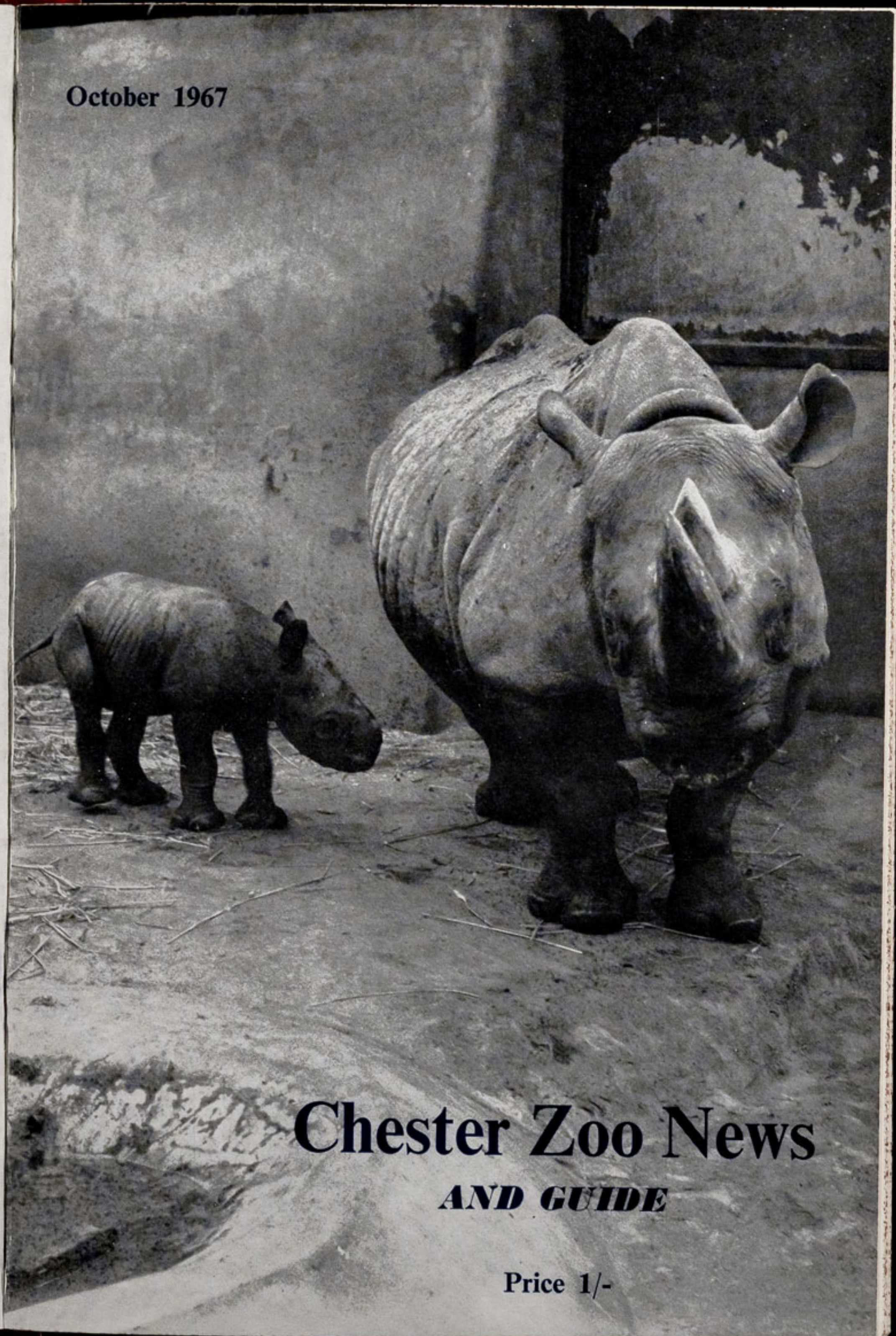
October 1967



Chester Zoo News

AND GUIDE

Price 1/-

The North of England Zoological Society

ZOOLOGICAL GARDENS, UPTON-BY-CHESTER

COUNCIL

MISS G. M. RUSSELL ALLEN, O.B.E., (CHAIRMAN)

J. F. WILKINSON, M.Sc., Ph.D., M.D., F.R.C.P., F.R.I.C.,
W. P. BLAND (VICE-CHAIRMAN)

G. E. BANWELL, C.B.E., M.C.

A. H. HILTON, L.D.S., F.L.S.

A. C. JOHNSON

J. A. KILPATRICK, M.B., Ch.B., F.R.C.S.E.

F. MOSFORD

H. F. PARKER

J. H. RIGBY, T.D.

A. E. SMITH

THE RIGHT HON. LORD TOLLEMACHE, M.C., D.L.

SALLY DUCHESS OF WESTMINSTER

J. N. WILSON

G. S. MOTTERSHEAD, M.Sc., DIRECTOR-SECRETARY

CONTENTS:

COVER: This month's cover photograph shows "Reginald" the baby Black Rhinoceros with his mother.

By Courtesy of Gary Talbot

ANNUAL SUBSCRIPTION SIXTEEN SHILLINGS POST PAID

TELEPHONE :: CHESTER 20106/7/8

ARRIVALS AND BIRTHS

The first Rhinoceros to be born at Chester Zoo arrived in the early hours of Sunday morning, September 10th and can be seen in the Rhinoceros House (No. 98 on the Plan). The House was closed until Thursday to allow the youngster to settle. This is the most valuable baby to be born at the Zoo, an adult being worth somewhere in the region of £1,500. It was decided unanimously to name him "Reginald", after the Director of Bristol Zoo whose birthday fell on September 10th. The Bristol Zoo is the only other Zoo in this country to breed the Black Rhino and our male Rhino, "Roger" was the first to be bred there, so we are well on the way to acquiring a captive-bred stock.

We estimate that at birth the young Rhino weighed about 100lbs., was 20ins. high and almost 3ft. long, so he has a long way to go before reaching the ton-plus weight of his mother "Susie". As can be seen in the photograph, "Reginald" is darker coloured than his mother and has very large feet and ears. He aiso lacks the two horns on the nose but these will develop as he becomes older. Rhinoceroses grow rather slowly, feeding on mother's milk for up to two years and do not mature until 5 or 6 years old. Granada T.V., who are at the Zoo filming for the "Zoo Time" Series, will film the Rhino at frequent intervals to record his progress.

Black Rhinoceroses (*Diceros bicornis*) are the most common of the five species of Rhino. They are found in Savannah areas of Africa but have been reduced greatly in numbers. The Rhino falls an easy prey to a man with a powerful rifle and large numbers have been shot near settled areas. Many are still hunted illegally; their horn can be sold in the East, as it is credited with aphrodisiac properties.

K. W. Green, A.R.P.S.

BABY BLACK RHINOCEROS REGINALD WHEN FOUR DAYS OLD

One male and two female Diadem Monkeys (*Cercopithecus mitis*) were received recently. These animals are only youngsters, so it is rather difficult to make an accurate identification of their sub-species. They were housed in the hospital whilst a check for parasites and infectious diseases was undertaken but have now been accommodated in the Monkey House.

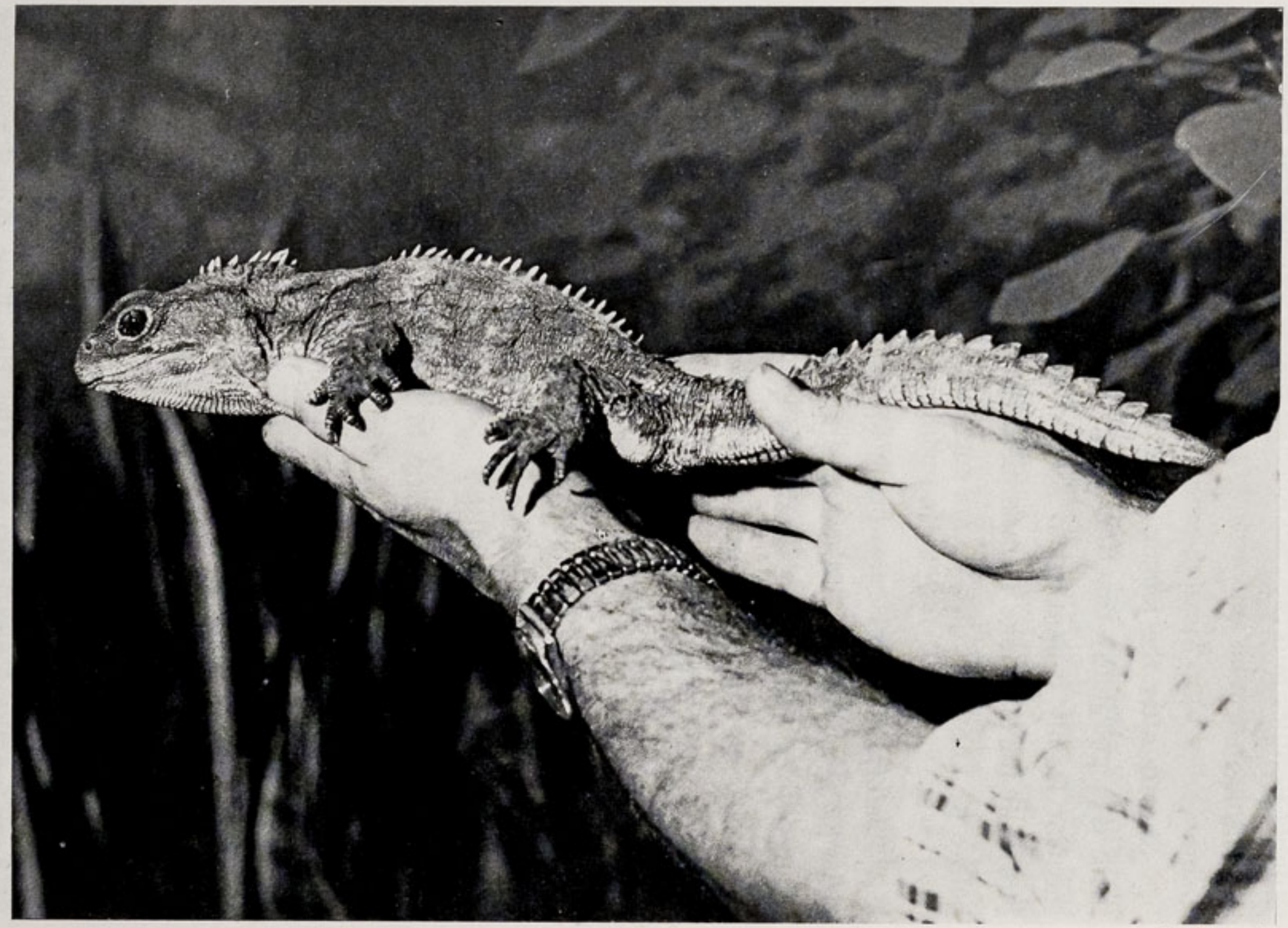
Diadem Monkeys are found in West and Central Africa. They are predominantly forest-living species, spending the majoirty of their time high in the trees. They are very agile Monkeys and should prove highly interesting exhibits.

There have been several other recent births at the Zoo and these include:—a Mandrill, (for further details, see page 11), two Leopards and one yellow Baboon. An Olive Baboon arrived recently and has settled well with the other Baboons in a pen between the Monkey and Cat Houses.

REPTILE NOTES

We are very pleased to report that we have now received a female Tuatara through the kind offices of the New Zealand Government. We were very fortunate to acquire this specimen, as our male Tuatara has been at the Zoo since 1963 and we have been endeavouring to find a mate for him since then.

The Tuataras have been placed in an enclosure which was specially designed for the purpose; we have tried to make it as attractive as possible and to emulate the conditions which are found in their native land. They are very sensitive to high temperatures and cannot be kept in normal Reptile Houses where the average temperature is 80°F.



J. Whitwotrh

TUATARA

As these Reptiles often hide from the public view and hibernate at certain periods of the year, we will probably introduce other suitable Reptiles into the enclosure so that it will not give an empty appearance.

Shortly after the female arrived, she actually laid some eggs; there is a possibility that these eggs are fertile as we understand she was freshly caught when sent to us on the 12th September. Normally the eggs take 15 months to hatch so it will be some while before we know whether we are successful in hatching them or not.

Tuataras are very rare, being found only on 20 islets off the coast of New Zealand. In their natural environment they are strictly protected by the New Zealand Government and specimens are collected only by them for selected Zoos. Chester Zoo has the distinction of being one of the three Zoos in the World to own a pair of these animals.

As can be seen in the photograph, the Tuatara (*Sphenodon punctatus*) is a lizard-like Reptile but due to a number of differences, has been placed in the order of Rhynchocephalia — meaning 'beak-head'; this refers to the tip of the upper jaw. The Tuatara has been described as a living fossil and this is quite true as it shows no significant skeletal change after 200 million years, fossil remains of this order having been found in Europe, North America, Africa and Asia, dating from the Triassic period.

From the scientific angle, the Tuatara differs from other Reptiles in various ways. It has complete bars of bone around the large apertures in each side of the skull; lizards have no border of bone on the lower apertures. The ribs have dorsal processes similar to Crocodiles and Birds and the floor of the abdomen contains a bony basketwork, absent from many true lizards. The

Tuatara is unique among modern Reptiles in that the male has no organ of copulation, the teeth are welded to the jaws and there are no gums. In the past, the pineal or 'third eye' was thought of as scientifically important but recent experiments have proved that this is no more developed than in a number of lizards and some animals.

An interesting Ecological fact is the Tuatara's apparent symbiosis with the colonies of sea birds, notably Petrels which nest on the islands; the birds' droppings attract quantities of insects upon which the Tuatara feeds. The Petrel's burrows are used frequently for sleeping and hibernation but Tuataras have been known to dig their own burrows. Occasionally they will make a meal of an egg or young bird but generally they live in complete harmony. Tuataras do not mature until they are 20 years old but can live to over 100.

From the Dallas Zoo, Texas, U.S.A., we received in exchange a large collection of snakes which include the following species:— Western Diamond-back Rattlesnake, Western Cotton-mouth, Southern Copperhead, Texas Indigo Snake, Texas Ratsnake, Emory's Ratsnake, Black-tail Rattlesnake, Mojave Diamond Rattlesnake, Sonora Kingsnake, Yellow Ratsnake, Texas Longnose, Prairie Kingsnake and one species of lizard — the Common Iguana. Other new arrivals include, a Banded Monitor, Mississippi Alligator and Sand Boa.

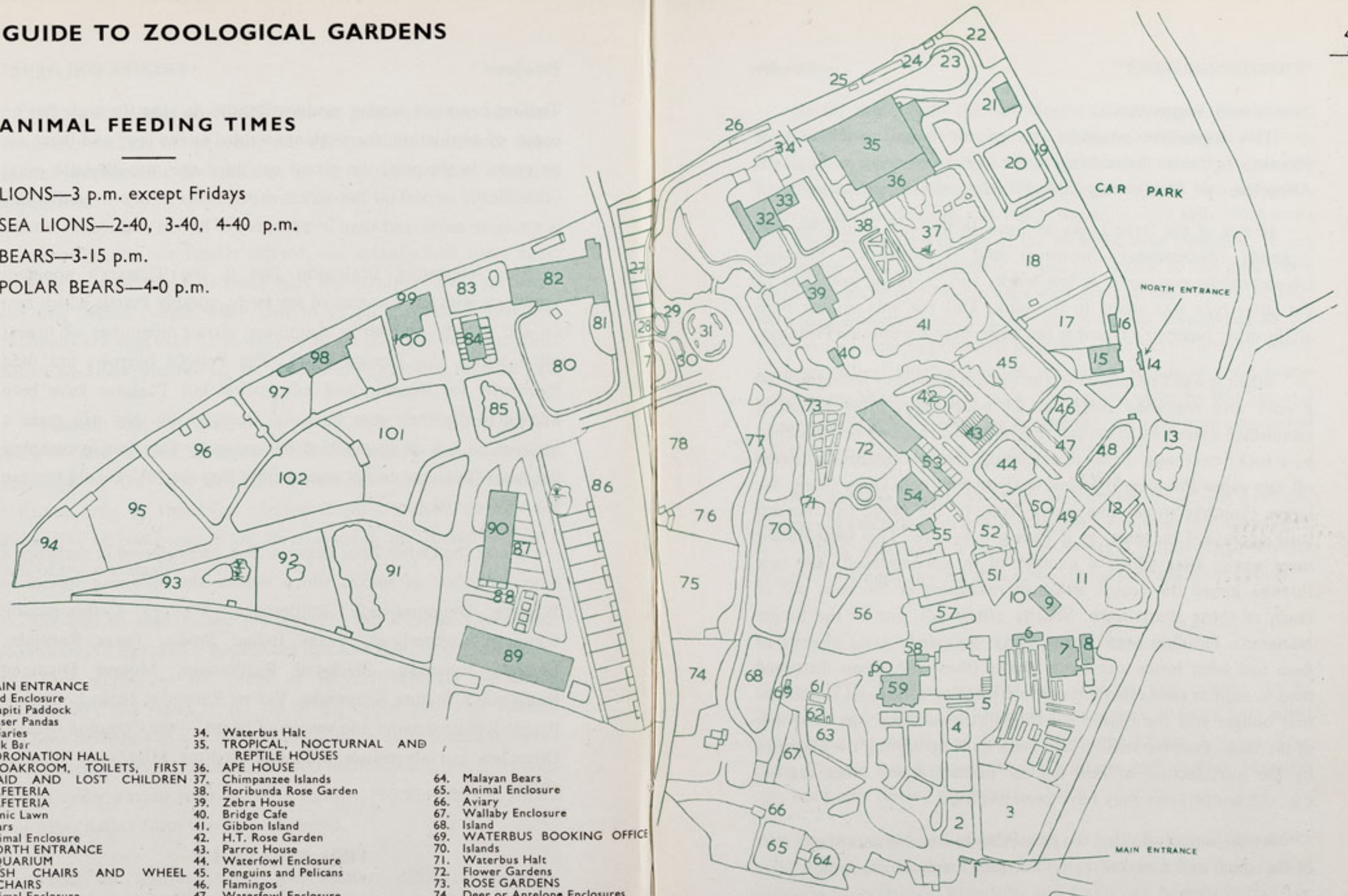
FISH BEHAVIOUR

One of the newest branches of science is Ethology, the study of animal behaviour. For gathering information about fish behaviour, aquaria are very useful. Recently in our Aquarium we have seen territorial behaviour in the Piranhas and breeding behaviour in the Firemouth Cichlids and Sea Horses.

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. Anteater and Penguin 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.

TERRITORIAL BEHAVIOUR.

This Aquarium possesses one of the largest collections of Piranhas (a fierce flesh-eating South American fish) in England. Altogether, we have twenty-three Piranhas of assorted species.

In one of the large tanks we have 16 fish — 9 young Spotted Piranhas (*Serrasalmus rhombeus*) and 7 Natterer's Piranhas (*Rooseveltiella nattereri*). A few weeks ago, a young specimen of the latter type was added to the tank. This fish was smaller than all the other Natterer's Piranhas but larger than the Spotted Piranhas.

When it was first placed in the tank, it went into hiding behind a rock and remained there for 24 hours. After this period it established a territory in the centre of the tank, this area being backed by a rocky overhang. From this position, the fish vigorously chased off any other Piranhas roaming near its territory. Quite often, the larger Piranhas would line up in front of the tank, tails nearest their aggressive member, as if daring it to bite! This went on for three weeks after which a number of things happened. The new Piranha joined the group, although remaining at the rear, out of reach of those sharp teeth. Shortly afterwards, one of the longer Natterer's Piranhas was found badly wounded; great chunks of flesh had been bitten out of its flanks (these fish when disturbed tend to rush at each others flanks in a warning action). It is unlikely that hunger was the reason for this attack as there was food still in the tank. Possible tension had been built up among the Piranhas by the introduction of new fish or perhaps some other reason, e.g., the temperature may have been too high.

As the weeks went by, the new Piranha became an integral part of the shoal and now moves about quite freely in the tank.

BREEDING BEHAVIOUR.

When many fish are about to breed, they become more attractively coloured and their behaviour changes to make a successful spawning more likely. Behaviour patterns in some fish can include courtship before spawning and parental care afterwards.

So far this month the Sea Horses (*Hippocampus brevirostrus*) from Singapore and the Firemouth Cichlids (*Cichlasoma meeki*) from Mexico have produced eggs. The Sea Horses recently came into breeding condition, becoming a golden colour with tiny red spots. Activity increased, there was much wrestling with tails intertwined and the brood pouch in two of the males became expanded. In Sea Horses the eggs are transferred from the female to the male; they remain in his brood pouch until they are hatched. When the eggs were laid however, some, if not all, were not transferred to the male and so were unprotected from the other fish in the tank, which soon ate them. One or two of the males still have their brood pouches expanded and one male changes the water by bending and squeezing the pouch, so we are hoping that the eggs were transferred successfully.

We are also waiting to see if the Firemouth Cichlids have any young; eggs were laid on a wall of the tank and were then transferred to a hollow underneath a rock. The pair of Cichlids guard this site fiercely, so we are hoping that some young fish will soon appear.

DRILLS AND MANDRILLS

In 1935, Chester was the first Zoo in this country to be successful in breeding the Mandrill. It was over 20 years later when the second Mandrill was born — this time at the London Zoo. Now Chester has repeated its first success and another Mandrill was born here during the month.

The Mandrill is closely related to the Drill. Both are baboon-like in general appearance but lack the tail, which is reduced to a small stump in both species. Mandrills and Drills can be seen in the Ape enclosures (No. 88 on the Plan).

The male Drills and Mandrills do not reach their full size until 8 or 9 years old but can breed long before this; females of both species are considerably smaller than the males.

Drills and Mandrills are found in the forests of the Cameroons in West Africa and the dividing line of the two species is the Sanaga River — Drills being found to the north and Mandrills to the south of this river. Although they are forest-living species, they spend the majority of their time on the ground, searching for food which consists of various leaves, roots, fruits, insects and some small vertebrates. Both species live in family groups. The adult males are extremely strong animals with very large teeth. One of their greatest enemies is the Leopard which will kill the young and females but a large male is a different proposition altogether.

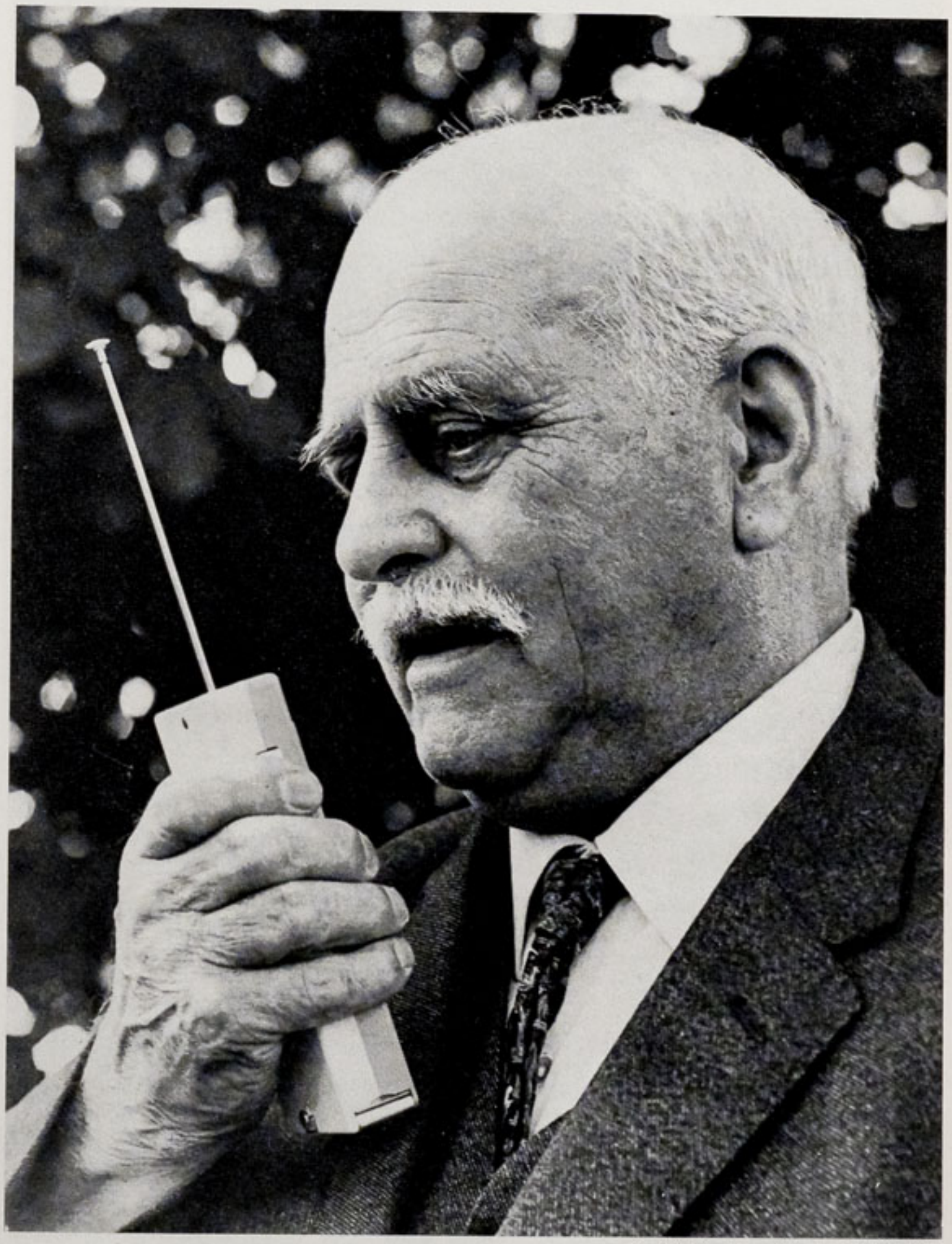
The adult Mandrill grows larger than the Drill and has brightly coloured areas on the face, with a red nose and bright blue cheeks and hind quarters which are blue and red. The pair of Mandrills arrived at the Zoo during August 1963 and both were youngsters on arrival.

The bare parts of the face of the Drill are black and altogether less colourful. One male and two females are in the collection; the male is now about 9 years old as is one of the females; the other female is about thirteen years old. As can be seen from the previous notes on ages, Drills do very well in captivity and there are several records of these animals living for over 20 years. Recently a female Drill died at the Zoo at the age of 17.

RADIO TELEPHONES

Due to the size of Chester Zoo it was decided to equip certain members of the staff with pocketphones so that they could be contacted in any part of the Zoo.

In the photograph on page 13, the Director can be seen using one of the pocketphones.



S. W. Jacobsen, Liverpool Daily Post

ZOO DIRECTOR, Mr. G. S. MOTTERSHEAD,
USING RADIO TELEPHONE

PRAIRIE MARMOT COLONY

During August 1966, eight Prairie Marmots were received in an exchange deal with another Zoo. We already had some of these animals in a small enclosure opposite the aviaries (No. 5 on the Plan). It was decided not to put the new Marmots with the original stock but to liberate them in the acre large Eland Paddock, close to the Rhinoceros House. Immediately upon liberation, the Marmots began digging vigorously in the enclosure, constructing their under ground burrows and it was obvious that they found conditions very agreeable.

In their native North America, Prairie Marmots go into a partial hibernation in their deep burrows during the winter. Our Marmots did not hibernate last winter but this was a particularly mild season in the Chester area.

The Prairie Marmot burrows are of an ingenious design having a main shaft going down 10-15 feet with two or three lateral tunnels in which grass nests are made. The tunnel entrance is formed into a raised ridge to prevent flooding and Marmots are said to be able to sense rain and strengthen this raised portion prior to a heavy downpour.

When the Prairie Marmots were first liberated, we were rather anxious in case they were attacked by hawks, owls, stoats or any other predators. Apparently this has not been the case so far, as thirty were counted during September. Since only four females were liberated, this gives a probable count of over 5 young to each mother. The young are said to be weaned at 7 weeks and fully grown at 15 months but do not mature until their third year. Not only have the Marmots increased in number but they have also increased the size of their territory and can now be seen in the Oryx paddock

PRAIRIE MARMOT

K. W. Green, A.R.P.S.

and occasionally in the Rhinoceros paddocks. They have managed to move from the Eland paddock by climbing the almost vertical concrete and sandstone wall from the bottom of the ditch to the roadway, a height of over five feet. A skirt of smooth concrete has now been placed on the rough parts of the wall to prevent any further escapes.

The Prairie Marmots are most interesting animals to watch and are proving very popular exhibits. Their appealing manner of sitting up on their hind legs and their constant movements cause members of the public hours of amusement. Marmots are not given any special food during the summer but feed on grass and other plant growth in the enclosure. When alarmed, they give voice to a dog-like yelp which has given rise to their alternative name of Prairie Dog.

OBITUARY

We regret to record the death of a very dear friend of the Society, Lt. Col. T. M. Brooks, M.C., T.D., D.L.

Lt. Col. Brooks had been a member of the North of England Zoological Society since August 1962 and was a member of the Zoo Council. He took a very active interest in the Zoo, particularly the botanical side. For several years, his generosity enabled us to acquire interesting new varieties of plants, especially orchids, of which he was particularly fond. Lt. Col. Brooks' kind and lovable nature endeared him to all members of the staff and his sound judgment and advice will be missed greatly at the Council Meetings.

Printed in England by
G. R. Griffith Ltd.
Castle Printing Works
Chester