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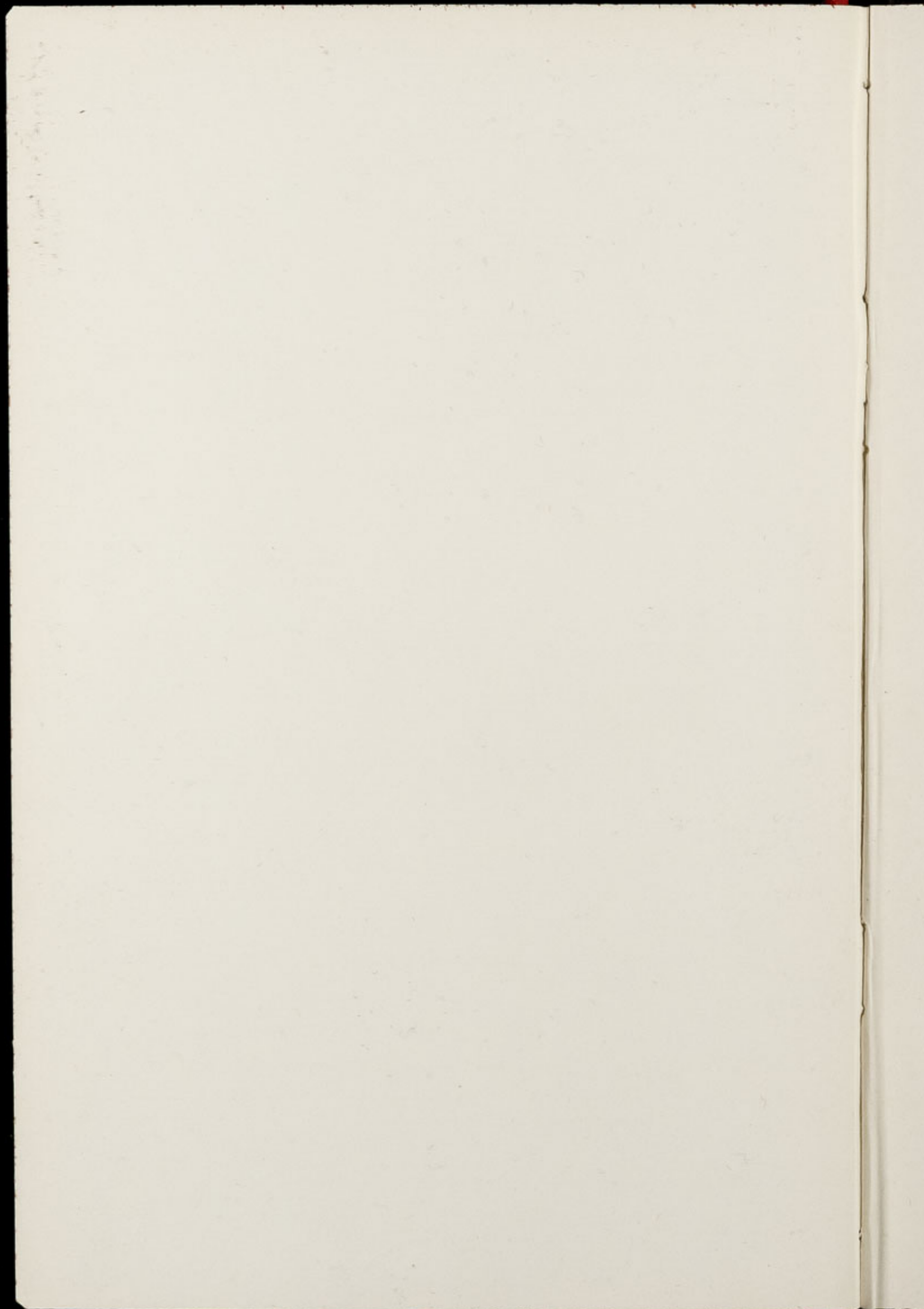
Chester Zoo News

AND GUIDE

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

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Editorial

With the start of the New Year, more visitors came to the Zoo than have done over the past few months. Our attendance figures for 1966 were slightly less than those for 1965, but already our January figures show an increase compared with last year.

Due to the number of enquiries about the keeping of Pet Reptiles, we have included an article on this subject on page 6, and hope this will provide a guide to all those interested.

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COVER: This month's cover photograph shows our Boat-billed Heron. For further details on this interesting bird, see page fourteen.

STOCKTAKING

Each year on December 31st a stocktake of all the Mammals, Birds, Reptiles and Fish has to be undertaken. Of course a record of each individual animal is kept and births and new arrivals, etc., are carefully noted, but the stocktake forms a valuable check and in addition is required by the auditors.

Most of the stocktaking is fairly straightforward and entails the actual counting of each individual species. Where the difficulties arise are in the Tropical and Temperate Bird Houses where large collections of birds are housed at liberty within the confines of the building. In the Temperate Bird House stocktaking is not too difficult and all the birds can be seen and counted if a little time is spent. With the Tropical House things are rather different as the building is so large and the vegetation so dense and there are 60 species of free-flying birds. It has been the practice for some time now to keep a daily record of the sighting of each species. Some of the shy birds which hide in the undergrowth are often not seen for several days. An accurate account cannot be kept of each species, especially the small Waxbills and Zosterops, etc. An estimate is made of their numbers after careful consideration of birds observed over the past week or two.

After the physical stocktake the numbers of each species are compared with those in the stock records and discrepancies have to be accounted for.

The next stage is the actual valuation of each animal. This is not quite so straightforward as one would imagine, as animals vary in value from year to year according to availability and age and a pair are obviously more valuable than two individuals of the same sex.

For those interested in statistics, a Polar Bear is worth approximately £250, a Lion £100, a Black Rhino £1,500, a White Rhino £3,000; the most expensive animals in the Zoo are the pair of Mountain Gorillas valued at £3,500 each. The total stock value, which includes all Mammals, Birds, Reptiles and Fish was in excess



MOUNTAIN GORILLA VALUED AT £3,500 *K. W. Green, A.R.P.S.*

of £100,000 last year and obviously had increased in value over the past twelve months.

Actual numbers of animals have shown a steady increase over the past few years. On 31st December, 1963, there were 439 Mammals, 729 Birds and 102 Reptiles. On 31st December, 1965, there were 538 Mammals, 906 Birds and 171 Reptiles. Last year, although numbers of Reptiles have shown an increase, Mammals and Birds remained static but the number of species increased, so obviously our collection of animals has improved. Numbers of fish have increased and more species have been added and 2,500 were accounted for on 31st December, 1966.

ARRIVALS AND BIRTHS

Two Eland have been born since the last issue of the "*Chester Zoo News*" was published — the first was a female and the second a male. The addition of these two youngsters brings our herd to seven. These animals can be seen in their large paddock (No. 96 on the Plan). Many young Eland have been bred since the arrival of the original stock during 1960 and a number have been sent to other Zoos in this country.

A Senegal Bushbaby was presented and accommodated in the Nocturnal House. These Bushbabies are the most common species of Bushbaby to be kept as pets in this country. They are most attractive animals and a long article on their care and management was included in the October 1966 issue of "*Chester Zoo News*".

KEEPING PET LIZARDS AND SNAKES

From time to time we receive enquiries, especially from children, who want to keep Snakes or Lizards as Pets. Normally our enquirers are concerned only with the British species, as most tropical Reptiles require expert knowledge if they are to live for any length of time in captivity.

There are three species of Lizards found in this country. The Slow-Worm, which looks similar to a Snake, but is in fact a legless



YOUNG ELAND

P. Stubbs, Daily Mirror

Lizard, is found in many dry areas of Great Britain. It is unsuitable as a pet; due to crepuscular and nocturnal habits it would only rarely be seen by its owner. The second species is the Sand Lizard, but unfortunately they are only found in a few small areas — on heaths and sandy dunes, etc. Viviparous Lizards are the most common species and are found in many areas of Great Britain, especially on heathlands and downs.

There are also three species of Snakes found in this country. The Smooth Snake is the rarest of the three, being found in Sussex, Dorset, Hampshire, Wiltshire and Surrey, but is common nowhere throughout this range. Grass Snakes are fairly common in England and Wales south of Yorkshire where they inhabit areas where ponds and ditches are plentiful. The only venomous species found in this country is the Adder or Viper, which is to be found on heaths, moorlands, downs and open woodland areas; it is fairly common in such habitat. The Adder can easily be identified by its rather thick-set build and by most specimens having a broad zig-zag line down the whole body. Colour and markings vary somewhat from Snake to Snake, but normally they are brown or reddish-brown with black markings. Adders are not dangerous if left alone but should never be teased or handled by an inexperienced person, as although their bite is rarely fatal, they can cause great distress to the person bitten.

From the above notes it can be seen that the most suitable species of Lizard to keep is the Viviparous and the most suitable Snake is the Grass Snake. Adders should never be kept, as they will not survive for long in captivity and are always a source of danger in a private household.

Viviparous Lizards and Grass Snakes can be purchased from Pet Shops for a few shillings each but otherwise they will have to be collected in the countryside. In the Chester area Lizards are common on heathland areas in Delamere Forest, the Wirral and in the foothills of the Welsh Mountains but Grass Snakes do not seem too common in this area. To collect a Lizard, a warm sunny day is essential, as it is only then that the Lizard can be seen basking in the sun. Walk away from the pathways and the Lizard will move when being approached and can be caught by hand and put in a small box, which should be filled with dry sphagnum moss. Be



GREEN TREE PYTHON

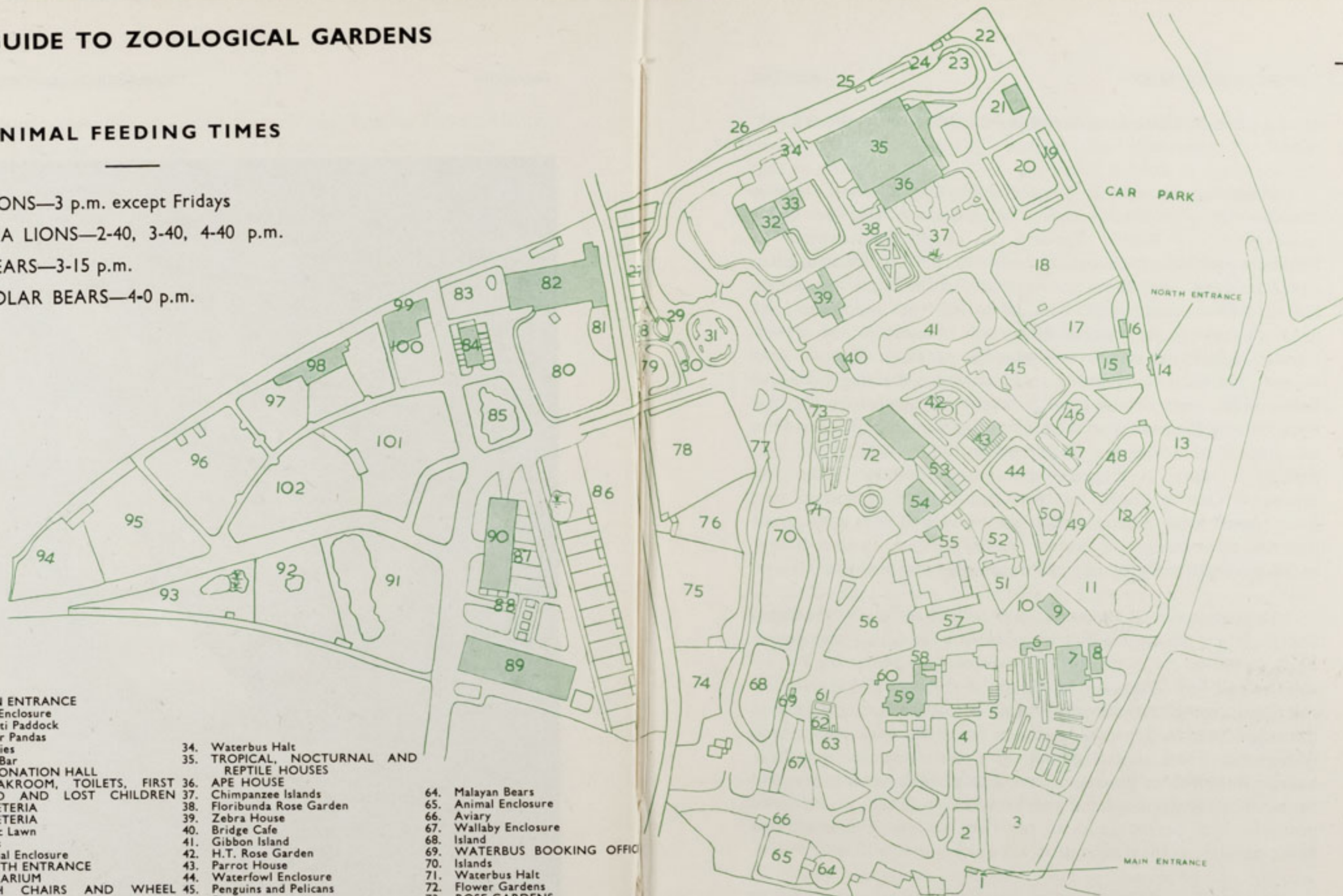
J. Whitworth

A snake requiring expert knowledge for its well being in captivity

GUIDE TO ZOOLOGICAL GARDENS

ANIMAL FEEDING TIMES

LIONS—3 p.m. except Fridays
 SEA LIONS—2-40, 3-40, 4-40 p.m.
 BEARS—3-15 p.m.
 POLAR BEARS—4-0 p.m.



1. MAIN ENTRANCE
2. Bird Enclosure
3. Wapiti Paddock
4. Lesser Pandas
5. Aviaries
6. Milk Bar
7. CORONATION HALL
8. CLOAKROOM, TOILETS, FIRST AID AND LOST CHILDREN
9. CAFETERIA
10. CAFETERIA
11. Picnic Lawn
12. Bears
13. Animal Enclosure
14. NORTH ENTRANCE
15. AQUARIUM
16. PUSH CHAIRS AND WHEEL CHAIRS
17. Animal Enclosure
18. Animal Enclosure
19. RAINBOW CAFE AND SHOP
20. Aviaries and Picnic Lawn
21. TOILETS
22. Peccaries
23. Waterbus Halt
24. Birds of Prey Aviary
25. Birds of Prey Aviary
26. Owls
27. Jackal Enclosures
28. Wolverines
29. Porcupines
30. Coypus
31. Beavers
32. Giraffe House
33. Camel House

34. Waterbus Halt
35. TROPICAL, NOCTURNAL AND REPTILE HOUSES
36. APE HOUSE
37. Chimpanzee Islands
38. Floribunda Rose Garden
39. Zebra House
40. Bridge Cafe
41. Gibbon Island
42. H.T. Rose Garden
43. Parrot House
44. Waterfowl Enclosure
45. Penguins and Pelicans
46. Flamingos
47. Waterfowl Enclosure
48. Sea Lion Pool
49. Rock Garden
50. Polar Bears
51. Tigers
52. Waterfowl Enclosure
53. BIRD HOUSE
54. FOUNTAIN RESTAURANT
55. TOILETS
56. Lions
57. NEW ZOO SHOP
58. TOILETS
59. OAKFIELD RESTAURANT
60. G.P.O. Telephone Kiosk
61. Animal Enclosure
62. Animal Enclosures
63. Cheetahs

64. Malayan Bears
65. Animal Enclosure
66. Aviary
67. Wallaby Enclosure
68. Island
69. WATERBUS BOOKING OFFICE
70. Islands
71. Waterbus Halt
72. Flower Gardens
73. ROSE GARDENS
74. Deer or Antelope Enclosures
75. Deer or Antelope Enclosures
76. Deer or Antelope Enclosures
77. Waterbus Halt
78. Zebra and Deer Enclosure
79. Kamchatka Bears
80. Elephant Paddock
81. Hippo Paddock
82. PACHYDERM HOUSE
83. Tapir Paddock
84. Small Mammal House
85. Waterfowl Enclosure
86. Ankole Cattle
87. Stork Enclosures
88. Monkey Enclosures
89. Cat House
90. MONKEY HOUSE

91. Cranes and Waterfowl
92. Waterfowl and Wallabies
93. Cranes and Waterfowl
94. Bison Paddock
95. Deer Paddock
96. Eland Paddock
97. Rhino Paddocks
98. RHINO HOUSE
99. TOILETS
100. MPILA SNACK BAR
101. Antelope Enclosure
102. Antelope Enclosure

Animals may be moved from time to time.

careful when handling Lizards not to pull their tails as the tail will fall off.

Before any thought is given to collecting Reptiles, suitable accommodation should have been constructed. A Vivarium is the name given to a Reptile cage and can usually be purchased at Pet Shops, but it is quite simple to make one from an old rectangular aquarium tank. The tank can be heated either from the top or bottom with an electric light bulb. If heated from underneath, the floor will have to be replaced by a sheet of asbestos and several ventilation holes cut and covered with fine gauze, to allow the heat to rise. If heated from above, a curved top containing bulb and holder with a piece of wire gauze is required to prevent the Reptiles from burning themselves on the bulb. Only a small bulb is required in a normal sized Vivarium of approximately 3ft. long by 1ft. 6in. high by 1ft. deep. A Vivarium of this size is suitable for keeping several Viviparous Lizards or two Grass Snakes of normal size. Unless some form of thermostatic control is used, it is a matter of trial and error to find the correct heating balance. A temperature of 70°F. would be the minimum for the well-being of British species.

Ventilation is most important, especially in the case of the Grass Snake. Where the heating bulb is underneath the tank a few circular holes should be cut in the top and covered with gauze; the hot air will rise and flow slowly out of the top of the tank and a good circulating system will have been provided. Where the heating lamp is at the top of the tank, holes will have to be cut in the sides and covered with gauze. The Lizards especially love to bask in the rays of the bulb so if underfloor heating is used, a small bulb at the top would be beneficial and essential if the Vivarium is placed in a shaded position. It is advantageous to put them outside, but beware of direct sunshine as the temperature will quickly rise, with fatal results.

The interior of the Vivarium can be decorated with sand or small pebbles for the floor and pieces of hollow moss covered bark can be utilized to give the Reptiles some privacy. A drinking dish should be provided and in the case of Grass Snakes should be large enough for them to fully immerse themselves. Dry Sphagnum moss is also very suitable for giving cover to these Lizards and Snakes; it is easily collected and looks most attractive.

Another form of Reptile enclosure known as a Reptiliary is an outside enclosure — usually a moated island surrounded by a small wall to prevent escapes. These are rather difficult to construct and have a great drawback in that the Reptiles are seen only on warm sunny days and these are so few in this climate.

Feeding is not too difficult — the Lizards will eat small insects, grasshoppers, moths, etc.; mealworms can be purchased at a Pet Shop and form the basis of the diet. Grass Snakes should be fed small frogs and fish — not sticklebacks, as the spines may do them some damage. Both Grass Snakes and Viviparous Lizards have to be fed living food, at least for a start, but most Grass Snakes soon learn to take dead food. It is unwise to mix these Snakes and Lizards as the Snakes are likely to eat the Lizards, especially if the supply of frogs should run short. Once a week should be adequate for feeding the Grass Snakes but it must be remembered that as Snakes are cold-blooded they will feed and digest only when the temperature is high enough, and will only feed when hungry.

The Viviparous Lizards should have a supply of food available most of the time as they are not able to swallow such large prey as the Snakes; they are also very fast-moving and use up a great deal of energy.

We do not advise the handling of Reptiles as this tends to disturb them. If the Grass Snake is handled it will exude an unpleasant smell; however, as the Snake becomes accustomed to its handler it will stop this. The Lizards should be handled most carefully as their tails can easily be broken off, as mentioned earlier in this article; although this does them no harm, they look unsightly until the new tail has grown.

Many authorities consider it wise to liberate British Reptiles during September so that they can find a hibernation place. They can be kept during the winter only if sufficient heat is maintained. A fairly constant temperature should be aimed at; a drop of a few degrees at night is acceptable, but it must be remembered that all Reptiles are cold blooded and become sluggish and unable to eat if the temperature is too low. Critics say that Reptiles endure a great change in temperature in the wild state and to a certain extent this

is true. It must, however, be remembered that when in captivity the Reptile has little choice of terrain but in the wild state can move out of very hot sun and go underneath rocks at night or when it is cold.

BIRD NOTES

A recent presentation in the Bird Section was a cock Indian Ring-necked Parrakeet (*Psittacula krameri*). This species is most attractive, being mainly bright green in colour. The cock has a distinct black ring marking running from the beak to the side of the head, changing to a rose colour around the back of the neck. The hen bird has a less distinct ring marking of emerald green colour.

These Parrakeets are very common in India and Ceylon where they are found in large flocks and do considerable damage to crops. Frequently they are kept as cage birds and can be taught to say a few words.

An Indian Hill Mynah (*Gracula religiosa*) was also presented during the past month. These birds make excellent talkers, even better than most Parrots, but are extremely dirty to keep in a small cage—this is why a large number are presented to the Zoo each year. We house them either at liberty or in an aviary in the Temperate Bird House or in the long outside flight aviary near the Oakfield Restaurant.

A pair of Red-billed Blue-Pies (*Urocissa melanocephala occipitalis*) arrived during the month. These birds are similar in shape to the Magpie found in this country but have a far longer tail. The upper parts of the plumage and tail is coloured blue and the beak and feet are an orange-red colour.

This species is found in the lower mountains of the Himalayas and resemble our Magpie in habits.

With the arrival of the Birds of Paradise mentioned in last month's "Zoo News", it was found necessary to transfer some of the birds occupying aviaries in the Tropical House to accommodate these new arrivals. The Red-billed Toucans and Laminated Hill



COCK-OF-THE-ROCK

J. Gwyn Jones

Toucan have been released within the confines of the building and are a magnificent sight. It was felt that they would do no harm to the small Waxbills and Finches in such a large area but a careful watch is being kept on them to make sure. The very tame Orange Cock-of-the-Rock has also been released but up to now has spent most of his time perched near or on the top of his old aviary. This bird is very tame indeed and perches on the edge of the food dish when it is being carried by the keeper.

One bird which unfortunately could not remain at liberty was the cock Prince Rudolph's or Blue Bird of Paradise. He looked most impressive flying around the Tropical House and had settled very well. The one drawback was his destructive nature and one afternoon he concentrated on tearing at the Banana Tree and had to be caught and placed in an aviary.

BOAT-BILLED HERON

The Boat-billed Heron, pictured on this month's cover, can be seen in the Temperate Bird House and is one of the real "characters" of our bird collection. When this Heron arrived during June 1965 he was very young and had to be hand fed by his keepers and would follow them around the Bird House shouting for food. He has grown a little in size since then and is becoming lighter in colour, but his colouration is not so brilliant as that depicted in most books.

Strangers are treated with indifference by our Boat-bill, but if they approach too closely he will peck and make a croaking noise and if disturbed too much will fly to a fresh perch. With his keepers this bird is very friendly indeed, although not quite as affable as when he first came. When Head Keeper Jim Murray is working in the Temperate Bird House, the Boat-bill will even try to perch on his hat and shows no fear whatsoever of him or any of the other keepers.

The Boat-billed Heron (*Cochlearius cochlearius*) is not a true Heron, but is closely related to the Shoe-bill Storks and the Hammer-headed Storks which come from Africa. The Boat-bill is found in Central and South America from Mexico to Brazil. Very little is

known about their habits in the wild state as they spend most of their time in thick Mangrove forests and are said only to come out and feed at night. The large eyes suggest a nocturnal way of life, but our Boat-bill seems strictly diurnal in its habits.

The most peculiar feature about these birds is the large bill, which as its name implies, is shaped like a boat. It is most likely that the beak is used for catching small aquatic animals in shallow muddy water but the feeding habits of this species have not been properly observed or recorded. Boat-billed Herons are said to nest alone, in small colonies, or in the company of Night Herons. They build a shallow stick nest in a mangrove tree and lay 2-4 blue and white eggs.

RECONSTRUCTION OF THE RAINBOW AVIARIES

The two Rainbow aviaries (No. 20 on the Plan) were constructed 10 years ago and have been most popular, probably because the aviaries are so long and therefore there is always such activity when the birds fly from one end to the other.

Due to the length of time the aviaries had been standing the netting and rustic poles supporting them had deteriorated. It was decided to make a fresh start and so both aviaries were completely demolished. The new aviaries are the same in size and general outline but the roof has been arched and the netting supported on metal; the sides and ends are supported on rustic poles which are sunk in concrete. From the Rainbow lawn side both aviaries are raised slightly above pathway level but on the other side they are level with the path. These aviaries are surrounded by a wide flower border which looks very attractive and also has the added advantage of acting as a protective barrier, preventing visitors from leaning on the wire netting or pushing various foodstuffs through the wire.

With such large aviaries, a fairly wide selection of species can be accommodated, but due to the rather exposed position, only the hardy are able to remain there throughout the winter.

In the past the larger of the two aviaries, *i.e.*, the one directly opposite the Rainbow Snack-bar, housed a collection consisting mainly of Doves and Pigeons. Barbary, Java, Deceptive and Stock Doves, Crested Bronzewing, Picazuro and Spotted Rock Pigeons were all exhibited last year and the Weka Rail and the Curassows are often accommodated in this aviary during the summer. With the reconstruction work, all the birds had to be moved and were accommodated in the Temperate Bird House. Due to the onset of cold weather it was decided to postpone moving them back to their aviary until the spring. The very thick vegetation has been thinned out considerably with the reconstruction work but the severely pruned shrubs will soon throw out many new shoots and an extremely pleasing effect will be gained.

The smaller of the two aviaries has been used in the past to accommodate a mixed collection of Parrakeets, Cockatiels and some Pheasants. This aviary was not designed to breed Parrakeets, although many species have bred and last year 9 Cockatiels were reared. It is now the intention to have Budgerigars, Lovebirds and Cockatiels in this aviary and they will prove to be a good show, especially the Budgerigars which will be able to fly in a large flock.

This aviary is far more exposed than the other as the Parrakeets have destroyed most of the bushes; even with Budgerigars, Lovebirds and Cockatiels, vegetation other than low grass will not survive.



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