

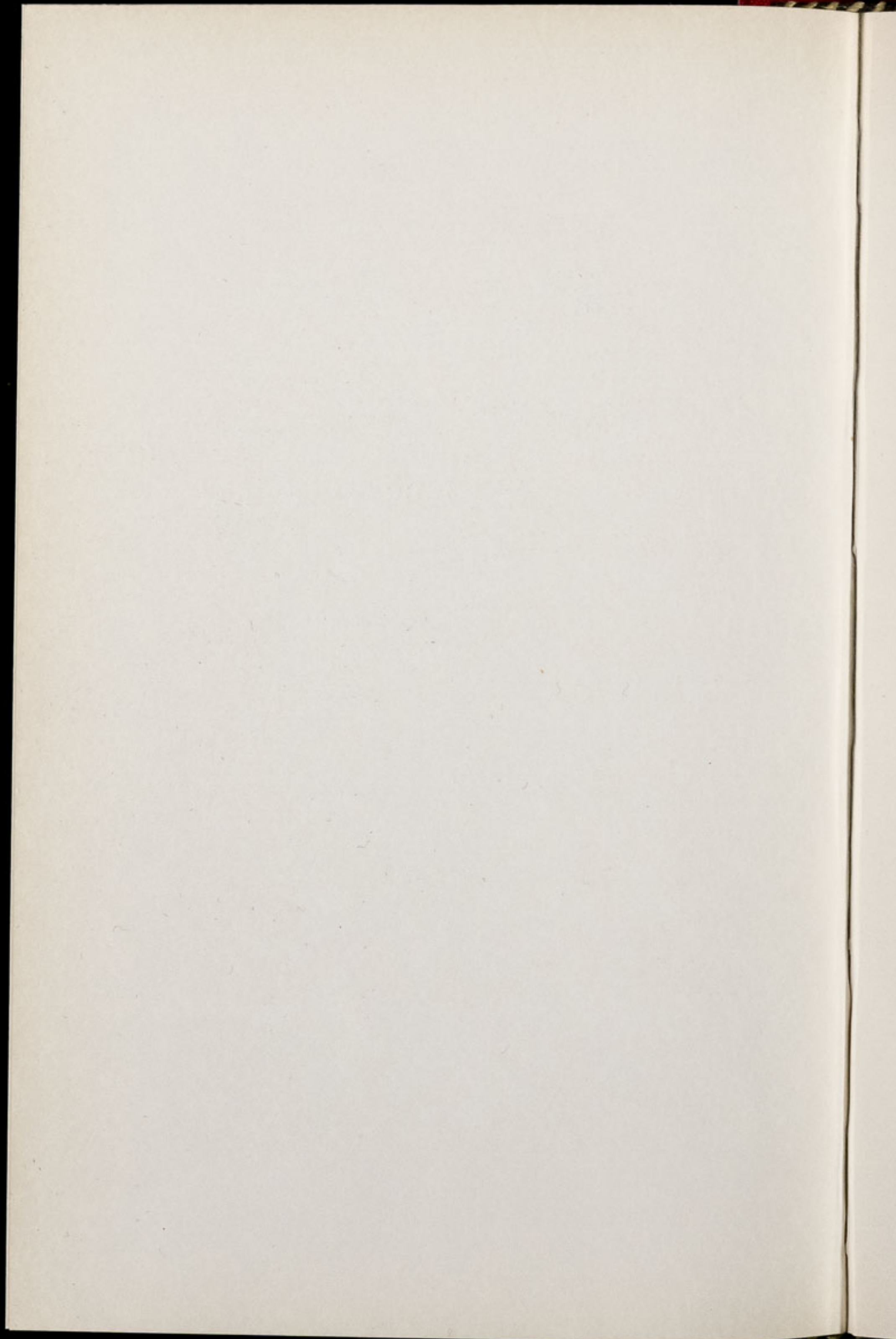


Chester Zoo News
AND GUIDE

THE NORTH OF ENGLAND ZOOLOGICAL
SOCIETY, ZOOLOGICAL GARDENS
UPTON-BY-CHESTER

July 1980

Price 15p



North of England Zoological Society

ZOOLOGICAL GARDENS, UPTON-BY-CHESTER

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COVER

Giraffe "Linda" with her youngster "Twiga"

By courtesy of G. Crowther, Daily Mirror

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Telephone Chester 20106

PROPOSED NEW PENGUIN ENCLOSURE

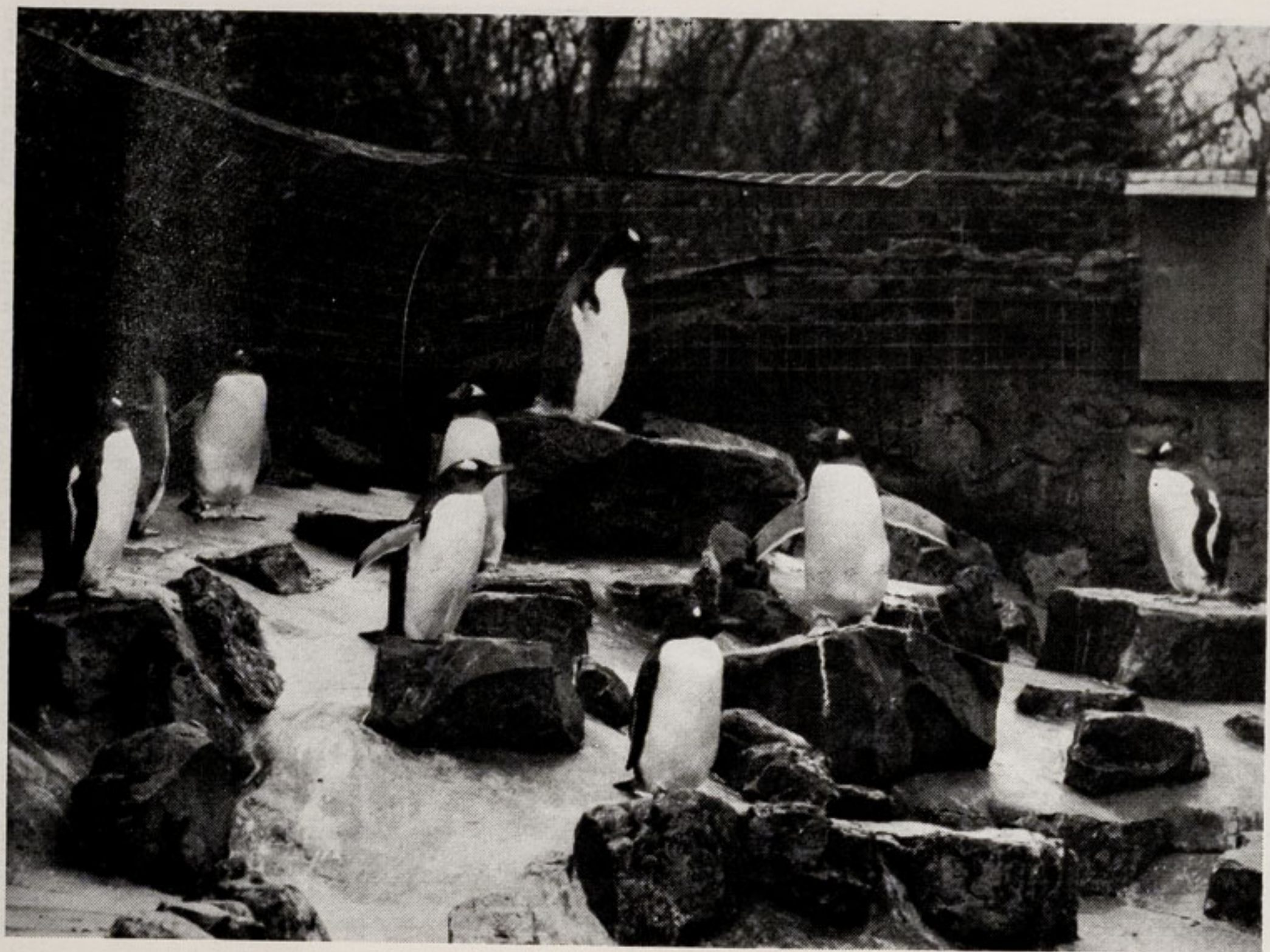
Chester Zoo, like most other major zoological collections, had, until early this year, kept penguins, and like many other zoos, we too have had difficulty in breeding these popular birds. Having lost the last penguin early in the new year, I felt that before considering acquiring more birds we should first decide on our objectives in keeping penguins, and look at the enclosure and resolve why we were unable to maintain a self-sustaining group.

Our objectives are to:—

- (a) Provide an educational exhibit;
- (b) Breed and maintain a self-sustaining population in captivity;
- (c) Further our knowledge on their husbandry and biology as a contribution toward their conservation.

In order to fulfill these objectives, we came to the conclusion that a new exhibit was necessary which would incorporate all that is known about the requirements of penguins and that the new enclosure should recreate, as far as possible, the natural habitat of the birds. Therefore, we first had to decide which of the 16 to 18 species (depending on which authority you follow) we would keep.

Penguins range from the Antarctic to as far north as the Galapagos Islands which straddle the equator. The well-known Antarctic Emperor Penguin inhabits the polar regions, and with the King Penguin make up the genus *Aptenodytes*, the latter living in the sub-antarctic region. These are the largest of the penguins. The genus *Pygoscelis* also occupies the barren, inhospitable coasts of the southern oceans and includes the Chinstrap, Adelie and Gentoo, the latter having three sub-species. The crested penguins of the *Eudyptes* have long feathers over the eyes, the most well-known being the Rockhopper, so named because of its hopping gait over the rocky shores. Other species of this genus are Macaroni, Fiordland and Erect-crested Penguin. The Macaroni breed in the southern waters with the Adelie on the edge of the ice. The other *Eudyptes* are more northern, around the islands of the southern oceans, which are still comparatively cold and inhospitable.



By courtesy of K. W. Green, A.R.P.S.

OLD ENCLOSURE AND GENTOO PENGUINS

The *Spheniscus* group have the most northern range of penguins with the Blackfooted (Jackass) along the S.W. African coast, the Humboldt's from the South American coast, the Galapagos from the islands of that name and the Magellan from the southern seas off South America and the Falkland Islands. (It is from this genus that we hope to have birds at Chester.)

Finally, there are the *Megadyptes* and *Eudyptula* which inhabit the shores of South Australia and New Zealand. The former consists of the Yellow-crowned Penguin and the other genus are the Fairy and White-flipped Penguins.

Although penguins cover a wide range, their distribution is probably related to the ocean currents, for, although some species occupy areas of high air temperatures, these same areas are also subjected to the cold currents such as the Humboldt's and the Benguela Currents, which carry a rich supply of planktonic marine life, such as squid and fish, on which the penguins feed. This supply of food is probably more important than the temperature of the water, for the various species have adapted physiologically to their environment.

The major habitat requirement of a penguin is water, for, although terrestrial, they only show their true potential at locomotion when in the water. Having lost their power of flight in evolving as aquatic birds, they can now produce the equivalent of flight in water, for they are as graceful and agile in that medium as most birds are in the air.

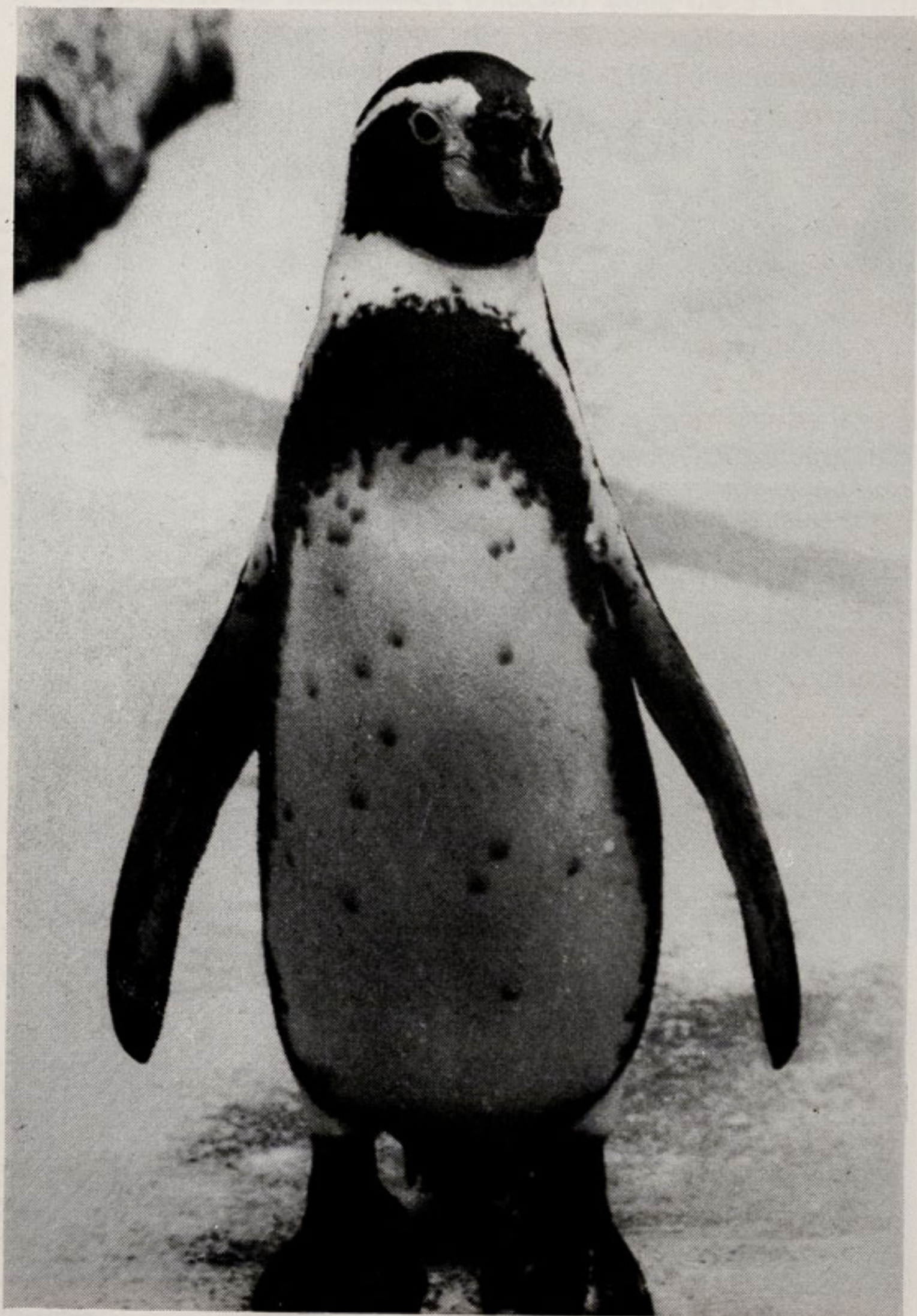
To enable these birds to inhabit such cold habitats, they have very thick plumage, the density of which varies with species and climatic conditions. They also carry plenty of fat under the skin which acts as insulation. The more northern species have thinner plumage as well as less fat. The breeding season also varies, as does the number and size of clutches, with the Emperor at one extreme with one egg per year and the Blackfooted with two eggs and two clutches.

The *Spheniscus* genus are thought to be most suitable for our proposed population for a number of reasons, but primarily



By courtesy of K. W. Green, A.R.P.S.

MODEL OF NEW PENGUIN ENCLOSURE



By courtesy of K. W. Green, A.R.P.S.

HUMBOLDT'S PENGUIN

because they are better adapted to the climate and conditions of the northern hemisphere and because they have proved to be one of the most successful in captivity. Penguins—particularly the Antarctic species—have suffered high mortality in captivity from a fungal infection of the lungs, known as Aspergillosis. The fungus *Aspergillus* is particularly dangerous to penguins, although all birds—and Man—are also affected at times. This susceptibility to this endemic fungus may be due to the birds not having developed any inherent resistance to it, as it is not prevalent in the more sterile areas of the Antarctic. In addition, if the penguin is under some stress, it is more likely to succumb to the effects of the fungus. In designing the new exhibit (a model of which is shown on page five), we have tried to counteract the possible causes of loss as well as re-create natural conditions.

Combatting Aspergillosis is a major problem and the question of whether the enclosure should be totally enclosed and air-conditioned with filtered air was considered. However, it is believed that such extreme measures are not practical, for it would require the Staff to work in near sterile conditions, which, apart from the high costs to install, would be difficult to maintain. The alternative is to ensure the birds are not stressed but maintained in a healthy state, enabling them to build up resistance to the fungus.

The new exhibit will incorporate a large area of water and land, with an open aspect to allow the circulation of air by prevailing winds. The water will be re-circulated and filtered to keep it clean, an essential requirement for the major feature of the pool—the underwater viewing window. This will allow visitors to watch birds in their true medium and it is not until seen in this way that their agility and charm can be fully appreciated.

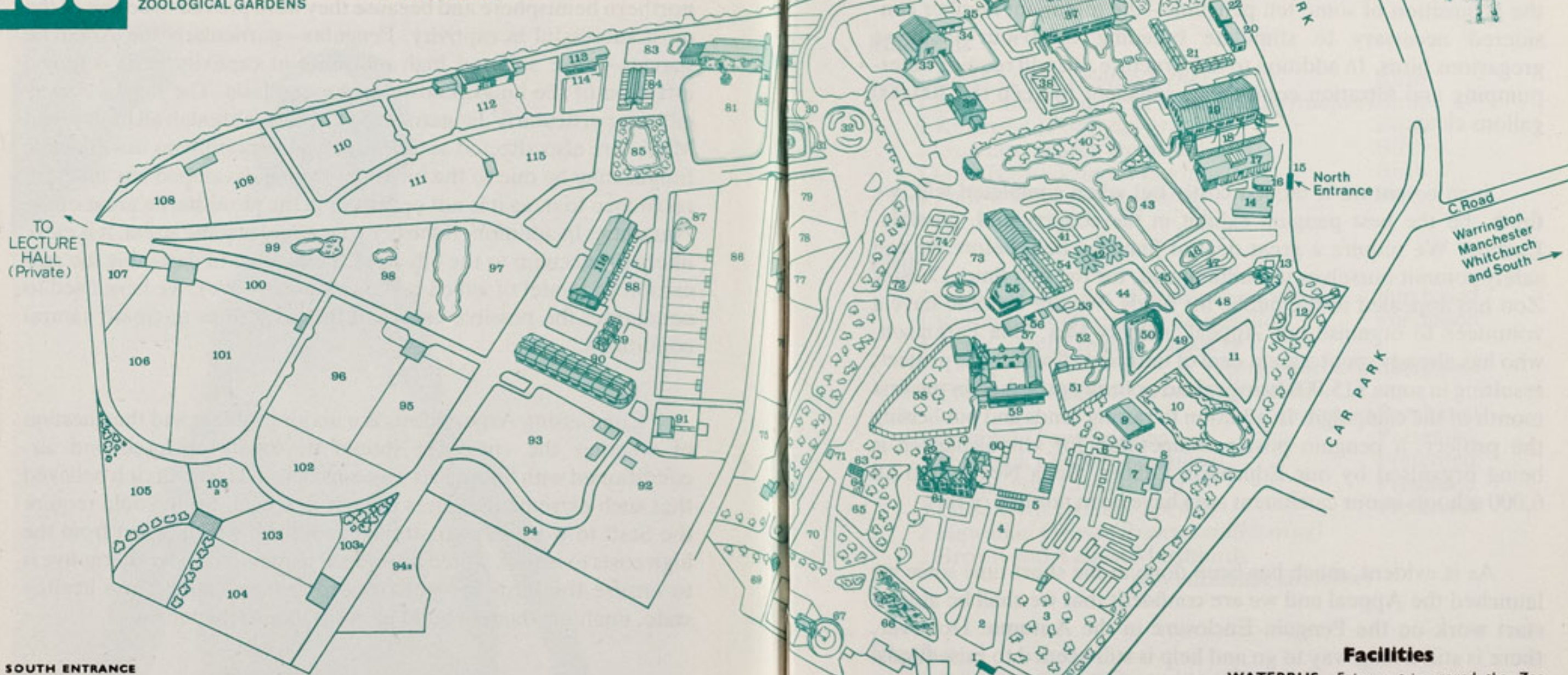
The land part of the enclosure will have a sand surface, which will not cause abrasions to the feet and can be replaced periodically. Small burrows will also be provided for nesting as well as providing shade in times of hot weather. This area will be separated from the public by the pool, so enabling the penguins to feel more secure and reduce any disturbances to a minimum.

CHESTER ZOO

THE NORTH OF ENGLAND
ZOOLOGICAL SOCIETY
ZOOLOGICAL GARDENS

FOR A COMPLETE TOUR OF THE ZOO — Follow Nos. 1-116 by South Entrance,
or Nos. 16-116 from North Entrance then return to Nos. 1-14

**Chester Zoo is Open Daily
from 10 a.m.**



1. SOUTH ENTRANCE

2. Peacock Enclosure
3. Wapiti Paddock
4. Raccoon Enclosure
5. Aviaries
6. Milk Bar
7. CORONATION HALL
8. CLOAKROOM, FIRST AID, TOILETS, INVALIDS' TOILETS, MOTHER AND BABY ROOM
9. CAFETERIA
10. Picnic Lawn
11. Ornamental Garden (under construction)
12. Jubilee Gardens (Noah)
13. Kiosk
14. AQUARIUM
15. NORTH ENTRANCE
16. PUSH CHAIRS, WHEEL CHAIRS, LOST CHILDREN
17. PARROT HOUSE
18. Free Flight Aviary
19. APE HOUSE
20. Shop and Kiosk
21. Aviaries and Picnic Lawn
22. CLASSROOM
23. TOILETS
24. TUATARA EXHIBIT
25. Peccaries
26. Birds of Prey Aviaries
27. Condor Aviary
28. Wild Dogs
29. Animal Enclosure
30. Porcupine Enclosure
31. Coypus
32. Beavers
33. Giraffe House

34. Camel House
35. Giant Tortoise Paddock
36. TROPICAL AND REPTILE HOUSES
37. CHIMPANZEES
38. Floribunda Rose Garden
39. Zebra House
40. Waterfowl Island
41. H.T. Rose Garden
42. Aviaries
43. Flamingos
44. Waterfowl Enclosure
45. Site for new Penguin Pool
46. Site for new Penguin Pool
47. Site for new Penguin Pool
48. Sealions
49. Rock Garden
50. Polar Bears
51. Big Cat Enclosure
52. Waterfowl Enclosure
53. Capybara
54. BIRD HOUSE
55. FOUNTAIN RESTAURANT
56. Animal Exhibit
57. TOILETS
58. Lions
59. SOUVENIR SHOP
60. TOILETS
61. OAKFIELD RESTAURANT & G. S. Mottershead Memorial Gds

62. P.O. Telephone
63. Gibbons
64. Arctic Fox Enclosure
65. Serval Enclosure
66. Ornamental Rock Garden
67. Wallabies and Kangaroos
68. Kangaroo Enclosure
69. Paddock
70. Cheetahs
71. WATERBUS BOOKING OFFICE AND KIOSK
72. Rose Gardens
73. Fountain Flower Gardens
74. Rose Garden
75. Red Lechwe
76. Red Lechwe
77. Deer or Antelope Enclosure
78. Zebra and Deer Enclosure
79. Zebra and Deer Enclosure
80. Brown Bears
81. ELEPHANTS
82. Hippos
83. Tapirs
84. Small Mammal House
85. Waterfowl Enclosure
86. Ankole Cattle
87. Emus, Cranes and Flamingos
88. Outside Monkey Enclosures
89. Baboon Pens
90. Cat House
91. Tiger Enclosures

92. Antelope Enclosure
93. Antelope Enclosure
94. Reindeer Enclosure
- 94a. Llamas
95. Antelope Paddock
96. Antelope Paddock
97. Waterfowl Enclosure
98. Waterfowl and Axis
99. Waterfowl Enclosure
100. Blackbuck
101. Wallabies
102. Ostrich
103. Wallabies
- 103a. Animal Enclosure

104. Pere David's Deer Paddock
105. Przewalski's Horses
- 105a. Onager
106. Arabian Gazelles
107. Guanaco
108. Bison
109. Pere David's Deer Paddock
110. Prairie Marmots, Alpacas
111. Antelope Enclosure
112. RHINOS
113. TOILETS
114. Mpila Snack Bar
115. Antelope Enclosure
116. MONKEY HOUSE

Facilities

WATERBUS. Enjoy a trip around the Zoo. Tickets available at Waterbus Kiosk (No. 71 on plan).
PUSH CHAIRS AND WHEELCHAIRS can be hired near the NORTH ENTRANCE (No. 16 on plan).
LOST CHILDREN are taken to building No. 16 on plan.
FIRST AID Cloakroom (No. 8 on plan).
TOILETS. Invalids' Toilets (No. 8 on plan).

Catering (subject to revision)

OAKFIELD RESTAURANT (Table Licence)—No. 61 on plan.
 FOUNTAIN RESTAURANT (Party Catering)—No. 55 on plan.
 CAFETERIA (Self Service)—No. 9 on plan.
 MPILA SNACK BAR (Light Meals)—No. 114 on plan.
 RAINBOW KIOSK (Picnic Lawn adjoining)—No. 20 on plan.
 Wet weather facilities for visitors wishing to eat their own food are provided at the CORONATION HALL No. 7.
 Snack Bars and Picnic Lawns are situated throughout the ZOO

Feeding Times

LIONS—3 p.m. except Fridays
 SEA LIONS—3 times daily—2.30 p.m.—3.30 p.m.—4.30 p.m.

ANIMALS MAY BE MOVED FROM TIME TO TIME

The whole project will cost £50,000 at current prices, including the acquisition of some ten penguins—the minimum number considered necessary to stimulate breeding behaviour in these gregarious birds. In addition to the structure, we will require water-pumping and filtration equipment, sufficient to keep the 100,000 gallons clean.

Such a venture is indeed costly but when completed will, we think, be the best penguin exhibit in the country and, possibly, Europe. We require a great deal of financial help before we can safely commit ourselves to building and, for the first time, Chester Zoo has appealed to the public for funds. We are lucky to have a volunteer to organise our Appeal, namely Mrs. Ena Parkinson, who has already spent a great deal of time and effort on this project, resulting in some £15,000 being raised or firmly promised in the first month of the campaign. In addition to raising funds and publicising the project, a penguin poster competition for schoolchildren is being organised by our Education Officer, Bella Neate, and all 6,000 schools in our catchment area have been notified of this.

As is evident, much has been done in the short time since we launched the Appeal and we are confident that we shall be able to start work on the Penguin Enclosure in the Autumn. However, there is still a long way to go and help is still needed to raise funds. Members can help by raising funds with Coffee Mornings, Produce Sales and so on, or simply by making a donation! Volunteers are required to man the Sales Point in the Zoo each Sunday, where goods donated by United Biscuits (Penguin Biscuits) are being sold. One lady has already raised over £100 in a Coffee Morning and a Liverpool School has raised £700 so far!

The Zoo is here for the benefit of everybody and we hope that our new exhibit will not only be a feature for enjoyment by the visitor, but stimulate and teach them something about the penguins, so that they consider they are worthy of protection, for that is our objective here at Chester.

Peter M. C. Stevens, *Curator of Birds.*

BIRTHS AND ARRIVALS

Mammals

1 Red Lechwe (<i>Kobus leche</i>)	Birth
1 Fire-footed Squirrel (<i>Funisciurus pyrrhopus</i>)	Birth
1 Kinkajou (<i>Potos flavus</i>)	Birth
1 Guanaco (<i>Lama guanicoe</i>)	Birth
1 Gnu (<i>Connochaetes taurinus</i>)	Birth
1 Fallow Deer (<i>Dama dama</i>)	Birth

Birds

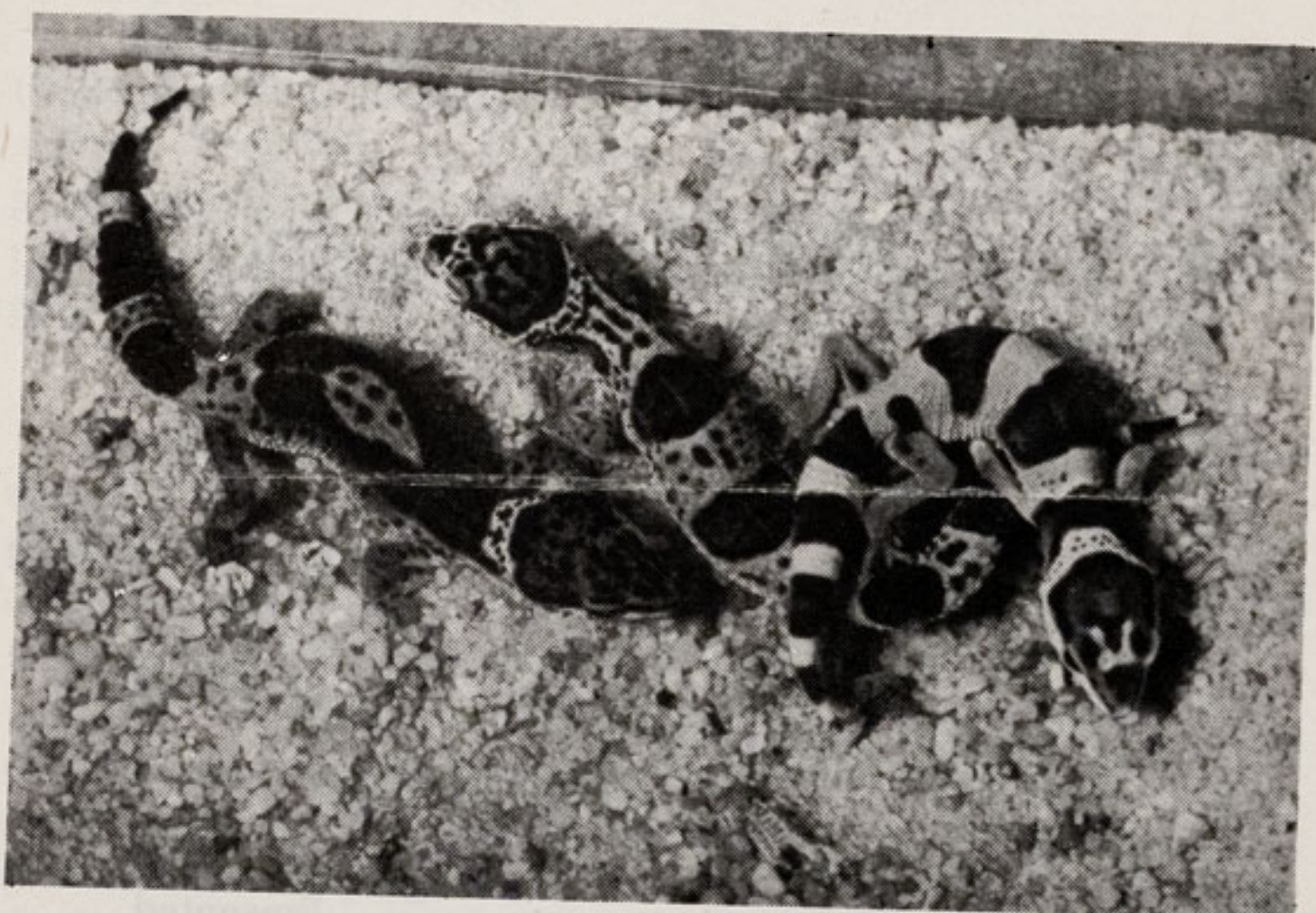
4 Purple Gallinules (<i>Porphyrio porphyrio</i>)	Purchased
1 Robin Chat (<i>Cossypha albicapilla</i>)	Purchased
3 Black-eared Golden Tanagers (<i>Tangara arthus</i>)	Purchased
2 Emerald Toucanets (<i>Aulacorhynchus</i> <i>prasinus</i>)	Purchased
1 Peafowl (<i>Pavo cristatus</i>)	Presented
5 Shelduck (<i>Tadorna tadorna</i>)	Presented
1 Tawny Owl (<i>Strix aluco</i>)	Presented
3 Little Owls (<i>Athene noctua</i>)	Presented
2 Hawaiian Geese (<i>Branta sandvicensis</i>)	
2 Brown and Yellow Marshbirds (<i>Pseudoleistes virescens</i>)	

Reptiles

1 Johnson's River Crocodile (<i>Crocodylus</i> <i>johnstonii</i>)	Wassenar Zoo, Holland
1 Common Iguana (<i>Iguana iguana</i>)	Presented
3 Leopard Geckos (<i>Eublepharis macularis</i>)	Birth
2 Lord Derby's Lizards (<i>Cordylus giganteus</i>)	Exchange
1 Jackson's Chameleon (<i>Chamaeleo</i> <i>jacksonii</i>)	Exchange
1 Leopard Gecko (<i>Eublepharis macularis</i>)	Exchange

Fish

1 Stingray	
3 Pike Characins	
12 Loreto Tetra	
6 Long-finned Characins (<i>Alestes longipinnis</i>)	
12 Giant Danios (<i>Danio malabaricus</i>)	



By courtesy of K. W. Green, A.R.P.S.

YOUNG LEOPARD GECKOS

LATEST NEWS

Our Cover picture this month shows "Linda" with her youngster which was born on 15th June. The youngster did give us some cause for concern, as "Linda" did not have enough milk to feed her. As "Debbie's" calf, "Chester", had just been sent to Edinburgh Zoo, it was decided to put "Debbie" in with the mother and youngster. We are pleased to say that this proved very successful, as the baby is suckling from both females and is getting enough nourishment from the now-increased supply.

On checking our records, we found this to be the 21st Giraffe to have been bred here at Chester, so a naming competition was held which was organised by Liz Howell of *Granada Reports*. A number of suggestions were received, and we felt that the most suitable was "Twiga" (pronounced "Tweega") which is Swahili for Giraffe. This name was sent in by Julia Bishop, of Runcorn, Cheshire, who will be coming to the Zoo for an official "christening" ceremony. Visitors can see "Twiga", "Linda" and "Debbie" in the Giraffe House, which is number 33 on the Zoo Guide.



By courtesy of Roland Hicklin, Sunday People

KEEPER CLIVE BARLOW AND BARN OWLS

The national daily newspaper, the *Daily Star*, has also been running a "Name the Zoo Baby Competition" in conjunction with a number of Zoos throughout the country, including Chester. The animals chosen here for naming were twin Ring-tailed Lemurs. A short-list was sent to us and the names chosen were "Benji" and "Brandy", which were submitted by Debbie King. Debbie will be coming to the Zoo with her parents to see the youngsters in a few weeks' time, when they will be named.

Two crews from the Granada Television Studios have been to Chester recently for the filming of two programmes. The first crew spent a day here during June, using the Zoo and Gardens as a "backdrop" for a programme called "*Life Time*". Our Assistant Curator of Birds, Peter Bloomfield, was interviewed, as he is now working at Chester Zoo, which was a complete change from his earlier occupations as a sailor in the Royal Navy and as a Fireman. This programme will be shown during this year.

The second crew spent two days filming an educational programme, "*Evolution*". The four aspects filmed were:—

- (a) The Siberian and Bengal Tigers, to show increased body weight in northern types;
- (b) A montage—birds, animals and reptiles with very different body forms, such as Giraffes, Sealions, Lions, etc.—to show the diversity of body forms;
- (c) Facial expressions in primates, to illustrate behavioural homology;
- (d) Co-evolution—predator and prey.

The last one proved to be most successful. The subject chosen for filming was a Carpet Python (*Morelia spilotes variegata*) which was offered a rather large and very dead rat. Before eating it, it went through an elaborate piece of behaviour. The crew were able to get some very good film of a happening which most people find both repulsive and fascinating.

In last month's magazine, we reported births of Chinese Water Deer (*Hydropotes inermis*) and Arctic Foxes (*Alopex lagopus*), although at the time we did not have the number of each that had been born. We are now able to inform our readers that there were two Chinese Water Deer and five Arctic Foxes.

We are sorry to report the death of "Roger", the Black Rhino, which had been at Chester for 22 years. This loss is particularly sad, as "Roger" was the first Rhino to be bred in Britain. He was born at Bristol Zoo.

The picture on page 11 shows Keeper Clive Barlow with the five Barn Owls which he hand-reared.

SURPLUS STOCK LIST

Mammals

		M	F	Y
Agile Wallaby (<i>Macropus agilis</i>)	1976	1	0	
Bennett's Wallaby (<i>Macropus rufogrisea</i>)		1	0	
Ring-tailed Lemur (<i>Lemur catta</i>)	1978/79	3	0	
Patas Monkey (<i>Erythrocebus patas</i>)	1979	2	0	
Prairie Marmots (<i>Cynomys ludovicianus</i>)				
	Various: when available			
Dingo (<i>Canis familiaris</i>)	1979	1	1	
Puma (<i>Felis concolor</i>)	1974	0	1	
Siberian Tiger (<i>Panthera tigris</i>)	1978	1	0	
Grant's Zebra (<i>Hippotrigris burchelli</i>)	1978	2	1	
Llama (<i>Lama glama</i>)	1972, 1976, 1979			
				Males
Fallow Deer (<i>Dama dama</i>)	1977	2	0	
Axis Deer (<i>Axis axis</i>)	1978/1979	2	0	
Pere David's Deer (<i>Elaphurus davidianus</i>)	1979	2	0	
Nilgai (<i>Boselaphus tragocamelus</i>)	1978/79	2	0	
Red Lechwe (<i>Kobus leche</i>) inc. one white				Males
Soay Sheep (<i>Ovis aries</i>)	1979			Various lambs
Bison (<i>Bison bison</i>)	1978	1	0	

Birds

		M	F	SU
Rheas (<i>Rhea americana</i>)	Now being hatched			
Grey-lag Goose (<i>Anser anser</i>)				1
Canada Geese (<i>Branta canadensis</i>)				12
Muscovy Ducks (<i>Cairina moschata Domestic</i>)		2	6	
Blue Eared Pheasants (<i>Crossoptilon auritum</i>)		3	0	
Peafowl (<i>Pavo cristatus</i>)		0	3	

	<i>M</i>	<i>F</i>	<i>SU</i>
Nanday Conures (<i>Nandayus nanday</i>)	3	3	
Blue-headed Conure (<i>Aratinga acuticauda</i>)			1
Lesser Patagonian Conures (<i>Cyanoliseus patagonus</i>)			10
Red-fronted Amazon (<i>Amazona species</i>)			1
Roseate Cockatoo (<i>Eolophus roseicapillus</i>)	0	1	
Cockatiels (<i>Nymphicus hollandicus</i>)			
Budgerigars (<i>Melopsittacus undulatus</i>)			
Plum-headed Parakeet (<i>Psittacula cyanocephala</i>)			1
Splendid Parakeet (<i>Neophema splendida</i> x)			1
Gold-mantled Rosella × Stanley Parakeet (<i>Platycercus eximius</i> × <i>P. icterotis</i>)			1
Peach-faced Lovebirds (<i>Agapornis roseicollis</i>)	3	3	
Indian Pied Hornbill (<i>Anthracoceros malabaricus</i>)	1	1	
Boat-tailed Grackle (<i>Cassidix mexicanum</i>)			1
Moluccan Cockatoo (<i>Cacatua moluccensis</i>)	1	0	
Glossy Ibis (<i>Plegadis falcinellus</i>)			1
Palm Cockatoo (<i>Probosciger aterrimus</i>)	0	1	

SU indicates sex unknown

We are looking for:—

Formosan Silka Deer (<i>Cervus nippon</i>)	1	0
Eland (<i>Taurotragus oryx</i>)	1	0
Yellow-tailed Black Cockatoo (<i>Calyptorhynchus funereus</i>)	1	0

The surplus stock listed above is available only to Zoos and Zoological Collections. We regret that we are not able to deal with private individuals.

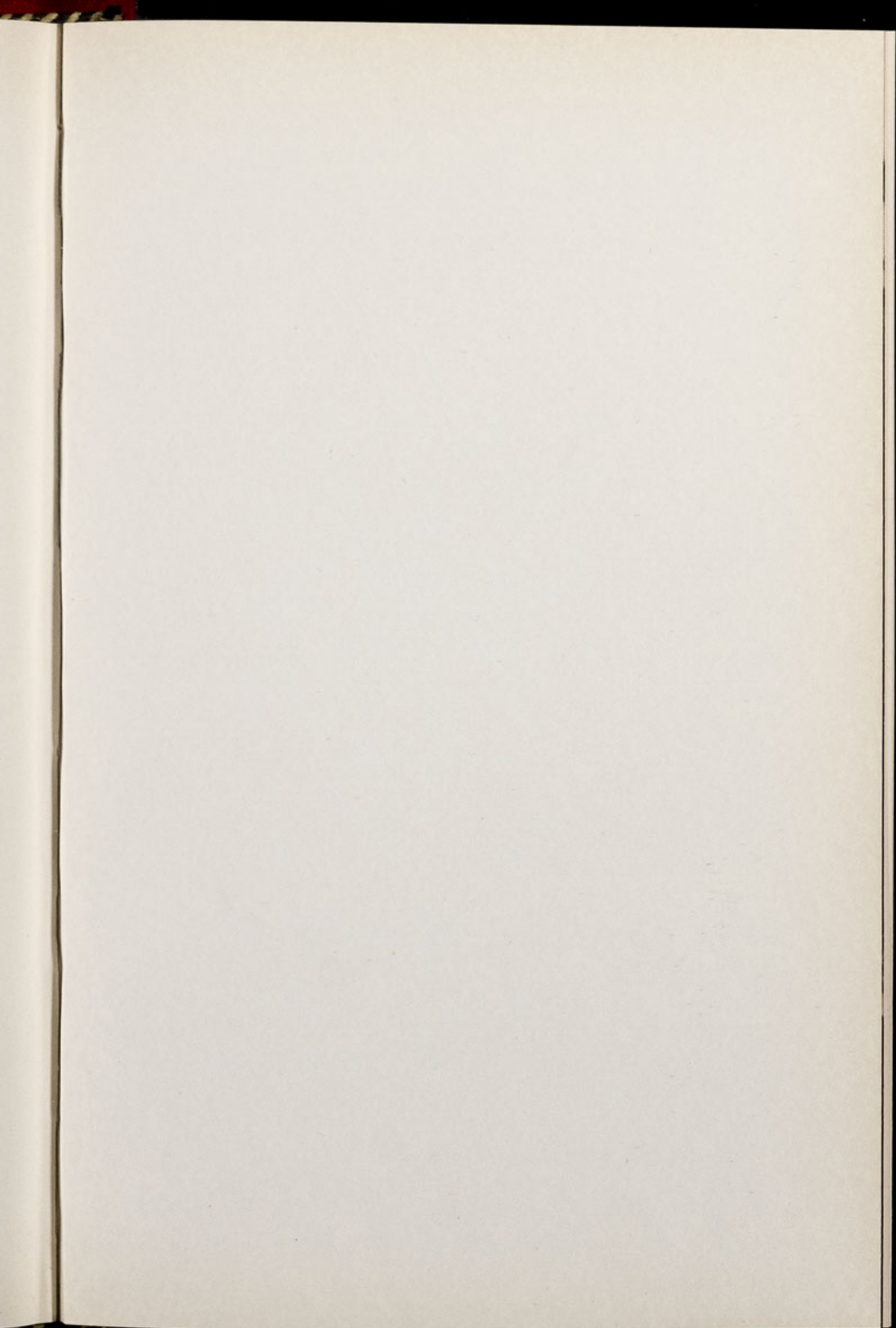
When applying, please contact:—

Mr. Peter Wait—Curator of Mammals;
Mr. Peter Stevens—Curator of Birds.

SUBSCRIPTIONS

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