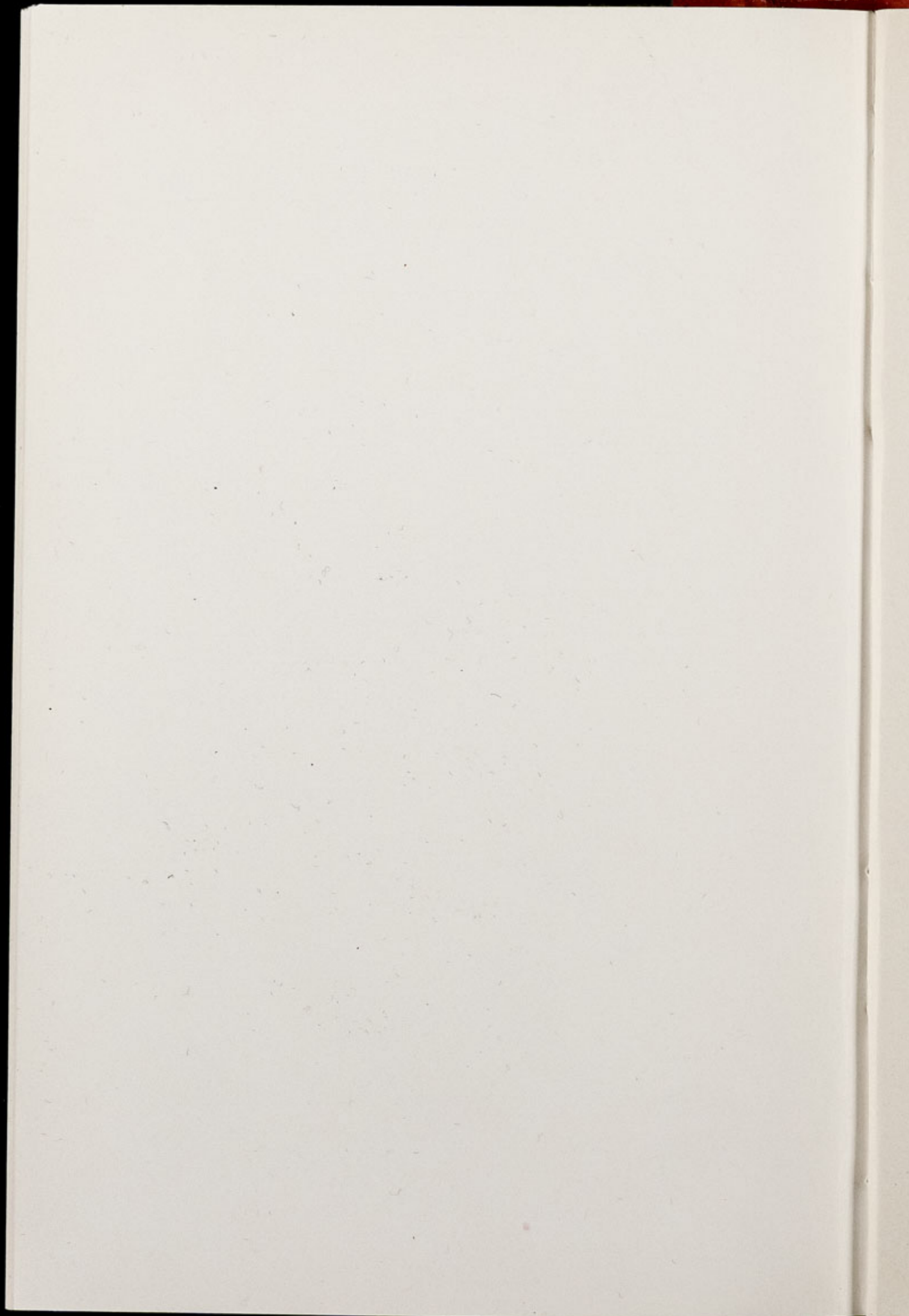




CHESTER ZOO NEWS
AND GUIDE

December 1976

Price 12p



The North of England Zoological Society
ZOOLOGICAL GARDENS, UPTON-BY-CHESTER

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COVER

Male Greater Kudu

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

Annual subscription — Two Pounds Twenty-four pence, postage paid
Telephone Chester 20106/7/8

COVER PHOTOGRAPH

This month's cover photograph is that of the male Greater Kudu (*Tragelaphus strepsiceros*). This is a magnificent specimen. As can be seen from the photograph, the bull has a wide twist to its horns. These remarkable horns have always been regarded as valuable trophy; the heads were brought to Europe by European hunters, and the horns were then in great demand. Earlier this year we lost our male and we have recently purchased a young male which is still in quarantine. We have two females in the collection and these can be seen in Enclosure 92.

The Greater Kudu is one of the best known and one of the largest antelopes. The male stands 5½ft. tall at the shoulder and weighs about 650-lb. It has the bearing of a large red deer. It carries its head high. The horns are up to 5-ft. in length. Kudu cows are smaller and do not have horns. The Kudu is a reddish-brown colour, having four to nine white vertical stripes on its body; the eyes are dark brown. The bull has a dark mane on his neck and back, and there is long hair on its throat.

Cows and immature bulls live together in small herds. Only in the mating season do the adult bulls join these herds. After a gestation period of seven months young Kudus are born, and this event takes place in mid-summer. The bellowing of Kudu bulls is said to be the loudest compared with that of any other antelope.

The natural habitat of this species is the bushy or tree-covered plains. It also favours broken hilly country. The Greater Kudu is not regarded as a forest animal although it is sometimes found in thick cover. During the day it lies up in cover, but emerges in the cool of the evening to feed, never being far from water. The distribution of the Greater Kudu is from Cape Province to Kenya and the Sudan.

The Lesser Kudu (*Tregelaphus imbertis*) now exists only in a

corner of North East Africa. Formerly its distribution was throughout Somalia, Kenya and Eastern Ethiopia. It stands only about 3-ft. tall, is similar in appearance to the Greater Kudu but more colourfully marked. Its natural habitat is wood, forest and thick jungle on the banks of rivers.

NEW ARRIVALS

The following mammals have also been added to the collection:

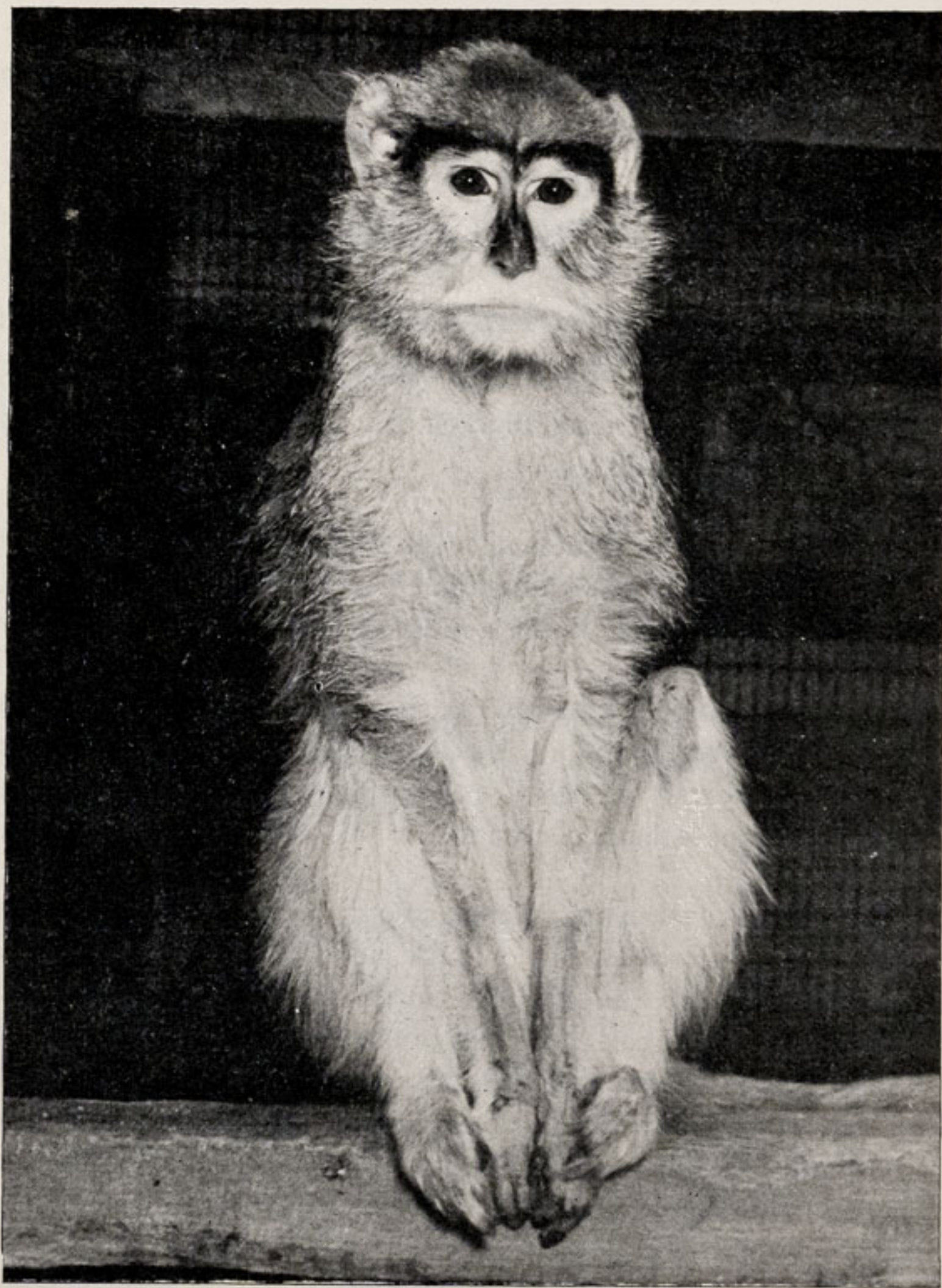
A female Celebes Black Ape (*Cynopithecus niger*) has been received in exchange. A photograph of a pair of these apes already in the collection is on page 7.

In October we were presented with a young male Patas Monkey (*Erythrocebus patas*). (See photograph of a Patas Monkey on page 4). Two Common Civets (*Civettictis civetta*) were purchased recently.

Readers may be interested to hear a little about the Patas Monkey. Its distribution is Africa, ranging to the north of the tropical rain forests of Africa and as far as south of the Sahara Desert, from the Atlantic Ocean to the Nile Valley and East Africa.

Its fur is a rather pale orange colour, becoming lighter on the extremities of the body and on each side of the head. The Patas Monkey is more like the guenons than the mangabeys or macaques. It has a long tail and can climb rocks and trees quite easily. However it spends most of its time on the ground. Its limbs are well adapted for running as the legs are quite long and the short toes have callosities on the undersides. Patas Monkeys skip up and down on the same spot when excited or nervous or perhaps when curious, trying to obtain a better view.

An alternative name for the Patas Monkey is the Hussar or Military Monkey, these names having been given owing to the slight redness of the coat and the fact that in the wild a group will move silently and in order. There is another race in the East known as the



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

PATAS MONKEY (*Erythrocebus patas*)

Nismas Monkey which has a white nose in contrast to the black nose of the Western groups.

Three Northern or Canadian Lynxes (*Lynx canadensis*) have been received in exchange. These consist of two males and one female.

Lynx canadensis are distributed over Alaska, Canada and the Northern part of the United States and are a geographical race of a species found all round the world in what is called the Holarctic region—in terms of continents therefore, it is the most widely distributed of all the cats.

The total length of the Lynx is between three to four feet, males being rather larger than the females. They stand 22/24 inches at the shoulder and the weight range is 12/25 pounds; exceptional animals may attain a weight of 40-lb.

The Canadian Lynx has special adaptations in the form of thick fur and large paws which act like snowshoes. Its coat, much sought after as fur, is a mixture of tawny yellow, dark brown and black, with a beautiful frosted appearance owing to part of the long guard hairs being silvery-white. The underparts are cinammon coloured, shading to white on the cheek ruff which is crossed with black stripes. The long buff-brown ears have white spots and slender black tufts. Unlike the Bobcat, the tip of the tail is entirely black though higher up the underside is white. The pads become very hairy in winter and leave indistinct marks which can be confused with those of a puma. The pupils of the eyes are vertical.

Like the Bobcat the Lynx is a silent animal, occasionally miaowing on the hunt. However at mating time the males have a range of cries and howls which compensate for a whole year of silence. Following a gestation period of about two months, the female gives birth to a litter of one to five young, usually three, in the customary well hidden feline den in rocks, a hollow log or a dense windfall of timber. At first the young lynx are not much bigger than

domestic kittens, with reddish-brown coats decorated with stripes and spots. Their eyes open fully after ten days and they remain close to the den for the first two months. At four months they resemble small adult animals and have been able to eat meat for some time. The lynx family stays together for the first winter and can sometimes be seen hunting in line; parties of six to eleven lynx which have been reported were probably a union of several families that have banded together in severe weather. The lynx is mature at one year and may live from twelve to twenty years in captivity.

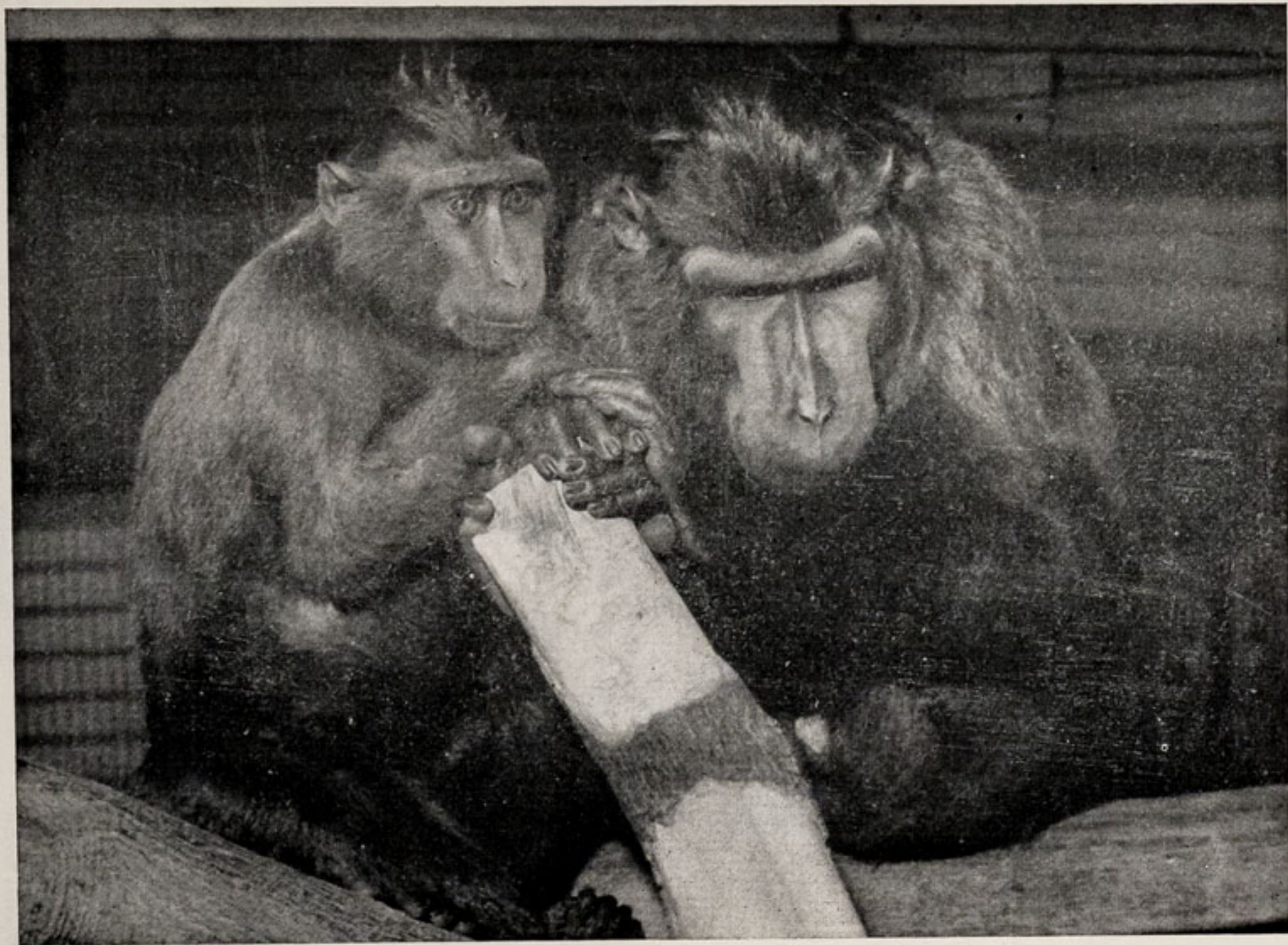
In the wild the principal item of food of the Canadian Lynx is the snowshoe hare. Hare populations fluctuate with food supply and when these are scarce, lynx sometimes roam far beyond their normal range. They are expert tree climbers, swimmers and powerful fighters, using both teeth and claws as savage weapons. They are most active after dark, hunting by sight and smell over an irregular route of perhaps twenty-five miles in one night.

BIRD NOTES

One of the most interesting breedings this year has been that of the Lesser Sulphur-crested Cockatoo (*Cacatua sulphurea*). The various species in this family are exceptionally beautiful birds for an aviary. They are slow to reach maturity and breeding them is not easy. However once a breeding is achieved they appear to be fairly consistent performers over a long period.

The Lesser Sulphur-crested Cockatoo strongly resembles the Greater Sulphur-crested (*galerita*). It is readily identified by its much smaller size and the yellow on the ear covert which is a much deeper shade. The sexes are alike but the female may be recognized by the colour of the iris which is reddish-brown compared with the almost black of the male.

This little cockatoo is a commonly imported species, and is admirably suited to aviary conditions. Provided that they are displayed in pairs, in a spacious aviary they can be kept in excellent



CELEBES BLACK APES (*Cynopithecus niger*)

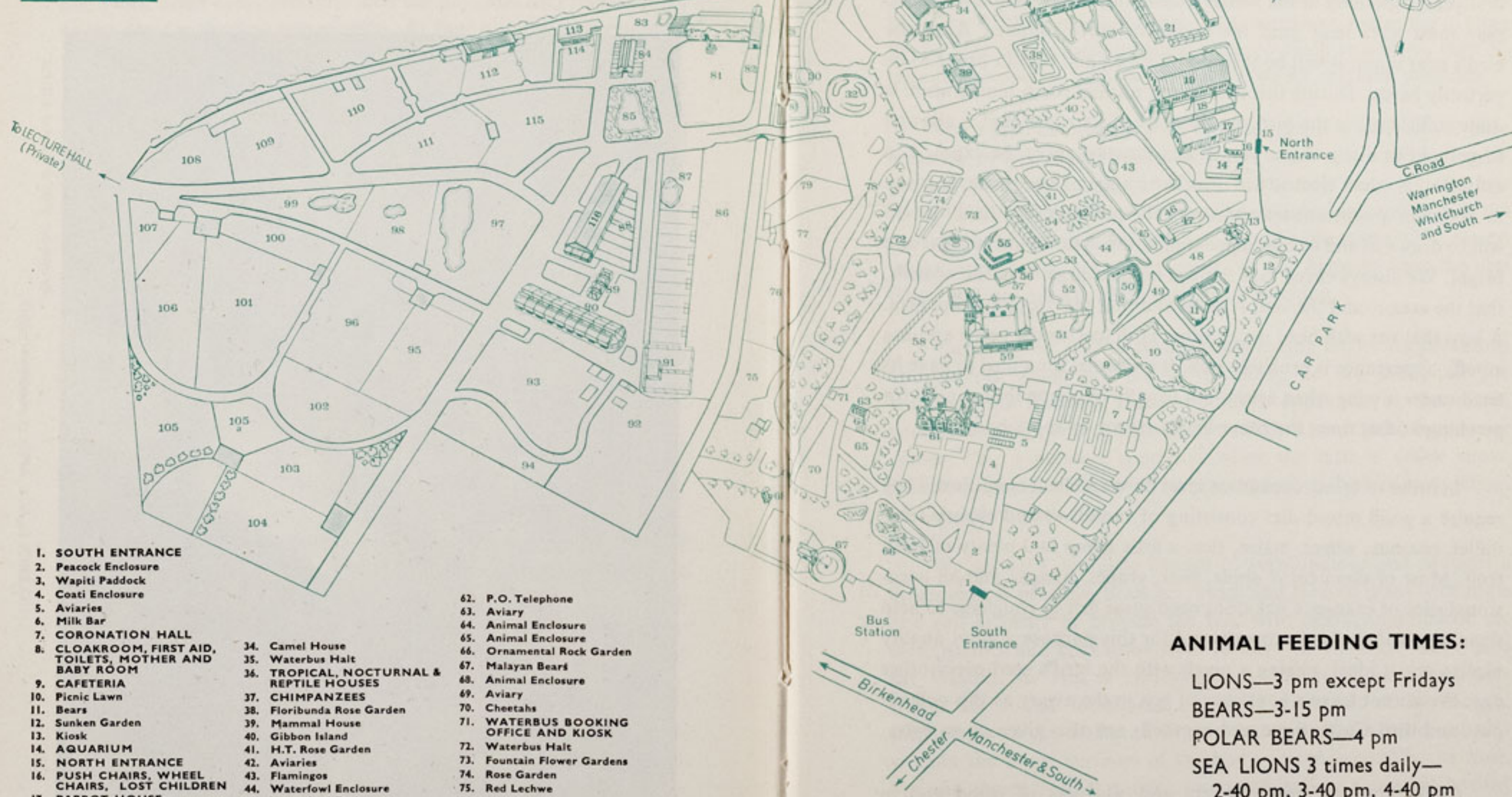
By courtesy of K. W. Green, A.R.P.S.

CHESTER ZOO

THE NORTH OF ENGLAND
ZOOLOGICAL SOCIETY
ZOOLOGICAL GARDENS

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

**Chester Zoo is Open Daily
from 9.00 a.m. until dusk.**



1. SOUTH ENTRANCE

2. Peacock Enclosure
3. Wapiti Paddock
4. Coati Enclosure
5. Aviaries
6. Milk Bar
7. CORONATION HALL
8. CLOAKROOM, FIRST AID, TOILETS, MOTHER AND BABY ROOM
9. CAFETERIA
10. Picnic Lawn
11. Bears
12. Sunken Garden
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. Picnic Lawn
21. Aviaries
22. TOILETS
23. Tuatara Exhibit
24. Peccaries
25. Waterbus Halt
26. Birds of Prey Aviaries
27. Condor Aviary
28. Jackal and Hyena Enclosures
29. Animal Enclosure
30. Porcupine Enclosure
31. Coypus
32. Beavers
33. Giraffe House

34. Camel House
35. Waterbus Halt
36. TROPICAL, NOCTURNAL & REPTILE HOUSES
37. CHIMPANZEES
38. Floribunda Rose Garden
39. Mammal House
40. Gibbon Island
41. H.T. Rose Garden
42. Aviaries
43. Flamingos
44. Waterfowl Enclosure
45. Waterfowl Enclosure
46. Waterfowl Enclosure
47. Penguins
48. Sealions
49. Rock Garden
50. Polar Bears
51. Cat Enclosure
52. Waterfowl Enclosure
53. Anteaters
54. BIRD HOUSE
55. FOUNTAIN RESTAURANT
56. Ape Nursery
57. TOILETS
58. Lions
59. SOUVENIR SHOP
60. TOILETS
61. OAKFIELD RESTAURANT

62. P.O. Telephone
63. Aviary
64. Animal Enclosure
65. Animal Enclosure
66. Ornamental Rock Garden
67. Malayan Bear
68. Animal Enclosure
69. Aviary
70. Cheetahs
71. WATERBUS BOOKING OFFICE AND KIOSK
72. Waterbus Halt
73. Fountain Flower Gardens
74. Rose Garden
75. Red Lechwe
76. Red Lechwe
77. Deer or Antelope Enclosure
78. Waterbus Halt
79. Zebra and Deer Enclosure
80. Kamchatka Bears
81. ELEPHANTS
82. Hippos
83. Tapirs
84. Small Mammal House
85. Waterfowl Enclosure
86. Ankole Cattle
87. Emus and Cranes
88. Stork Enclosures
89. Baboon Pens
90. Cat House
91. Big Cat Enclosures

92. Antelope and Chinch
93. Antelope Enclosure
94. Antelope Enclosure
95. Zebras
96. Zebras
97. Waterfowl Enclosure
98. Waterfowl Enclosure
99. Waterfowl Enclosure
100. Blackbuck
101. Wallabies
102. Animal Enclosure
103. Wallabies
104. Pere David's Deer Paddock

105. Llamas
- 105a. Llamas
106. Arabian Gazelles
107. Animal Paddock
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

ANIMAL FEEDING TIMES:

- LIONS—3 pm except Fridays
 BEARS—3-15 pm
 POLAR BEARS—4 pm
 SEA LIONS 3 times daily—
 2-40 pm, 3-40 pm, 4-40 pm

ANIMALS MAY BE MOVED
FROM TIME TO TIME

condition. Freshly imported birds require special attention in the first year, especially in the winter during the whole period of which they must have heat until the spring or early summer. After the bird's next moult it will be then acclimatised and should prove to be perfectly hardy. During this first winter normal room temperature is quite sufficient but the bird should not be in a room that is allowed to go cold at night and never, in any circumstances, be exposed to draughts. A small electric fire or other source of heat must be given to maintain a constant temperature. The plumage of a healthy bird will be drawn in and of tight appearance, the eyes should be clear and bright. We always check that there is no discharge from the nostrils, that the area round the vent is clean and that the droppings are firm. A bird that sits with head under wing, both feet on the perch and has a puffy appearance is probably sick. It is normal for a bird to have its head under a wing when asleep but usually only one foot is used for perching at this time, the other being drawn up to its body.

In order to breed, cockatoos must be in excellent condition. They require a good mixed diet consisting of sunflower and canary seed, millet, peanuts, wheat, maize, rice, a little hemp and plenty of fresh fruit. Most of them enjoy apple, pear, grapes, banana and an occasional slice of orange. Cockatoos need some grit or roughage to help them digest their food properly and for this purpose a good quality pigeon grit is ideal, mixing a pinch with the bird's seed every other day. We do not leave a container of grit in the aviary as this collects dust and dirt. Cuttle bone and eggshells are also given as an extra.

Cockatoos are great chewers and whittlers of wood and in captivity they should never be without some twigs or branches on which they can exercise their beaks. We have found that Elder, Apple, Plum, Elm, Hazel, Poplar or Willow are the best to use. Chewed up branches can be replaced after a few days. Branches and twigs also help to prevent the beaks from excessive growth. We find that some of our parrotlike birds will take live food such as maggots

and mealworms and one of the soft foods as used for mynahs, etc. The old idea that parrots do not require water still persists in some quarters. Whilst they do not bathe like parrakeets, preferring to cling to the wire and spread out their wings to catch raindrops, they do require a supply of fresh water at all times for drinking purposes.

When first attempting to get birds to nest, it is advisable to offer a variety of boxes, logs and other items which may induce them to get started. If no interest is shown in the nest boxes in the first positions they should be tried at varying heights and angles with the entrance holes facing different ways. The nest boxes should be placed in the open flight, not under cover, as this helps to keep the nest filling and box moist, which assists the hatching.

Each year we receive many letters asking advice on cockatoos and parrots which are feather plucking, or are biting off the wing and tail feathers. These conditions appear to be one of the commonest disorders in caged parrots. There seem to be four major causes, i.e., a nervous condition when the bird is under stress, boredom, insufficient humidity at the time when the bird is moulting, and an incomplete diet.

We advise a complete change of surroundings and routine; a larger cage if possible, branches, twigs and turfs of grass with roots and soil in order to provide the bird with distractions; check the diet; parrots and cockatoos seem to have an especially large need for Vitamin A. This is synthesised by the body from carotenes which are found in almost all plant material; oddly enough, seeds tend to be deficient in carotenes. In the absence of this vitamin the moist surfaces of the body—more especially the nose, eye and throat region, cannot be maintained in a normal healthy state. Prevention may be found by giving the bird fruit and green food; Abidec drops in the drinking water and, during the winter months, cod liver oil in the ratio of one teaspoonful to a pound weight of canary seed.

The food of the Lesser Sulphur-crested Cockatoo in the wild consists of numerous species of grass seed, berries, nuts, fruits,



VILLAGE IN CENTRAL FLORES, INDONESIA



NATURAL HABITAT OF THE LESSER SULPHUR-CRESTED
COCKATOO (*Cacatua sulphurea*)

Photos by courtesy of W. H. Timmis, Curator of Birds and Mammals, Chester Zoo

cereals and insects. In grain-producing regions it can become a pest by eating newly-sown seeds and damaging the mature crops. The breeding season appears to be highly variable and the birds may be found nesting in most months of the year. After mating a hollow tree stump is usually chosen to contain the nest.

Our Curator of Mammals and Birds, Mr. W. H. Timmis, spent several weeks watching Lesser Sulphur-crested Cockatoos nesting in Central Flores, Indonesia and found that dead palm trees were the favourite locations for nests of this species and two or three white eggs are laid on decaying wood dust within the nesting hole. They take about thirty days to hatch, both sexes helping with the incubation. The chicks, after hatching, take some six weeks to fledge. If the parents are disturbed at the nest they leave quietly, without calling, and only become vocal when well clear of the breeding site.

Mr. Timmis observed that they are rarely found far from water and are usually encountered in wooded areas bordering rivers. They were also to be seen in swamp, monsoon and tropical forests as well as cultivated areas, but they are rarely found above 5,000-ft. Although extremely noisy and quite easily seen, Lesser Sulphur-crested Cockatoos are very difficult to approach. Mr. Timmis saw several flocks foraging for food in open country, and noticed that a few birds kept guard on good vantage points. If danger threatens, the birds fly up giving the alarm call and the whole flock flies away to safety. At dusk the flocks return to their own communal roost and, after a good deal of squabbling for the best perches, settle down. In the morning they leave the roost amid much noise and often stop to drink at the nearest water before going to the feeding areas.

The following birds have recently been presented to us:

- 1 Java Sparrow (*Padra orizivora*)
- 1 Red-vented Bulbul (*Pycnonotus cafer*)
- 1 Spice Bird (*Munia punctulata*)
- 1 Red Cardinal (*Richmondia cardinalis*)
- 1 Green Cardinal (*Gubernatrix cristata*)

AQUARIUM NEWS

The following tropical marine fishes have recently been acquired for the aquarium. These tropical fish are difficult to rear in captivity and have not been known to breed in aquarium conditions.

A Snowflake Moray Eel (*Echidna nebulosa*) is at present about eight inches long, but when fully grown it should reach a length of two feet. Moray eels are generally rather ugly but the Snowflake Moray Eel is not unattractive with quite striking marking from which it derives the name "snowflake". This eel can be quite dangerous to handle.

Two Scorpion Fishes (*Pterois volitans* and *Pterois lunulata*) have been acquired. These scorpion fishes come from the Red Sea. The *Pterois lunulata* is at the time of writing about eight inches in length with regular brown and white stripes on its body which also extend to the poisonous spines on its back; these can inflict a very painful weal. The pectoral fins are large and wing-like and the general appearance of the fish is most graceful and striking. *Pterois volitans* is much younger than the *lunulata* and is now only about $2\frac{1}{2}$ -3 inches long but will reach about ten inches when fully mature. In appearance the two fishes are similar but the *volitans* at present has much lighter colouring than the *lunulata*.

The Picasso Trigger Fish (*Balistapus aculeatus*) has the rather unusual local name in Hawaii of "humu humu nuku nuku apuaa". By means of a special locking mechanism in its dorsal spine, the Trigger Fish can elude capture by wedging itself into a hole or under a rock, lock its dorsal spine in position and it is then extremely difficult to extricate the fish from its hiding place. Trigger Fish have very strong well-defined teeth and are quite capable of dismantling a crab in a few minutes. Their colouring is basically white with a dark brown stripe over the middle of the body.

The Batfish (*Platzx teira*) which has been acquired has exceptionally elongated fins, the height of a young fish being several times its length. Our specimen is only some five inches long but as these are

fast-growing fish it could well reach fifteen inches within twelve months. Batfish can become very tame and have been known to take food from the keeper's hand. However, it is a timid fish and should not be placed with more aggressive species.

Among our freshwater exhibits the Axolotl (*Amblystoma mexicanum*) have started to spawn and there is a very fine show of eggs to be seen attached to the rocks in the tank. These eggs should hatch out within the next week or so. This species of Axolotl is most unusual in that it can complete its life cycle without ever leaving the water, as sexual maturity is reached in the larval stage.

GARDENING NOTES

One of the main jobs in the winter is to give some attention to the various shrubs planted throughout the zoo. Many need to be pruned to keep their shape; some need the past season's flowering stems cut out and yet others have to be cut back where they are crowding one another.

The autumn tints have been very good this year and although this has been a wet autumn, there have been some long periods of sunshine during the latter part of October and early November to show up the glorious colours.

Growing in the sunken garden is a shrub *Amelanchier canadensis*, common name Snowy Mespilus or June Berry. This produces a mass of white flowers in April, red berries in June and in the autumn the foliage turns red.

The Fossil Tree (*Metasequoia glyptostroboides*) develops a lovely bronze tint early in November—if we are fortunate enough not to have any strong winds, as the leaves are brittle. Two specimens are growing in the rockery near the South Entrance and one in front of the Main Zoo Shop.

Another shrub which might not be noticed in the summer is *Cornus*, its common name being Dogwood, but it has lovely shades

in the autumn. When the leaves have fallen a colourful stem is revealed for the rest of the winter; this is particularly striking if there is snow on the ground and the sun is shining. It is growing throughout the zoo and adapts itself to any conditions but likes wet ground best. We have two species *Cornus sanguinea*, Common Dogwood, which has blood red twigs and *Cornus stolonifera flaviramea* which has a yellow stem.

Vitis coignetiae, a member of the vine family, is a climber growing over the ends of the Rainbow Aviaries. This climber has large leaves and shows a magnificent tint at the end of October. The derivation of many plant names is not always of interest, but the specific name of this *Vitis* came from Madame Coignet who introduced it to Europe from Japan.

The beauty of many more shrubs is revealed when the deciduous ones have lost their leaves. *Elaeagnus pungens aurea* with its golden leaves edged with dark green is one. A large specimen of this shrub can be seen growing in the shrubbery opposite the Fallow Deer Enclosure. Another species *Elaeagnus ebbingii* has glossy dark green leaves and is silvery-grey underneath. This can be seen growing on the left-hand side of the entrance to the Monkey House. At the end of the Monkey House, where the outdoor monkey cages are, there are two standard trees of the winter-flowering cherry; this is *Prunus submirtella autumnalis*. It will continue to flower during mild spells throughout the winter; the flower is a semi-double pale pink.

SUBSCRIPTIONS

New readers of the CHESTER ZOO NEWS who would like to receive the magazine regularly may be interested to know that subscription forms can be obtained from the souvenir shops. An annual subscription (12 issues) costs £2.24, postage paid, which can either be handed over the counter at the shops or posted with the completed form to the Director-Secretary, Chester Zoo, Chester.

The following notice is displayed on several boards in the grounds
Please comply with it at all times

FEEDING OF ANIMALS AND BIRDS

IT IS AN OFFENCE for any member of the public to offer food of any description to any Animal or Bird in Chester Zoo.

This regulation is made for the sake of the health of the Animals and Birds. Since the **NO FEEDING** rule was introduced, the number of deaths has dropped appreciably and sickness due to wrong feeding has been virtually eliminated.

What you may be offering to an animal may only be a sweet or an inoffensive piece of bread, but it can mean a death sentence for the animal. For example, a cough drop, which may relieve your cough, can cause instant death to many Animals and Birds in the Zoo.

You must not lose sight of the fact that you are only one of over a million visitors who visit the Zoo annually. If for instance an elephant had one bun from only one tenth of a day's visitors during the summer, it would eat between three and four thousand. You can guess the result.

We realise what a temptation it is for visitors, particularly children, to feed our Animals and Birds and this is why we invite members of the public to be present at the official feeding times.

This is a polite warning to you, asking you not to feed the animals. If you ignore it, the Keepers are authorised to ask you to leave the Gardens.

If you really love Animals and Birds, you will appreciate the wisdom of the ruling — No feeding by members of the public.

**PLEASE HELP US TO KEEP OUR COLLECTION OF
ANIMALS NOT ONLY ALIVE BUT IN FIRST CLASS
CONDITION**

