|--|----------------|-----------|----------------|-----------|
| | Permanent | Temporary | Permanent | Temporary |
| Animal Welfare | 55 | 3 | 56 | 1 |
| Maintenance and gardens | 51 | 13 | 51 | 13 |
| Education | 3 | - | 4 | - |
| Publicity and fundraising | 6 | - | 6 | - |
| Catering and shops | 19 | 42 | 18 | 43 |
| Administration | 20 | 4 | 20 | 3 |
| | <u>154</u> | <u>62</u> | <u>155</u> | <u>60</u> |

8. PENSIONS

Pensions contributions are determined by a qualified actuary on the basis of triennial valuations using the projected unit method. The assumptions which have the most significant effect on the results of the valuations are those relating to the valuation rate of interest (9% p.a.), the rate of future salary inflation and future increases in Lower Earnings Limit (7% p.a.), the rate of future pension increases (4% p.a.) and the rate of future dividend growth (5% p.a.). The most recent valuation was at 31 December 1993 which showed that the market value of the scheme's assets was £1,973,000 and that the actuarial value of those assets represented 102.3% of the benefits that had accrued to members, after allowing for an increase in pensions, in line with the increase in the Retail Price Index, with effect from 1 January 1995.

The contributions made to the scheme have been

| | Members | Society |
|--------------------------|---------|---------|
| 6% Contributory members | 6% | 19.3% |
| 3% Contributory members | 3% | 8.2% |
| non-contributory members | Nil | 2.2% |

The actuary has given it as his opinion that, provided contributions continue at the revised rates as set out above, the next actuarial valuation as at 31 December 1996 is expected to show that the resources of the scheme are likely in the normal course of events to be sufficient to meet in full the liabilities of the scheme as they fall due.

Contributions amounting to £8,000 had been repaid to the fund at the year end and are included in debtors (1994 £8,000).

9. TANGIBLE FIXED ASSETS

| | Freehold property £'000 | Buildings & enclosures £'000 | Monorail system £'000 | Machinery & equipment £'000 | Animals £'000 | Total £'000 |
|--------------------------|-------------------------------|------------------------------------|-----------------------------|-----------------------------------|------------------|----------------|
| CONSOLIDATED COST | | | | | | |
| At 1 January 1995 | 575 | 3,946 | 1,472 | 1,275 | 150 | 7,418 |
| Additions | 6 | 598 | 24 | 191 | - | 819 |
| Grants | - | (76) | - | - | - | (76) |
| Disposals | - | - | - | (55) | - | (55) |
| At 31 December 1995 | <u>581</u> | <u>4,468</u> | <u>1,496</u> | <u>1,411</u> | <u>150</u> | <u>8,106</u> |
| DEPRECIATION | | | | | | |
| At 1 January 1995 | - | 1,928 | 588 | 828 | 149 | 3,493 |
| Provided during year | - | 204 | 149 | 180 | - | 533 |
| Grant Amortisation | - | (13) | - | - | - | (13) |
| Disposals | - | - | - | (21) | - | (21) |
| At 31 December 1995 | <u>-</u> | <u>2,119</u> | <u>737</u> | <u>987</u> | <u>149</u> | <u>3,992</u> |
| NET BOOK VALUE | | | | | | |
| At 31 December 1995 | <u>581</u> | <u>2,349</u> | <u>759</u> | <u>424</u> | <u>1</u> | <u>4,114</u> |
| VALUE | | | | | | |
| At 1 January 1995 | <u>575</u> | <u>2,018</u> | <u>884</u> | <u>447</u> | <u>1</u> | <u>3,925</u> |

The net book value at 31 December 1995 represents fixed assets used for

| | | | | | | |
|-------------------------------|------------|--------------|------------|------------|----------|--------------|
| Charitable trading activities | - | 1,030 | 759 | 41 | - | 1,830 |
| Direct charitable purposes | - | 1,016 | - | 192 | 1 | 1,209 |
| Other purposes | 581 | 303 | - | 191 | - | 1,075 |
| | <u>581</u> | <u>2,349</u> | <u>759</u> | <u>424</u> | <u>1</u> | <u>4,114</u> |

The depreciation charged for the year to 31 December 1995, net of grant amortisation, was allocated

| | | | | | | |
|-------------------------------|----------|------------|------------|------------|----------|------------|
| Charitable trading activities | - | 42 | 149 | 11 | - | 202 |
| Direct charitable purposes | - | 114 | - | 96 | - | 210 |
| Other purposes | - | 35 | - | 73 | - | 108 |
| | <u>-</u> | <u>191</u> | <u>149</u> | <u>180</u> | <u>-</u> | <u>520</u> |

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 1995**9. TANGIBLE FIXED ASSETS**

Animal purchases of £4000 (1994 £7,000) and sales of £4,000 (1994 £6,000) have been treated as revenue transactions.

Included in the total net book value of tangible fixed assets is £587,000 (1994 £704,000) in respect of the Monorail system acquired under 'finance' leases. Depreciation for the year on these assets was £117,000 (1994 £117,000).

A European Regional Development Grant of £76,000 (1994 £236,000) was received in respect of certain assets acquired in the year.

All the tangible fixed assets included in the consolidated statement above relate entirely to the Society, with the exception of the machinery and equipment where the equivalent figures for the Society alone are

| | COST | DEPRECIATION | NET BOOK VALUE |
|----------------------|--------------|---------------------|-----------------------|
| | £'000 | £'000 | £'000 |
| At 1 January 1995 | 1,190 | 798 | 392 |
| Additions | 148 | | 148 |
| Disposals | (40) | (18) | (22) |
| Provided during year | | 158 | (158) |
| At 31 December 1995 | <u>1,298</u> | <u>938</u> | <u>360</u> |

10. INVESTMENT IN SUBSIDIARY COMPANY

The Society has a trading subsidiary and owns all 100 ordinary £1 shares in Chester Zoo Enterprises Limited, incorporated in the UK which operates the catering and retail activities of the zoo from outlets rented from the Society. It covenants its taxable profit to The North of England Zoological Society. Audited accounts for the year ended 31 December 1995 will be filed with the Registrar of Companies. A summary of its trading results has been included in Note 4 above.

| | CONSOLIDATED | | SOCIETY | |
|-------------------|---------------------|--------------|----------------|--------------|
| | 1995 | 1994 | 1995 | 1994 |
| | £'000 | £'000 | £'000 | £'000 |
| 11. STOCKS | | | | |
| Goods for resale | 219 | 192 | 17 | 19 |
| Consumables | 36 | 36 | 36 | 36 |
| | <u>255</u> | <u>228</u> | <u>53</u> | <u>55</u> |

The replacement cost of the above stocks would not be significantly different from the values stated.

12. DEBTORS

| | | | | |
|--------------------------------|------------|------------|------------|------------|
| Trade debtors | 14 | 4 | 8 | 3 |
| Intra group debtor | - | - | 61 | 90 |
| Other debtors | 84 | 85 | 79 | 97 |
| Prepayments and accrued income | 44 | 46 | 44 | 46 |
| | <u>142</u> | <u>135</u> | <u>192</u> | <u>236</u> |

13. CREDITORS - AMOUNTS FALLING DUE WITHIN ONE YEAR

| | | | | |
|---------------------------------------|--------------|--------------|--------------|--------------|
| Bank overdraft (secured) | 1,368 | 1,204 | 1,331 | 1,204 |
| Obligation under finance lease | 185 | 185 | 185 | 185 |
| Trade creditors | 265 | 220 | 189 | 146 |
| Corporation tax | 38 | 38 | 38 | 38 |
| Other taxes and social security costs | 160 | 121 | 71 | 46 |
| Other creditors | 31 | 13 | 22 | 10 |
| Accruals | 28 | 50 | 24 | 42 |
| | <u>2,075</u> | <u>1,831</u> | <u>1,860</u> | <u>1,671</u> |

The bank overdraft is secured by a fixed charge on the freehold property. Interest is charged at a fixed rate related to the bank base rate.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 1995**14. CORPORATION TAX**

As the Society is a Registered Charity it had been considered that no tax liability (other than V.A.T.) arose on income. However in 1993 the Inland Revenue raised an assessment on certain of the catering and souvenir retailing activities in respect of the financial years up to 1991. A settlement figure of £225,000 was agreed, payable in 6 equal instalments of £37,500 interest free, from 1994 to 1999.

Since 1 January 1992 any commercial activity which falls outside the statutory exemption for the purposes of Corporation Tax has been conducted through Chester Zoo Enterprises Ltd., which pays all its taxable profits annually to the Society by deed of covenant.

15. FUNDS EMPLOYED

| | Balance 1 January 1995 £'000 | New funds £'000 | Funds Utilised £'000 | Balance 31 December 1995 £'000 |
|--------------------------------|------------------------------------|-----------------------|----------------------------|--------------------------------------|
| Restricted Income Funds | | | | |
| Animal adoptions scheme | 0 | 81 | 81 | 0 |
| Animal welfare projects | 20 | 26 | 24 | 22 |
| | <u>20</u> | <u>107</u> | <u>105</u> | <u>22</u> |
| Designated Funds | | | | |
| Animal welfare projects | 185 | 213 | 135 | 263 |
| New entrance complex | 259 | 172 | 405 | 26 |
| Other capital expenditure | 150 | 173 | 202 | 121 |
| | <u>594</u> | <u>558</u> | <u>742</u> | <u>410</u> |
| Other Charitable Funds | <u>1,430</u> | <u>3,593</u> | <u>3,275</u> | <u>1,748</u> |
| Total Funds Employed | <u>2,044</u> | <u>4,258</u> | <u>4,122</u> | <u>2,180</u> |

16. ANALYSIS OF CHANGES IN FINANCING DURING THE YEAR

| | Balance 1 January 1995 £'000 | Movement in 1995 £'000 | Balance 31 December 1995 £'000 |
|---------------------------------------|------------------------------------|------------------------------|--------------------------------------|
| Finance leases, being total financing | 520 | (167) | 353 |

17. ANALYSIS OF CHANGES IN CASH AND CASH EQUIVALENTS DURING THE YEAR

| | Balance 1 January 1995 £'000 | Movement in 1995 £'000 | Balance 31 December 1995 £'000 |
|--|------------------------------------|------------------------------|--------------------------------------|
| Bank overdraft | (1,204) | (164) | (1,368) |
| Cash at bank and in hand | 72 | (48) | 24 |
| Total net cash and cash equivalents | <u>(1,132)</u> | <u>(212)</u> | <u>(1,344)</u> |

18. CAPITAL COMMITMENTS

The estimated amounts of commitments for future capital expenditure are

| | CONSOLIDATED | | SOCIETY | |
|--|---------------|---------------|---------------|---------------|
| | 1995 £'000 | 1994 £'000 | 1995 £'000 | 1994 £'000 |
| Under contracts | 12 | 26 | 12 | 26 |
| Authorised by Council but not contracted | 398 | 651 | 398 | 651 |
| | <u>410</u> | <u>677</u> | <u>410</u> | <u>677</u> |

There is an annual commitment in respect of operating leases which expire within two to five years of:

| | 1995 | 1994 | 1995 | 1994 |
|---------------------|------|------|------|------|
| Plant and equipment | 3 | 3 | 3 | 3 |

19. CONTINGENT LIABILITIES

Under Section 4 of the Development of Tourism Act 1969, the Society received a grant from the English Tourist Board of £40,000 towards the cost of building the Chimpanzee House. Under certain circumstances this grant could become repayable, although no liability is expected to arise.



zoological gardens
CHESTER



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CHESTER



1995 LIVESTOCK REVIEW

Annual Report of the North of England Zoological Society

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NORTH OF ENGLAND ZOOLOGICAL SOCIETY
CONSERVATIONALLY SENSITIVE LIVESTOCK OF 1995

EXPLANATION OF CODES USED

1. WORLD CONSERVATION UNION (IUCN) AND BIRDLIFE INTERNATIONAL (ICBP) CODES

COMMERCIALLY THREATENED (CT) Taxa not currently threatened with extinction, but most or all of whose populations are threatened as a sustainable commercial resource, or will become so, unless their exploitation is regulated. This category applies only to taxa whose populations are assumed to be relatively large. In practice, this category has only been used for fish and aquatic invertebrate species of commercial importance that are being overfished in several parts of their ranges.

CRITICAL (C) A taxon is 'Critically Endangered' when it is facing a very high risk of extinction in the wild in the immediate future.

DECLINING (D) Population in moderate decline and population more than 10,000 breeding pairs or 40,000 wintering individuals.

ENDANGERED (E) Taxa in danger of extinction and whose survival is unlikely if the causal factors continue operating. Included are taxa whose numbers have been reduced to a critical level or whose habitats have been so drastically reduced that they are deemed to be in immediate danger of extinction. Also included are taxa that may be extinct but have definitely been seen in the wild in the past 50 years.

EXTINCT (Ex) Species not definitely located in the wild during the past 50 years (criterion as used by CITES, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, see below). On a few occasions, the category Ex? has been assigned; this denotes that it is fairly certain that the taxon has recently become extinct.

INDETERMINATE (I) Taxa known to be 'Endangered', 'Vulnerable' or 'Rare' but where there is not enough information to say which of the three categories is appropriate.

INSUFFICIENTLY KNOWN (K) Taxa that are suspected but not definitely known to belong to any of the above categories, because of lack of information.

LOCALISED (L) Population more than 10,000 breeding pairs or 40,000 wintering birds, and neither in moderate nor in large decline, but with more than 90% of the population occurring at 10 or fewer sites (Important Bird Areas) as listed in Grimmett and Jones (1989).

NEAR THREATENED (NT) In a 'Low Risk' category and does not qualify for any of the categories 'Critical', 'Endangered', 'Vulnerable', etc., but are close to qualifying for the threatened categories.

RARE (R) Taxa with small world populations that are not at present 'Endangered' or 'Vulnerable', but are at risk. These taxa are usually localised within restricted geographical areas or habitats, or are thinly scattered over a more extensive range.

THREATENED (T) Threatened is a general term to denote species which are 'Endangered', 'Vulnerable', 'Rare', 'Indeterminate' or 'Insufficiently Known' and should not be confused with the use of the same term by the U.S. Office of Endangered Species. In previous reports it has been used to identify taxa comprised of several sub-taxa which have differing status categories.

VULNERABLE (V) Taxa believed likely to move into the 'Endangered' category in the near future if the causal factors continue operating. Included are taxa of which most or all of the populations are decreasing because of over-exploitation, extensive destruction of habitat or other environmental disturbance; taxa with populations that have been seriously depleted and whose ultimate security has not yet been assured; and taxa with populations that are still abundant but are under threat from severe adverse factors throughout their range. N.B. In practice, 'Endangered' and 'Vulnerable' categories may include, temporarily, taxa whose populations are beginning to recover as a result of remedial action, but whose recovery is insufficient to justify their transfer to another category.

2. CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES (CITES) CODES

APPENDIX I Includes species of wild fauna and flora *threatened with extinction* and for which trade must be subject to particularly strict regulation and only authorised in exceptional circumstances.

APPENDIX II species are *not necessarily now threatened with extinction* but may become so unless trade is strictly regulated. Appendix II further contains so-called *look-alike* species, which are controlled because of their similarity in appearance to the other regulated species, thereby facilitating a more effective control.

APPENDIX III includes species that are *subject to regulation within the jurisdiction of a Party* and for which the *cooperation of other Parties* is needed in order to prevent or restrict their exploitation.

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ABBREVIATED CODES

| | | |
|---|--------------------------|---------------------------------|
| Ex = Extinct in wild form | I = Indeterminate | X = bred in indicated period |
| E = Endangered | K = Insufficiently known | C = Critical (by ICBP) |
| V = Vulnerable | K* = Under review | NT = Near threatened (by ICBP) |
| R = Rare | D = Declining | 1 = CITES I 3 = CITES III |
| L = Localised | S = Safe | 2 = CITES II C1 = ANNEX C1 |
| (European status in parenthesis) | | N/A = Not applicable |
| RE-INTRO PROG = Species held at Chester Zoo that are or have been the subject of cooperative re-introduction programmes. (X^ = English Nature Programmes) | | |
| CAMP = IUCN/CBSG Conservation Assessment Management Plan data | | |
| * Not currently in a breeding pair or group. + recent arrivals or not yet of breeding age. *** This species will be joining the collection in 1996 | | |

MAMMALS

| | | IUCN | BRED | BRED | CITES | RE-INTRO | |
|----|---------------------------------|--------------------------------------|------|------|---------|----------|---|
| | | Red List | 95 | < 95 | LISTING | PROG | |
| 1 | Rodrigues Fruit Bat | <i>Pteropus rodricensis</i> | E | X | X | 2 | |
| 2 | Ring-tailed Lemur | <i>Lemur catta</i> | V | X | X | 1 | |
| 3 | Black & White Ruffed Lemur | <i>Varecia variegata variegata</i> | E | X | X | 1 | X |
| 4 | Red Ruffed Lemur | <i>Varecia variegata rubra</i> | E | X | X | 1 | |
| 5 | Black-tailed (Silvery) Marmoset | <i>Callithrix argentata melanura</i> | | | X | 2 | |
| 6 | Cotton Topped Tamarin | <i>Saguinus oedipus oedipus</i> | E | | X | 1 | X |
| 7 | Buffy Headed Capuchin ***+ | <i>Cebus apella xanthosternus</i> | V | | | 1 | |
| 8 | Colombian Black Spider Monkey | <i>Ateles fusciceps robustus</i> | V | X | X | 2 | |
| 9 | Talapoin Monkey | <i>Miopithecus talapoin</i> | | | X | 2 | |
| 10 | Lion-tailed Macaque | <i>Macaca silenus</i> | E | | X | 1 | |
| 11 | Sulawesi Crested Macaque | <i>Macaca nigra</i> | I | X | X | 2 | |
| 12 | Chimpanzee | <i>Pan troglodytes</i> | V | X | X | 1 | X |
| 13 | Orang Utan (Bornean form) | <i>Pongo pygmaeus pygmaeus</i> | E | X | X | 1 | X |
| 14 | Orang Utan (Sumatran form) | <i>Pongo pygmaeus albelli</i> | E | | X | 1 | X |
| 15 | Bush Dog | <i>Speothos venaticus</i> | V | X | X | 1 | |
| 16 | Oriental Small-clawed Otter | <i>Aonyx cinerea</i> | K | | X | 2 | |
| 17 | Caracal Lynx | <i>Felis caracal</i> | | | X | 2 | |
| 18 | Black-footed Cat* | <i>Felis nigripes</i> | | | X | 1 | |
| 19 | Geoffroy's Cat | <i>Felis geoffroyi</i> | | | X | 2 | |
| 20 | Jungle Cat | <i>Felis chaus</i> | | | X | 2 | |
| 21 | Scottish Wild Cat | <i>Felis sylvestrus</i> | | | X | 2 | |
| 22 | European Lynx | <i>Felis lynx</i> | | | X | 2 | |
| 23 | Serval | <i>Felis serval</i> | | X | X | 2 | |
| 24 | Ocelot | <i>Felis pardalis</i> | V | | | 1 | |
| 25 | Margay | <i>Felis wiedii</i> | K | | X | 1 | |
| 26 | Persian Leopard | <i>Panthera pardus saxicolor</i> | I | | X | 1 | |
| 27 | Siberian Tiger* | <i>Panthera tigris altaica</i> | E | | X | 1 | |
| 28 | Asiatic Lion | <i>Panthera leo persica</i> | E | | X | 1 | |
| 29 | Cheetah | <i>Acinonyx jubatus</i> | V | | | 1 | X |
| 30 | Asiatic Elephant | <i>Elephas maximus</i> | E | X | X | 1 | |
| 31 | Persian Onager | <i>Equus hemionus onager</i> | E | X | X | 2 | X |
| 32 | Przewalski's Horse* | <i>Equus przewalski</i> | Ex | | X | 1 | X |
| 33 | Tapir | <i>Tapirus terrestris</i> | | X | X | 2 | |
| 34 | Black Rhinoceros | <i>Diceros bicornis</i> | E | | X | 1 | |
| 35 | Great Indian Rhinoceros* | <i>Rhinoceros unicornis</i> | E | | | 1 | |
| 36 | Collared Peccary* | <i>Tayassu tajacu</i> | | | X | 2 | |

| | | IUCN Red List | BRED 95 | BRED < 95 | CITES LISTING | BIRDLIFE LISTING | CAMP STATUS | RE-INTRO PROG |
|-----|---------------------------------|------------------|------------|--------------|------------------|---------------------|----------------|------------------|
| 109 | Great Indian Hornbill | | | X | C1 | | E | |
| 110 | Rhinoceros Hornbill+ | | | | 2 | | C/S | |
| 111 | Wrinkled Hornbill | | X | X | 2 | V | V | |
| 112 | Toco Toucan | | | | 2 | | | |
| 113 | Channel-billed Toucan* | | | X | 2 | | | |
| 114 | Gouldian Finch | K | X | | | E | | |
| 115 | Java Sparrow | | | X | | V | | |
| 116 | Yellow-throated Laughing Thrush | | | | | NT | | |
| 117 | Red-tailed Laughing Thrush | | | X | | NT | | |
| 118 | Bali Starling | E | X | X | 1 | C | | X |
| 119 | Red-billed Chough | | | X | | (V) | | X |

REPTILES

| | | IUCN Red List | BRED 95 | BRED < 95 | CITES LISTING | OTHER LISTINGS | RE-INTRO PROG |
|----|-------------------------------|------------------|------------|--------------|------------------|-------------------|------------------|
| 1 | Aldabra Giant Tortoise* | R | | | 2 | | |
| 2 | Greek Tortoise | V | | | 2 | | |
| 3 | Hermann's Tortoise | V | | | 2 | | |
| 4 | Horsfield's Tortoise+ | | | | 2 | | |
| 5 | Red-footed Tortoise | | | | 2 | | |
| 6 | Mississippi Alligator | | | | 2 | | |
| 7 | West African Dwarf Crocodile+ | | | | 1 | | |
| 8 | Tuatara+ | R | | | 1 | | X |
| 9 | Ornate Day Gecko | | | | 2 | | |
| 10 | Rhinoceros Iguana | I | | X | 1 | | |
| 11 | Philippine Sail-fin Lizard | V | X | X | | | |
| 12 | Prehensile-tailed Skink | | X | X | 2 | | |
| 13 | Black & White Tegu | | | | 2 | | |
| 14 | Sand Lizard*** | | N/A | N/A | | | X^ |
| 15 | Common Iguana | | | X | 2 | | |
| 16 | Salvator Monitor | | | | 2 | | |
| 17 | Cuban Boa | I | | X | 2 | | |
| 18 | Jamaican Boa | V | X | | 1 | | |
| 19 | Madagascan Tree Boa | K | | X | 2 | | |
| 20 | Rubber Boa* | R | | | | | |
| 21 | Brazilian Rainbow Boa | | X | | 2 | | |
| 22 | Royal Python | | | X | 2 | | |
| 23 | Green Tree Python | | | | 2 | | |
| 24 | Green Anaconda | | | | 2 | | |
| 25 | Boa Constrictor | | | | 2 | | |
| 26 | Pacific Boa | | | | 2 | | |
| 27 | Aruba Island Rattlesnake***+ | R | | | | | |
| 28 | Indian Cobra | | X | X | 3 | | |
| 29 | Neotropical Rattlesnake | | | | 3 | | |

AMPHIBIANS

| | | IUCN Red List | BRED 95 | BRED < 95 | CITES LISTING | OTHER LISTINGS | RE-INTRO PROG |
|---|-----------------------------------|------------------|------------|--------------|------------------|-------------------|------------------|
| 1 | Axolotl | R | X | X | 2 | | |
| 2 | Black & Gold Poison Arrow Frog | | X | X | 2 | | |
| 3 | Black & Green Poison Arrow Frog+ | | | | 2 | | |
| 4 | Yellow Striped Poison Arrow Frog+ | | | | 2 | | |
| 5 | Golfoducean Poison Arrow Frog+ | | | | 2 | | |

INVERTEBRATES

| | | IUCN Red List | BRED 95 | BRED < 95 | CITES LISTING | OTHER LISTINGS | RE-INTRO PROG |
|---|----------------------------|------------------|------------|--------------|------------------|-------------------|------------------|
| 1 | Partula Snail | Ex | X | X | | | X |
| 2 | Partula Snail | Ex | X | X | | | |
| 3 | Partula Snail | Ex | X | X | | | X |
| 4 | Partula Snail | Ex | X | X | | | X |
| 5 | Mexican Red-knee Tarantula | K | X | X | 2 | | |
| 6 | Macleay's Spectre | | X | X | | Int. Zoo Yb | |
| 7 | Tadpole Shrimp | | X | N/A | | | X^ |
| 8 | Southern Giant Clam | V | | | | | |

FISHES

| | | IUCN Red List | BRED 95 | BRED < 95 | CITES LISTING | OTHER LISTINGS | RE-INTRO PROG |
|---|----------------------|------------------|------------|--------------|------------------|-------------------|------------------|
| 1 | Cumming's Barb | V | | X | | | |
| 2 | Black Ruby Barb | V | X | X | | | |
| 3 | Cherry Barb | V | | X | | | |
| 4 | Silver Shark | I | | | | | |
| 5 | Oman Blind Cave Fish | R | | X | | | |
| 6 | Pla Eesok | K | | | 1 | | |
| 7 | Red Rainbowfish | R | X | X | | | |

| | | IUCN Red List | BRED 95 | BRED < 95 | CITES LISTING | BIRDLIFE LISTING | CAMP STATUS | RE-INTRO PROG |
|----|-------------------------|--|------------|--------------|------------------|---------------------|----------------|------------------|
| 8 | Boeseman's Rainbowfish | <i>Melanotaenia boesemani</i> | V | X | X | | | |
| 9 | Lake Tebera Rainbowfish | <i>Melanotaenia herbertaxelrodi</i> | R | X | X | | | |
| 10 | Lake Kutubu Rainbowfish | <i>Melanotaenia lacustris</i> | V | X | X | | | |
| 11 | Lake Victoria Cichlid | <i>Haplochromis 'argens'</i> | Ex | X | X | | | |
| 12 | Lake Victoria Cichlid | <i>Astatorheochromis alluaudii</i> | E | X | X | | | |
| 13 | Lake Victoria Cichlid | <i>Haplochromis nyererei</i> | E | X | X | | | |
| 14 | Lake Victoria Cichlid | <i>Haplochromis pyrrhocephalus</i> | Ex | X | X | | | |
| 15 | Lake Victoria Cichlid | <i>Haplochromis riponanus</i> | E | X | X | | | |
| 16 | Lake Victoria Cichlid | <i>Haplochromis sauvagei</i> | E | X | X | | | |
| 17 | Lake Victoria Cichlid | <i>Haplochromis 'Velvet Black'</i> | E | X | X | | | |
| 18 | Lake Victoria Cichlid | <i>Haplochromis xenognathus</i> | E | X | X | | | |
| 19 | Otjikoto Tilapia | <i>Tilapia guinasana</i> | E | X | X | | | |
| 20 | Asiatic Arowana | <i>Scleropages formosus</i> | K | | | I | | |
| 21 | Mafia Island Killifish | <i>Nothobranchius korthausae</i> | | X | | | X | |
| 22 | Butterfly Goodeid | <i>Ameca splendens</i> | E | X | N/A | | | |
| 23 | Bold Characodon | <i>Characodon audax</i> | V | X | N/A | | | |
| 24 | Mexclapique | <i>Girardinichthys viviparus</i> | E | X | N/A | | | |
| 25 | Solo Goodeid | <i>Xenopophorus captivus</i> | E | X | N/A | | | |
| 26 | Crescent Zoe | <i>Zoogoneticus</i> sp. | | X | N/A | | | |
| 27 | Monterey Platy | <i>Xiphophorus couchinanus</i> , 'Apodaca' | E | X | N/A | | | |

SUMMARY

NUMBERS OF CONSERVATIONALLY SENSITIVE SPECIES IN EACH MAIN CATEGORY

| | IUCN Red List | Other Categories | Total | Ex | 7 | CITES I | 62 |
|---------------|------------------|---------------------|-------|----|----|----------|----|
| MAMMALS | 34 | 13 | 47 | E | 35 | CITES II | 96 |
| BIRDS | 47 | 72 | 119 | V | 44 | ICBP | 81 |
| REPTILES | 11 | 18 | 29 | R | 20 | | |
| AMPHIBIANS | 1 | 4 | 5 | I | 5 | | |
| INVERTEBRATES | 6 | 2 | 8 | | | | |
| FISHES | 25 | 2 | 27 | K | 12 | | |
| TOTALS | 124 | 111 | 235 | K* | 1 | | |



NORTH OF ENGLAND ZOOLOGICAL SOCIETY
ANIMAL STOCKLIST 1995

TEXT LISTINGS

The animals are listed in seven columns, which is the world wide standard for major zoological collections.

Column 1.

This is the stock at the beginning of the year - and normally agrees with the closing stock of the 1994 report. However, re-sexing, and the detection of hitherto undetected errors have resulted in some minor adjustments.

Column 2.

This is the stock that has come to the collection from outside sources.

Column 3.

This is the addition to our stocks through breeding.

Column 4.

This is the stock bred in the Zoo which failed to survive more than 30 days. Although columns 3 and 4 are the appropriate places for recording the breeding performance of many species, they are inappropriate for those which produce large numbers of very small or microscopic young, most of which are unlikely to survive, until they are of countable size. For these species, column 4 is ignored, and only surviving countable young are shown in column 3.

Column 5.

These are animals which died or were humanely destroyed for reasons of ill health whilst in the collection.

Column 6.

This is for animals which were removed from the collection other than for reasons of ill health.

Column 7.

This is the closing stock as at 31st December 1995.

Within each column, known male animals are listed under the heading 'M', female animals under 'F' and as yet un-sexed animals or young stock are shown under the heading 'Y/?'

SUMMARY
LIVESTOCK TOTALS AS AT 31 DECEMBER 1995

| | Number of Species | (End 94) | Number of Specimens | (End 94) | Species Breeding & Reared | (End 94) | Specimens Bred & Reared | (End 94) |
|---------------|----------------------|--------------|------------------------|---------------|------------------------------|--------------|----------------------------|--------------|
| Mammals | 76 | (76) | 670 | (671) | 30 | (29) | 121 | (124) |
| Birds | 206 | (201) | 954 | (901) | 73 | (68) | 261 | (279) |
| Reptiles | 44 | (41) | 270 | (298) | 8 | (9) | 155 | (238) |
| Amphibians | 17 | (19) | 129 | (164) | 2 | (3) | 31 | (63) |
| Fishes | 134 | (130) | 3156 | (2894) | 38 | (21) | * | * |
| Invertebrates | 39 | (35) | 460 | (494) | 18 | (16) | * | * |
| Totals | 516 | (502) | 5639 | (5422) | 169 | (146) | 568 | (704) |

* Not included

MAMMALS STOCKLIST

| | | STOCK 31/12/1994 | | | RECEIVED | | | BORN/H'CH | | | D.N.S. 30 DAYS | | | DEATHS OTHERS | | | DISPOSALS | | | STOCK 31/12/95 | | |
|----------------------------|-------------------------------------|---------------------|----|-----|--------------|---|-----|-----------|---|-----|-------------------|---|----|------------------|---|-----|-----------|---|-----|-------------------|----|-----|
| | | M | F | Y?? | M | F | Y?? | M | F | Y?? | M | F | Y? | M | F | Y?? | M | F | Y?? | M | F | Y?? |
| MONOTREMATA | | | | | | | | | | | | | | | | | | | | | | |
| Short-nosed Echidna | <i>Tachyglossus aculeatus</i> | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| MARSUPIALIA | | | | | | | | | | | | | | | | | | | | | | |
| Tammar Wallaby | <i>Macropus eugenii</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Red-necked Wallaby | <i>Macropus rufogriseus</i> | 7 | 10 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 1 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 6 | 9 | 0 |
| Western Grey Kangaroo | <i>Macropus fuliginosus</i> | 4 | 3 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 3 | 3 | 0 |
| CHIROPTERA | | | | | | | | | | | | | | | | | | | | | | |
| Rodrigues Fruit Bat | <i>Pteropus rodricensis</i> | 16 | 24 | 5 | 0 | 0 | 0 | 14 | 2 | 5 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 7 | 0 | 30 | 19 | 3 |
| Seba's Short-tailed Bat | <i>Carollia perspicillata</i> | 4 | 5 | 13 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 4 | 5 | 21 |
| PRIMATES | | | | | | | | | | | | | | | | | | | | | | |
| Slow Loris | <i>Nycticebus coucang</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Ring-tailed Lemur | <i>Lemur catta</i> | 17 | 11 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 2 | 0 | 0 | 0 | 2 | 0 | 10 | 1 | 0 | 10 | 11 | 1 |
| White Fronted Lemur | <i>Lemur fulvous albifrons</i> | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 |
| Ruffed Lemur | <i>Varecia variegata</i> | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 0 |
| Red Ruffed Lemur | <i>Varecia variegata rubra</i> | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 |
| Lesser Bushbaby | <i>Galaga senegalensis</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Pygmy Marmoset | <i>Callithrix pygmaea</i> | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 3 | 0 |
| Silvery Marmoset | <i>Callithrix argenata melanura</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| Cotton Topped Tamarin | <i>Saguinus oedipus</i> | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 0 | 3 | 1 | 0 |
| White-lipped Tamarin | <i>Saguinus labiatus</i> | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 |
| Spider Monkey (black face) | <i>Ateles fusiceps robustus</i> | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 6 | 0 |
| Lion-tailed Macaque | <i>Macaca silenus</i> | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 |
| Sulawesi Crested Macaque | <i>Macaca niger</i> | 4 | 8 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 9 | 0 |
| De Brazza Monkey | <i>Cercopithecus neglectus</i> | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| Talapoin Monkey | <i>Miopithecus talapoin</i> | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 1 | 2 | 0 |
| Chimpanzee | <i>Pan troglodytes</i> | 5 | 19 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 21 | 0 |
| Orang Utan (Bornean Form) | <i>Pongo pygmaeus pygmaeus</i> | 1 | 7 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 7 | 0 |
| Orang Utan (Sumatran Form) | <i>Pongo pygmaeus abelli</i> | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 |
| RODENTIA | | | | | | | | | | | | | | | | | | | | | | |
| Prairie Marmot | <i>Cynomys ludovicianus</i> | 0 | 0 | 70 | ← ESTIMATE → | | | | | | | | | | | | 0 | 0 | 70 | | | |
| African Crested Porcupine | <i>Hystrix cristata</i> | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 2 | 0 |
| Capybara | <i>Hydrochoerus hydrochaeris</i> | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 1 | 0 |
| Coypu | <i>Myocastor coypus</i> | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 |
| Mountain Viscacha | <i>Lagidium viscaccia</i> | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| CARNIVORA | | | | | | | | | | | | | | | | | | | | | | |
| Zorilla | <i>Ictonyx striatus</i> | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Bush Dog | <i>Speothos venaticus</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| Coati | <i>Nasua nasua</i> | 1 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 1 | 16 | 0 |
| Kinkajou | <i>Potos flavus</i> | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| Small-clawed Otter | <i>Aonyx cinerea</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Dwarf Mongoose | <i>Helogale parvula</i> | 7 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 2 | 0 | 6 | 1 | 0 |
| Meerkat | <i>Suricata suricatta</i> | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 0 |
| Margay | <i>Felis wiedi</i> | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| Jungle Cat | <i>Felis chaus</i> | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 |
| Wildcat (Scottish Form) | <i>Felis sylvestris</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Black Footed Cat | <i>Felis nigripes</i> | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Ocelot | <i>Felis pardalis</i> | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 |
| Caracal | <i>Felis caracal</i> | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 |
| European Lynx | <i>Felis lynx</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Serval | <i>Felis serval</i> | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 |
| Geoffroy's Cat | <i>Felis geoffroyi</i> | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 |
| Lion (Indian Form) | <i>Panthera leo persica</i> | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 |
| Tiger (Siberian Form) | <i>Panthera tigris altaica</i> | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 |
| Leopard (Persian Form) | <i>Panthera pardus saxicolor</i> | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 |
| Cheetah | <i>Acinonyx jubatus</i> | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 |
| Common Genet | <i>Genetta genetta</i> | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 |

North of England Zoological Society 1995 LIVESTOCK REVIEW

| | | STOCK 31/12/1994 | | | RECEIVED | | | BORN/H'CH | | | D.N.S. 30 DAYS | | | DEATHS OTHERS | | | DISPOSALS | | | STOCK 31/12/95 | | | | | |
|----------------------------|--------------------------------|---------------------|-----|-----|----------|---|-----|-----------|----|-----|-------------------|----|-----|------------------|----|-----|-----------|----|-----|-------------------|-----|-----|----|----|---|
| | | M | F | Y/? | M | F | Y/? | M | F | Y/? | M | F | Y/? | M | F | Y/? | M | F | Y/? | M | F | Y/? | | | |
| PINNIPEDIA | | | | | | | | | | | | | | | | | | | | | | | | | |
| Californian Sealion | <i>Zalophus californianus</i> | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 0 |
| PROBOSCIDEA | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asiatic Elephant | <i>Elephas maximus</i> | 2 | 6 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 0 |
| PERISSODACTYLA | | | | | | | | | | | | | | | | | | | | | | | | | |
| Przewalski's Horse | <i>Equus przewalskii</i> | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 |
| Common Zebra | <i>Equus burchelli boehmi</i> | 1 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 0 |
| Onager (Persian Form) | <i>Equus hemionus onager</i> | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 0 |
| South American Tapir | <i>Tapirus terrestris</i> | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 |
| Black Rhinoceros | <i>Diceros bicornis</i> | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 |
| Indian Rhinoceros | <i>Rhinoceros unicornis</i> | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| ARTIODACTYLA | | | | | | | | | | | | | | | | | | | | | | | | | |
| Collared Peccary | <i>Tayassu tajacu</i> | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Guanaco | <i>Lama guanicoe</i> | 8 | 15 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 7 | 8 | 0 | 2 | 8 | 0 | 2 | 8 | 0 |
| Bactrian Camel | <i>Camelus bactrianus</i> | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 2 | 0 | 1 | 2 | 0 |
| Chilean Pudu | <i>Pudu pudu</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Axis Deer | <i>Cervus axis</i> | 6 | 13 | 0 | 0 | 0 | 0 | 5 | 4 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 0 | 8 | 13 | 0 | 8 | 13 | 0 |
| Père David's Deer | <i>Elaphurus davidianus</i> | 4 | 6 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 6 | 0 | 4 | 6 | 0 |
| Reindeer | <i>Rangifer tarandus</i> | 3 | 14 | 0 | 0 | 0 | 0 | 6 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 6 | 13 | 0 | 6 | 13 | 0 |
| Chinese Water Deer | <i>Hydropotes inermis</i> | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Giraffe | <i>Giraffa camelopardalis</i> | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 2 | 0 |
| Nilgai | <i>Boselaphus tragocamelus</i> | 6 | 10 | 0 | 0 | 0 | 0 | 3 | 7 | 0 | 1 | 2 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 5 | 13 | 0 | 5 | 13 | 0 |
| Congo Buffalo | <i>Syncerus caffer nanus</i> | 1 | 6 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 5 | 0 | 2 | 5 | 0 |
| Eland | <i>Taurotragus oryx</i> | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bongo | <i>Tragelaphus erycerus</i> | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 3 | 0 | 1 | 3 | 0 |
| Sitatunga | <i>Tragelaphus spekei</i> | 2 | 7 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 3 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 7 | 0 | 2 | 7 | 0 |
| Roan Antelope | <i>Hippotragus equinus</i> | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sable Antelope | <i>Hippotragus niger</i> | 5 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 0 |
| Kafue Flats Red Lechwe | <i>Kobus leche kafuensis</i> | 2 | 13 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 16 | 0 | 2 | 16 | 0 |
| Scimitar-horned Oryx | <i>Oryx dammah</i> | 1 | 11 | 0 | 1 | 0 | 0 | 5 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 11 | 0 | 5 | 11 | 0 |
| Gemsbok | <i>Oryx gazella gazella</i> | 1 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 2 | 4 | 0 |
| Blackbuck | <i>Antelope cervicapra</i> | 18 | 23 | 1 | 0 | 0 | 0 | 14 | 9 | 0 | 10 | 4 | 0 | 1 | 1 | 0 | 3 | 9 | 0 | 18 | 18 | 1 | 18 | 18 | 1 |
| Arabian Gazelle | <i>Gazella gazella arabica</i> | 4 | 13 | 0 | 0 | 0 | 0 | 5 | 8 | 0 | 0 | 3 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 8 | 16 | 0 | 8 | 16 | 0 |
| American Bison | <i>Bison bison</i> | 3 | 7 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 9 | 0 | 4 | 9 | 0 |
| Burmese Brow Antlered Deer | <i>Cervus eldi thamin</i> | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 2 | 1 |
| | | 218 | 364 | 89 | 9 | 5 | 0 | 75 | 66 | 36 | 19 | 21 | 16 | 18 | 25 | 8 | 39 | 46 | 0 | 226 | 343 | 101 | | | |
| | | 671 | | | 14 | | | 177 | | | 56 | | | 51 | | | 85 | | | 670 | | | | | |

Number of Specimens 670
Number of Species 76



Getting Karha accustomed to Jangoli.



Asiatic Lion Cub.

BIRDS STOCKLIST

| | | STOCK 31/12/1994 | | | RECEIVED | | | BORN/HCH | | | D.N.S. 30 DAYS | | | DEATHS OTHERS | | | DISPOSALS | | | STOCK 31/12/95 | | |
|------------------------------|------------------------------------|---------------------|----|----|----------|---|---|----------|---|----|-------------------|---|---|------------------|---|---|-----------|---|---|-------------------|----|----|
| | | MFY/? | | | MFY/? | | | MFY/? | | | MFY/? | | | MFY/? | | | MFY/? | | | MFY/? | | |
| STRUTHIONIFORMES | | | | | | | | | | | | | | | | | | | | | | |
| Ostrich | <i>Struthio camelus massaicus</i> | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 |
| RHEIFORMES | | | | | | | | | | | | | | | | | | | | | | |
| Common Rhea | <i>Rhea americana</i> | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 1 | 4 |
| CASUARIIFORMES | | | | | | | | | | | | | | | | | | | | | | |
| Emu | <i>Dromaius novaehollandiae</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| SPHENISCIFORMES | | | | | | | | | | | | | | | | | | | | | | |
| Humboldt's Penguin | <i>Spheniscus humboldti</i> | 15 | 17 | 20 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 0 | 5 | 0 | 1 | 2 | 7 | 3 | 6 | 8 | 13 | 33 |
| PELECANIFORMES | | | | | | | | | | | | | | | | | | | | | | |
| White Pelican | <i>Pelecanus onocrotalus</i> | 2 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 0 |
| Dalmatian Pelican | <i>Pelecanus crispus</i> | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| CICONIFORMES | | | | | | | | | | | | | | | | | | | | | | |
| Little Egret | <i>Egretta garzetta</i> | 3 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 |
| White Stork | <i>Ciconia ciconia</i> | 2 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 2 | 0 |
| Black Stork | <i>Ciconia nigra</i> | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 |
| Waldraup Ibis | <i>Geronticus eremita</i> | 9 | 8 | 18 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 6 | 9 | 8 | 16 |
| Scarlet Ibis | <i>Eudocimus ruber</i> | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 |
| Eurasian Spoonbill | <i>Platalea leucorodia</i> | 0 | 0 | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 0 |
| Chilean Flamingo | <i>Phoenicopterus chilensis</i> | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 6 | 0 | 0 | 1 | 0 | 0 | 0 | 12 | 11 | 16 |
| Caribbean Flamingo | <i>Phoenicopterus ruber ruber</i> | 17 | 12 | 23 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 16 | 12 | 25 |
| Caribbean x Chilean Flamingo | <i>P.r. ruber x P. chilensis</i> | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| ANSERIFORMES | | | | | | | | | | | | | | | | | | | | | | |
| Fulvous Tree Duck | <i>Dendrocygna bicolor</i> | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Black-billed Whistling Duck | <i>Dendrocygna arborea</i> | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 3 | 6 |
| White-faced Whistling Duck | <i>Dendrocygna viduata</i> | 0 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 |
| Black-necked Swan | <i>Cygnus melanocoryphus</i> | 3 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 6 | 0 | 0 | 3 | 2 | 1 | 3 | 0 | 0 | 0 | 2 | 2 | 0 |
| Emperor Goose | <i>Anser canagicus</i> | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 |
| Lesser White-fronted Goose | <i>Anser erythropus</i> | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Ross's Snow Goose | <i>Anser rossii</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Red-breasted Goose | <i>Branta ruficollis</i> | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 0 |
| Hawaiian Goose | <i>Branta sandvicensis</i> | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 2 | 2 | 0 |
| Common Shelduck | <i>Tadorna tadorna</i> | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 2 | 4 | 3 |
| Ruddy Shelduck | <i>Tadorna ferruginea</i> | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Baikal Teal | <i>Anas formosa</i> | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 |
| Falcated Teal | <i>Anas falcata</i> | 2 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 4 | 0 |
| Northern Shoveler | <i>Anas clypeata</i> | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 6 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 3 | 1 | 2 | 0 |
| Red Shoveler | <i>Anas platalea</i> | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Laysan Teal | <i>Anas laysanensis</i> | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 3 | 2 | 0 |
| Garganey | <i>Anas querquedula</i> | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 |
| Chiloe Wigeon | <i>Anas sibilatrix</i> | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 |
| Ringed Teal | <i>Callonetta leucophrys</i> | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 |
| Marbled Teal | <i>Marmaronetta angustirostris</i> | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 4 | 0 |
| Common Eider | <i>Somateria mollissima</i> | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 |
| Ferruginous Duck | <i>Aythya nyroca</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Tufted Duck | <i>Aythya fuligula</i> | 4 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 0 |
| Rosy-billed Pochard | <i>Netta peposaca</i> | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 2 | 1 | 2 | 0 |
| Red-crested Pochard | <i>Netta rufina</i> | 3 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 3 | 3 | 0 |
| Mandarin Duck | <i>Aix galericulata</i> | 7 | 5 | 0 | 2 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 5 | 0 | 3 | 3 | 0 |
| Carolina Duck | <i>Aix sponsa</i> | 3 | 6 | 0 | 0 | 0 | 0 | 4 | 2 | 2 | 0 | 0 | 2 | 0 | 1 | 0 | 3 | 5 | 0 | 4 | 2 | 0 |
| White-winged Wood Duck | <i>Cairina scutulata</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Smew | <i>Mergus albellus</i> | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 |
| Hooded Merganser | <i>Mergus cucullatus</i> | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 3 | 1 | 0 | 0 | 0 | 0 | 2 | 3 | 0 |
| Ruddy Duck | <i>Oxyura jamaicensis</i> | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 4 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 0 |
| White-headed Duck | <i>Oxyura leucocephala</i> | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 5 | 0 | 1 | 2 | 0 | 0 | 0 | 3 | 2 | 2 |
| Bufflehead | <i>Bucephalus albeola</i> | 2 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 |
| FALCONIFORMES | | | | | | | | | | | | | | | | | | | | | | |
| Mauritius Kestrel | <i>Falco punctatus</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| Andean Condor | <i>Vultur gryphus</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| European Black Vulture | <i>Aegypius monachus</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Secretary Bird | <i>Sagittarius serpentarius</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |

| | | STOCK 31/12/1994 | | | RECEIVED | | | BORN/H'CH | | | D.N.S. 30 DAYS | | | DEATHS OTHERS | | | DISPOSALS | | | STOCK 31/12/95 | | | | |
|-----------------------------|------------------------------------|---------------------|---|-----|----------|---|-----|-----------|---|-----|-------------------|---|-----|------------------|---|-----|-----------|---|-----|-------------------|---|-----|---|---|
| | | M | F | Y/? | M | F | Y/? | M | F | Y/? | M | F | Y/? | M | F | Y/? | M | F | Y/? | M | F | Y/? | | |
| GALLIFORMES | | | | | | | | | | | | | | | | | | | | | | | | |
| Grey-headed Chachalaca | <i>Ortalis cinereiceps</i> | 0 | 0 | 0 | 1 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 4 |
| Variable Chachalaca | <i>Ortalis motmot</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Bare-faced Curassow | <i>Crax fasciolata</i> | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 2 | 0 | 2 | 2 | 0 |
| Chinese Painted Quail | <i>Excalfactoria chinensis</i> | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Californian Quail | <i>Lophortyx californica</i> | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 1 | 3 | 0 |
| Red-legged Partridge | <i>Alectoris rufa</i> | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| Grey Partridge | <i>Perdix perdix</i> | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rouletou Partridge | <i>Rollulus rouloul</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Blyth's Tragopan | <i>Tragopan blythii</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Satyr Tragopan | <i>Tragopan satyra</i> | 2 | 3 | 0 | 0 | 1 | 0 | 2 | 1 | 7 | 0 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 4 | 3 | 0 |
| Temminck's Tragopan | <i>Tragopan temminckii</i> | 1 | 1 | 0 | 1 | 1 | 0 | 2 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 |
| Himalayan Monal | <i>Lophophorus impeyanus</i> | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 2 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 3 | 0 |
| Brown Eared Pheasant | <i>Crossoptilon mantchuricum</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| White Eared Pheasant | <i>Crossoptilon crossoptilon</i> | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| Golden Pheasant | <i>Chrysolophus pictus</i> | 2 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 3 | 0 |
| Grey Peacock-Pheasant | <i>Polyplectron bicalcaratum</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Palawan Peacock Pheasant | <i>Polyplectron emphanum</i> | 3 | 3 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 3 | 2 | 0 |
| Mountain Peacock Pheasant | <i>Polyplectron inopinatum</i> | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Edwards' Pheasant | <i>Lophura edwardsi</i> | 3 | 3 | 0 | 0 | 0 | 0 | 2 | 3 | 4 | 0 | 0 | 2 | 1 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 3 | 5 | 0 |
| Malayan Crestless Fireback | <i>Lophura e. erythroptialma</i> | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Common Peafowl | <i>Pavo cristatus</i> | 2 | 1 | 0 | 3 | 1 | 0 | 0 | 1 | 3 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 3 | 0 |
| Green Peafowl | <i>Pavo muticus</i> | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Congo Peafowl | <i>Afropavo congensis</i> | 1 | 0 | 0 | 1 | 1 | 0 | 2 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 3 | 0 |
| Ocellated Turkey | <i>Agriocharis ocellata</i> | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| GRUIFORMES | | | | | | | | | | | | | | | | | | | | | | | | |
| Red-crowned Crane | <i>Grus japonensis</i> | 4 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 3 | 0 |
| White-naped Crane | <i>Grus vipio</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Wattled Crane | <i>Bucconas carunculatus</i> | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |
| Demoiselle Crane | <i>Anthropoides virgo</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Stanley (Blue) Crane | <i>Anthropoides paradisea</i> | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| West African Crowned Crane | <i>Balearica pavonina pavonina</i> | 2 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 |
| Gough Island Moorhen | <i>Gallinula nesiotis</i> | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| Sun Bittern | <i>Eurypyga helias</i> | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Little Black Bustard | <i>Eupodotis alfra</i> | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 |
| CHARADRIFORMES | | | | | | | | | | | | | | | | | | | | | | | | |
| Avocet | <i>Recurvirostra avosetta</i> | 2 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 |
| Stone Curlew | <i>Burhinus oedicnemus</i> | 1 | 3 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 |
| Southern Stone Curlew | <i>Burhinus magnirostris</i> | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Crowned Plover | <i>Vanellus coronatus</i> | 5 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 0 | 0 | 5 | 1 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 3 | 2 | 0 |
| COLUMBIFORMES | | | | | | | | | | | | | | | | | | | | | | | | |
| Jambu Fruit Dove | <i>Phalinopus jambu</i> | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Speckled Pigeon | <i>Columba guinea</i> | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 2 | 1 | 7 |
| Rock Dove | <i>Columba livia</i> | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 6 |
| Pink Pigeon | <i>Nesoenas mayeri</i> | 2 | 2 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 |
| Laughing Dove | <i>Streptopelia senegalensis</i> | 1 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 |
| Emerald Dove | <i>Chalcophaps indica</i> | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Crested Bronzewing Pigeon | <i>Ocyphaps lophotes</i> | 1 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 |
| Common Bronzewing Pigeon | <i>Phaps chalcoptera</i> | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| Diamond Dove | <i>Geopelia cuneata</i> | 1 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Mountain Witch Dove | <i>Geotrygon versicolor</i> | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | |
| Luzon Bleeding Heart Pigeon | <i>Gallicolumba luzonica</i> | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 |
| Superb Fruit Dove | <i>Phalinopus superbus</i> | 4 | 2 | 0 | 0 | 0 | 0 | 1 | 3 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 3 | 4 | 1 | |
| Pink-spotted Fruit Dove | <i>Phalinopus perlatus</i> | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| Pied Imperial Pigeon | <i>Ducula bicolor</i> | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 |
| Blue Crowned Pigeon | <i>Goura cristata</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Nicobar Pigeon | <i>Caloenas nicobarica</i> | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 4 | 0 |

| | | STOCK 31/12/1994 | | | RECEIVED | | | BORN/H'CH | | | D.N.S. 30 DAYS | | | DEATHS OTHERS | | | DISPOSALS | | | STOCK 31/12/95 | | |
|---------------------------------|-----------------------------------|---------------------|-----|-----|----------|----|----|-----------|----|-----|-------------------|---|-----|------------------|----|-----|-----------|----|-----|-------------------|-----|-----|
| | | M | F | Y? | M | F | Y? | M | F | Y? | M | F | Y? | M | F | Y? | M | F | Y? | M | F | Y? |
| PASSERIFORMES | | | | | | | | | | | | | | | | | | | | | | |
| Blue-winged Pitta | <i>Pitta brachyura</i> | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Red-eared Bulbul | <i>Pycnonotus jocosus</i> | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| Chinese Bulbul | <i>Pycnonotus sinensis</i> | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fairy Bluebird | <i>Irena puella</i> | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 1 | 0 | 0 |
| White-rumped Shama | <i>Copsychus malabaricus</i> | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Plumbeous Redstart | <i>Rhyacornis fuliginosus</i> | 0 | 1 | 0 | 2 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 |
| Orange-headed Ground Thrush | <i>Zoothera citrina</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Yellow-throated Laughing Thrush | <i>Garrulax galbanus</i> | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| White Crested Laughing Thrush | <i>Garrulax leucolophus</i> | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Red-tailed Laughing Thrush | <i>Garrulax milnei</i> | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |
| Pekin Robin | <i>Leiothrix lutea</i> | 0 | 0 | 5 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 6 |
| Silver-eared Mesia | <i>Leiothrix argentea</i> | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 |
| Red-faced Liocichla | <i>Liocichla phoenicea</i> | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mountain Fulvetta | <i>Alcippe peracensis</i> | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Black-chinned Yuhina | <i>Yuhina nigripes</i> | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Narcissus Flycatcher | <i>Ficedula narcissina</i> | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Splendid Sunbird | <i>Nectarinia coccinigastra</i> | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Oriental White-eye | <i>Zosterops palpebrosa</i> | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| Blue-grey Tanager | <i>Thraupis episcopus</i> | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Silver-beaked Tanager | <i>Ramphocelus carbo</i> | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Mexican House Finch | <i>Carpodacus mexicanus</i> | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 5 | 0 |
| Red-billed Firefinch | <i>agonosticta senegala</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Red-cheeked Cordon-bleu | <i>Uraeginthus bengalus</i> | 5 | 4 | 0 | 0 | 0 | 0 | 3 | 3 | 10 | 0 | 0 | 6 | 3 | 3 | 4 | 0 | 0 | 0 | 5 | 4 | 0 |
| Orange-cheeked Waxbill | <i>Estrilda melipoda</i> | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| Red Avadavat | <i>Amandava amandava</i> | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Golden-breasted Waxbill | <i>Amandava subflava</i> | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Gouldian Finch | <i>Chloebia gouldiae</i> | 3 | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 6 | 0 | 0 | 4 | 2 | 3 | 1 | 0 | 0 | 0 | 2 | 0 | 1 |
| Bicheno Finch | <i>Poephila bichenovii</i> | 0 | 0 | 6 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 2 |
| Zebra Finch | <i>Poephila guttata</i> | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Red-billed Buffalo Weaver | <i>Bubalornis niger</i> | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 |
| White-headed Buffalo Weaver | <i>Dinemellia dinimelli</i> | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| Java Sparrow | <i>Padda oryzivora</i> | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 15 |
| Taveta Golden Weaver | <i>Ploceus castaneiceps</i> | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| Red-billed Weaver | <i>Quelea quelea</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Fire-fronted Bishop | <i>Euplectes diadematus</i> | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Asian Glossy Starling | <i>Aplonis panayensis</i> | 1 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 1 | 6 |
| Red-winged Starling | <i>Onycognathus morio</i> | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Blue-eared Glossy Starling | <i>Lamprotornis chalybaeus</i> | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Purple Glossy Starling | <i>Lamprotornis purpureus</i> | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Emerald Starling | <i>Lamprocolius iris</i> | 1 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 2 |
| Amethyst Starling | <i>Cinnyricinclus leucogaster</i> | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 |
| African Pied Starling | <i>Spreo bicolor</i> | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| Superb Starling | <i>Spreo superbus</i> | 3 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 5 | 0 | 0 | 4 | 0 | 0 | 1 | 1 | 0 | 0 | 3 | 3 | 0 |
| Fischer's Starling | <i>Spreo fischeri</i> | 0 | 0 | 0 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 1 |
| Hildebrandt's Starling | <i>Spreo hildebrandtii</i> | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Royal Starling | <i>Cosmopsarus regius</i> | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 |
| Bali Starling | <i>Leucopsar rothschildi</i> | 9 | 7 | 0 | 0 | 0 | 0 | 4 | 7 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 3 | 1 | 0 | 10 | 13 | 0 |
| Red-billed Blue Magpie | <i>Urocissa erythrorhyncha</i> | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 0 |
| Azure-winged Magpie | <i>Cyanopica cyana</i> | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 2 | 0 |
| Red-billed Chough | <i>Pyrhocorax pyrrhocorax</i> | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 3 | 0 |
| | | 401 | 355 | 145 | 65 | 64 | 32 | 51 | 52 | 297 | 0 | 0 | 139 | 63 | 48 | 67 | 73 | 47 | 71 | 381 | 376 | 197 |
| | | 901 | | | 161 | | | 400 | | | 139 | | 178 | | | 191 | | | 954 | | | |

Number of Specimens 954

Number of Species 206

AMPHIBIAN STOCKLIST

| | | STOCK 31/12/1994 | | | RECEIVED | | | BORN/H'CH | | | D.N.S. 30 DAYS | | | DEATHS OTHERS | | | DISPOSALS | | | STOCK 31/12/95 | | | |
|----------------------------------|------------------------------------|---------------------|-----|-----|----------|----|-----|-----------|----|-----|-------------------|---|----|------------------|----|-----|-----------|----|-----|-------------------|---|-----|-----|
| | | M | F | Y/? | M | F | Y/? | M | F | Y/? | M | F | Y? | M | F | Y/? | M | F | Y/? | M | F | Y/? | |
| Smoky Jungle Frogs | <i>Leptodactylus pentadactylus</i> | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| Axolotl (Black Form) | <i>Amblystoma mexicanum</i> | aq | 0 | 1 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| " (White Form) | " " | aq | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| Japanese Fire-bellied Newt | <i>Cynops pyrrhogaster</i> | aq | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| Green Tree Frog | <i>Hyla cinerea</i> | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Red Eyed Tree Frog | <i>Agalychnis callidryas</i> | | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| Giant Amazonian Tree Frog | <i>Hyla boans</i> | | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| White's Tree Frog | <i>Litoria caerulea</i> | | 6 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 6 |
| New Guinea Tree Frog | <i>Litoria infrafrenata</i> | | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Black & Gold Poison Arrow Frog | <i>Epipedobates truncatus</i> | | 3 | 3 | 40 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 67 | 0 | 0 | 3 |
| Brazilian Horned Frog | <i>Caratophrys comuta</i> | | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Black & Green Poison Arrow Frog | <i>Dendrobates auratus</i> | | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| Yellow Striped Poison Arrow Frog | <i>Dendrobates leucomelas</i> | | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| Golfoducean Poison Arrow Frog | <i>Phyllobates vittatus</i> | | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| Argentine Ornate Horned Frog | <i>Ceratophrys ornata</i> | | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| African Bullfrog | <i>Pyxicephalus adspersus</i> | | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Albino South African Clawed Frog | <i>Xenopus laevis</i> | aq | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nigerian Clawed Frog | <i>Xenopus tropicalis</i> | aq | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Tomato Frog | <i>Discopus antongili</i> | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Climbing Toad | <i>Pedostildes hosei</i> | | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fire Bellied Toad | <i>Bombina orientalis</i> | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dwarf Congo Frog | <i>Hymenochirus boettgen</i> | aq | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| Surinam Toad | <i>Pipa pipa</i> | aq | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | | | 17 | 29 | 118 | 1 | 0 | 30 | 0 | 0 | 31 | 0 | 0 | 0 | 3 | 7 | 16 | 0 | 2 | 69 | 0 | 0 | 94 |
| | | | 164 | | | 31 | | | 31 | | | 0 | | | 26 | | | 71 | | | | | 129 |

Number of Specimens 129

Number of Species 17

aq indicates species kept in the Aquarium



Juvenile Tuatara



Smoky Jungle Frogs



African Bullfrog

INVERTEBRATES STOCKLIST

| | | STOCK 31/12/95 | |
|----------------------------|-------------------------------------|-------------------|------------|
| ARACHNIDS | | | |
| Pink-toe Tarantula | <i>Avicularia avicularia</i> | * | 1 |
| Mexican Red-knee Tarantula | <i>Euatalus smithii</i> | * | 15 |
| INSECTS | | | |
| Jungle Nymph | <i>Heteropryx dilata</i> | * | 9 |
| Stick Insect | <i>Baculum extradentatum</i> | * | 30 |
| Spiny Stick Insect | <i>Eurycantha calcarata</i> | * | 25 |
| McCleays Spectre | <i>Extastoma tiaratum</i> | * | 4 |
| Seychelles Millipede | <i>Scathiostreptus seychellarum</i> | * | 2 |
| Fruit Beetle | <i>Pachnada</i> sp. | * | 50 |
| MOLLUSCS | | | |
| Sea Hare | <i>Aplysia</i> sp. | aq* | 10 |
| Turbo Snail | <i>Turbo castaneus</i> | aq* | 20 |
| Drill | <i>Thais</i> sp. | aq | 1 |
| African Land Snail | <i>Achatina fulica</i> | * | 8 |
| Partula Snail | <i>Partula varia</i> | * | 38 |
| Partula Snail | <i>Partula taeniata</i> | * | 52 |
| Partula Snail | <i>Partula tohiveana</i> | * | 98 |
| Conch | <i>Fusinus polygonoides</i> | aq | 1 |
| Clam | <i>Tridacna derasa</i> | aq | 4 |
| COELENTERATES | | | |
| Hard Coral | <i>Goniopora</i> sp. | aq | 1 |
| Sea Anemone | <i>Heteractis</i> sp. | aq* | 8 |
| Sand Anemone | <i>Phymanthus crucifer</i> | aq | 1 |
| Leather Coral | <i>Sarcophyton trocheliophorum</i> | aq* | 9 |
| Soft Coral | <i>Xenia</i> sp. | aq* | 3 |
| Zoanthid Colony | <i>Zoanthid</i> sp. | aq | 2 |
| Soft Coral | <i>Sinularia</i> sp. | aq | 1 |
| Soft Coral | <i>Cladiella</i> sp. | aq* | 12 |
| Brain Coral | <i>Trachyphyllia geofroyi</i> | aq | 3 |
| Mushroom Polyps | <i>Actinodiscus</i> sp. | aq | 30 |
| Mouse Ear Coral | <i>Lobophytom crassum</i> | aq | 1 |
| Encrusting Anemone | <i>Palythoa</i> sp. | aq | 2 |
| Bowl Coral | <i>Turbinaria pelata</i> | aq | 1 |
| Hammer Coral | <i>Euphyllia</i> sp. | | 2 |
| CRUSTACEANS | | | |
| Banded Coral Shrimp | <i>Stenopus hispidus</i> | aq | 2 |
| Cleaner Shrimp | <i>Lysmata debelius</i> | aq | 4 |
| Cleaner Shrimp | <i>Lysmata grabhami</i> | aq | 1 |
| Hermit Crab | <i>Dardanus</i> sp. | aq | 1 |
| ECHINODERMS | | | |
| Red Pencil Urchin | <i>Hetrocentrotus mammillatus</i> | aq | 3 |
| Slate Pencil Urchin | <i>Eucidaris tribuloides</i> | aq | 1 |
| Serpent Starfish | <i>Ophiolepis superba</i> | aq | 1 |
| Green Brittle Starfish | <i>Ophiura chrysa</i> | aq | 3 |
| TOTAL | | | 460 |

Number of Specimens 460

Number of Species 39

* indicates species bred in the Society's collection in 1995
aq indicates species kept in the Aquarium

FISHES STOCKLIST

| | | STOCK 31/12/95 | |
|--------------------------------|---------------------------------------|-------------------|-----|
| OSTEOGLOSSIDAE | | | |
| South American Arowana | <i>Osteoglossum bicirrhosum</i> | | 2 |
| Black Arowana | <i>Osteoglossum ferreirai</i> | | 2 |
| Asiatic Arowana | <i>Scleropages formosus</i> | | 4 |
| NOTOPTERIDAE | | | |
| African Knife Fish | <i>Xenomystus nigri</i> | | 1 |
| MORMYRIDAE | | | |
| Blunt Jaw Elephant Trunkfish | <i>Gnathonemus elephas</i> | | 4 |
| Elephant Trunkfish | <i>Gnathonemus ibis</i> | | 4 |
| Long-nosed Elephant Trunkfish | <i>Gnathonemus petersi</i> | | 6 |
| Angolan Elephant Trunkfish | <i>Campylomormyrus cassaicus</i> | | 5 |
| Down Poker | <i>Campylomormyrus rhynchophorus</i> | | 4 |
| Short-nosed Elephant Trunkfish | <i>Marcusenrus angolensis</i> | | 4 |
| Short-faced Elephant Trunkfish | <i>Mormyrus longirostris</i> | | 2 |
| Round-nosed Elephant Trunkfish | <i>Pollinyrus castelnaui</i> | | 4 |
| CHARACIDAE | | | |
| Red-eyed Characin | <i>Arnoldichthys spilopterus</i> | | 4 |
| Long-finned Characin | <i>Brycinus longipinnis</i> | | 4 |
| Cardinal Tetra | <i>Paracheirodon axelrodi</i> | | 40 |
| Congo Tetra | <i>Phenacogrammus interruptus</i> | | 24 |
| Emperor Tetra | <i>Nematobrycon palmeri</i> | * | 24 |
| Black Phantom Tetra | <i>Megalomorphus megalopterus</i> | | 8 |
| Gold Tetra | <i>Hemigrammus rodwayi</i> | | 10 |
| Black Neon Tetra | <i>Hyphessobrycon herbertaxelrodi</i> | | 6 |
| Rummy-nosed Tetra | <i>Hemigrammus bleheri</i> | | 60 |
| GYRINOCHEILIDAE | | | |
| Sucking Loach | <i>Gyrinocheilus aymonieri</i> | | 8 |
| GASTERAPELECIDAE | | | |
| Marbled Hatchettish | <i>Carnegiella strigata</i> | | 5 |
| CYPRINIDAE | | | |
| Silver Shark | <i>Balantiocheilus melanopterus</i> | | 7 |
| Cherry Barb | <i>Capoeta titteya</i> | | 20 |
| Goldfish (various) | <i>Carassius auratus</i> | * | 100 |
| Grass Carp | <i>Ctenopharyngodon idella</i> | | 6 |
| Mirror Carp | <i>Cyprinus carpio</i> | | 8 |
| Koi Carp | <i>Cyprinus carpio</i> | | 35 |
| Blind Cave Fish | <i>Garra barreimae</i> | | 125 |
| Golden Ori | <i>Idus idus</i> | | 10 |
| Cummings Barb | <i>Puntius cummingsi</i> | | 5 |
| Pla Eesok | <i>Probarbus jullieni</i> | | 7 |
| Black Ruby Barb | <i>Puntius nigrofasciatus</i> | * | 30 |
| Golden Rudd | <i>Scardinius erythrophthalmus</i> | * | 100 |
| CYPRINODONTIDAE | | | |
| Mafia Island Killifish | <i>Nothobranchius korthausae</i> | * | 30 |
| Butterfly Goodeid | <i>Ameba splendens</i> | * | 60 |
| Bold Characodon | <i>Characodon audax</i> | * | 30 |
| Mexclapique | <i>Girardinichthys viviparus</i> | * | 40 |
| Solo Goodeid | <i>Xenopophorus captivus</i> | * | 70 |
| Crescent Zoe | <i>Zoogoneticus</i> sp. | * | 25 |
| Monterey Platy | <i>Xiphophorus couchinanus</i> | | |
| | 'Apodaca' | * | 60 |
| Guppy | <i>Poecilia picta</i> | | 4 |
| Guppy | <i>Poecilia reticulata</i> | * | 150 |
| COBITIDAE | | | |
| Clown Loach | <i>Botia macracantha</i> | | 10 |
| Dwarf Loach | <i>Botia sidhimunki</i> | | 10 |
| ELECTROPHORIDAE | | | |
| Electric Eel | <i>Electrophorus electricus</i> | | 2 |

CICHLIDAE

| | | | |
|-----------------------|---|---|-----|
| Lake Victoria Cichlid | <i>Haplochromis obliquidens</i> | * | 6 |
| Lake Victoria Cichlid | <i>Astatoreochromis alluaudi</i> | * | 66 |
| Lake Victoria Cichlid | <i>Haplochromis 'argens'</i> | * | 29 |
| Lake Victoria Cichlid | <i>Haplochromis nyererei</i> | | 10 |
| Lake Victoria Cichlid | <i>Haplochromis pyrrocephalus</i> | * | 235 |
| Lake Victoria Cichlid | <i>Haplochromis riponians</i> | * | 24 |
| Lake Victoria Cichlid | <i>Haplochromis sauvagei</i> | * | 17 |
| Lake Victoria Cichlid | <i>Haplochromis 'velvet black-blotched'</i> | * | 250 |
| Lake Victoria Cichlid | <i>Haplochromis xenognathus</i> | * | 25 |
| Otjikoto tilapia | <i>Tilapia guinasana</i> | * | 40 |
| Frontosa | <i>Cyphotilapia frontosa</i> | * | 10 |
| Heckel Discus | <i>Symphysodon discus discus</i> | | 6 |
| Lake Malawi Cichlid | <i>Rhamphochromis macrophthalmus</i> | | 1 |
| Lake Malawi Cichlid | <i>Nimbochromis venustus</i> | | 4 |
| Lake Malawi Cichlid | <i>Melanochromis auratus</i> | * | 30 |
| Lake Malawi Cichlid | <i>Pseudotropheus elongatus chailosi</i> | * | 50 |
| Lake Malawi Cichlid | <i>Cyrtocara moonii</i> | | 10 |
| Lake Malawi Cichlid | <i>Pseudotropheus socolofi</i> | * | 100 |
| Lake Malawi Cichlid | <i>Pseudotropheus lombardoi</i> | * | 20 |
| Lake Malawi Cichlid | <i>Pseudotropheus sp. elongatus ornatus</i> | * | 18 |
| Lake Malawi Cichlid | <i>Labidochromis caeruleus</i> | * | 20 |
| Lake Malawi Cichlid | <i>Labidochromis chisumulae</i> | | 10 |
| Lake Malawi Cichlid | <i>Labeotropheus fuelleborni</i> | * | 60 |
| Altum Angelfish | <i>Pterophyllum scalare altum</i> | | 9 |

ANABANTIDAE

| | | | |
|-------------------|--------------------------------|---|----|
| Pearl Gourami | <i>Trichogaster leeri</i> | * | 22 |
| Sparkling Gourami | <i>Trichopsis pumilus</i> | | 4 |
| Moonlight Gourami | <i>Trichogaster microlepis</i> | | 3 |

ATHERINIDAE

| | | | |
|--------------------------|-------------------------------------|---|----|
| Red Rainbow Fish | <i>Glossolepis incisus</i> | * | 37 |
| Boeseman's Rainbow Fish | <i>Melanotaenia boesemani</i> | * | 14 |
| Lake Tebera Rainbow Fish | <i>Melanotaenia herbertaxelrodi</i> | * | 13 |
| Lake Kutubu Rainbow Fish | <i>Melanotaenia lacustris</i> | * | 34 |

ICTALURIDAE

| | | | |
|-----------------|----------------------------|--|---|
| Channel Catfish | <i>Ictalurus punctatus</i> | | 4 |
|-----------------|----------------------------|--|---|

MOCHOKIDAE

| | | | |
|---------------------------------|-------------------------------|--|---|
| Polka-dot Upside-down Catfish | <i>Synodontis angelicus</i> | | 8 |
| Upside-down Catfish | <i>Synodontis nigriventis</i> | | 7 |
| Lake Malawi Upside-down Catfish | <i>Synodontis myassae</i> | | 6 |

CALLICHTHYIDAE

| | | | |
|-------------------|----------------------------|---|----|
| Arched Corydoras | <i>Corydoras arcuatus</i> | | 4 |
| Burgess's Catfish | <i>Corydoras burgessi</i> | | 12 |
| Blue Catfish | <i>Corydoras nattereri</i> | | 8 |
| Panda Catfish | <i>Corydoras panda</i> | * | 30 |
| Flag Tail Catfish | <i>Corydoras robineae</i> | | 6 |
| Peppered Catfish | <i>Corydoras paleatus</i> | | 12 |

LORICARIIDAE

| | | | |
|-------------------------|--------------------------------|---|-----|
| Bristlenose Plecostomus | <i>Ancistrus dolichopterus</i> | * | 150 |
| Twig Catfish | <i>Farlowella acus</i> | | 3 |
| Plecostomus Catfish | <i>Hypostomus plecostomus</i> | | 6 |
| Clown Plecostomus | <i>Peckoltia sp.</i> | | 12 |
| Whiptailed Catfish | <i>Sturisoma aureum</i> | | 4 |
| Dwarf Sucking Catfish | <i>Otocinclus affinis</i> | | 12 |
| Angelicus Peckoltia | <i>Peckoltia sp.</i> | | 2 |
| Emperor Peckoltia | <i>Hypancistrus zebra</i> | | 1 |

TOXOTIDAE

| | | | |
|-------------|--------------------------|--|---|
| Archer Fish | <i>Toxotes jaculator</i> | | 5 |
|-------------|--------------------------|--|---|

POTAMOTRYGONIDAE

| | | | |
|----------------------|----------------------------|---|----|
| Fresh-water Stingray | <i>Potamotrygon motoro</i> | * | 10 |
|----------------------|----------------------------|---|----|

DIPNOI

| | | | |
|-------------------|------------------------------|--|---|
| African Lung Fish | <i>Protopterus annectens</i> | | 1 |
|-------------------|------------------------------|--|---|

HOLOCENTRIDAE

| | | | |
|-------------|------------------------------|--|---|
| Soldierfish | <i>Myripristis axillaris</i> | | 2 |
|-------------|------------------------------|--|---|

CENTRISCIDAE

| | | | |
|------------|---------------------------|--|---|
| Shrimpfish | <i>Aeoliscus strigata</i> | | 2 |
|------------|---------------------------|--|---|

SYNGNATHIDAE

| | | | |
|----------------------|-----------------------------|---|-----|
| Seahorse | <i>Hippocampus sp.</i> | * | 400 |
| Blue Stripe Pipefish | <i>Doryrhamphus excisus</i> | | 1 |
| Jans Pipefish | <i>Doryrhamphus janssi</i> | | 1 |

CENTROPOMIDAE

| | | | |
|------------------|------------------------------|--|---|
| Giant Glass Fish | <i>Parambassis gulliveri</i> | | 6 |
|------------------|------------------------------|--|---|

SERRANIDAE

| | | | |
|-----------------------|----------------------------|--|---|
| Blue-jewelled Grouper | <i>Cephalopholis argus</i> | | 1 |
|-----------------------|----------------------------|--|---|

MONODACTYLIDAE

| | | | |
|------|-------------------------------|--|---|
| Mono | <i>Monodactylus argenteus</i> | | 1 |
|------|-------------------------------|--|---|

SCORPAENIDAE

| | | | |
|-----------------------|---------------------------------|------|---|
| Dwarf Lionfish | <i>Dendrochirus zebra</i> | | 1 |
| White Fin Lionfish | <i>Pterois radiata</i> | *DNS | 3 |
| Sail Fin Scorpionfish | <i>Hypodytes sp.</i> | | 4 |
| Fumanchu Lionfish | <i>Dendrochirus biocellatus</i> | | 2 |

SCATOPHAGIDAE

| | | | |
|----------------|---------------------------------|--|---|
| Silver Scat | <i>Selenotoca multilasciata</i> | | 3 |
| Red Tiger Scat | <i>Scatophagus argus</i> | | 3 |

POMACENTRIDAE

| | | | |
|-------------------|-------------------------------|------|---|
| Skunk Clown Fish | <i>Amphiprion akallopisos</i> | | 1 |
| Fire Clown Fish | <i>Amphiprion ephippium</i> | | 3 |
| Tomato Clown Fish | <i>Amphiprion frenatus</i> | *DNS | 2 |
| Common Clownfish | <i>Amphiprion ocellaris</i> | | 3 |
| Blue Damsel Fish | <i>Pomacentrus alleni</i> | | 6 |

ACANTHURIDAE

| | | | |
|--------------|------------------------------|--|---|
| Regal Tang | <i>Paracanthurus hepatus</i> | | 5 |
| Yellow Tang | <i>Zebrasoma flavescens</i> | | 7 |
| Sailfin Tang | <i>Zebrasoma veliferum</i> | | 1 |

BALISTIDAE

| | | | |
|------------------------|---------------------------------|--|---|
| Clown Trigger Fish | <i>Balistoides conspicillum</i> | | 1 |
| Red-tooth Trigger Fish | <i>Odonus Niger</i> | | 2 |

TETRAODONTIDAE

| | | | |
|---------------------|---------------------------------|--|---|
| Puffer Fish | <i>Arothron hispidus</i> | | 1 |
| Figure-eight Puffer | <i>Tetraodon palembangensis</i> | | 1 |
| Spiney Puffer Fish | <i>Diodon holacanthus</i> | | 1 |

APOGONIDAE

| | | | |
|-------------------------|-------------------------------|------|---|
| Polka Dot Cardinal Fish | <i>Sphaeramia nematoptera</i> | *DNS | 4 |
| Red Cardinal Fish | <i>Apogon sp.</i> | *DNS | 5 |

LABRIDAE

| | | | |
|---------------|----------------------------------|--|---|
| Dragon Wrasse | <i>Novaculichthys taeniourus</i> | | 1 |
|---------------|----------------------------------|--|---|

SCARIDAE

| | | |
|------------------|---------------------------|---|
| Clown Parrotfish | <i>Cetoscarus bicolor</i> | 1 |
|------------------|---------------------------|---|

GOBIIDAE

| | | |
|-------------------|------------------------------|----|
| Orange spot Goby | <i>Valencienna puellaris</i> | 1 |
| Neon Goby | <i>Gobiosoma oceanops</i> | 10 |
| Yellow Coral Goby | <i>Gobiodon okinawae</i> | 6 |

ANTHIINAE

| | | |
|---------------------|-----------------------------|---|
| Lyre-tail Coralfish | <i>Anthias squamipinnis</i> | 5 |
|---------------------|-----------------------------|---|

| | | |
|-------|--|------------------|
| TOTAL | | <hr/> 3156 <hr/> |
|-------|--|------------------|

Number of Specimens 3156

Number of Species 134

*denotes species bred in 1995





zoological gardens
CHESTER



For further information please write to:

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