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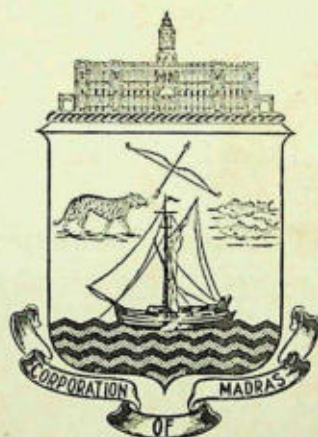


CORPORATION OF MADRAS
ZOO CENTENARY ★ SOUVENIR 1955.

Corporation of Madras

Zoo Centenary Celebrations

1855



1955



Mayor:

SRI M. A. CHIDAMPARAM

Commissioner:

SRI V. N. SUBBARAYAN

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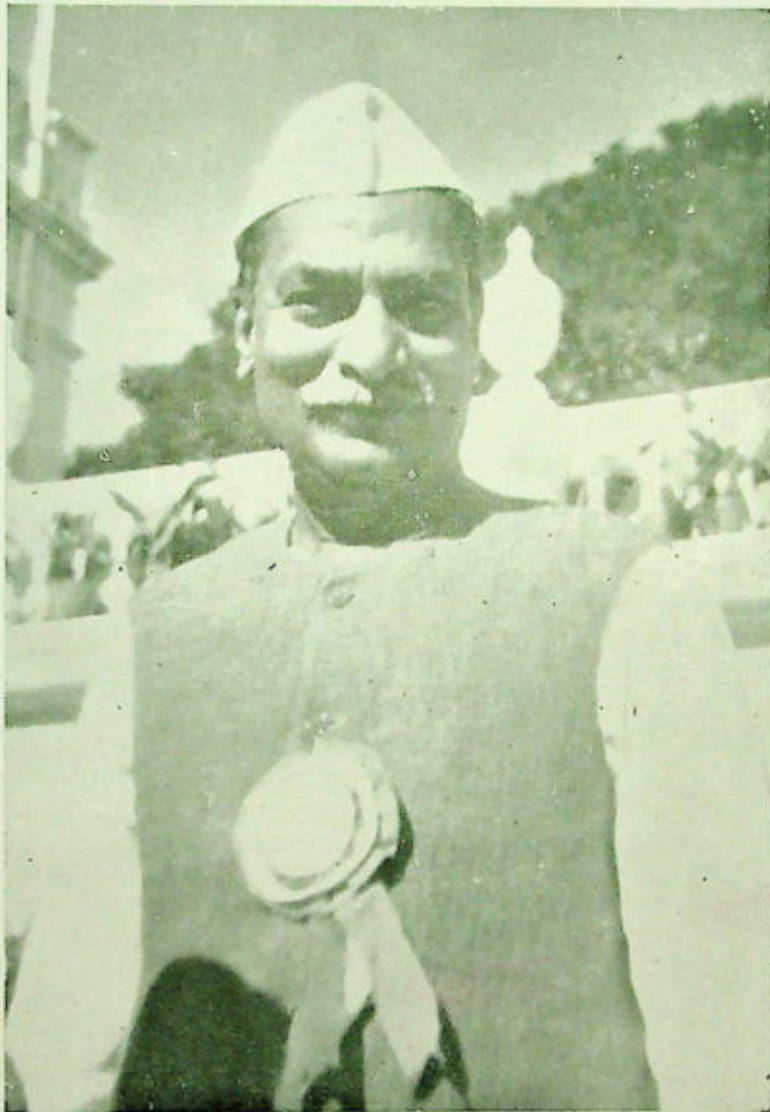
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THE NEW COAT OF ARMS



SECTION I — General



Dr. RAJENDRA PRASAD
President of India



DR. S. RADHAKRISHNAN
Vice-President of India



VICE-PRESIDENT

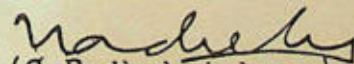
VICE-PRESIDENT'S LODGE
2, KING EDWARD ROAD
NEW DELHI

26 August, 1955.

Dear Shri Chidambaram,

Thank you for your letter of the 24th inst. I am glad to know that you will celebrate the Centenary of the Zoo in Madras managed by the Corporation. We are known to be advocates of Ahimsa or non-violence, but our treatment of animals is not consistent with our professions. If your Centenary should help to raise our standards of treatment to animals we should be thankful.

Yours sincerely,


(S. Radhakrishnan).

Shri M.A. Chidambaram,
Mayor of Madras,
Ripon Buildings,
Madras.



PANDIT JAWAHARLAL NEHRU
Our beloved Prime Minister



No.1543-PMH/55.

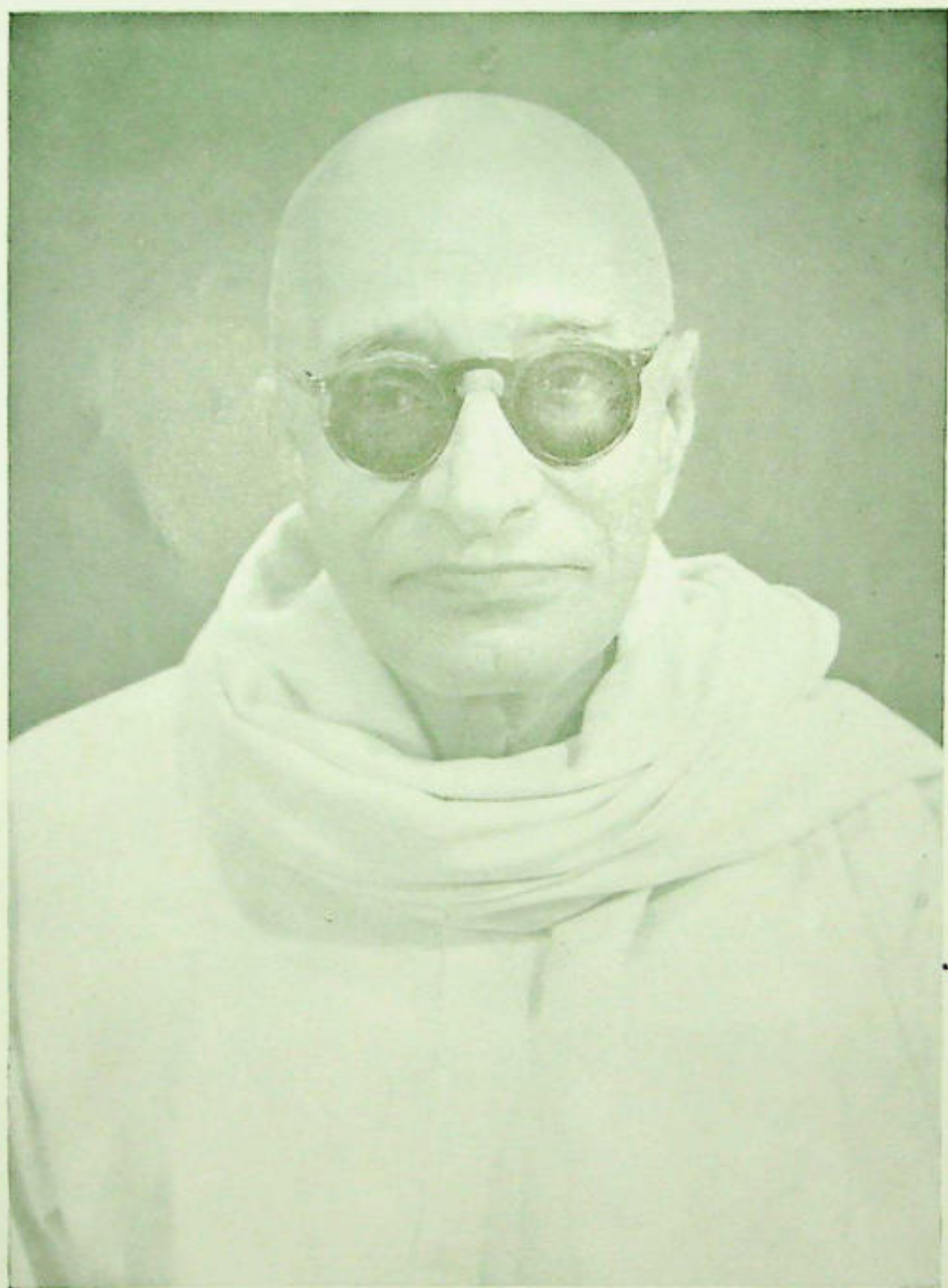
New Delhi,
August 25, 1955.

MESSAGE

I send my good wishes on the occasion of the Centenary Celebrations of the Madras Zoological gardens. I hope that the animals kept there are treated as friends and given as agreeable surroundings as possible.

Jawaharlal Nehru

Shri M.A. Chidambaram,
Mayor of Madras,
Ripon Buildings,
Madras.



DR. C. RAJAGOPALACHARI

C. Rajagopalachari

60, Bazlullah Road,
T'Nagar, Madras-17.

Every institution belonging to the modern age is now getting to be a hundred years old and so the Madras Zoo also is celebrating its centenary this year. In every country and in every city wherever there is a Zoo, it is the joy-world of children; and what is there more worthy of care than a centre of children's joy?

The animals are the dumb teachers of man. "O Fool! You are one of us" say they. "Know you not that you are given more power than we possess, not to misuse it, but to use it to spread more joy?". Even philosophers can learn in a Zoo what they cannot learn by mere contemplation. Cruel men can be made kind by the irresistible pathos of the eyes of the caged animals. There is no end of good in a Zoo. May those who come to hold the Madras Corporation ever look after the Zoo with undiminished care.

30-8-1955.

C. RAJAGOPALACHARI



SHRI SRI PRAKASA
Governor of Madras, who inaugurates the Centenary Celebrations

Governor of Madras

"Raj Bhavan"
Guindy, Madras-22,
20th September 1955.

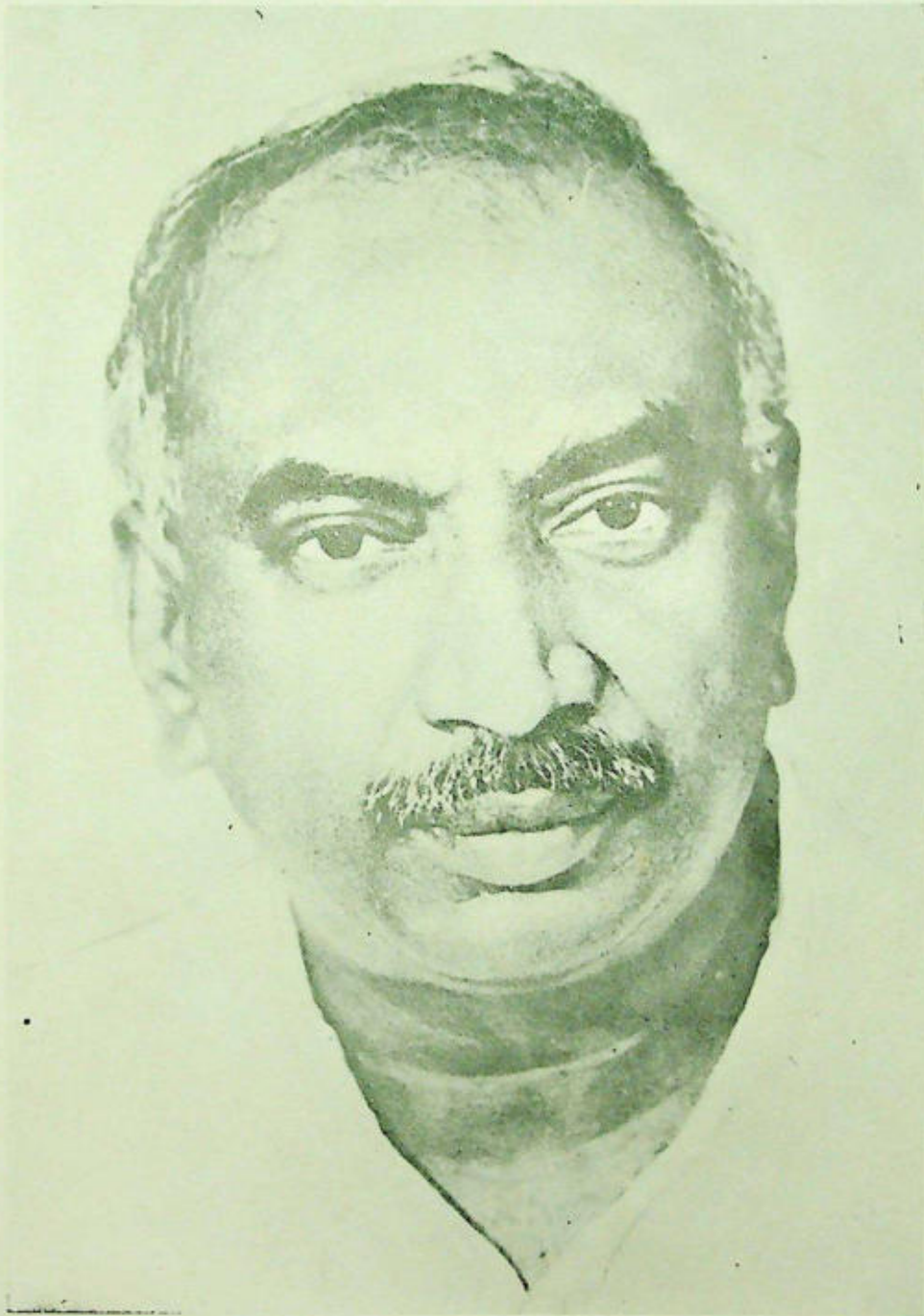
It is a matter of great gratification to me, as it must be to all citizens of Madras, that the time has come when we can celebrate the centenary of our zoo. For fully one hundred years, it has provided to the old and young of succeeding generations, both amusement and instruction, in a safe and simple manner. I am happy indeed that a pictorial souvenir will be brought out on the occasion.

The Madras Zoo can well take pride in the fact that it is the oldest zoo in the country, and has a great historical background. It was started by Dr. Edward Balfour, an officer in charge of the Madras Museum, on 23rd November 1855. At that time, I am informed, the zoo had only a few specimens like leopards and tigers which Mr. Balfour had collected from the Nawab of Carnatic. During these hundred years, the Madras Zoo has been steadily growing, and it has now become a place of attraction and recreation not only to the people of Madras State but to persons coming from outside as well. The zoo, I understand, has now 640 specimens.

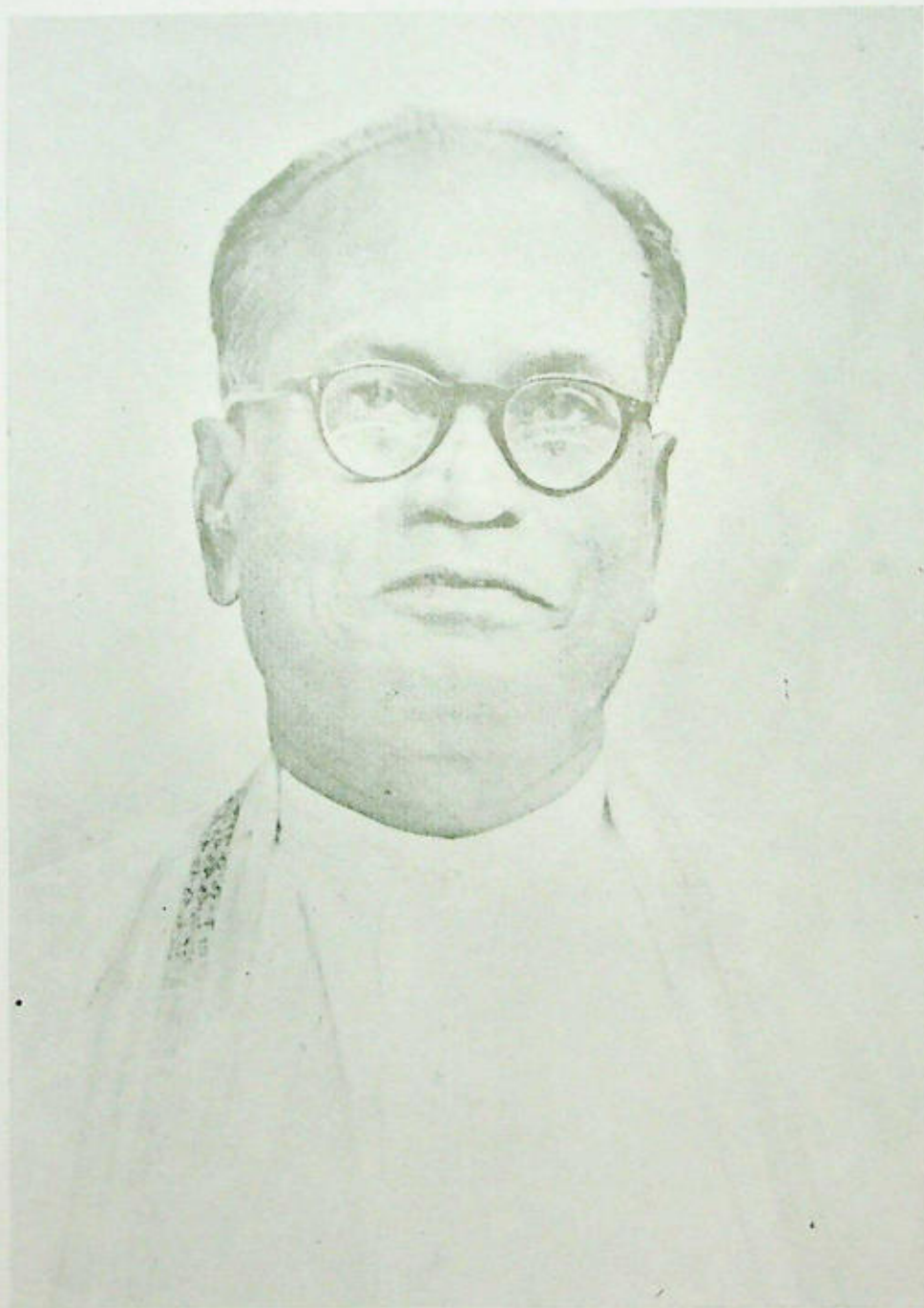
About 1,000 visitors are attracted by the zoo on ordinary working days and quite 3,000 to 4,000 on holidays. This speaks of its great popularity and utility; and the authorities of the Corporation of Madras deserve to be congratulated on the efficient manner in which they are maintaining it. The completion of one hundred years of useful service for an institution is indeed a great event; and it is therefore in the fitness of things that the authorities of the Corporation of Madras should have thought of fittingly celebrating the centenary of the zoo, and incidentally expanding its activity and usefulness.

On this auspicious occasion, I send my warm felicitations to all those connected with the zoo, and my very best wishes for its continued prosperity and usefulness.

SRI PRAKASA,
Governor of Madras.



SHRI K. KAMARAJ
Our Popular Chief Minister



SHRI R. P. SETHU PILLAI, B.A., B.L.
who Delivers the Centenary Commemoration Address

MEMBERS OF THE ZOO CENTENARY COMMITTEE

1. The Worshipful Mayor of Madras, Chairman.
2. The Hon'ble Dr. Justice P. V. Rajamannar,
Chief Justice, High Court of Judicature, Madras.
3. The Commissioner, Corporation of Madras.
4. Dr. U. Krishna Rao, M.L.A.,
Former Minister, Madras State, Lawders Gate Road, Vepery.
5. Sri S. Parthasarathy Ayyangar, I.P.,
Commissioner of Police, Peters Road, Royapettah.
6. Rev. Fr. D. J. Leigh, S. J.,
Professor of English, Loyola College, Madras.
7. Mr. J. P. L. Shenoy, Bar-at-Law, I.C.S. (Retd)
M/s. Simpson & Co. Ltd., Mount Road, Madras-2.
8. Mr. Paul C. Sherbert,
Public Affairs Officer, U.S.I.S., 158, Mount Road, Madras.
9. Mr. S. K. Basu, I.F.S.,
Chief Conservator of Forests, Chepauk, Madras.
10. Mr. C. E. Holland,
"Ascot", Ormes Road, Kilpauk, Madras.
11. Sri S. A. Govindarajan, Asst. Editor, "Hindu", Madras.
12. Sri A. A. Nair, Asst. Editor, "Mail", Madras.
13. Sri V. Emberumanar Chetty,
14. Dr. D. Damodar Das,
President, The Madras Amateur Photographic Society,
15. Sri N. D. Sundaravadivelu,
Director of Public Instruction, Madras.
16. Major P. K. S. Chari, Post Master General, Mount Road, Madras.
17. J. R. Davies, 13, College Road, Nungambakkam, Madras.
18. Dr. Bertie D'Souza, Principal, Veterinary College, Vepery.
19. Sri Venkataramana Reddy,
Jt. Director, Town Planning, Andhra State, Mowbrays Road, Madras.
20. Sri P. V. Ramanujam Chetty,
Hony. Visitor, Zoo, Madras.
21. All Heads of Departments of the Corporation.
22. Zoo Supdt. & C. I. John, Veterinary Assistant.

Special Officer for Zoo Centenary Celebrations : Sri S. SATYAMURTI



SHRI M. A. CHIDAMBARAM
Worshipful Mayor

CENTENARY CELEBRATIONS OF THE MADRAS ZOO

Foreword by

SRI M. A. CHIDAMBARAM

(Mayor of Madras)

IN the case of any institution the Centenary Celebration is landmark in its history. It is a gratifying record of its utility to the public at large and the Madras Corporation can justifiably feel proud in maintaining such useful institutions. The Madras Zoo was inaugurated on the 23rd November 1855. It is the oldest Zoo in India. The Zoo has great educative value not only to the children but to older people also. To many of them the sight of a wild animal is rather a phenomenon. The fact that the Institution is celebrating its Centenary shows that it has served a very useful purpose and it is worthy to be improved upon.

I cannot say the Madras Zoo is complete by itself as at present. There is considerable scope for improvement and large number of other wild animals have to be acquired and as far as possible it should be the attempt of the authorities to locate them in natural surroundings. The Zoological Gardens should be expanded to make it a picnic spot, where people can spend hours together. It should be the resort of dilettante and the student of real learning. During the evacuation period in 1942 many dangerous animals had to be shot dead and some of them have not yet been replaced. This requires urgent attention of the Corporation Authorities. Finance of course, is the great bottle-neck but when there are plans and money is found for the execution of various plans of development, Government

should not stint to spend a few lakhs of rupees for the improvement and maintenance of the Zoo and keeping wild animals and rare species of birds in natural surroundings. I wish the Zoo many more years of continued useful service not only to this City but to the country as a whole.

My message will not be complete if I do not record my great appreciation of the strenuous efforts taken by Sri V. N. Subbarayan, Commissioner, Corporation of Madras and Sri S. Satyamurti, Chief Accounts Officer, and Special Officer for the Centenary Celebrations who have spared no pains to make this Celebration a success. My thanks are due to all the departmental Heads in the Corporation of Madras, the Superintendent of Zoo and his assistants and all the officials of the Corporation who were all responsible to make the Centenary Celebrations a success.



Sri T. S. GOVINDASWAMY
Dy. Mayor



SHRI V. N. SUBBARAYAN
Commissioner

THE MADRAS ZOO CENTENARY SOUVENIR

PREFACE

ONE of the numerous attractions of the City of Madras is the Zoo in the People's Park maintained by the Corporation of Madras. It is perhaps the oldest institution of its kind in India. Thanks to the strenuous efforts of Dr. Edward Balfour, the Father of the Zoo in Madras who exhibited at the Madras Museum in 1853 when he was an Officer-in Charge of the Museum, two large "Cats" a Leopard and a Tiger, a Zoological Garden was started as an adjunct to the Museum in 1855 which was later on transferred to the People's Park, and since then it has remained and is remaining a Municipal Concern. Easily accessible from all parts of the City and situate in ideal surroundings, the Zoo contains a fine collection of animals and birds which it is worth one's while to see. The Zoo covered an area of 11 acres 13 grounds and 561 sq. ft. inclusive of a small lake on which boating is allowed. An additional area has now been added to the Zoo and its present total extent is about 20 acres.

Notwithstanding the ravages of the War and the financial stringency often facing the Corporation, the needs of the Zoo have been receiving the attention of the Council. The stock of animals, birds and reptiles has been replenished from time to time and facilities for amusement and study within the Zoological Gardens have been considerably extended and enlarged. In this connection I have to mention how grateful we are to His Excellency the Maharajah of Bhavanagar, former Governor of Madras for the very valuable gifts he made to the Zoo by presenting a pair of gibbons, macaw parrots and albino bucks and for helping us to secure a Lion and Tiger from

Junagadh and to His Excellency Shri Sri Prakasa, the present Governor through whose efforts a rhinoceros was obtained from Assam and who has been taking interest in the development of the Zoo.

The wild animals and birds, etc. are housed in cages and enclosures specially designed to suit each species. Improvements, additions and alterations have been carried out on the eve of these celebrations. Thanks to the Governments of Madras and Andhra State and a number of other donors, the Zoo has been made very attractive. We have received gifts of animals and birds from the Mysore and Calcutta Zoos in India and from Zoos in foreign countries, namely the U.S.A., the U.S.S.R., Germany and Ceylon which have also added considerably to the attraction of the Zoo.

The Centenary of the Zoo is being celebrated, commencing from the 31st October 1955. Many philanthropic gentlemen have come forward to give donations for enclosures inside the Zoo and it is hoped that many more will also help us to give comfortable habitation to the most valuable animals that we have secured.

Considerable interest is now being evinced both by the Government and by other Organizations to the preservation of wild life. The Zoo is not only a place of amusement and recreation but it is a place of education. It is a place which delights children and instil in them a love of wild life based on sympathy and understanding. The long felt want of a Children's Corner in the Zoo is soon in sight of fulfilment and the Worshipful Mayor, Sri M. A. Chidambaram has come forward to fulfil that long-felt desire. During the Centenary Celebrations of the Zoo, foundation stone for the same will be laid by the Hon'ble the Chief Minister of Madras. The Children's Corner will contain pets and other harmless animals with which children can play besides other attractions.

It is a great and good augury that the Centenary Celebrations will be inaugurated by the most lucky hand of His

Excellency the Governor of Madras, Shri Sri Prakasa on the 31st of October 1955 and that Prof. R. P. Sethu Pillai, B.A., B.L., Professor of Tamil, Madras University, will deliver the Centenary Commemoration Address. We are also very fortunate in getting all the Hon'ble Ministers to take part in these celebrations. We are grateful to all of them. We are also grateful to the distinguished gentlemen who have contributed their valuable articles to the Souvenir or sent messages and to Messrs. Gnanodaya Press who have brought this beautiful publication in time. Entire credit for the success of the Centenary Celebrations is due to the untiring effort of our young and energetic Mayor Sri M. A. Chidambaram who planned and designed every minute detail and spent a good deal of his time and energy in formulating the improvements to the Zoo which were carried out and in organising the celebrations. My sincere thanks are due to him. I also thank the various donors who have kindly contributed for making improvements to the Zoo and to the Centenary Celebrations.

I place on record my appreciation of the services rendered and the valuable assistance given by Sri S. Satyamurti, Chief Accounts Officer, Corporation of Madras and Special Officer for the Zoo Centenary Celebrations in bringing out this attractive Pictorial Souvenir. I am also thankful to the Health Officer and the Superintendent and other staff of the Zoo and other Heads of Departments and staff for having co-operated with me to make the publication an attractive one and also the Centenary Celebrations a success.

"Ripon Buildings"
Madras, 20th Octr. 1955 }

V. N. SUBBARAYAN,
Commissioner.

100 YEARS

— AT A GLANCE

- 1854-55 A young cheeta and a young tiger were exhibited in the Madras Museum.
- 1855 With the collection of wild animals gifted by H. E. the Nawab of Carnatic, on 23-11-1855, a small zoo was established in the Museum as an adjunct under the care of Dr. Balfour who can be said to be the father of the Madras Zoo. Admission to the Zoo was free. Govt. sanctioned Rs. 1,000/- for the construction of cages and recurring monthly expenditure of Rs. 180/- for maintenance.
- 1861 In October Zoological collections were transferred from Museum to People's Park under the management of the People's Park Committee. Government sanctioned Rs. 3,500/- for the purpose.
- 1865 Maintenance of Zoo was transferred to the Madras Municipality.
- 1869 Contribution of Rs. 3,960/- was received from Government. The animals were caged or penned in different parts of the Park but wild animals were caged in one compact area.
- 1871 An elephant and a bison with calf were acquired.
- 1874 Wolf's cage was built.
- 1877 Zoo received some rare additions, Orangoutang from Calcutta Zoo (in exchange for a young lioness), a rhinoceros and some black swans and Emus. Rhino's enclosure was put in good repairs.
- 1878 Government granted Rs. 2,000/- which was spent for acquiring more animals, such as one ostritch, two kangaroos, two tigers, two sambars one wolf, four crocodiles, etc. — A Howdah was made for joy rides on the elephant.
- 1895 The Managerie enclosure was extended on the northern side and the Llama brought from South America was housed there.
- 1902 Shed with enclosure was constructed for the ostritch.

- 1903 A new Aviary was constructed at a cost of Rs. 3,000/- on the Island to house rare birds.
- 1904 Government gave a special grant of Rs. 10,000/- for improvements to Managerie and Park. Zinc fencing was put up and new cages and enclosures were provided for animals and birds.
- 1910 An elephant was presented by the Government to the zoo.
- 1911 A new wooden bridge was constructed over the lake on the eastern side of the zoo connecting the Monkey Island.
- 1913 A cage was constructed for bears. Further improvements were effected.
- 1915 Deer's enclosure was fenced and completed ; road ways were formed round the new bears' cage. The zoo and park were placed in charge of the Licensing Officer of the Municipality.
- 1921 Entrance fee was raised from 1/2 anna to 1 anna Further improvements were effected.
- 1923 The Licensing Officer ceased to have control over the Park and the Zoo. These two were placed in charge of separate officials. A few more cages and sheds were put up and the old ornamental red cage of the tiger was completely renovated.
- 1925 A monkey house, an elephant shed and a rest house for sheltering visitors were constructed. Wild animals' cages were provided with outing yards with bars and iron gates.
- 1929 Further extension towards the South was carried out. A sum of Rs. 33,600/- was sanctioned and substantial improvements were taken up on hand. A Napier terrace with cages and moats was constructed to house the lions giving them larger freedom of movement. Barred outing yards were provided to some cages. Tiled canopies were put over old cages to give protection to animals. A Kangaroo shed and a new aviary were constructed.
- 1931 A cage for baboons and an enclosure for ducks and crocodiles were built and gifted to the Zoo by Sri C. Cunniab, Proprietor of Royal Theatre.
- 1933 A shelter was constructed for the deer in deer enclosure. The Zoo was placed in charge of a qualified Superintendent, and Dr. S. G. Manavala Ramanujam, Professor of Zoology, Presidency College, Madras was nominated as Honorary visitor of the Zoo.

- 1936 A lion's cage and a camel shed were constructed.
- 1937 A detailed survey of the zoo was made and improvements were examined. A three year programme was prepared and funds were provided under the respective budget allotments for three years for carrying out improvements. The unsightly rickety zinc fencing of the zoo compound was completely removed and ornamental compound walls were constructed. The bank of the lake around the island was provided with rivetment. New aviaries were constructed. An ornamental parapet wall with a cement concrete promenade was provided around the lake. A boating jetty was constructed. A snake house, and cages for wolves, hyaenas, leopard and small species of cats were constructed.

Additions to live stock were made from time to time with the funds available, latest additions being a pair of giraffes, a pair of zebras and a tusker elephant. The Zoo had been receiving animals as gifts from Rajas, Zamindars and other philanthropic gentlemen.

- 1936-37 A start was made for the construction of cages with outing-yards for wild animals and another shed was provided to stable Giraffes and camels. A programme for improvements at an estimated cost of Rs. 80,000 was drawn up. Rs. 13,000 was provided for the year towards the 1st instalment of the Programme. A tiger cub was born in the zoo for the first time. The tiger cub and the lioness cub were brought up together with a view to conduct the experiment of cross breed between the tiger and the lioness resulting in the birth of a Tigon.
- 1937-38 An aviary shed was constructed for the Storks. Water supply pipes were renewed. The Lion's moat was improved and remodelled. Improvements were carried out to the gardens, rest-house and rivetment of the banks.
- 1938-39 Work on the rivetment of zoo lake, aviary for fancy birds on the island, bathing platform with drainage for washing the elephants, and ornamental R. C. landing jetty for visitors plying pleasure boats in the lake were all completed. A pair of Giraffes were purchased in March 1939 for Rs. 6,750.
- 1939-40 Cages for leopards with compartments, for hyaenas and allied species with 12 compartments, a new two storeyed cage for the civets and other species of cats with 12 compartments six in each floor, a new raised circular cage of two storeys for snakes

with 20 compartments 10 on in each floor, and a life-size statue of a gorilla with rockery and fencing complete were provided. Provision of two portable teakwood mounting platforms for joy rides on the trained elephant and a comfortable Howdah were also provided.

One full grown bull for carting purposes and one trained donkey with a set of harness for the meat distribution cart were presented to the Zoo by its Superintendent, Sri P. V. Ramanujam Chetty. In September 1939, Rinderpest broke out for the first time among the deer herd in the zoo, but fortunately because of prompt prophylactic measures taken, the disease was quickly controlled and an otherwise feared worst loss was averted.

Shooting of films allowed on rent in the zoo.

- 1940-41** New cages with latest equipments were built in place of the four blocks of dilapidated cages in front of the zoo, and a public convenience was constructed. A zebra was born in the Zoo.
- 1941-42** A cafe was opened for the benefit of the public and it was let on lease. Due to evacuation of citizens, the income dwindled.
- 1942-43** 1942 was a very unhappy year in the history of the Madras Zoo. It was the war period and there was threat of enemy action to the City itself. On account of the City being threatened suddenly with danger from enemy action, the Government ordered on 11-4-1942, the dangerous animals and poisonous reptiles in the zoo to be destroyed. The dangerous and wild livestock including snakes were shot at and the remaining animals and birds were transported to Erode Municipality temporarily during War.
- 1943-44** On 25-1-1944 the Council resolved to bring back the animals from Erode. With great difficulty caused by paucity of railway waggons, the Zoo animals and birds were completely brought back from Erode to Madras by the end of the year and the zoo activities restored, to normal conditions.
- 1944-45** Avenue trees were planted all over to provide more shade.
- 1945-46** A separate enclosure for zebra was constructed. The Zoo lake was cleaned and breeding of larvicidal fish in it was begun, early in the year. Erection of 3 sheds for elephants was taken up. Both the elephants in the Zoo were hired with their ornamental dresses and other equipments for ceremonial occasions.

- 1946-47 15 boats were newly purchased from Messrs. Brunton & Co., Cochin, out of which 7 plied in the zoo lake and 4 in the pond in front of the Stadium in People's Park.
- 1947-48 Camels also were hired to the public for use on ceremonial occasions. Sheds for camels and Sambur deer were completed and other improvements were effected.
- 1948-49 A number of valuable animals were acquired. A female Silvery Gibbon of Java, male black Hoolock Gibbon and coloured Macaw parrots were gifted by His Excellency the Maharajah of Bhavanagar, Governor of Madras.
- 1949-50 One Red Faced Pig Tail Monkey was received from Sri T. R. Mahalingam and four Albino bucks were presented by His Excellency the Maharaja of Bhavanagar. After the arrival of bucks, the Does fawned a young buck and a Doe.
- 1950-51 As a measure of economy and with a view to solve the accommodation problem three adult lions and a pair of lion cubs were sold to a circus company. The favourite Giraffe "Reetha" died in the year. Giraffe enclosure was extended and reconstructed. Fencing of the deer enclosure was raised. The 2 wooden bridges over the zoo lake renovated and a small enclosure to keep an Indian Python was constructed. A pictorial guide book describing each animal, its habit, food and feeding habits and other useful information was printed, for the first time. Young animals trained to behave well towards children. Hyena cubs, bear cubs, tiger cubs, lion cubs, wallaby, young donkeys, lambs, zebra filly, young monkeys, cockatoo, parrots, fish, etc. chosen to form the children's zoo.
- 1951-52 A Pets' Show organised and conducted by the Corporation of Madras was opened by His Excellency the Maharajah of Bhavanagar on 6-1-1952. There was a fair number of exhibits. 29 pets were exhibited, including one baby elephant, two pythons, parrots, dogs, cats, a deer and some rare varieties of fish. The zoo's exhibits were 3 lion cubs born in the Zoo, a stump-tail monkey and a bonnet monkey which greeted His Excellency by presenting him a copy of the zoo guide. There was a record receipt from Zoo during the year amounting to Rs. 1,01,632-1-0.
- 1952-53 Many gifts were received, prominent among them being a fine specimen of South Indian Bison kindly secured by Sri M. Kesava

Unni Nayar, Chief Conservator of Forests, Madras. The Government of Assam supplied at cost a pair of "Tragopan Pheasants". An automatic refrigerating unit with water pipe and electric motor connections was installed under an ornamental umbrella shed within the zoo near the lion's moat. Zoo receipts during the year totalled Rs. 96,603-13-0. Owing to drought, the zoo lake completely dried up in the earlier part of the year and pleasure boats could not be plied then. From May 1952, the lake filled up and boating was resumed.

1953-54 A Rhinoceros "Kushal" acquired through the kindness of Hon'ble Sri Bishnuram Mehdi, Chief Minister of Assam, through the good offices of His Excellency the Governor of Madras, Shri Sri Prakasa. There was record receipt from the Zoo which was let on lease for Rs 1,03,000 plus Rs. 300 per mensem from the date of arrival of rhinoceros in the zoo.

1955 October 31st 1955, 4-30 p.m. Zoo Centenary Celebrations under the distinguished presidency of His Excellency the Governor of Madras, Shri Sri Prakasa.

SIGNIFICANCE OF THE ZOO CENTENARY MEMORIAL TOWER

By

SRI M. RADHAKRISHNA PILLAI, B.A., B.L.,

Leader of the House in the City Council.

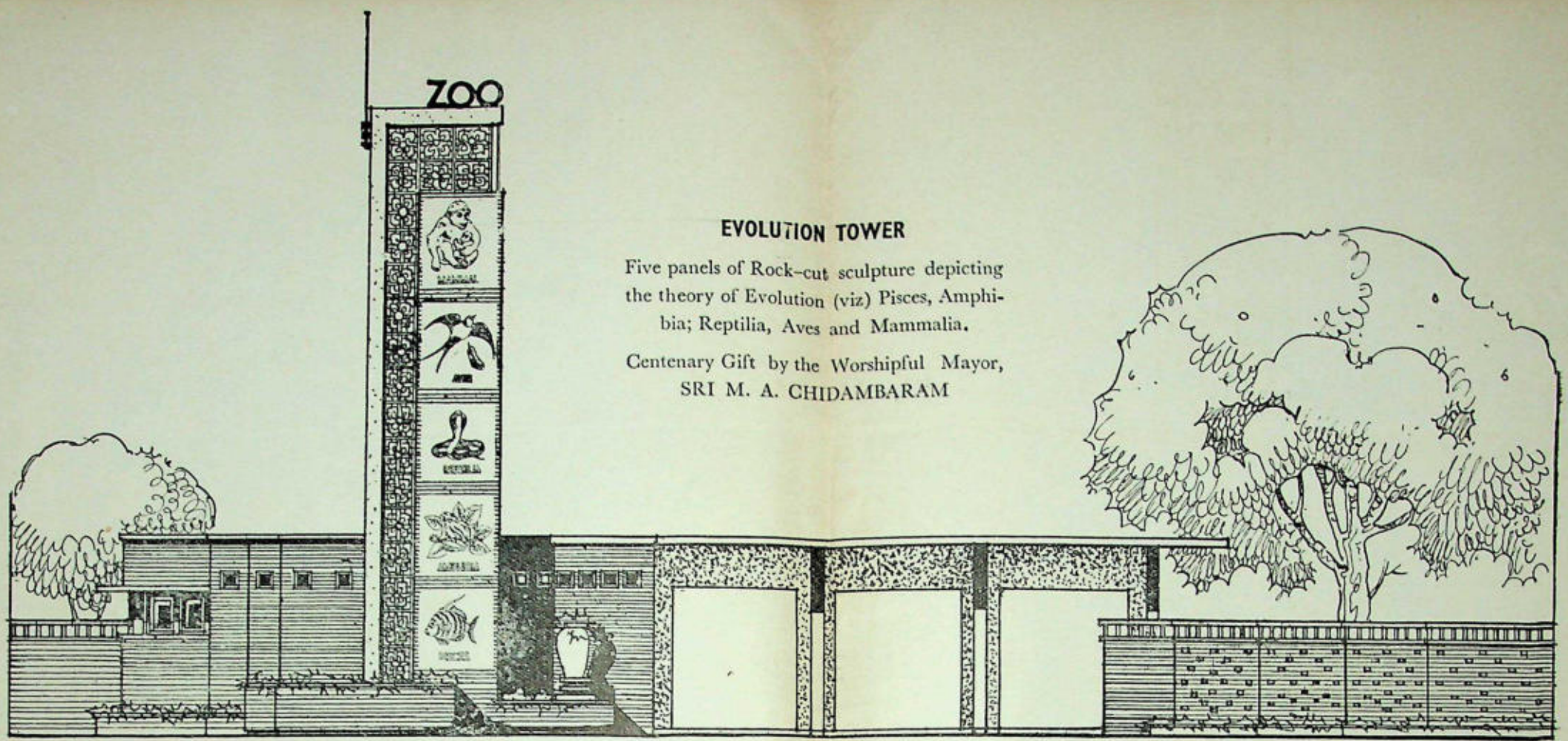
THE world is full of changes, and every day some change or other takes place. Some changes occur so slowly that we cannot see them at all. By observing the results of these changes, too, scientists have figured out what must have happened.

To-day there are over a million different living species of plants and animals. Every species that we know to-day has come from some other species. Among its ancestors there was one change after another, but these changes some times took millions of years.

A very quick change overtook the Madras Zoo in its history of 100 years—the quickest change to stupefy a visitor and lose his bearings. If a visitor who had visited this zoo in June 1955 were to come back now, he might easily think himself in a different zoo. The face of the garden has changed in many ways.

Before entering the portals of the Zoo every visitor now will stay for a while and gaze at the tower in wonderment and give thought to his or her own ancestry. You are reminded of the ceaseless changes which evolved the human species.

In the ascending column of the tower which we call as 'the Evolution Tower' you will find the Fish (Pisces) in the lowest order, the frog (Amphibia) in the next, the snake (Reptilia) in the third, the Bird (Aves) in the fourth, and finally the Ape (Mammalia) of the highest order.

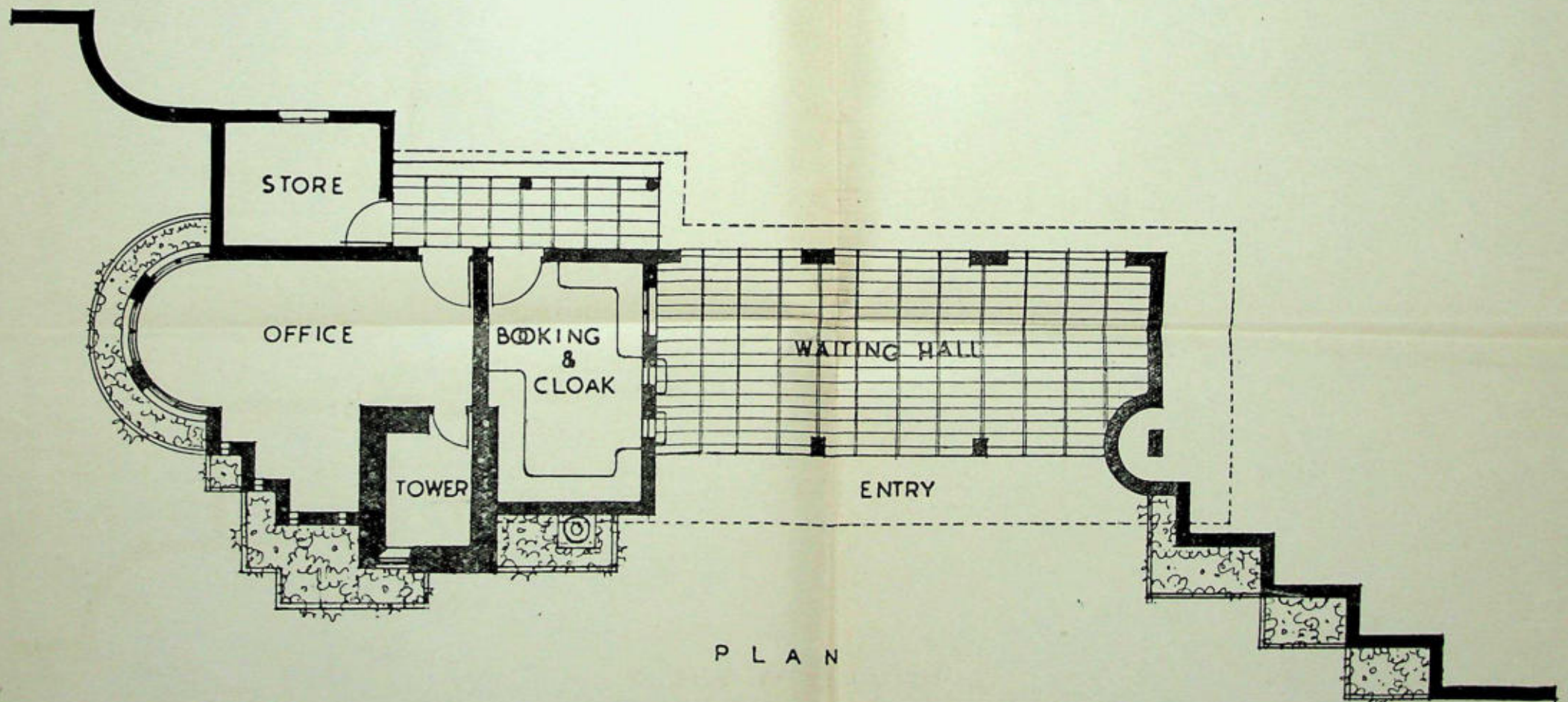


EVOLUTION TOWER

Five panels of Rock-cut sculpture depicting the theory of Evolution (viz) Pisces, Amphibia; Reptilia, Aves and Mammalia.

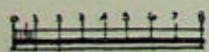
Centenary Gift by the Worshipful Mayor, SRI M. A. CHIDAMBARAM

ELEVATION



PLAN

SCALE



NEW CENTENARY ENTRANCE GATE OF THE ZOO

DESIGNED BY
G VENKATARAMANA REDDY
A.R.I.B.A. A.I.I.A.
JOINT DIRECTOR OF TOWN PLANNING
ANDHRA STATE
HONORARY CONSULTANT

This ascent of changes in the formation of living beings is so interesting and absorbing that the visitor who gets into the zoo from now on will realise gazing at the odd rock-cut sculptures of the fish, frog, snake, bird and the ape that he is a part of the life that started countless millions of years ago.

Some ostracoderms produced bony fish; some bony fish produced lobe fins; some lobe fins produced amphibians; some amphibians produced reptiles; some reptiles produced birds and mammals; some mammals produced primates and some primates produced man.

Step by step, evolution moved animals to higher and higher levels. Over specialised animals ended in blind alleys, but this steady up-hill trip produced animals with ever greater all round efficiency which freed them more and more from the tyranny of nature's changes.

Let us see how these changes took place, and these changes are important steps to freedom.

The invertebrates were at the mercy of the water. If its temperature changed, or if the chemicals in it changed, the tissues of these animals changed, too. When the changes were too great, the animals died.

Stronger animals in the shape of fishes have evolved to survive these ordeals. The bony fish have tissues in which the chemicals remain constant, even though there are chemical changes in the water. But they are still at the mercy of heat and cold, and of course they can't live outside the water.

From the above group the amphibians evolved and they can stay out of water for long periods. They have lungs and legs. But they can't stand too great a change in temperature, and they will have to lay their eggs in water.

In the next stage of evolution the reptiles became even more independent of water. They can live entirely on land, and

their eggs are laid on land. Yet they are at the mercy of climate and temperature. Later on the birds became the glorified reptiles with the power of flight.

The mammals have an even body temperature, whether their surroundings are hot or cold, and their young develop inside their mother's bodies. Still their food supply is at the mercy of the weather. They live or die in their surroundings as they find them, and so the mammals are not entirely free.

Man is not only independent of his surroundings; he can, in addition, change his surroundings to suit himself. He can free himself more and more from nature.

Now let's look back at the procession of the rulers of the world—the fish, amphibians, the reptiles, the birds and the mammals, and finally man. Will man give way to a new kind of creature as every other dominant type before him has done? Or is he the last one? Will his body evolve into some other animal, or has his bodily evolution stopped?

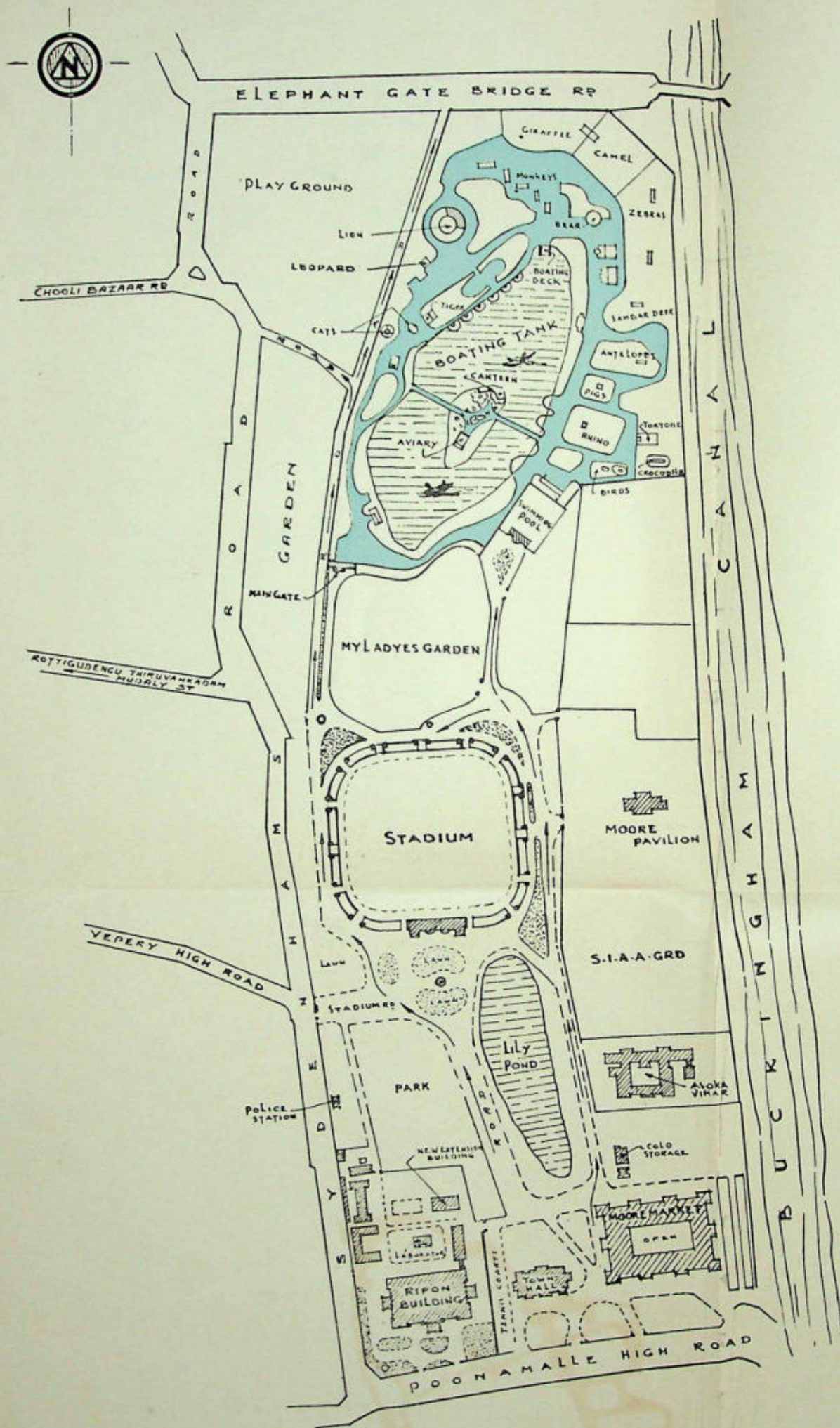
Can we learn the answer from the fact that modern man has undergone no important bodily changes in the last 50,000 years? Not really, because even 50,000 years is not more than a few ticks of the clock in the story of evolution.

More important to the answer is the fact that civilization is destroying the possibility of any groups of men remaining isolated from each other for long periods of time. And most important of all, man is free from some of the conditions that determined the evolution of other animals. The fish gave way to the amphibians when the ponds dried up. The reptiles gave way to the birds and mammals when the climate grew colder. Man became the most important of the primates because he was able to leave the trees when the forests began to shrink. Animals could not free themselves from nature. But man can.

If these changes happen so slowly we can't see them, how do we know they have happened at all? A bird and a fish certainly don't look much alike. How can we be sure that they are related to each other?

PLAN OF PEOPLES PARK AND ZOO

SCALE 1 inch = 264 FEET



DRAWN BY: C.K.Rao
D-10-10-55

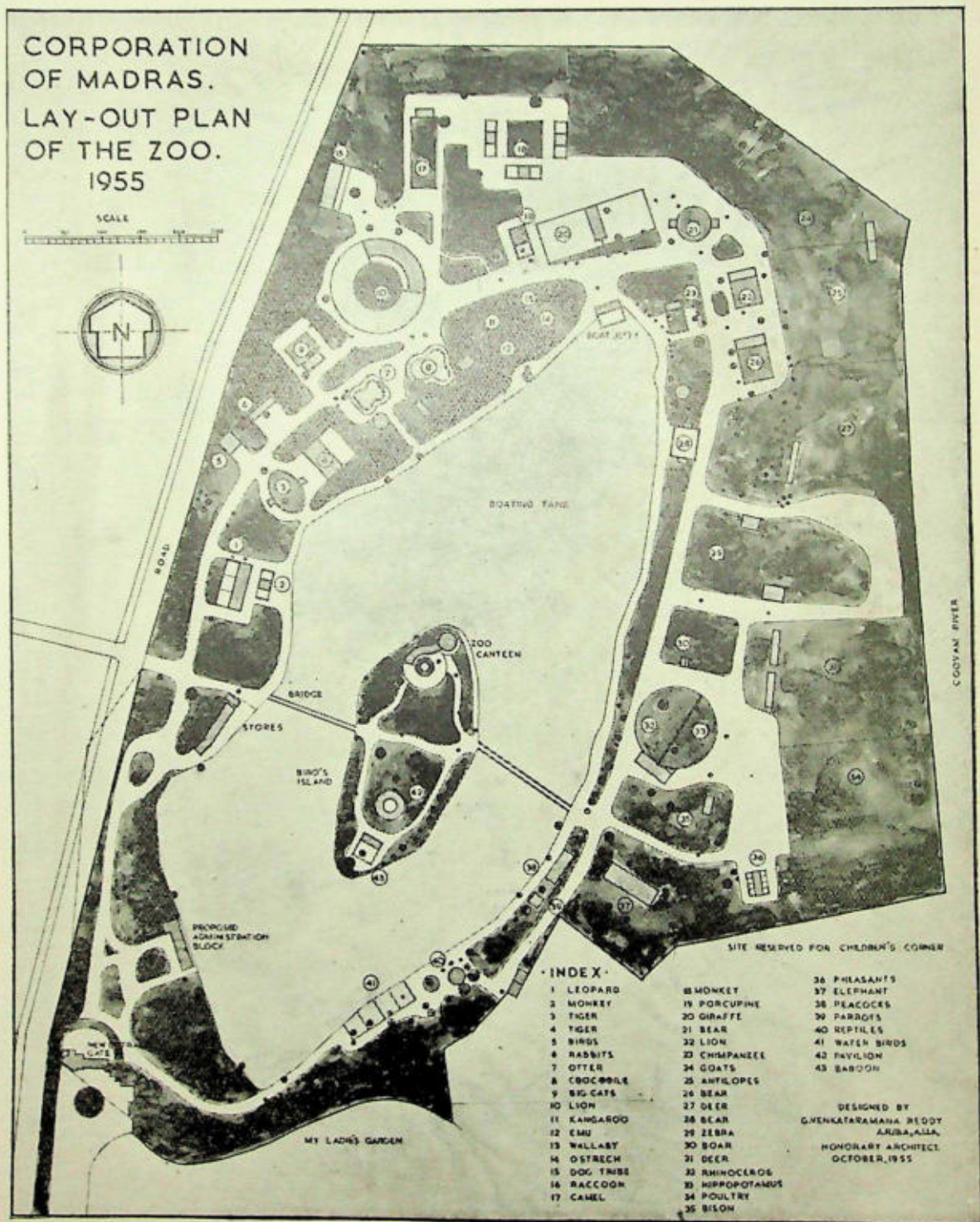
A.S.V.
H.L.Y.SS.
H.D.S.

A.E.(SPL)

ENGINEER

CORPORATION
OF MADRAS.
LAY-OUT PLAN
OF THE ZOO.
1955

SCALE
0 100 200 300 400 500



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- 4 TIGER
- 5 BIRDS
- 6 RABBITS
- 7 OTTER
- 8 CROCODILE
- 9 BIG CATS
- 10 LION
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- 16 RACCOON
- 17 CAMEL

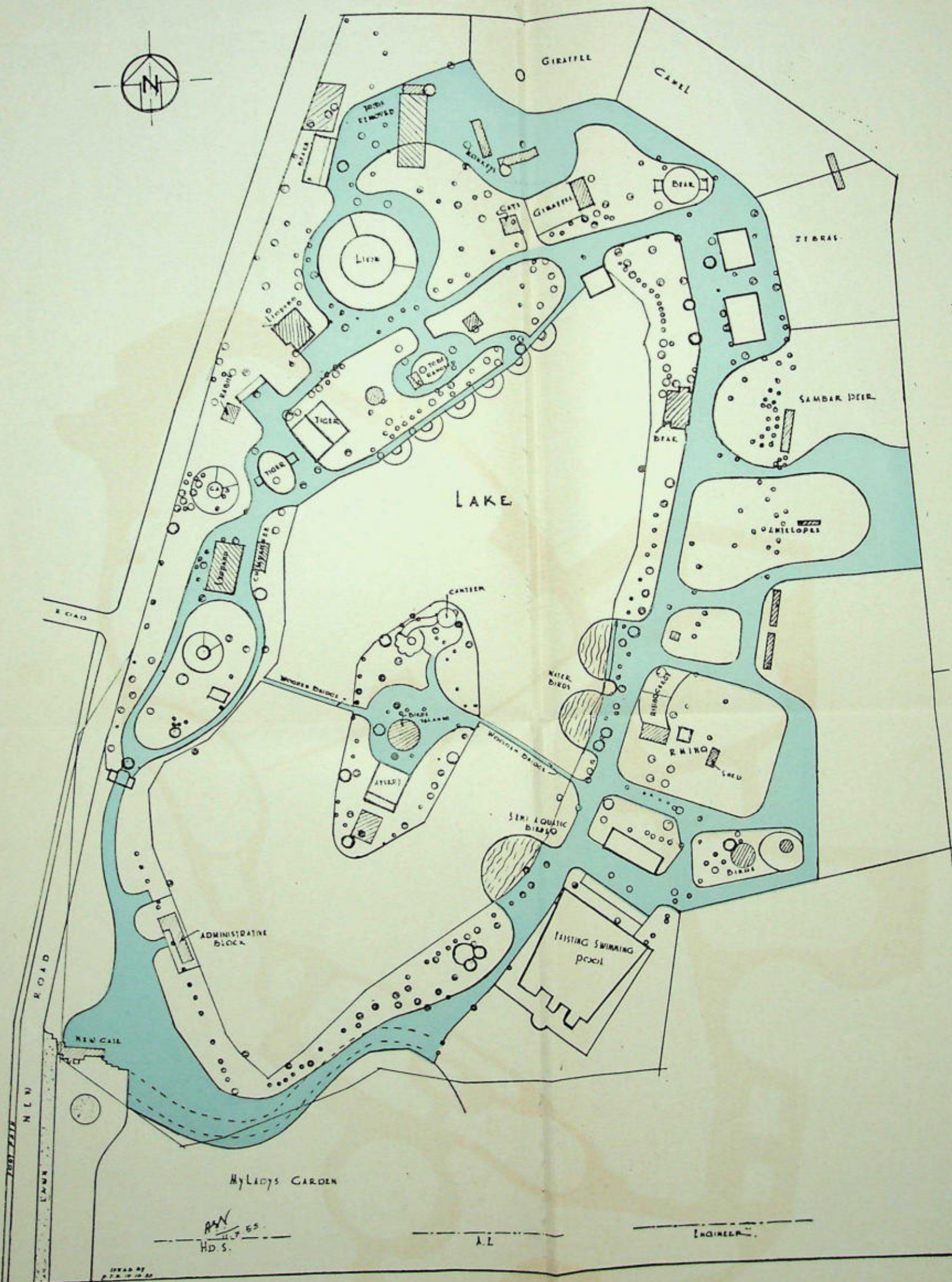
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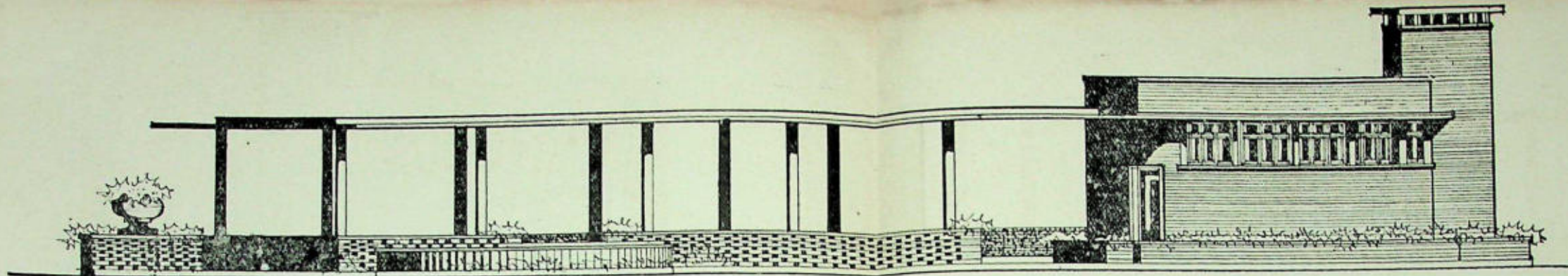
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- 41 WATER BIRDS
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DESIGNED BY
G. VENKATARAMANA REDDY
ARUBA, ALA.
HONORARY ARCHITECT.
OCTOBER, 1955

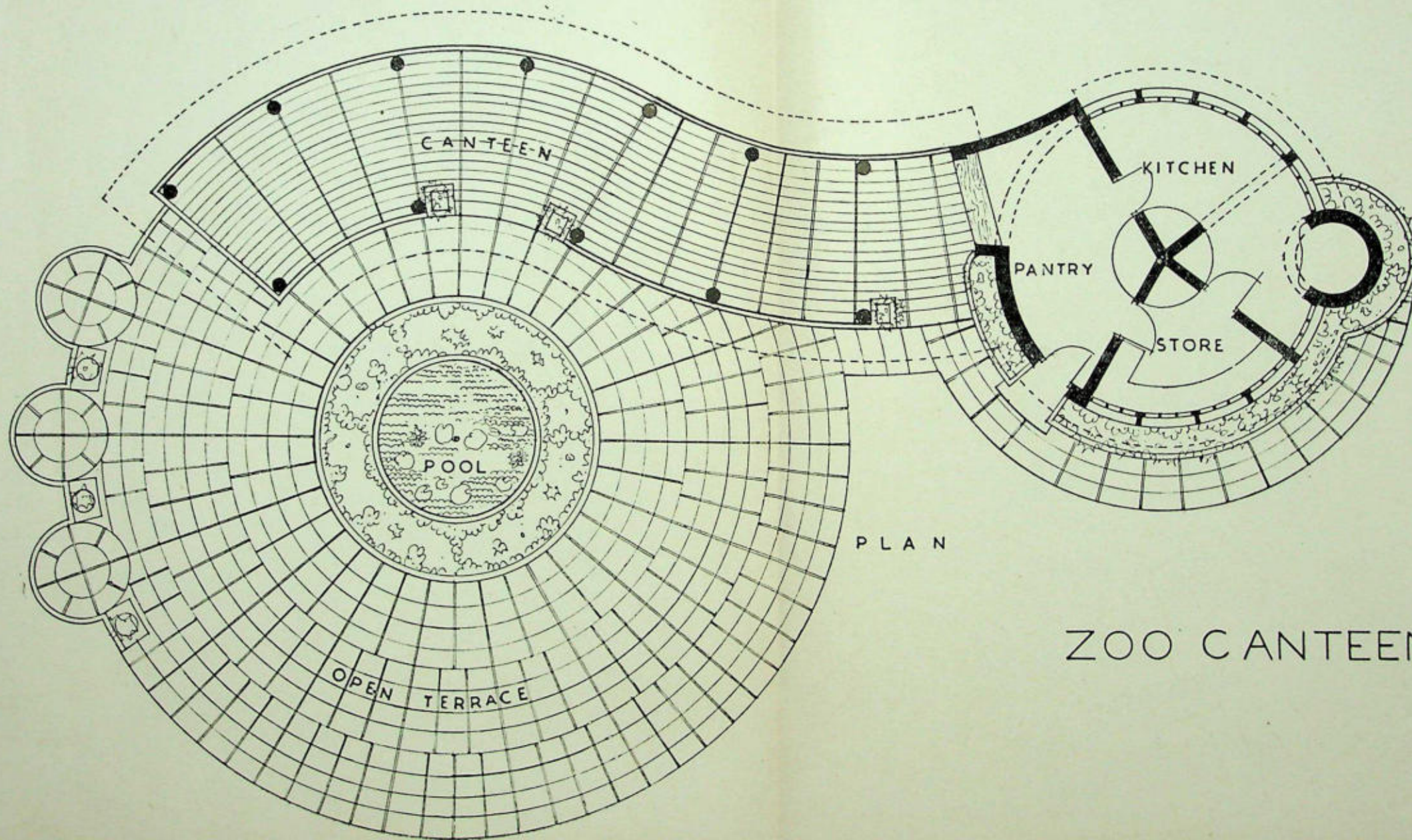
SCALE: 66 FEET TO AN INCH.

SCALE: 66 FEET TO AN INCH.





ELEVATION



PLAN

ZOO CANTEEN

Up until 400 years ago most people were convinced the world was flat. It was Fernando Magellan and his crew who proved that the world was round by sailing around it. In the same way, most people believed that everything in the world had been created in the beginning just exactly as it is now. It was Charles Darwin, more than any other person, who convinced people almost a hundred years ago that the different species were all related to each other and showed how one species was descended from another.

Darwin proved the truth of evolution, the descent with change of one species from another. Where others before him had failed, Darwin succeeded in convincing the world that he was right about evolution. He succeeded for two reasons: He collected an enormous number of facts and put them together so that they told the whole story. And he not only declared that evolution occurred, but he also explained how it worked and what caused it. This he called the theory of natural selection.

Very few people know about these changes which have taken place in nature, and now all who visit the Madras Zoo will not fail to go with a fair amount of knowledge about the evolution of mankind; the 36 feet tall imposing tower depicting the various stages of evolution will become a land mark in the City of Madras. The members of the City Council are grateful to the popular Mayor M. A. Chidambaram for his munificent donation of the panels imbedded in the tower representing the evolution theory.

LIST OF SPECIES EXHIBITED IN THE MADRAS ZOO

MAMMALS

1. Indian lion (*Panthera leo persica*)
2. Tiger (*Panthera tigris*)
3. Leopard (*Panthera pardus*)
4. Black panther (*Panthera pardus*)
5. Hyæna (*Hyaena hyæna*)
6. European wolf (*Canis lupus*)
7. Jackals (*Canis aureus*)
8. Civet cat (*Viverricula malacensis*)
9. Palm civet (*Paradoxurus niger*)
10. Sloth Bears (*Melursus ursinus*)
11. Himalayan bears (*Selenarctos thibetanus*)
12. Russian brown bear (*Ursus arctos*)
13. Polar bear (*Thalarctos maritimus*)
14. Raccoons (*Procyon lotor*)
15. Wolverine (*Gulo luscus*)
16. Otter (*Lutra lutra*)
17. Malabar squirrel (*Ratufa indica*)
18. Guinea pigs (*Cavia sp.*)
19. Porcupine (*Hystrix leucura*)
20. Rabbits (*Lepus sp.*)
21. Stump tailed monkey (*Macacus arctoides*)
22. Rhesus monkey (*Macaca mulatta*)
23. Bonnet monkeys (*Macaca radiata*)
24. The lion tailed monkeys (*Macaca silenus*)
25. The Sooty mangabeys (*Cercocebus fuliginosus*)
26. The Yellow baboon (*Papio cynocephalus*)
27. Sacred baboon (*Papio hamadryas*)
28. Black langur (*Kasi johnii*)

- | | | |
|-----|---------------------------------|------------------------------------|
| 29. | Common langur | (<i>Semnopithecus entellus</i>) |
| 30. | Indian one horned
rhinoceros | (<i>Rhinoceros unicornis</i>) |
| 31. | Indian gaur | (<i>Bibos gaurus</i>) |
| 32. | Black buck | (<i>Antelope cervicopra</i>) |
| 33. | White Antelopes | (<i>Antelope cervicopra</i>) |
| 34. | Four horned antelopes | (<i>Tetracerus quadricornis</i>) |
| 35. | Nilgai | (<i>Bocelaphus tragocamelus</i>) |
| 36. | Spotted deer | (<i>Axis axis</i>) |
| 37. | Sambar deer | (<i>Rusa unicolor</i>) |
| 38. | Barking deer | (<i>Muntiacus muntjak</i>) |
| 39. | Indian chevoraitan | (<i>Moschiola memina</i>) |
| 40. | Indian elephant | (<i>Elephas ulabatus</i>) |
| 41. | Wallabies | (<i>Macropus ulabatus</i>) |
| 42. | Camels | (<i>Camelus dromedarisu</i>) |
| 43. | Zebra | (<i>Equns burchelli</i>) |
| 44. | Chimpanzee | (<i>Pan traglooytes</i>) |
| 45. | Ratel | (<i>Mellivora capensis</i>) |
| 46. | Red mongoose | (<i>Herpestes edvardue</i>) |

AVES

- | | | |
|-----|-----------------------------|-------------------------------------|
| 1. | Emus | (<i>Drommaeus novahollandiae</i>) |
| 2. | Pea fowl | (<i>Pavo cristatus</i>) |
| 3. | Night herons | (<i>Nycticorax griseus</i>) |
| 4. | White swan | (<i>Cygnus olor</i>) |
| 5. | Black swan | (<i>Cygnus stratus</i>) |
| 6. | Macaw parrots | (<i>Ara ararauna</i>) |
| 7. | Macaw parrots | (<i>Ara chloroptera</i>) |
| 8. | Red lory | (<i>Lorius rubra</i>) |
| 9. | Sulphur crested
cockatoo | (<i>Cacuatva galerita</i>) |
| 10. | White pea fowl | (<i>Pavo cristatus</i>) |
| 11. | Sarus cranes | (<i>Grus antigone</i>) |
| 12. | Pelicans | (<i>Pelicanus philippensis</i>) |
| 13. | Demoiselle cranes | (<i>Grus virgo</i>) |
| 14. | Brahminy ducks | (<i>Tadorna casorca</i>) |
| 15. | Stork | (<i>Ciconia alba</i>) |

- | | | |
|-----|----------------------------------|------------------------------------|
| 16. | Adjutant storks | (<i>Leptoptilus argala</i>) |
| 17. | Red vented bulbul | (<i>Mospastes cafer</i>) |
| 18. | White cheeked bulbul | (<i>Molpastes leucogenys</i>) |
| 19. | Sultan bulbul | (<i>Otocompsa jocosa</i>) |
| 20. | Brahminy or Black
headed Myna | (<i>Temenuchus pagodarum</i>) |
| 21. | The common myna | (<i>Acridotheres tristis</i>) |
| 22. | The Baya | (<i>Ploceus philippinus</i>) |
| 23. | The White backed
munia | (<i>Uroloncha striata</i>) |
| 24. | White throated munia | (<i>Uroloncha malabarica</i>) |
| 25. | Spotted munia | (<i>Uroloncha punctata</i>) |
| 26. | Indian pitta | (<i>Pitta brachyura</i>) |
| 27. | The Koel | (<i>Eudynamis scolapaceus</i>) |
| 28. | Alexandrine parakeet | (<i>Psittacula eupatria</i>) |
| 29. | Rose ringed parakeet | (<i>Psittacula krameri</i>) |
| 30. | The spotted owl | (<i>Athene brama</i>) |
| 31. | The Black king vulture | (<i>Sarcophrys calvus</i>) |
| 32. | White backed vulture | (<i>Pseudogyps bengalensis</i>) |
| 33. | Spotted dove | (<i>Streptopelia chinensis</i>) |
| 34. | The ring dove | (<i>Streptopelia decaocta</i>) |
| 35. | Red jungle fowl | (<i>Gallus gallus</i>) |
| 36. | Red spur fowl | (<i>Galloperdix spadicea</i>) |
| 37. | Grey quail | (<i>Coturnix coturnix</i>) |
| 38. | Water hen | (<i>Ammaurornis phaeincurus</i>) |
| 39. | Guinea fowl | (<i>Numidea mealigris</i>) |
| 40. | Tragopan | (<i>Tragopan blythii</i>) |
| 41. | Silver pheasant | (<i>Gynnaeus leucolophus</i>) |
| 42. | Gold pheasant | (<i>Chrysolophus pictus</i>) |
| 43. | Nepal Kalij pheasant | (<i>Gynnaeus mergenus</i>) |
| 44. | White crow | (<i>Corvus splendens</i>) |
| 45. | Eclectus parrot | (<i>Lorius roratus</i>) |

REPTILES

- | | | |
|----|----------------|------------------------------|
| 1. | Monitor lizard | (<i>Varanus monitor</i>) |
| 2. | Russels viper | (<i>Vipera russelli</i>) |
| 3. | Cobra | (<i>Naja naja</i>) |
| 4. | Black krait | (<i>Bungarus bungarus</i>) |

- | | | |
|-----|--------------------------|----------------------------------|
| 5. | Pacific rattle snakes | (<i>Crotalus viridis</i>) |
| 6. | Red diamond rattle snake | (<i>Crotalus adamanteus</i>) |
| 7. | Water snake | (<i>Tropidonotus stolatus</i>) |
| 8. | Rat snake | (<i>Zamenis mucosus</i>) |
| 9. | Boa constrictor | (<i>Boa constrictor</i>) |
| 10. | Python | (<i>Pythonus molurus</i>) |
| 11. | Banded krait | (<i>Bungarus fasciatus</i>) |
| 12. | European mud turtles | (<i>Emys orbicularis</i>) |
| 13. | Map turtle | (<i>Graptemys geographica</i>) |
| 14. | Painted turtle | (<i>Chrysemis picta</i>) |
| 15. | Star tortoise | (<i>Testudo elegans</i>) |
| 16. | Caimans | (<i>Caiman trigonotus</i>) |
| 17. | Marsh crocodile | (<i>Crocodylus palustris</i>) |

PISCES

- | | | |
|-----|----------------------|--------------------------------------|
| 1. | Gold fish | (<i>Carrasius auratus</i>) |
| 2. | Red tetra | (<i>Hyphessobrycon flammeus</i>) |
| 3. | Riddlei | (<i>Pristella riddlei</i>) |
| 4. | Bloodfins | (<i>Aphyocharax rubripinis</i>) |
| 5. | Neon tetra | (<i>Hyphessobrycon innesi</i>) |
| 6. | Buenos Aires tetra | (<i>Hemigrammus caudovittatus</i>) |
| 7. | Serpae | (<i>Hyphessobrycon serpae</i>) |
| 8. | Rosy tetra | (<i>Hyphessobrycon rosaceous</i>) |
| 9. | Pulcher tetra | (<i>Hyphessobrycon pulcher</i>) |
| 10. | Widow tetra | (<i>Gymnocorymbus ternetzi</i>) |
| 11. | Head and tail lights | (<i>Hemigrammus ocellifer</i>) |
| 12. | Harlequins | (<i>Rasbora heteromorpha</i>) |
| 13. | Scissors tail | (<i>Rasbora trilineata</i>) |
| 14. | Barbus sp. | (<i>Barbus hexagona</i>) |
| 15. | Barbus sp. | (<i>Barbus lateristriga</i>) |
| 16. | Barbus sp. | (<i>Barbus pentozone</i>) |
| 17. | Panchax | (<i>Aplocheilus panchax</i>) |
| 18. | Pearl gourami | (<i>Trichogaster leeri</i>) |
| 19. | Three spot gourami | (<i>Trichogaster trichopterus</i>) |
| 20. | Dwarf gourami | (<i>Colisa lalia</i>) |
| 21. | Snakeskin gourami | (<i>Trichogaster pectoralis</i>) |

22. Bumble bee	(<i>Gobius xanthazona</i>)
23. Clown loach	(<i>Botia macracantha</i>)
24. Paradise fish	(<i>Macropodus opercularis</i>)
25. Fighters	(<i>Betta splendens</i>)
26. Blue acaras	(<i>Acquidens latifrons</i>)
27. Brown acara	(<i>Acquidens portellogrensis</i>)
28. Dwarf cichlids	(<i>Apistogramma ramerizi</i>)
29. Angels	(<i>Pterophyllum scalare</i>)
30. Sword tails	(<i>Xiphophorus hellerii</i>)
31. Molly	(<i>Mollinisia latipinna</i>)
32. Platy	(<i>Platipoceillus maculatus</i>)
33. Giant danio	(<i>Danio malabaricus</i>)
34. Giant gourami	(<i>Osphromenous gourami</i>)
35. Stinging cat fish	(<i>Sacchobranthus fossilis</i>)
36. Pearl spot	(<i>Etroplus suratensis</i>)
37. Orange chromide	(<i>Etroplus maculatus</i>)
38. Ox-eyed herring	(<i>Megalops cyprinoids</i>)
39. Fresh water eel	(<i>Anguilla bengalensis</i>)
40. Climbing perch	(<i>Anabas scandens</i>)
41. Catfish	(<i>Aries jella</i>)

MADRAS ZOO

INFORMATION CHART

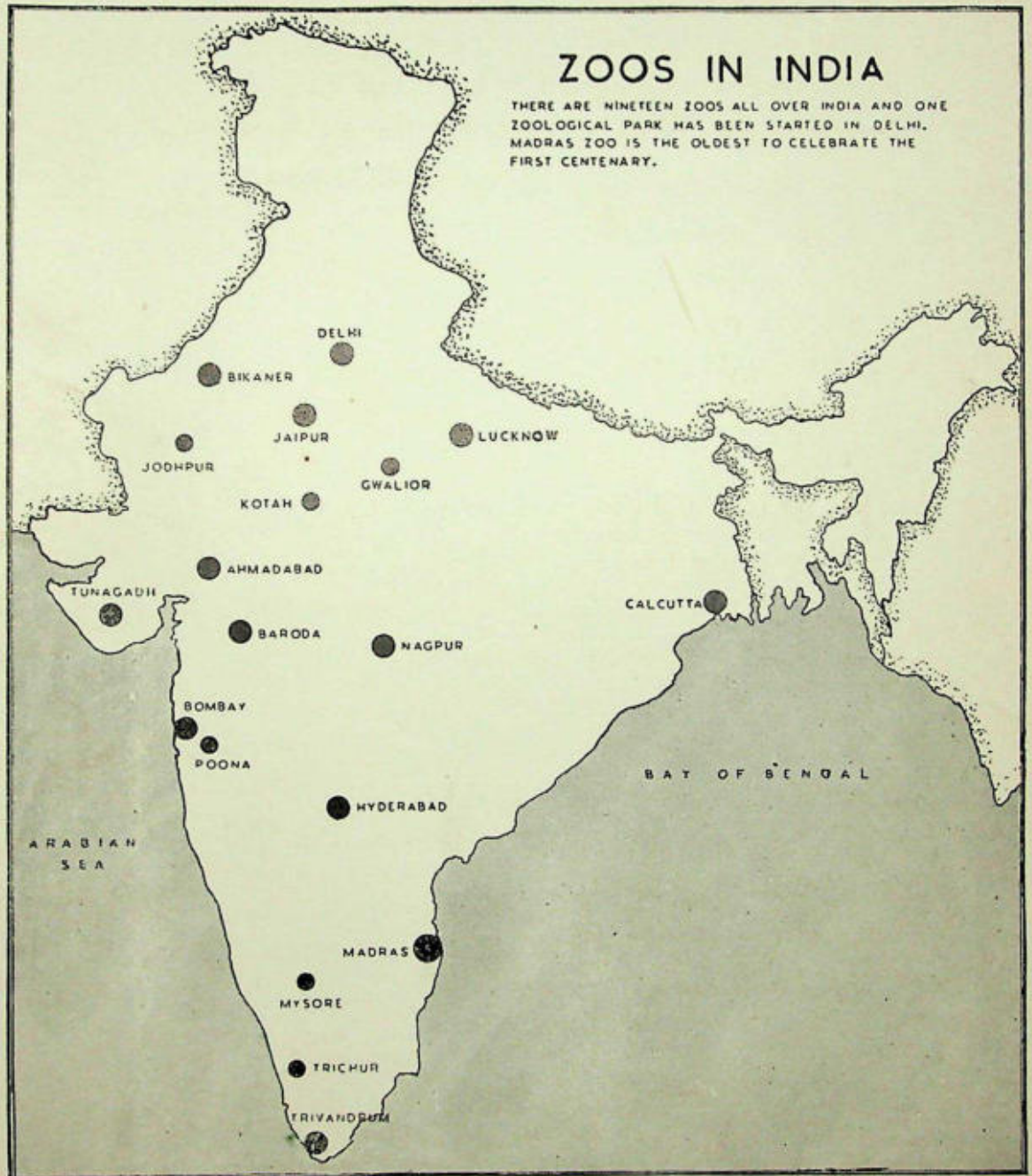
Name of the Zoo :	...	The Madras Corporation Zoological Gardens		
Location :	...	Madras City		
When founded :	...	23rd November 1855		
Acreage :	...	20 Acres		
Statistics of collection :	...	Animals	No. of species	No. of specimen
		Mammals	46	203
		Aves	45	459
		Reptiles	17	42
		Fishes	41	156
		Total	149	860
Daily average attendance :	...	1250		
Annual average attendance } for the last five years :	...	3,58,000		
Entrance Fee :	...	Four annas per adult, one anna for every child in the case of Elementary School Children when visits are arranged by schools and free for children below 3 years.		
		Admission fee for a car inside the Zoo for pleasure drives is Re. 0-8-0 besides collecting admission fees from the inmates of the car.		
No. of small buildings :	...	10		
No. of big buildings :	...	17		
No. of Paddocks :	...	8		
No. of Aviaries :	...	3		
New Buildings :	...	1 Centenary Memorial Gate		
		1 Ornamental Pavilion Canteen.		
New Buildings for housing } animals	...	1 Otter pool		
		1 Crocodile tank		
		1 Monkey enclosure		
		1 Giraffe extra enclosure		
		1 Chimpanzee house		
New Buildings for birds :	...	1 Pheantry		
		1 Swan enclosure		
New paddocks for hoofed } animals :	...	1 Zebra paddock		
		1 Antelope paddock		
		1 Deer paddock		

LIST OF ZOOLOGICAL GARDENS IN INDIA

1. Zoological Gardens, Alipore, CALCUTTA
2. Prince of Wales Zoological Gardens, LUCKNOW
3. Corporation Zoological Gardens, MADRAS
4. Zoological Gardens, TRIVANDRUM
5. Peshwas Park Zoological Garden, POONA
6. Victoria Gardens, BOMBAY
7. Zoological Hill Garden, AHMADABAD
8. Sayaji Rao Garden Zoo, BARODA
9. Public Gardens, HYDERABAD
10. Maharaj Bagh Zoo, NAGPUR
11. Junagadh Zoo, JUNAGADH
12. King George Zoological Garden, Laskhar, GWALIOR
13. Zoological Garden, TRICHUR
14. Zoological Garden, JAIPUR
15. Zoological Garden, KOTAH
16. Zoological Garden, JODHPUR
17. Zoological Garden, BIKANER
18. Zoological Garden, UDAIPUR
19. Delhi Zoological Park, DELHI
20. Zoological Gardens, MYSORE

ZOOS IN INDIA

THERE ARE NINETEEN ZOOS ALL OVER INDIA AND ONE ZOOLOGICAL PARK HAS BEEN STARTED IN DELHI. MADRAS ZOO IS THE OLDEST TO CELEBRATE THE FIRST CENTENARY.



SECTION II—Messages (INDIAN)

Governor-Andhra

Raj Bhavan, Kurnool
7th September 1955.

I am glad to learn that the Madras Corporation will celebrate the Centenary of its zoo early next month. Unfortunately we have very few zoos in India, and by and large therefore, our people do not know very much about the animal kingdom. A zoo is not only a source of joy, but also of fostering knowledge of animal life. It is, therefore, all to the good that of late there has been increasing interest in our country in the animal world, and one may look forward to the establishment of more zoos and wild-life parks and sanctuaries in different parts of India. The Madras Zoo is, I understand, the oldest in India. I wish the Centenary celebrations every success, and hope that the years to come will witness the progressive development of the Madras Corporation Zoo.

C. M. TRIVEDI
Governor.

Private Secretary to the
Minister for Home Affairs,
New Delhi,
26th August 1955.

Dear Sir,

Pantji has received your letter dated August 24 and has asked me to thank you for the same. He appreciates the laudable objective in celebrating the Centenary of the Madras Corporation Zoo and sends his good wishes for the success of the function.

Yours sincerely
A. D. PANDE I.A.S.

C. Subramaniam
Minister for Finance and Education

Fort St. George Madras-9
29th August 1955.

I am glad that the Corporation Zoo is celebrating its Centenary in the month of October 1955. The Zoo has been serving a very

useful purpose for the visitors to the City and also for the children living in the City. I hope the Zoo will be developed further and all amenities for children to make use of it fully will be made. I wish the Centenary function every success.

C. SUBRAMANIAM
Minister for Finance & Edn.

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R. Shanmuga
Rajeswara Sethupathi
Minister for Public Works

Fort St. George
Madras
27th August 55.

I am glad that the Madras Corporation will be celebrating the Centenary of the Zoo this year. We have, of course, every reason to feel proud that our Zoo is probably the oldest one in India and that it is well maintained. I wish the celebrations all success.

R. SHANMUGA RAJESWARA SETHUPATHI
Minister for Public Works.

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S. S. Ramaswami Padayatchi
Minister for Local Administration

Fort St. George
Madras
31st August 1955.

The Madras Zoo which had its origin as an adjunct to the Museum, has built up a proud and excellent record and I might say without fear of contradiction, that it occupies the foremost rank among the Zoos in India, being also the earliest. Being situated in ideal surroundings, it has provided pastime, recreation and relaxation of an excellent kind to the residents of the City as well as its floating population. It is gratifying to note that the Corporation has been striving to enhance the usefulness of the Zoo, by securing rare and interesting additions to the animal, bird and reptile life. The Government, in appreciation of its endeavours, have increased the State aid to the Zoo, and they trust that the Zoo will make further

rapid strides to take an honoured place among the Zoos of other countries as well.

I congratulate the Corporation on the proud record of its Zoo and I wish the Centenary celebrations all success.

S. S. RAMASWAMI PADAYATCHI
Minister for Local Administration.

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B. PARAMESWARAN,
*Minister for Religious Endowments
and Transport*

Fort. St. George,
Madras,
20th September 1955.

I am happy to learn that the Corporation of Madras proposes to celebrate the Centenary of the Madras Corporation Zoo and that it is proposed to bring out a Souvenir on the occasion. I congratulate the Corporation authorities on their excellent proposal and on their initiative in the matter. That the Madras Corporation Zoo has completed a century of useful existence of great educative value in this historic city of Madras is indeed unique in the annals of civic bodies in India. In recent years, the Madras Corporation Zoo has made rapid strides and has earned for itself a reputation for legitimate fame which redounds to the credit of the Corporation authorities connected with its maintenance. Centenary celebrations of institutions such as the Madras Corporation Zoo will undoubtedly serve to focus public attention on the very many constructive activities of the City Corporation. I have no doubt that the Souvenir which the Corporation of Madras proposes to bring out on the occasion will be as instructive, interesting and attractive as the Corporation publications usually are. I wish the centenary celebrations of Madras Corporation Zoo all success.

B. PARAMESWARAN,
Minister for Religious Endowments and Transport.

M. A. Manickavelu,
Minister for Revenue.

Fort St. George,
Madras
20-9-55.

I am glad the Centenary of the Madras Corporation Zoo is coming on next month. The Zoo has been a centre of attraction for the mofussil people especially as a pastime and also as a source of improving their knowledge of the animal kingdom. I wish the function all success.

M. A. MANICKAVELU

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Maharaja of Bhavnagar

On the occasion of Centenary Celebrations of the Madras Corporation Zoo I send my hearty congratulations to the Corporation for their valuable collection of excellent specimens of birds animals and reptiles which has a great educational value to the State and for the care and interest with which they are looked after. I wish the celebrations all success.

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C. P. Ramaswami Aiyar,
Vice-Chancellor

Banaras Hindu University,
Banaras-5.
1st September 1955.

Dear Sir,

I fully approve of the idea of celebrating the Centenary of the Corporation Zoo which, as you point out, is the oldest Zoo in India.

I wish the function all success.

I am,
Yours sincerely,
C. P. RAMASWAMI AIYAR

Dr. Rajah
Sir Muthiah Chettiar
of Chettinad.

Chettinad House, Adyar,
Rajah Annamalaipuram, P.O.
Madras-28
21st October 1955

My dear Chidambaram,

Let me wish the Madras Zoo Centenary Celebrations and your efforts in making the celebrations all success.

Yours affectionately,
M. A. MUTHIAH CHETTIAR

THE MADRAS CABINET



SHRI K. KAMARAJ
Chief Minister



SRI C. SUBRAMANIAM
Minister for Finance & Education



SRI M. BHAKTHAVATSALAM
Minister for Agriculture & Forests



SHRI A. B. SHETTY
Minister for Health

THE MADRAS CABINET



RAJAH OF RAMNAD
Minister for Works



SRI M. A. MANICKAVELU NAICKER
Minister for Revenue



SRI S. S. RAMASWAMI PADAYATCHI
Minister for Local Administration



SHRI B. PARAMESWARAN
Minister for Religious Endowments
& Transport

**Permanent Mission of India
to the United Nations**

3 East 64th Street
New York 21, N. Y.
October, 8 1955.

I gather that you are celebrating the centenary of the Madras Corporation Zoo and that a publication is being brought out. I wish you eventual success.

Yours sincerely,
V. K. KRISHNA MENON.

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Mr. Justice Basheer Ahmed Sayeed

"Sadhr Gardens,"
Alwarpet, Madras-18.
7-9-1955.

Dear Mr. Subbarayan,

I am very happy to know that you are celebrating the Centenary of the Corporation Zoo in October this year. During the period of my Councillorship of the Corporation between the years 1926-1936 and 1946-1949, I have had many occasions to watch the progress and development of the Corporation Zoo. Even after I ceased my active connection with the Corporation of Madras, I have had plenty of opportunity to watch the improvements that have been effected in various directions in the Zoo. What has struck me is the efficient manner in which the Zoo has been maintained and made attractive to the public at a comparatively low cost. Apart from the high standards of sanitation and hygiene achieved in the Zoo, it is remarkable that the Superintendents have trained the animals so well, that every one of the inmates seems to have developed a special attachment to the Superintendent and his subordinates. You have asked me to send you an article touching the aspects of the animals, birds, serpents, fish, etc. I wish to mention on this occasion that you and your staff deserve every congratulation on the level of satisfaction so far achieved in regard to the variety of the Animal Kingdom found in the Zoo and the excellence gained in the up-keep and maintenance of the Zoo.

Yours sincerely,
BASHEER AHMED SAYEED.

Justice Krishnaswami Nayudu

Madras,

30—8—1955.

Madras City prides itself in possessing the oldest Zoo in India, which is now celebrating its centenary. The Zoo has really been an attractive place for the young and the old and no visitor from any part of our State to the City misses to see and enjoy the variety of animals and birds that are housed. Though our Zoo may not contain certain rare species of animal and bird life that may be found in other Zoos, our Zoo has a charm of its own, the lake, the tiny bridge and the inviting boat contributing to its attractiveness and grandeur. Better arrangements may be made to put all the creatures in their natural set-up instead of confining them to cages, cages being however necessary to secure them. The Corporation of Madras deserve our congratulations in the increasing interest evinced by the City Fathers and the Executive in the maintenance of this amenity, which affords to the visitors, especially children, a place to amuse and interest themselves, apart from being a place of real educative value.

W. S. KRISHNASWAMI.

* * *

Justice N. Somasundaram

Moore's Gardens,
2, Moore Road,
Nungambakkam, Madras-6,
4—9—1955.

My dear Subbarayan,

Thank you very much for your letter of 27th. I am glad that the Corporation is arranging to celebrate the Centenary of the Zoo. It is in the fitness of things that it should be done in a befitting manner. I wish the celebrations all success.

Yours sincerely,
N. SOMASUNDARAM.

Chief Justice of Andhra

Guntur,
24th September 1955.

Dear Sir,

The Corporation Zoo is one of the premier Zoos in India. It contained different specimens of the animal species gathered from different parts of the World which at the same time gave pleasure and afforded instruction to children and elders alike. Though it had a set-back when the animals were destroyed during the War when it was feared that Japan would invade Madras, I find that subsequently it was replenished and to some extent improved upon. It is really a happy idea to celebrate the Centenary of this famous Zoo. I hope and trust that it will continue to be a centre of amusement and instruction for the future generations as it has been in the past.

I wish the Centenary every success.

Yours sincerely,
K. SUBBA RAO.

* * *

Honourable A. Ratnayake, *Minister of Home Affairs, Ceylon.*

On the historic occasion of the centenary celebrations of the Madras Zoo, as Minister responsible for the Zoological Gardens of Ceylon, I send felicitations and good wishes from my country.

Not many institutions have reached the centenary mark. Those that reach that mark have the right to look back with pride and to take stock of their achievements. I feel sure that the Corporation of Madras has not only the distinction of having inaugurated one of the oldest, if not the oldest, Zoos in Asia but has also stimulated the study of Zoology by preserving and showing the live things of the earth that city dwellers would otherwise have not had the opportunity of seeing.

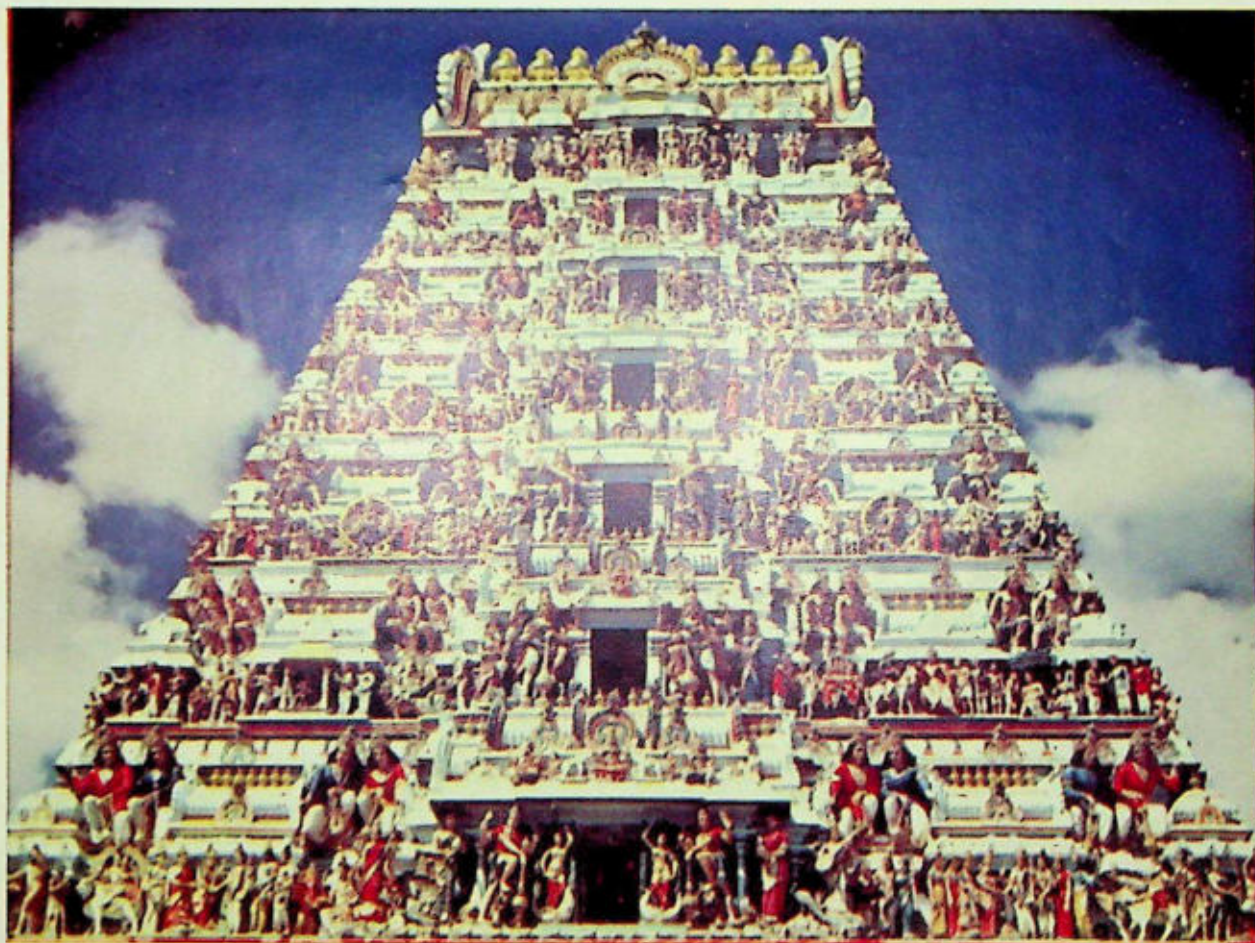
Due to the many attractions and distractions of modern living, the concentration of populations in big cities like yours, and a civili-

sation that is daily growing more mechanised and industrialised, the masses would soon lose touch with the world of nature but for institutions like zoological gardens. Quite apart from its beauty, charm, grace and mystery, animal life is the most forceful expression of the processes of nature.

To estimate the ultimate value of such things as zoological gardens is quite impossible. Studies in genetics, pathology, behaviour, conservation and many other equally important fields of science are assisted and encouraged by Zoos. The best form of visual and unconscious education is provided by them. These are all valuable for a better understanding of life and of the great world of nature from which man has sprung.

I congratulate the Madras Zoo on what it has achieved during its glorious existence of 100 years and wish it a still more glorious and useful future. It is a matter of great regret that it has not been possible for the Zoological Gardens of Ceylon to take part in your centenary celebrations; compared to the Madras Zoo the Ceylon institution is a very young one, but I am happy that it is expanding rapidly.

Let me assure you that we shall always be happy to co-operate with India in the promotion and expansion of the Zoological Gardens movement in your great country, in which the Madras Corporation has been the pioneer. Our immediate contribution is being made under the Technical Co-operation Scheme of the Colombo Plan on an application from the Government of India for the services of Major A. N. Weinman, O.B.E., C.M.Z.S., Director of the Zoological Gardens of Ceylon, to advise in connection with the setting up of a National Zoological Park in Delhi. Plans for the loan of Major Weinman on this assignment have been finalised and he will be leaving for Delhi very shortly. Further co-operation between India and Ceylon in this great work will doubtless be of great benefit to both countries.



The renovation of this glorious Kapaleeswarar temple at Mylapore was done by **Arasur Parthasarathy Mudaliar** assisted by **K. M. Shanmugha Sundaram**.

Dr. P. V. Cherian,
Chairman, Madras State
Legislative Council.

Fort St. George,
Madras.
21-9-55

I am very glad to hear that the Corporation of Madras is celebrating the Centenary of the Corporation Zoo early in October this year. I wish the function every success and trust that the Zoo will continue to serve usefully the public for very many years to come.

P. V. CHERIAN

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Dr. U. Krishna Rau,
M.B., B.S., M.L.A.

Office :
323-24, Thambu Chetty St.,
Madras-1,
23-9-1955.

I am very happy to learn that the Madras Corporation is celebrating the Centenary of the Madras Corporation Zoo early in October 1955. I am also glad that the Corporation has decided to bring out a Souvenir in connection with this Centenary celebrations. I am also happy to learn that the Madras Zoo is celebrating its Centenary in a proper manner. The Madras Zoo is, perhaps, one of the oldest in India, and in my opinion, is one of the best managed. Successive Commissioners and Zoo Superintendents have devoted much attention to the development and improvement of the Madras Zoo. I hope that the Centenary celebrations will be a grand success.

Please accept my congratulations and good wishes for the success of the Centenary celebrations.

I am sure the exhibition which you propose to conduct will also be a great success.

U. KRISHNA RAU.

Office of the Inspector General
of Police,
P. B. No. 601, Madras-4,
Dated 26th September 1955.

My dear Subbaroyan,

I am indeed very happy to learn that the Corporation of Madras proposes to celebrate in a manner befitting the occasion the Centenary of the Corporation Zoo, reputed to be the oldest Zoo run by a City Corporation in our country. Let me heartily congratulate the Corporation on its splendid achievement, in providing this amenity for its citizens for the last 100 years.

I wish the celebration all success.

Yours sincerely,
V. R. RAJARATNAM.

• • •

S. Anantharamakrishnan

C/o Simpson & Co. Ltd.,
Madras,
1st September 1955.

Dear Mr. Subbarayan,

Thank you for your letter of the 30th ultimo.

It is very nice of you to have asked me to contribute an article to your Zoo Souvenir which you are bringing out to celebrate the Centenary of the Corporation Zoo.

I, wish you and the Corporation a successful celebration of the centenary.

Yours sincerely,
S. ANANTHARAMAKRISHNAN.

O. Pulla Reddi, I.C.S.,
Chief Secretary, Govt. of Andhra.

Kurnool,
30th August 1955.

I am happy to learn that the Corporation of Madras is celebrating the Centenary of its Zoo in October this year. This is not an event vitally affecting the interests or welfare of the thousands of citizens of Madras but in the context of present-day conditions it is important to highlight the usefulness of the preservation of the Fauna of India. For years, due to the thoughtlessness of millions of people the Flora and Fauna of India are in danger of losing their representative character. Consequently, several functions are being organised of late to stress the importance of the preservation of the varied Flora and Fauna of this country. When I was Commissioner of the Madras Corporation I had the unhappy experience of seeing several valuable animals slaughtered in the Zoo because of fear of the Japanese invasion which, fortunately, did not after all materialise. The Corporation has since then rehabilitated the Zoo and I am sure it is now a very representative collection of wild animals, birds, reptiles, etc. Apart from providing some relaxation to the several people who care to visit the Zoo occasionally, it has a highly educative value to the youth of the country as also the hundreds of visitors from mofussil districts. The Corporation has rightly been devoting a lot of attention to the opening of new and maintenance of old parks in the City. Thus, the Corporation is playing its part in preserving the representative character of the Flora and Fauna of our part of the country. I hope the Zoo in the People's Park will be further enriched in the years to come and become one of the main sources of attraction in the City.

O. PULLA REDDI

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Madras Collector's Office,
Madras, dated 31--8--1955.

Dear Sri Subbarayan,

I am in receipt of your letter dated 30th August on the above subject. I do not know on what basis I have been asked to contri-

bute an article on animals, birds, serpents, fish etc , for publication in the Souvenir of the Zoo. If this has any reference to my having acted as Chief Conservator of Forests, I may say that my tenure in that post was very short and I am unable to contribute any article. However, I would like to urge that active steps must be taken to restrict the issue of Gun Licences in the moffussil. Innumerable applicants have applied for and got Gun Licences allegedly for protection of crops from wild animals. In reality they shoot whatever comes in handy and wild life has been almost completely destroyed. There is very little left now. If we are really to preserve wild life, I think it is very essential that Gun Licences should be restricted drastically.

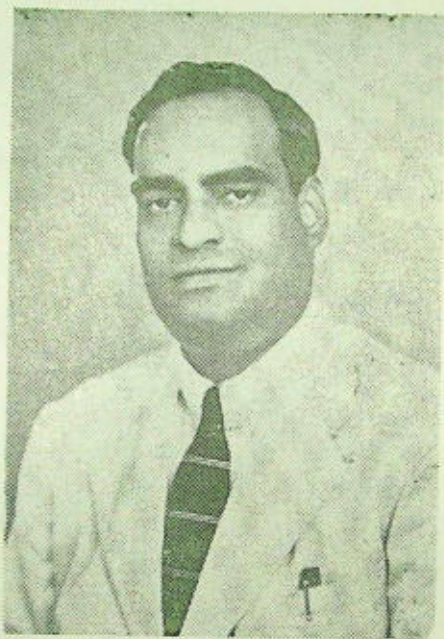
Yours sincerely,
V. V. SUBRAMANIAM
Collector of Madras.

P. Ramakrishnan I. C. S.
Chief Presidency Magistrate.
My dear Sri Subbarayan,

“Court House”,
Egmore, Madras, 8.
26th September 1955.

“ It is a laudable move to celebrate the Centenary of the Zoo. The Zoo had a set back in the disturbed condition in 1942. That it had been restored, and enlarged is a tribute to the public spirit of the successive Mayors, Councillors and Commissioners of the City Corporation. The Zoo suffers from a serious draw back of restricted space. To shift the Zoo to a large open air area in the outskirts of the City accessible by the suburban train service will be a laudable objective to be aimed at, during the Centenary celebrations. The creation of a back ground of jungle, trees and lakes, where the animals can approximate more closely to the state of nature is much to be desired. In the meantime the Citizens especially the very young continue to be grateful for what has been provided. May every success attend the Centenary celebrations!

Yours sincerely,
P. RAMAKRISHNAN.



S. SATYAMURTI, B. A.
Chief Accounts Officer
&
Special Officer for the
Zoo Centenary Celebrations

K. Srinivasan,
Managing Editor,
"The Hindu"

Kasturi Buildings,
Madr-2
16.9.55.

In forwarding my contribution to the Madras Zoo Centenary Celebrations Fund, I send you my best wishes for their success. The Madras Zoo is the oldest in India and the Madras Corporation can, I have no doubt, rely on the co operation of every citizen in any steps they take for maintaining and expanding it on a scale worthy of our great City.

K. SRINIVASAN

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P. K. S. Chari
Post-Master-General, Madras

Madras-2
3rd Septembtembr 1955

Of all the emotions of man, the love of animals is the purest and noblest. It is possible to force animals to our will and to compel them to do as we please. But it is always better and more profitable to train them gently, firmly and with consideration. Even the age of steel, of steam, of electricity, of atomic energy has not rendered us entirely independent of the service of animals. They give us their lives ungrudgingly, they work for us even unto the point of death and all that we give them in return is cheap food and or more less indifferent shelter. No ! we can give them some more, something that will cost us nothing. A horse tired unto death tosses up his head in proud animation the moment the kind owner has given it a gentle pat and a soft word. No dog in the world can never become so tired as not to be able to jump up in eager expectation of more service for the master—and all this just at one word of encouragement.

It has sometimes been advanced that the best persons are to be found in a zoo—real men and women and children who have still kept a corner of their hearts for the animals which have also been created by the same God.

The Madras Zoo is an excellent specimen of what a zoo can and should be. The care, the attention, the personal friendship with the various animals are reflected in the proud mien and haughty eye of every one of the inmates. May God bless this institution and keep the inmates happy, happy, happy!

P. K. S. CHARI,
Postmaster-General.

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Diwan Bahadur
J. Venkata Narayana Nayudu,
B.A., B.L., C.I.E.,
Law and Education Secretary
to the Government of Madras (Retired.)

' Venkata Vilas '
2/11, Ormes Road,
Kilpauk, Madras-10.
Phone 4816.
31st August 1955.

Dear Sir,

While thanking you heartily for your letter dated 23rd idem asking me to contribute an article for the Pictorial Souvenir proposed to be issued in connection with the Centenary Celebrations of the Madras Corporation Zoo, I regret I have to deny myself the pleasure of complying with your invitation on account of my ill-health. I have no doubt that your untiring efforts to celebrate the Centenary in a befitting manner will be crowned with a glorious success.

Yours sincerely,
J. V. NARAYANA

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Regional Secretary, Indian
Board for Wild Life, Doyang,
T. E., Oating P.O., Assam.

Many thanks for your letter of 27th, with all your news.

I wish the Madras Zoo Centenary all the success it deserves, for zoos in India have a big part to play in the education as well as the recreation of the people.

I was to glad to have been able to pay a personal visit to the Madras Zoo in May 1955, especially as it claims the distinction of being the oldest zoo in the country. And I was particularly pleased to see the rhino from Assam's Kaziranga looking so well. I hope that a mate can be obtained for this rhino, so that we will have another opportunity of observing the habits and life history of this remarkable animal.

E. P. GEE

Officers of the Corporation who helped the
Zoo Centenary Celebrations



M. MUNISWAMI,
Water Works Engineer



V. A. PATNAIK,
Electrical Engineer



N. SANKARAN,
Deputy Commissioner



M. MEERAN,
Engineer

Officers of the Corporation who helped the
Zoo Centenary Celebrations



M. SIVARAMAN,
Mechanical Engineer & Conservancy Officer



N. BHASKARAN,
Special Engineer



GULAM MOHD. BADSHA,
Revenue Officer



C. ARUMAINAYAGAM,
Education Officer



DR. A. RANGANATHAM
Health Officer Corporation of Madras
The Maintenance of Zoo is vested under the
Control of Health Officer



MR. B. V. RAMANJULU
Superintendent Zoo, to whose credit must be
said that many wild animals have been trained
as "pets" to adorn the "children's corner"
which will be inaugurated shortly by our
Chief Minister.



DR. JOHN, Veterinary Surgeon
attached to the Zoo is seen treating an
injured animal and the Zoo Superin-
tendent has taken pains to see that
sufficient natural surroundings are affor-
ded to animals in the newly designed
"lay out"



The Publicity and Propaganda of Zoo Centenary Celebrations were entrusted to
Mr. Kumaran Nair assisted by Mr. Subbiah under the immediate supervision of
the Health Officer and the Zoo Superintendent



G. VENKATARAMANA REDDY
Joint Director of Town Planning, Andhra



T. V. RANGASWAMI
Executive Engineer
In Charge of works



Capt. Miss. C. N. RUKMINI
Lady Supdt.
Child-Welfare Scheme

SECTION III—Messages (FOREIGN COUNTRIES)

FOREIGN MESSAGES

**Gerald Iles, Superintendent, The Belle Vue Zoological Gardens
Manchester**

Send Greetings and best wishes to the Madras Zoo on the occasion of its Centenary.

* * *

**H. A. Snazle, Acting General Manager, Chessington Zoo
and Circus, Chessington Zoo Limited, Burnt Stub,
Chessington, Surrey.**

Thank you for your letter of 1st July 1955, from which I was most interested to learn that the Madras Zoo will be celebrating its Centenary on 28th September, 1955.

May I take this opportunity of wishing the Centenary Celebrations every success, and trust that the Zoo will enjoy yet another 100 years.

* * *

Dr. Thienemann, Duisburger, Tierparkverein E. V., Duisburg.

We are quite prepared to assist you concerning your planned exhibition and congratulate the Zoo of Madras on its 100 years' jubilee. All the best and much luck.

* * *

**Directeur, Societe Royale De Zoologie D'Anvers,
26, Place Reine Astrid, Antwerp.**

We wish your exhibition a fine success.

* * *

**Director of the Zoological Dept., Nordiska Museet
and Skansen, Stockholm, Sweden.**

We wish you good luck with your exhibition.

**Dr. Katharina Ueinwarth, Adtich-Verein des
Zoologischen Gartens Zu Berlin.**

We congratulate you and send our best wishes for the Madras
Zoo and its Centenary Celebration.

* * *

**Mr. Freeman, M. Shelly, Zoological Gardens,
Zoological Society of Philadelphia.**

We extend congratulations to you and your zoo officials on the
occasion of the very important milestone in the Zoo's History. We
want you to know how delighted we are to have been invited to
participate in such an important event, and we give you our sincere
thanks for inviting us to do so.

* * *

Mayor of Mulhouse, Mulhouse, Republique Fancise, France.

Your letter of the July that the Zoological Garden is celebrating
its 100th anniversary this September and I am very happy to be
acquainted with it.

I am very happy to offer on this occasion the cordial felicitations
of the Municipality of the City of Malhouse and mine own, and
convey our happiness for the prosperity of your park, the oldest in
India.

* * *

**Mr. Y. G. Haggard, Director, Royal Zoological Society of
South Australia, Zoological Gardens, Adelaide.**

We offer you our hearty congratulations and felicitations on the
celebration of your centenary.

* * *

**Professor A. Urbaan, Director du Parc Zoologique, du Bois de
Vincennes, 51, Av. de Saint-Maurice, Paris 12.**

Please accept my sentiments and best wishes.

**Mrs. Monica Meyer, Superintendent, Tierpark Dahlholzli Bern
Switzerland.**

Congratulations for the Zoological Exhibition on the occasion of
the Centenary of your zoo.

* * *

**The Director, Zoological Gardens, Wassennar, The Hague,
Holland.**

We take this opportunity to wish you utmost success,

* * *

**Mr. R. Olasek, Director, Supervision of Polish Zoos,
Warszawa, Dnia, Poland.**

With best wishes of further development of your zoo and suc-
cesses in breeding.

* * *

**Mr. C. Rame, President, Board of Trustees, Rangoon
Zoological Gardens, Rangoon**

The trustees of the Rangoon Zoological Gardens, highly
appreciate the honour done to them on behalf of the oldest zoo in
India by its invitation to participate in the Centenary
Celebrations.

They have therefore to be content just now with this message of
good-will and good wishes for the future of the Madras Zoo.

* * *

**Superintendent, Jardim Zoologico, Quinta Da Boa-Vista,
EAO Cristovao Rio De Janeiro**

Expressing my thanks for your communication and kind
invitation to the celebration of the Madras Zoo Centenary, I send
you my best compliments for the event.

Mr, L. Ruhe, Postscheck-Konto, Hanover

I refer to your letter dated 1st of July 55, from which I learned with great interest that the Madras Zoo, the oldest in India, will be celebrating its centenary on 28th of September 1955. For that reason I beg to convey to your Garden for its success in future my best wishes.

My representative Mr. Albert Meems very often visited your Garden and he told me with appreciations of the importance of your undertaking.

As at present Mr. Ruhe would like to give to you a pair of very nice Crown-Cranes.

* * *

Mr- Carl Hagenbeck, Tierpark, (24-a) Hamburg-Stellingen, Den.

With great interest I learn from your letter of July 1st that the Madras Zoo is celebrating its centenary. I would be prepared to give you as a present a pair of white swans.

Wishing you further success for the Zoo, I am.

* * *

New York Zoological Society, New York.

The New York Zoological Society and the New York Zoological Park (Bronx Zoo) extends to the Madras Zoo, the oldest in India, the best of good wishes on attaining its Centenary. It is good to know that zoological parks may attain this distinction and that other zoos gather around them to celebrate.

With the cordial and warm greetings of this institution.

* * *

San Diego Zoological Gardens, Belmont

"The Board of Directors of the Zoological Society of San Diego, Inc., San Diego, California, U. S. A., extends its most hearty

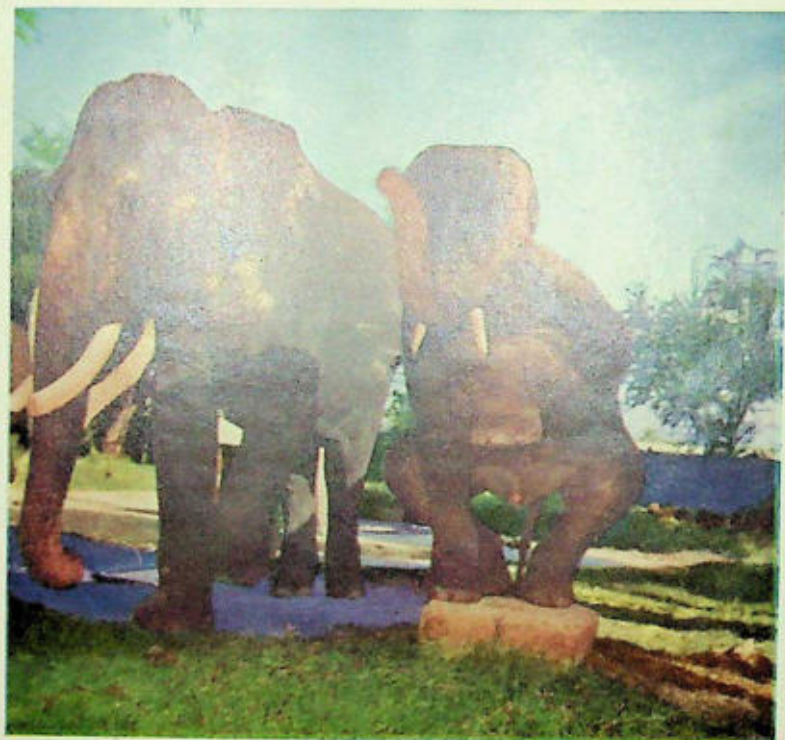


PHOTO: V. P. VENKATACHALAM

PERFORMING TUSKERS

congratulations to the Madras Zoo, its director and personnel on this, its Centenary, September 1955.

“May this celebration serve as an impetus to future growth and development of your fine Zoo, and may we always be fortunate enough to work together in amity and good fellowship for the progress of zoological studies.

Many thanks again for this opportunity and we hope that our contributions arrive in time for the celebration.

* * *

The Director, Zoological Gardens Rome, Italy

For the happy celebration of the centenary of Madras Zoo we send best wishes and everlasting prosperity.

* * *

**Dr. S. Khan. Director Zooparka of Lucknow
Dr. R. Rao Veterinary Inspector of Parks, Mysore
Mr. Janenka, Director Zoo Park of Odessa—Russia**

We congratulate you and all your staff members with Centenary Jubilee. We wish you from all our hearts further successes in your work for the Prosperity of the Great Indian People.

* * *

Staff of Zoo Garden, Odessa, Russia.

From all our hearts congratulate you and all your staff members with centenary Jubilee of your Zoo Garden. We wish your staff further success in work for prosperity of the friendly Greater Indian People.

* * *

**Peter Ryhiner, Swiss Animal dealer who escorted our
Rhinoceros, and supplied the pair of Chimpanzees
from St. Louis, California, U. S. A.**

Heartiest Congratulations and best wishes for future.

Director of the Leningard Zoo

The employees of Leningrad Zoo heartily congratulate you and the employees of the Madras Zoo on the occasion of the 100th anniversary of the Madras Zoo. We are very glad to have an opportunity of having ties with one of the oldest zoos of the World. While expressing our friendship we ask you to accept some materials on the history of the Leningrad Zoo which will celebrate its 90th anniversary in 1955. We have full hope that it will serve closer ties between our zoos. We wish you and the employees of the Zoo many happy returns and great success in your work for the sake of your motherland.

* * *

Mr. N. T. Balashov, Director of Scientific Research Institute
"Aksaniya Nove," U.S.S.R.

I am extremely grateful to you for your kind invitation to participate in Madras Zoo Centenary Celebrations.

I have the honour to intimate you that we are undertaking some measures for taking part in the honorary ceremony on the occasion of the jubilee.

* * *

Sir Landsborough Thompson,
President, Zoological Society of London, Regent's Park, London, N.W.-1

My colleagues and I have heard with great interest of the approaching celebration of the Centenary of the Zoological Gardens maintained by the Corporation of Madras. On behalf of the Zoological Society of London, therefore, I have great pleasure in sending you this message of greeting and congratulation to yourself and the Corporation and to all others concerned with the direction of the Zoological Gardens which have reached this auspicious point in their history.

It is a matter for admiration that the well-known Zoological Gardens in Madras should have been founded so long ago and should have been maintained with such success for a hundred years. This is a distinguished contribution to the study of zoology and to the promotion of public interest in animals. It is thus fitting that others concerned with the subject in different parts of the world should take the opportunity of paying a tribute of esteem to this important enterprise.

It is a matter for congratulation that the undertaking should at the present time be continuing to flourish in a manner worthy of its honourable history. And it is a matter of very confident expectation that the Zoological Gardens in your great city will now enter upon a second century of prosperity and of eminent public service.

From the Zoological Society of London—on past achievement, sincere congratulations; on the present occasion of celebration, fraternal greetings; and for the future, the most cordial good wishes.

SECTION IV — Articles

CAN ANIMALS REASON ?

By

HON'BLE SRI K. KAMARAJ NADAR

(Chief Minister, Madras State)



IT is a matter for congratulation that the Madras City Corporation is celebrating the Centenary of its Zoo. It is twenty three hundred years ago that Aristotle wrote that many animals can learn and remember but that only man can reason. This conclusion has been challenged many times during the ensuing centuries and even to-day there are some that still ask, "Can animals reason?" To what extent does reason govern our lives, and how does habit become its foe? Problem-solving experiments with man and animals force us to revise our thinking on these basic issues.

I am sure that all the Citizens of Madras and elsewhere are fond of animals, although everybody is not a born animal lover. Yet there are plenty of people who take interest in living creatures and many people in the City of Madras and elsewhere are very fond of animals and they keep some of them as their pets. This fondness for keeping wild creatures in what is called captivity, is a very ancient trait in the human character. It was in very ancient times that animals were killed with primitive weapons either as sports or for food. They would capture the calves and keep them alive with a view perhaps to killing and eating them when they grew bigger.

The keeping of animals in menageries of sorts dates from very ancient times. We know from inscriptions and mummied remains that the ancient Egyptians kept wild animals and they thoroughly domesticated some of them. The wild cat having

thus been domesticated, is partly responsible for some of our tame cats of to-day.

It is now the policy of the Government both Provincial and Central to keep and preserve the wild life with the result a Wild Life Board has been constituted and the forests also are preserved by celebrating Vana Mahotsavas every year so that the majesty of the trees in the forest could be preserved for being the ideal home for these animals and birds.

Very few of us have got the opportunity of visiting the wild haunts of the larger wild animals and therefore it is but fitting that the Madras Zoo is able to bring a close acquaintance with wild animals in captivity and help every one to learn and develop the best qualities in the animal and such a measure paves for solid and sound education among the masses. It develops best qualities in men that visit the Zoo and also develops kindness towards dumb creatures and it acts as a lesson that dumb labourers can also be looked upon with kindness by their masters. Most of us are naturally kind and those who have become attached to their pets or to animals living in zoological gardens lose any wish they may have had of going out to kill such animals in the wilds for the sake of sport, rather they prefer to do all they can to preserve such interesting creatures.

The essentials to a happy and contented life in wild animals are sufficient good food and safety from their natural enemies; and although they can never be sure of the latter in the wild state, they are certain of both in a properly conducted zoo, like the Madras Corporation Zoo. It is the essence that is taught in the ideal of the Socialistic Pattern of Society adumbrated in the Avadi Congress where even dumb creatures of men and animals are fostered and treated on a par with the well-to-do in the Welfare State of India.

FUNCTIONS and USEFULNESS OF ANIMAL KINGDOM

By

HON'BLE SRI M. BHAKTHAVATSALAM

(Minister for Agriculture & Forests)



I am happy that the Madras Corporation is celebrating the Centenary of the Zoo and is also bringing out a Souvenir in that connection. There is no denying the importance of this occasion at a time when wild life in this part of the country is deteriorating and the necessity for arresting this deterioration in the interest of national welfare is an imperative one. This celebration, I hope, will therefore focus public attention on the importance of preserving wild life. Zoological science tells us about the close inter-relationship between human and animal life. The welfare of man is largely conditioned by the welfare of the animal kingdom and to this end the relationship of the former with the latter has to be adjusted.

South India is rich in the wealth and variety of its fauna. Besides an infinite variety of birds, South Indian forests abound in elephants, tigers, panthers, deer, foxes, wolves, wild boars, black bucks, ibexes, porcupines, sambhurs and a host of others too numerous to mention here; but the tragic fact has to be repeated that this rich wild life is proving a vanishing asset. Many species of wild animals which flourished in days of yore are becoming either rare or extinct. For example, the lions are no longer common in India, and at present are confined to a small tract in Saurashtra. The rhinoceros in Assam is fast disappearing and the destruction of deer and sambhur which is progressively going on may lead to their ultimate extinction unless otherwise stopped.

The position is a grave one which calls for the whole-hearted co-operation of the people with the Government in protecting one of the magnificent natural assets which the country possesses. The importance of a Zoo comes into the picture in this context. From the aesthetic and recreational point of view wild life is always a source of perpetual enjoyment to mankind, but it is not possible for all to travel long distances for the purpose of seeing wild life. A zoo solves this difficulty and places within the reach of the busy city population something like a cross-section of the larger wild life which obtains in our distant forest areas. I need hardly point out how exhilarating a visit to a zoo is to both the young and the old apart from the more important educative value of such a visit. The zoo conserves many rare species of wild life which it may not be possible for ordinary people to see in their normal course of things. Above all it also engenders a real love for wild life which is so necessary in the interests of both men and mammals.

We are marching towards the goal of a welfare State. The welfare State ideal presupposes among other things close harmony between human and animal life which together share this

OLD ENTRANCE TO ZOOLOGICAL GARDENS



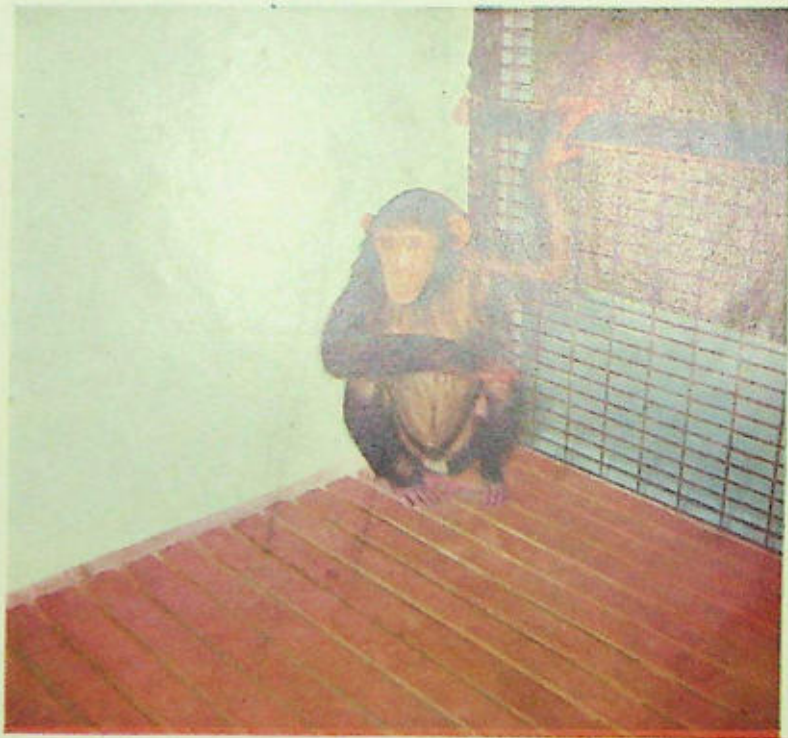
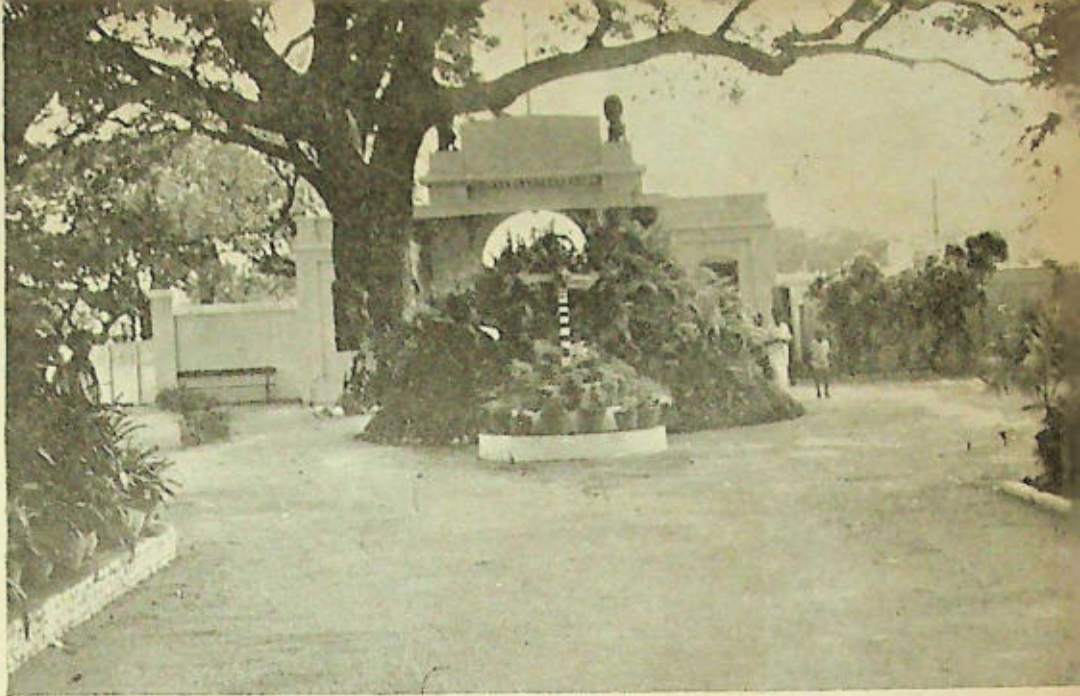


PHOTO: V. P. VENKATACHALAM

CHIMPANZEE 'INDU'



FERN HILL

world. This harmony can be secured only by a proper understanding and appreciation on the part of man of the functions and usefulness of the animal kingdom. Towards developing this understanding a zoo necessarily plays an important part.

Such celebrations as the one sponsored by the Madras Corporation in the present case will have served their purpose, if they lead to an understanding on the part of the people in South India of the value of wild life in so far as their own interests are concerned and how important it is for them to co-operate with the Government in the various measures which they are launching from time to time to protect the animal kingdom against heavy odds.





PRESERVATION OF WILD LIFE

By

HON'BLE SRI A. B. SHETTY

Minister for Health

WILD life is a source of great fascination to us. Children hear and read stories of wild animals with eager interest and take delight in seeing their pictures. A visit to the Zoo gives pleasure and excitement to young and old. Every day about a thousand people visit the Madras Zoo. The sight of wild animals in their natural surroundings in the forest is thrilling. Many naturalists have written about the beauty and variety of wild animals in India. There are said to be more than 500 species of mammals. The furs, hides and horns obtained from them form a valuable asset to the country. The avi-fauna is also rich and varied. Several of the fine specimens of wild beasts and birds seem to have progressively diminished in many parts of the world. The denudation of natural forests which provide shelter for them is one cause for it. Professional poachers destroy wild life to a great extent. Shooting from motor cars at night with the aid of electric light and the use of the more efficient arms and equipment of to-day has increased such destruction. The movement for the preservation of wild life has taken practical form on a vast scale in many countries of the world. Africa, the land of big game animals, has several game-preserves. The U. S. A., Japan and other countries have National Parks and Wild Life Sanctuaries. The need for wild life preservation is now well recognised in this country also. Among the big animals, the lion is confined to-day only to a small tract in Sourashtra, namely the Gir Forest. The rhino-



ZOO LAKE DRIVE

ceros of Assam is fast disappearing. Similarly there are other wild animals which are dwindling in numbers in all States. An Indian Board for Wild Life Conservation has been constituted by the Central Government in 1952. Several of the State Governments have set up their own State Wild Life Boards. Game Reserves and Wild Life Sanctuaries have been established. A State Wild Life Board has been constituted here in September, 1954. Special organisations have been functioning in the Palni and the Nilgiri hills for the purpose of regulating shikar and preservation of game in those localities. Madras has had a Wild Life Sanctuary at Mudumalai forests in the Nilgiris District since 1940. This Sanctuary is now being extended over an area of 120 square miles running up to parts of the forest range of Wynaad division. Visitors can go on elephants to the Sanctuary and see wild life there in its native haunts. Proposals are under consideration for converting this sanctuary into a National Park providing various amenities to attract visitors and tourists. The establishment of a sanctuary for birds in Chingleput District is also being contemplated. The All India Conference of the Superintendents of Zoos which met in Madras City in May last, seems to have taken up the question



THE BIRD ISLAND

of the improvement of Zoos. This is a welcome move since Zoos have a scientific and educative value.

The forest area which is set apart for the purpose of the sanctuary is well away from cultivation. The agricultural population need have no apprehension about the measures that are being taken for the protection of wild life. Crop protection gun licences are being given to ryots. What is prohibited is the shooting of animals and birds which are threatened with extinction and the destruction of females and immature males among big game in reserved forests. The shooting of other animals and birds is regulated by rules. The preservation of the larger carnivores will keep in check the growth of the numbers of the crop destroying animals like the wild pigs, deer, monkeys, etc. The maintenance of the balance of nature in this way serves a useful purpose.

Dr. Punjabrao Deshmukh, the Union Minister for Agriculture has rightly observed that we cannot rely only on legislation to stop the excessive and indiscriminate killing of our beautiful birds and animals by poachers and others. He has stressed the need for developing a strong and enlightened public opinion in order to create the right atmosphere for the execution of plans



SHADE AND SCENE OF THE THE 'DIVI DIVI'

for the preservation, systematic management and perpetuation of wild life. Government of India, have, therefore decided that a "Wild Life Day" should be observed annually all over the country and that the first annual day should be celebrated this year on the last day of the Vanamahotsava Week. It is hoped that this celebration will focus attention of the public, especially of students and children, to the need for cultivating a Love of Nature and the preservation of the fauna and flora in Wild Life.

Zoological science tells us about the extent of animal life which shares the world with Man. Human creatures are just one species of mammal among many hundreds of other species. Man represents the last link in the long chain of evolutionary process. The progress of science enables us to understand better to-day the wonderful living world about us and its inter-relationship. Out of this understanding must come greater sympathy for the host of animal companions with whom we human beings are going through the life adventure..

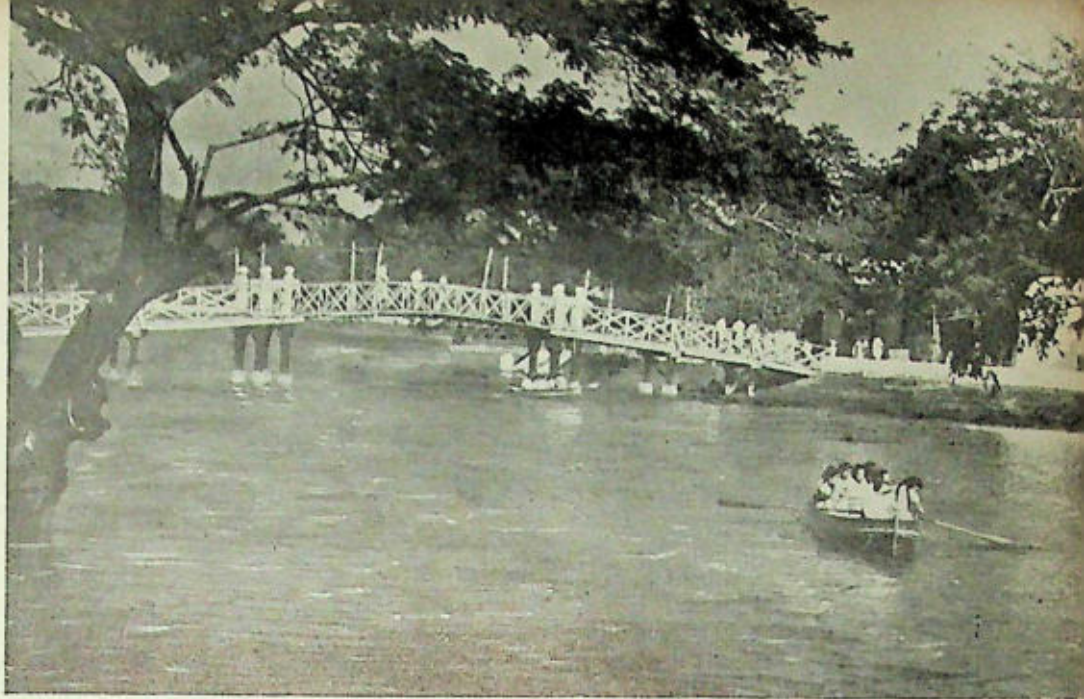


ON ANIMALS - - - - AND BIRDS

By

THE HON'BLE
DR. P. V. RAJAMANNAR
Chief Justice of Madras

INDIA is unique in many things. One of them is the Indian's attitude to animals and birds. I use the term "Indian" as synonymous with the term Hindu, because Indian culture and social and religious tradition are predominantly Hindu. Though in the world of creation, a human being may occupy a much higher place than the animal or the bird, nevertheless the Indians have not treated animals with contempt or indifference. In other countries animals are considered only from two aspects, namely (1) according to their being useful to man and (2) as pets and companions. In India, however, though these two aspects are not totally absent, there is another aspect which gives to the animal and the bird a very much higher status than is given to them in other countries. This attitude is partly, if not mostly, due to the association of many of the animals and birds with deities which sometimes make them even objects of worship. Each of the Gods and Goddesses in the Hindu Pantheon is described as having his or her peculiar *vahanam* which generally is an animal, or in some instances, a bird. Such animals are not only the more imposing variety like the elephant, the lion and the tiger, but even the peacock and the rat. The bull is sacred to Lord Shiva and invariably found in every temple dedicated to Shiva. The reverence paid by devout Vaishnavites to Garuda is well known. Indeed



THE ZOO BRIDGE

Garuda is also called an Alwar. Even the serpent has a very high place. It is an ornament of Shiva. Adishesha furnishes the couch for Mahavishnu. The guardian deities of the eight *diks* have their special *vahanams*. Among them is found even the crocodile which is the *vahanam* of Varuna. Kubera rides on a horse and Yama on a buffalo.

India is rich in its forests which abound in wild animals. In ancient literature no description of an ashrama is complete without reference to the animals which lived in perfect amity in their spiritual atmosphere. No doubt the ancient kings were fond of hunting ; but as a pastime it was considered to be a vice. The king was expected to use his skill in hunting only to destroy particularly ferocious specimens of wild life.

The solicitude of King Asoka for animals and birds is well known and it has found permanent expression in his edicts. It is very interesting to find that in one of his edicts Asoka prohibits certain animals and birds from being slaughtered, particularly animals which have no food value. The following

extract from one of his pillar edicts reveals the detailed attention paid to animals and birds :

"When I had been consecrated twenty-six years, the following creatures have been prohibited by me from being slaughtered, e.g. parrot, maina, red-breast, the ruddy goose, the swan, the nandimukha, the gelata, the bat, the queen-ant, the terrapin, the boneless fish, the partridge the Gangetic water-cock, the gilt edge Fish, the tortoise, the porcupine, the squirrel, the *smara*, the bull the monkey, the dotted antelope, the white dove, domestic dove and all quadrupeds which are neither utilised for food, nor are eaten. A she-goat or a she-pig, either pregnant or with milk, shall not be slaughtered.

"Similarly young ones under six months shall not be slaughtered. Cocks shall not be caponed. Husks with living creatures shall not be burnt. Forest fire shall not be lit unnecessarily and with a view to kill living beings. One living being shall not be nourished by sacrificing another living being."

In another rock edict of his it is said :

"For the use of men and *cattle*, trees have been grown and wells caused to be dug on the roads."

Two kinds of medical treatment were established by Asoka who was rightly called Priyadarsin, medical treatment for human beings and medical treatment for animals. Medicinal herbs useful for human beings and animals were imported and grown wherever they were not available. It looks as if this benevolent

BOAT JETTY





PHOTO : V. P. VENKATACHALAM

TRAGOPAN



PLEASURES OF BOATING

king was against slaughter of animals even for his banquets, for in one of the rock edicts we have the following :

“Formerly several thousands of animals were slaughtered*for soups in the kitchen of Devanampriya Priyadarsin. But now, when this instruction on Dharma is being inscribed, only three lives (animals) are being killed ; i. e. two peacocks and one deer ; even this deer is not slaughtered regularly. In future even these three lives shall not be slaughtered.”

In no country in the world as in India there are so many of its people being vegetarians, not because of taste or disinclination, but on principle, namely, that no animal should be slaughtered to supply man's food.

India has adopted Asoka's Pillar as an emblem, a symbol of its ideals and traditions. It is therefore incumbent on the Government and every public body to provide for the protection of animals and birds and to provide them with all amenities and medical treatment. India will then be able to demonstrate to the world that her people do not only believe in the oneness of all humanity, but also in the oneness of the entire Creation.



THE USES OF A ZOO

By

THE HON'BLE

MR. JUSTICE A. S. P. AYYAR, I.C.S.

MAN is the elder brother of the animals, the younger brother of the gods. Born an animal, he eats, excretes, procreates, feels pleasure and pain, hope and fear. Partaking of the nature of the gods, he distinguishes between right and wrong, DHARMA and ADHARMA. It is obvious that if he is to march from animalhood to godhood he has at first to become equal to the best animals, just as if a pit is to be made into a mound it has first to be filled up and made level.

Animals are still superior to man in many respects. No animal lends money on interest : man does. No animal keeps a brothel : man does. No animal organizes wars in cold blood and from political motives : man does. No animal is ungrateful : man is. No animal has unmotivated envy, jealousy and cantankerousness : man has. No animal exploits fellow-animal : man does, mill-owner becoming millionaire, mill-cooly remaining mill-cooly. To-day, thinking men are enacting measures calculated to draw man up level to the animals as best as they can. Hence the Agriculturists' Relief Act, Usurious Loans Act, Brothels Act, Anti-Hoarding and Profiteering Act, and the Peace movement, and attempt to form a socialistic pattern of society.

It is notorious that men and women, if closely scrutinised, resemble some animal or other physically, some the lion, some the tiger, some the bull, some the cow, some the monkey, some the fox, some the bandicoot, some the rat, some the shark, some the eagle, some the parrot, some the crow, and some the worm. They have also the quality of every animal except the elephant

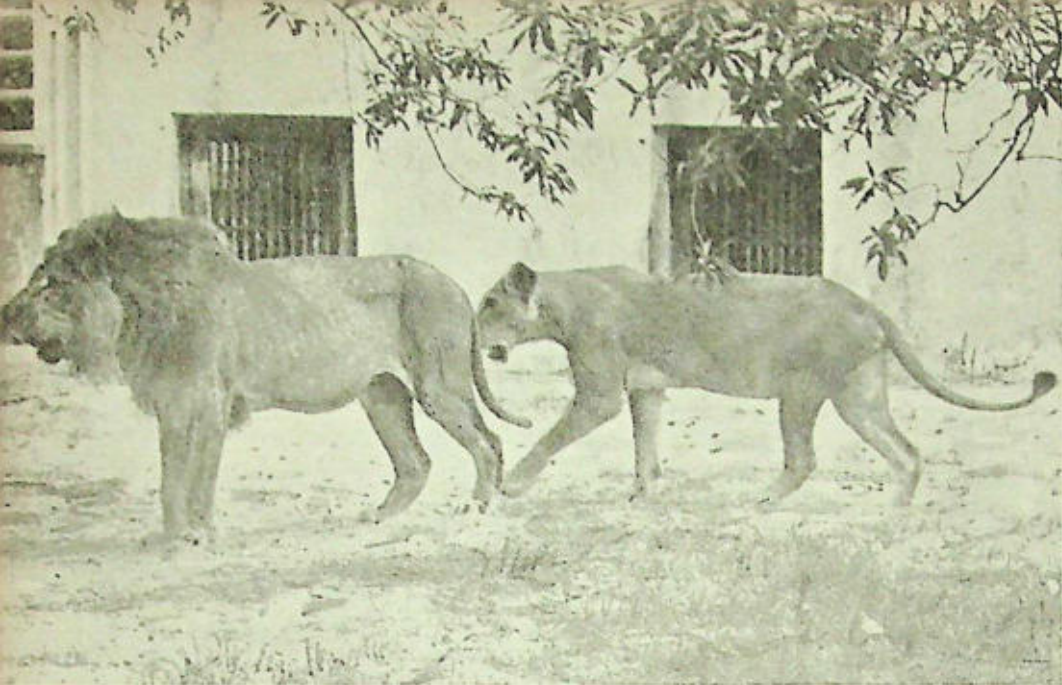


ZEBRAS BORN IN MADRAS ZOO

and the dove. Man is brave like the lion, fierce like the tiger, cruel like the wolf, mean like the hyena, cunning like the fox, thievish like the rat, hoarding like the squirrel, lustful like the pig, revengeful like the crocodile. He struts about like the peacock, repeats like the parrot, apes like the monkey, swoops like the eagle, and kills like the hawk. The only animals he does not imitate are the elephant with its stateliness and magnanimity and disdain to look back to see which fools are following it, and the dove with its love and affection.

The Zoo is very useful for us, especially Madras, as a visit to it will dispel the false propaganda that people in a tropical climate, and more particularly vegetarians, can never be strong. When we see the elephant, the Bengal tiger, the crocodile, the rhinoceros and the King Cobra, all denizens of the tropics, stronger than any animal in the arctic or temperate zones, and when we see the vegetarian elephant and gorilla as strong as any animal on earth, we get rid of the debilitating effect of this cunning propaganda.

Lastly, man can make interesting and useful experiments for his own profit in the Zoo, let alone learn valuable lessons by



LIONS IN THE OPEN

watching the habits of the animals there. The late Maharaja of Mysore made the lion and the tiger mate, in order to see whether there would be any progeny and what such progeny would be like. There was progeny, but it was a failure, being a feeble useless animal which died soon, something like mixing water and milk, both good in themselves but a failure when combined. In the Mysore Zoo again, a tiger was taught to climb up a tree like a leopard, showing the latent capacity in us all, and giving great hopes for the educational possibilities of aborigines and Harijans. Animals do not take kindly to medicines, thus showing to us that medicines are not to be freely resorted to. They do not willingly keep on clothes, or eat over-cooked or over-spiced food, giving us a much-needed warning not to indulge in too much clothing or over-cooked or over-spiced food if we care for our health.

We must therefore visit the Zoo in order to see our younger brothers and learn from them positive and negative lessons to enable us to progress towards godhood, just as we must visit temples in order to commune with the gods and partake of their nature. So, every community must encourage both zoos and temples. It is a matter of great pride to us, citizens of Madras, that our Corporation has one of the oldest and most interesting Zoos in India. Let us visit it once a quarter at least !

WHAT WE LEARN - - - - FROM THE ANIMAL

By

SRI K. VENKATASWAMI NAIDU, M.L.A.

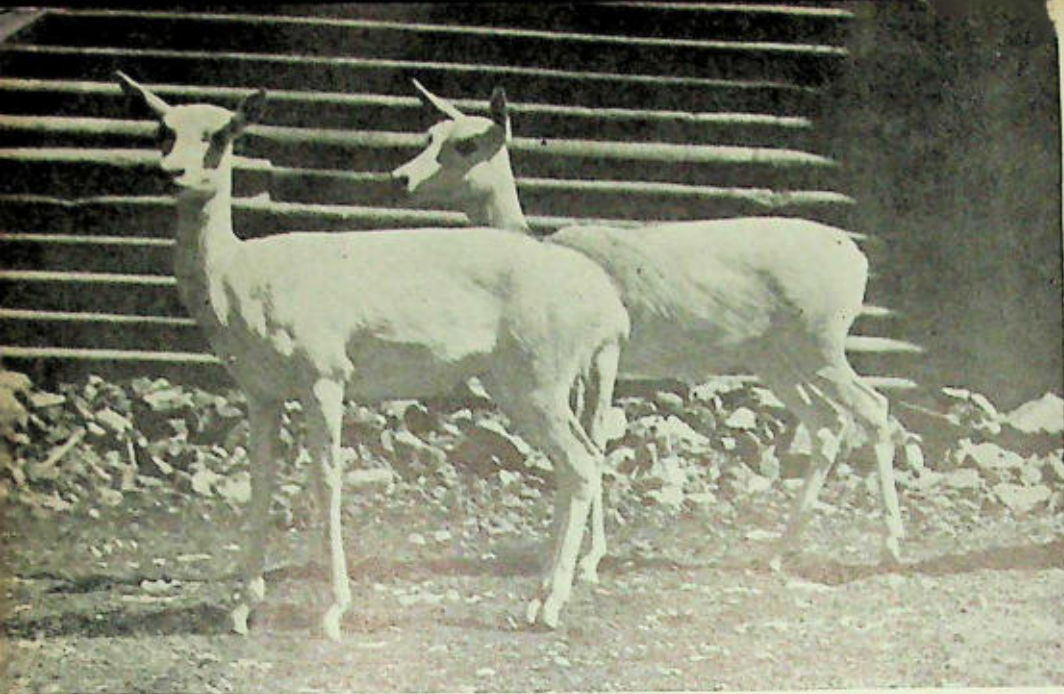


WE not only live with members of our family, friends and such human beings but we live with animals and birds. Early morning the cock raises its majestic voice "Koo-Kro-Ko"—announces the break of day. Later the chirrupings of birds come like speaking of friends. Sometimes the Cuckoo makes its long drawn appeal. The crow stirs us to raise from bed. From our deep slumber we come into life again through the reminder of these kind friends. If we happen to have a pet it jumps on us, fondles and more than a child gives its abundant love to us. A good pedigree dog is a wonderful companion and a great friend. The watch dogs work like no paid servants can do. He will protect you. The keeping of a dog is no small matter. It is a science by itself. Have we not heard of the police dogs which have traced many a criminal in this land?

There are several such pet animals. Sometimes our house itself is a small zoo. We have cats and dogs—birds and fish—squirrels etc. Many a cultured person spends a good part of his time in enjoying the company of these emissaries of nature.

We may not have a swan in our house or the snow-white crane, the few birds that sing to beautiful notes. The great writers and sages wrote so beautifully about them and they sent them as messengers to the Lord to reveal their love for the Lord.

Never forget the presence of these wonderful creatures round you. You should do what you can to attract them and feed them. Some men and women, who can afford, have the



WHITE DOES

bigger animals in their private zoo. There are private zoos where the elephant, the cheeta, snakes of various kinds are all bred up.

Our elders had great reverence for the bigger animal. The name of God is associated with Lion, Bear, Horse and so on. Lord Krishna is seen with a cow, Jesus Christ with a lamb, Subrahmanya with a peacock, Vishnu with Garuda, Siva with Nandi, Kali with a lion. How closely allied is the animal. How referential we feel towards the same. Every morning the house-wife cleans the cow, decorates it with saffron and flowers and is proud to own a cow.

The horse has played a great part in human life, in wars, in races and as a daily vehicle. A good horse is a wonderful animal to look at.

We like once in a way or more often to spend some time with these wonderful creatures of God. So we go into the Zoo. We take some fruits or biscuits and approach the animals. It is not a good man that poaches an animal. He looks in wonder at the majestic lion which paces up and down the huge cage. The children have a joy ride on the elephant or camel. The



SAMBUR FAMILY

Chimpanzee is very near approach to man. The aviary, where we see different sorts of birds. What a wonderful colour. We can gaze for days and days together on these birds.

We lose ourselves in wonder when we are in the zoo. It is not only for the child. There is nothing in the child losing itself in wonder. In the man, going into a zoo, and not feeling the happiness and pride of seeing them, we must suspect he is becoming morbid and losing finer sentiments of human nature.

Men not only domesticated animals, but they specialised in breeding animals and secured animals of Pedigreed Status. The most useful of all domestic hybrids is the mule. A mule is the offspring of a mare and a male donkey. It combines the size and strength of the horse with the sure-footedness and stamina of the donkey. The hybrid called the hinny is very much like the mule. A hinny is the offspring of a female donkey and a male horse. Similarly cattle hybrids are getting more and more attractive.

Recently preservation of wild life has attracted greater attention. The Government are doing their best to discourage

distracting wild life and encouraging great interest in wild animals and starting game sanctuaries. The Zoos, which used to be the hell of wild animals, are now becoming the garden of wild life. This centenary, we are sure, will rouse the world interest in our Madras Zoo and wild life and I am sure the citizens of Madras will respond wonderfully by attending the celebrations in large numbers and making the zoo quite an interesting place, and the centenary a great success.



LIONESS 'LILLY' AND TIGER 'BABY'





PHOTO : V. P. VENKATACHALAM

ADJUTANT STORKS

ANIMAL DWARFS and GIANTS

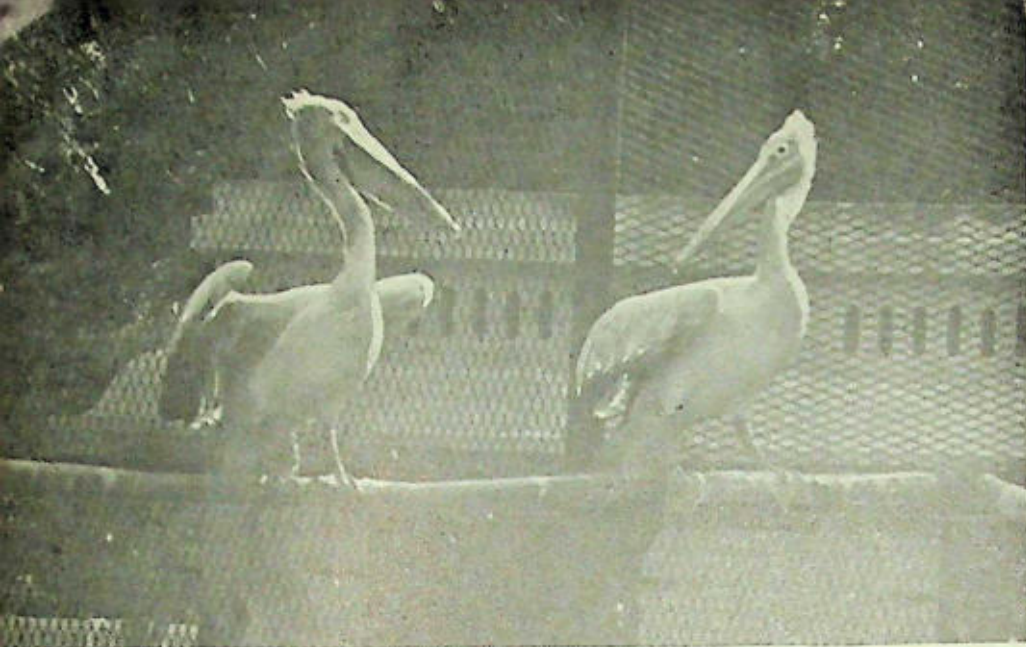
By

SRI V. R. RAJARATNAM, B.A., I.P.

Inspector-General of Police, Madras State.



A lay student of the Animal Kingdom is struck with awe and wonder at the great oddities and varieties of the extant and extinct species of the Animal Kingdom. One of the interesting oddities in the Animal world is the fact that most of the animals, well known to us, have their little known Liliputian relations, usually spoken of as the pygmy variety. The African elephant is the largest animal in our modern world. The pygmy elephant is found in Congo, in Liberia and West Africa. It measures 5 feet and less from the ground at the shoulder. In all other respects, it resembles its big relation and the dwarfishness of this does not appear to have anything to do with the physical environment it lives in. In the London Zoo, this pygmy is reported to have proved itself as clever as its big cousin, if not as strong and useful. The Hippopotamus is the second largest animal in the world, and he also has his pygmy relations known as 'River Horses'—The latter are less than half the size of the former and are mostly found in Liberia. 'River Horses' are strict vegetarians, particularly fond of indulging in picnics to distant sugar-cane groves. A curious thing about the pygmy hippos is the fact that their skins exude a thick brownish oil which coats the human hand, when they are patted. Another huge beast is the Rhinoceros. The pygmy rhino known as 'Chittagong' hails from the East Indies. It stands about 3 feet high and has two horns. This pygmy relation has an extra long pointed upper lip with which it can pick up the smallest seed and it is a vegetarian like its mammoth cousin. These pygmy rhinos are more amiable than the other



PELICANS 'BOYNA' AND 'CATY'

varieties. It is reported that when they were shown at various Zoos, they were found to be tractable, and it was found possible to shepherd them from one compartment to another by means of a rope which will not be a safe method in the case of their giant cousins. This pygmy rhino is very rarely met with now, presumably because it has been so ruthlessly hunted for the sake of its horns which were used in the preparation of medicines.

The Bison of North America has its midget cousin, known as Anoa found in the Island of Celebes. It is not bigger than a sheep. This pygmy variety is more like antelope than cattle. They are extremely mild and gentle in disposition. The baby anoa is the smallest calf, ever known in the world. There is also a well-known pygmy or dwarf variety of the splendid horse family. They hail from Shetland and are known as Shelties. They are so strong that, when trained to domestic purposes, they can carry a man or a woman for a considerable distance; they are so intelligent that they can be harnessed to small farm carts of a low-built kind and can be used for most light farm haulage work.

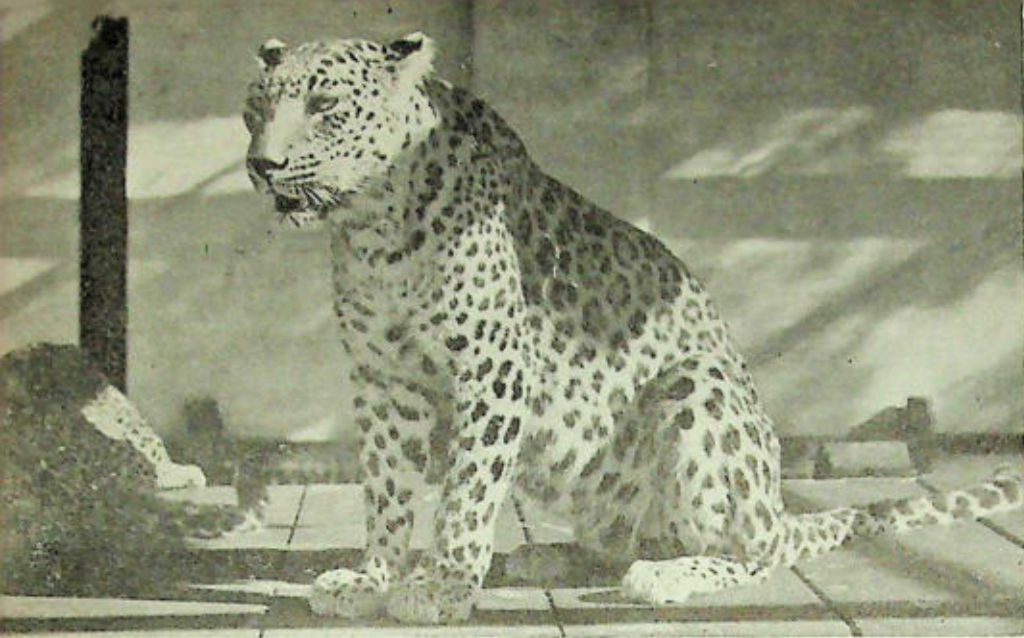
There is a very tiny pygmy member of that extraordinary reptile family known as the chameleons, so famous for



CIVET CAT 'CHEEMA'

their ability to change their colouring to suit their surroundings. Pygmy chameleons are found in South Africa, and they are little more than two inches in bodily length, while their thin tapering tails add about another three inches to their total length. The natural colour of the pygmy chameleon is a sort of dull brownish-green, but it will take on a dazzling grass-green tint if placed among bright green foliage. A particularly curious feature about the pygmy chameleon—and one in which it differs from all other members of its tribe—is that, instead of laying eggs in the usual reptile manner, it produces its young ones alive and perfect in every way.

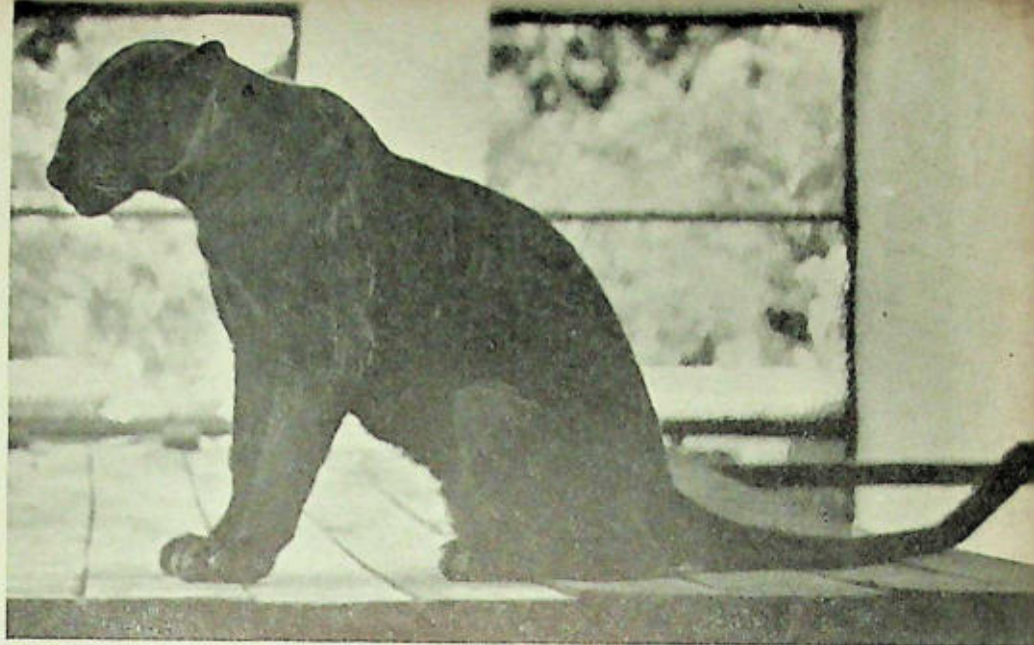
There are a few dwarfs among the feathered folk also. One of these is the pygmy falcon which hails from Abyssinia. It is scarcely larger than a sparrow, and it is so plump and frivolously fluffy that its fierce little head, with the hooked beak gives it the quaint appearance of having 'an old head on young shoulders'. These pretty little pygmy falcons are flesh-eaters and are ruthless in their hunting methods and will continue to kill for the sake of killing even after having satisfied the hunger of themselves and their greedy families. The smallest bird that lives in the world to-day is the dwarf hermit humming-bird



LEOPARDESS 'JABIRU' AND CUB

found in tropical Brazil. This tiny bird is no bigger than a wild bee, and its body will appear to be a living cluster of coloured jewels, while its fairy-like wings will flash and scintillate with rainbow tints in the sunshine. Most of the humming-birds are very small; but the dwarf hermit is the tiniest of them all. So much about the extant dwarfs.

Among the extinct variety,, the 'Thunder Lizard' and 'The King of the Tyrant Reptiles' were the gargantuan monsters in pre-historic times. The 'Thunder Lizard' was over 75 feet long and 15 feet high and must have weighed 30 or 35 tons. A large Indian elephant that weighs five tons would look like a mouse playing with a lion along side such a monster. An elephant of 5 tons, eats about 1000 pounds of green fodder and 20 pounds of grain each day. The 'Thunder Lizard' must have eaten five or six times this quantity. This was a real feat, because its head was ludicrously small compared with the size of its body, and its teeth were very weak. It is believed that the 'Thunder Lizard' spent most of its time in the water feeding on aquatic plants. Its long neck enabled it to reach out in all directions for food without moving its enormous body. The King of the Tyrant Reptiles was not as long as the Thunder Lizard, and probably did not weigh as much, but it lived on



BLACK PANTHER 'RATHRI'

land and preyed on other animals. It was probably the most terrible creature that ever lived on the earth. It grew to a length of at least 47 feet and stood 20 feet high. Its head was over four feet long and its mouth, which had a gape, a yard wide, was filled with double-edged teeth from three to six inches long. The King of the Tyrant Reptiles walked on its hind legs, with its front legs high in the air. Its claws were long and sharp and well fitted for grasping its prey while it was torn to pieces by its terrible teeth. The plant-eating animals which existed at that period must have been an easy prey for such a fearful monster. Such formidable animals had become extinct, perhaps, because, the Tyrant Reptiles multiplied and began to eat each other when their food supply ran short, until none was left alive to perpetuate the species.





A WELL EQUIPPED ZOO

By

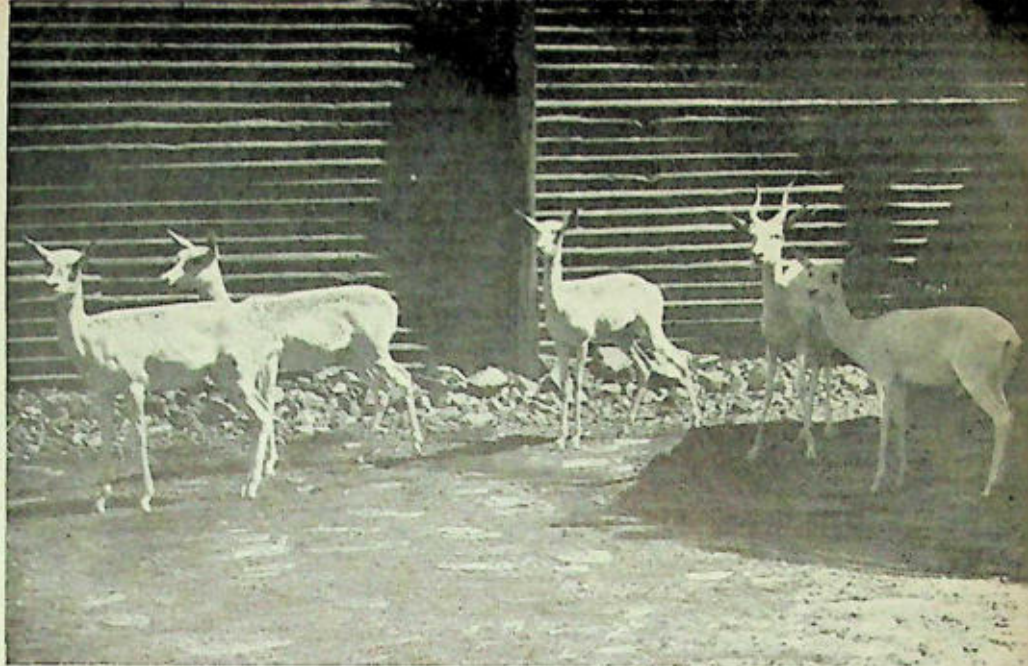
J. P. L. SHENOY,

Bar-at-law, I.C.S., (Retired.)

EVERY modern city has a well-equipped zoo to which children stream in their thousands. It is not merely curiosity that impels children to visit the zoo but an instinctive love for animals and birds of every description.

It is a pity that this instinctive fondness for animals vanishes in later life when it is replaced by a desire to shoot animals that wander harmlessly in the jungles of India. However it is fortunate that Government is establishing numerous game-sanctuaries all over India to preserve what is left of India's once rich wild-life.

I always felt that it is almost cruel to confine animals and birds in large cages however well they may be fed in captivity. This fact is being increasingly appreciated in most European countries which have moved the old and congested zoos from the heart of the city to very large spaces on the outskirts of the city where each species of animal is allotted about two acres of land in surroundings resembling as nearly as possible the natural conditions under which that animal was accustomed to live in its wild state. Iron bars and barbed wire are conspicuous by their absence and the wild animals are at liberty to move about over a fairly large area and exercise themselves and keep thoroughly fit. Under these ideal conditions most wild animals breed in captivity – which they rarely do when confined behind iron bars as in the old type of city zoo. Incidentally, the existence



ALBINO BUCKS

of a Zoo spread over an area of a thousand acres and situated about ten miles from the modern city, would provide an ideal outing and a picnic spot for residents of a congested city. The wild life will be much happier in such surroundings. It is time therefore that the Madras Corporation applied its mind to moving the animals and birds from the narrow confines of the present zoo to a very much larger and healthier zoo situated on the outskirts of the city.

A Zoo should be judged not merely by the number of the different varieties of animals and birds which it confines within narrow cages, but in the health, happiness and contentment of these poor creatures. Most animals confined within narrow limits mangle, fall in and die quickly as would any human being similarly confined. It is particularly cruel to see certain animals and birds without even a mate of the opposite sex to keep them company while they are confined behind iron bars. It is however satisfactory to note that the Madras Zoo has gone out of its way to provide mates for almost every species of animal and bird that is found within the zoo and this at any rate makes such solitary confinement somewhat easier to bear.

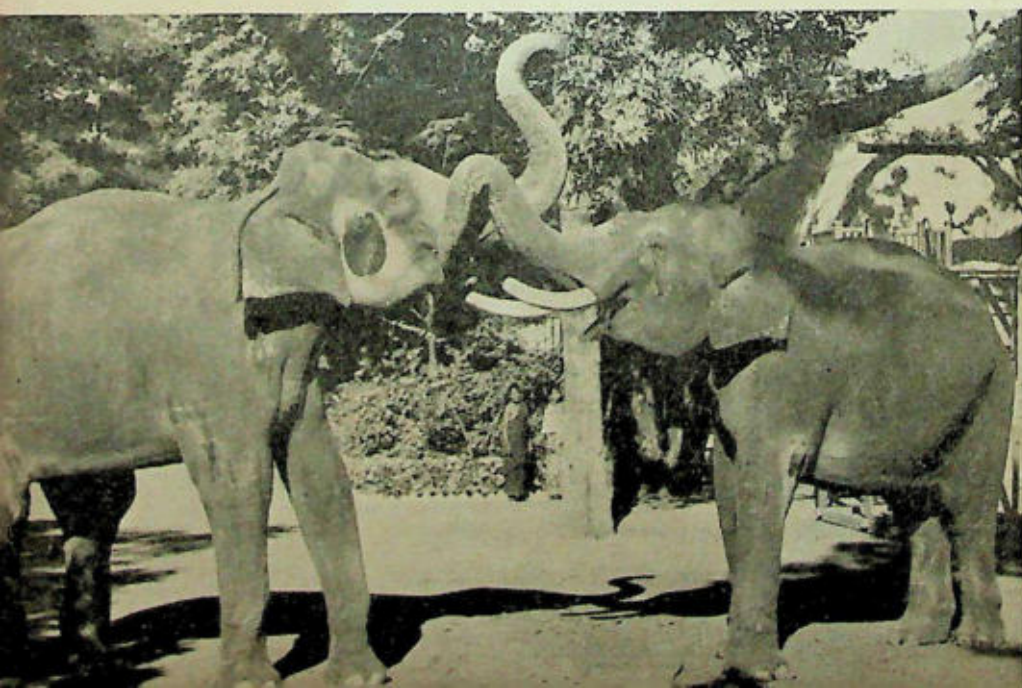
In 1942, most of the wild animals in the Madras Zoo were shot dead. This was a most unfortunate decision of the Madras Government. The theory was that if a bomb fell on the zoo it

would destroy the iron cages and would liberate the wild animals within the iron cages and thereby endangering human life. It does not seem to have dawned on the authorities concerned that if a bomb's blast was strong enough to break the iron bars of an animal's cage, the blast would most certainly destroy the wild animal within the cage. However we live and learn and it fell upon me as Commissioner of the Corporation between 1944-47 to replace the wild animals that had been so unfortunately done to death.

Noting of our great need for wild animals, the Conservator of Forests in Madhurai sent me a telegram intimating that two tiger cubs, whose mother had been killed in the forest, had been captured alive and did I require them for the Corporation Zoo?

I telegraphed in reply that I was sending a man along to fetch the tiger cubs. On their arrival at my house I discovered that the poor creatures could not even drink milk from a saucer and had to be fed through a Baby's feeding bottle. We accordingly kept these little creatures in our house for two months until they grew up and were able to look after themselves.

ELEPHANTS 'SARAH' AND 'KRISHNA' COURTING



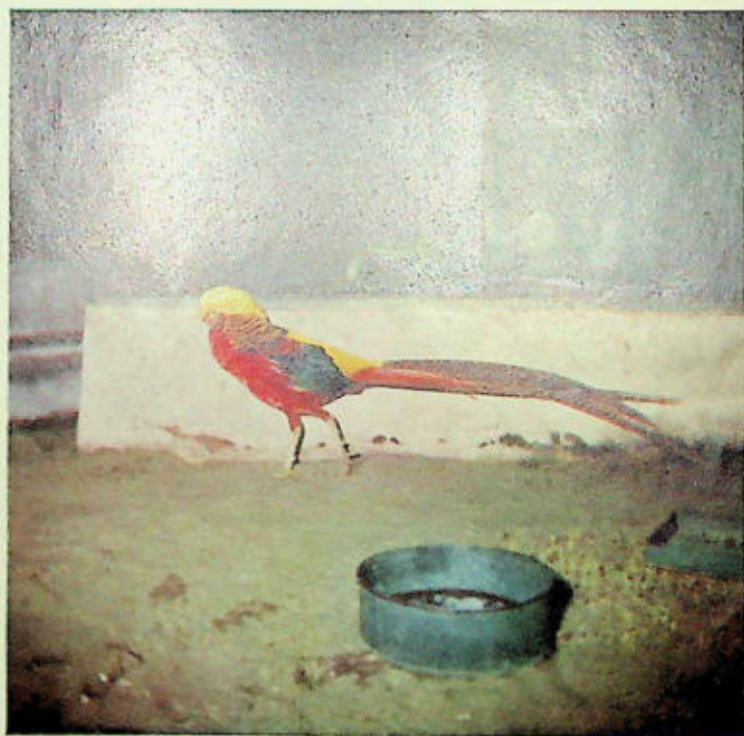
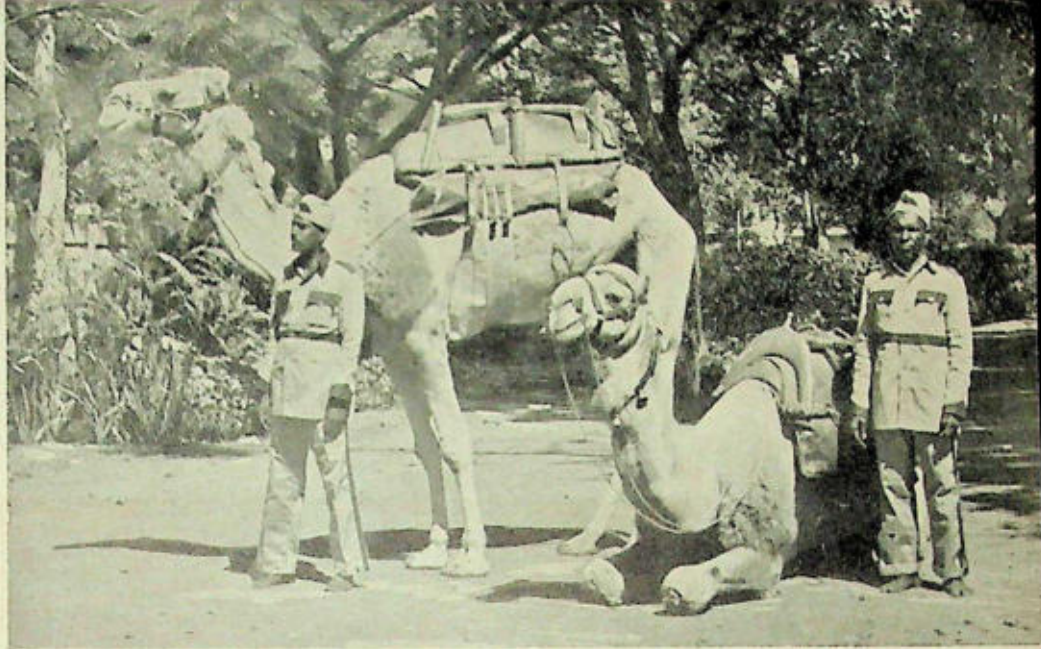


PHOTO : V. P. VENKATACHALAM

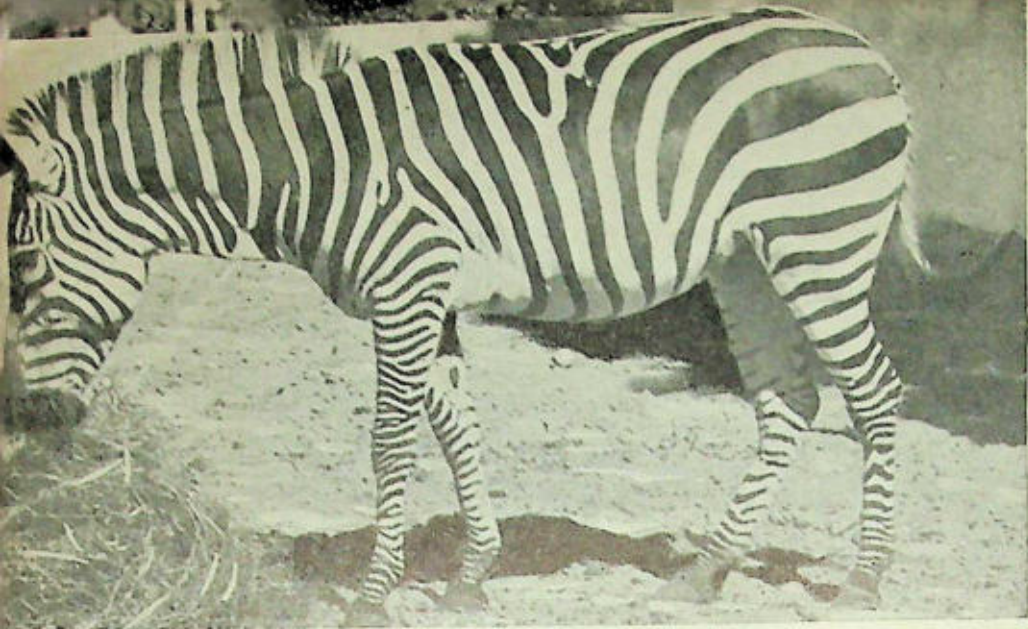
GOLDEN PHEASANTS



CAMELS READY FOR RIDES

During this period they had free access to every room in our house and went about like any pet dog or cat. They were most affectionate and responsive to kind treatment and one could hardly believe that they had come straight from the wilds of the Jungle. Unfortunately these two dear creatures had to be sent in due course to the Madras Zoo to live behind iron bars for the rest of their lives. But I am happy to think that notwithstanding the harsh treatment that man has meted out to them they are now full grown tigers and not a bit ferocious to human beings who have made prisoners of them. This speaks highly of the kindness and affection with which the Zoo Superintendent and his assistants look after these poor animals and birds and they seem to be as happy as any prisoners can be expected to be under such circumstances. It illustrates the fact that wild animals are not really wild. They become wild only when they are hunted and persecuted. They respond to kindness and one could well believe the story of "ANDROCLES AND THE LION".

It would be a fitting souvenir of the Centenary of the Madras Corporation Zoo, if in this centenary year, a decision were taken to move the Zoo entirely to more extensive surround-



ZEBRA 'IONA'

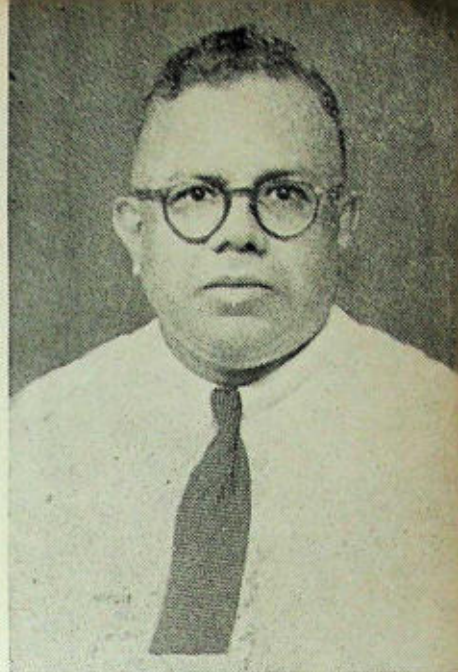
ings on the fringe of the city. Plenty of land is available at very moderate prices and although the distance of the new Zoo may prevent quite so many people from visiting it every day, nevertheless it would be for the lasting benefit of the denizens of this Zoo and it will make people happier to see these poor captive animals and birds in pleasant surroundings and leading a contented life. This indeed would be a fitting centenary reward to these animals and birds that are inevitably sentenced to life-long imprisonment.



YOUNGER OR OLDER ?

By

SRI T. S. RAMACHANDRAN, M.A., I.C.S.,
Inspector General of Prisons, Madras State.

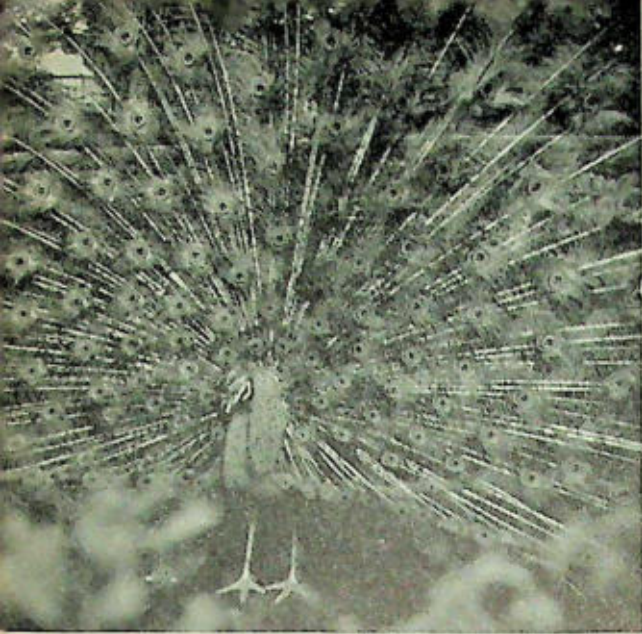


I feel it a privilege and an honour to be able to accept the kind invitation of the Commissioner to contribute an article to the Madras Zoological Centenary Souvenir. The term "Zoological Gardens" is defined in the Chamber's Dictionary as "a place where wild animals are kept for public exhibition." The Concise Oxford Dictionary concisely defines it as "public garden or park with collection of animals kept for exhibition." The Concise Oxford Dictionary probably hints at the fact that animals which are not wild are also kept in zoos. And it is rather curious that a wild beast, which you can find in many zoos, is not really a wild animal but a tame gnu or oxlike antelope.

As Srimathi Rukmani Devi has often explained, our brotherhood with animals both tame and wild really is a part of God's planning for the world. As Coleridge said in his Rhyme of the Ancient Mariner,

"He prayeth best who loveth best
Both man and bird and beast."

In ancient India, the natural desire to take care of wild animals was provided for by saying 'They should be free and not hunted in the Ashramas or Hermitages of the Rishis or ascetics who lived in them.' That is why we read even in the story



THE STRUTTING PEACOCK

of Sakuntala that king Dushyanta unstrung his bow before he approached the Ashramas. But with the mixture of kindness and prudence, which characterized the ancients, the kings were allowed to hunt lions and tigers when they began to attack the domestic animals near populated areas.

The nicest way of seeing animals and watching them is to have large sanctuary reserves like Yellow Stone Park in the U.S.A. The next best is to keep them almost in natural conditions with a security moat as in the Whipsnade Zoo in London. The least satisfactory but the best we can hope for to educate the large poor and lower middle-class population in congested cities is the establishment of ordinary zoos of which the most famous that I have seen are

- (1) The Royal Zoological Gardens in Regent's Park, London,
- (2) The Jardindes Plantes in Paris.
- (3) The Berlin Zoo,
- (4) The Mysore Zoo, and
- (5) Our Zoos

in Trivandrum and Madras City.

Contact with the animals teaches us the essential soundness of the basis of the Darwinian 'Theory of Evolution' that in many respects we are only animals and that very often a human being who is a glorified animal is much better than a human being who is only a poor sort of animal. Some persons may believe that evolution means we have evolved out of a prototype ape and others may believe that really we may have degenerated from man into the ape. There is a good lot of the ape and the

tiger in most of us and it is in studying the ape and following it in aping the best in our country and other countries and not blindly aping others that we can evolve. Similarly we can study the majesty of the lion and the fierceness of the tiger while avoiding their rapacity and brutishness in settling international complications. Like Aesop's Fables, our Pancha Tantra and Hitopodesa have, by making dumb animals talk with the tongues of men, enabled us to realise the fundamental principles of conduct. Chesterton in a lovely poem and *UNTERMAYER* in a lovely story called "The Donkey of God" have shown that even the donkey burdened with the donkey work of the world had its one glorious hour when it carried the Lord Jesus on his triumphal march in Jerusalem. The giraffe teaches us that what is high is not necessarily superior. The elephant teaches us that wisdom may lie even with small eyes and that there can be delicacy of touch to pick up a needle in a long trunk. The camel is superb with its many curves and ungainly gait to remind us that curves are not necessarily at luring and that speed is not always beautiful to see. The guineapig has given us the phrases on the one hand to denote a company director with a showy name receiving fees without doing work. On the other hand, it also means an animal used to make experiments in medicine. According to the Mahabharata, after the whole world got submerged under water, probably as a result of an explosion of atom bombs and hydrogen bombs, (which we are now informed, may make the oceans swell and cover the land,) it was a fish which carried the surviving leader and others till the waters again receded and the land came up to revive civilized life and progress. The birds gave us the first sloka with the characteristic ingredients of (1) feet, (2) syllabic equality, (3) capacity to be set to music, and (4) involving tragic disturbance of the emotions. For, when Valmiki saw one of the two birds in love-play shot down by the arrow of a cruel hunter, he burst forth into the first piece of metered rhyme. From ancient times, we have been warned to be wise as serpents. I am sure that for spiritual and moral health and material prosperity, it is necessary to separate ourselves from the storm and toil of economic drudgery living in offices and close-pent houses which are no better than prisons, and restore our affinity to God by visiting horticultural gardens and Zoological gardens. As a matter of fact, in England many landladies and landlords are Fellows of the Zoological Society and offer as attraction to prospective tenants their privilege of giving free tickets to the zoo for authorized holidays and Sundays. As the finances of the Corporation will always admit of support, may I conclude by suggesting that a similar subscription may be invited from those who wish to help the Zoo to become even more attractive than it is now.

SOCIAL LIFE AMONG WILD ANIMALS

By

M. A. BADSHAH

Personal Assistant to the Chief Conservator of Forests

FRIENDSHIP, love and affection are not the birth rights of human beings alone but it is also divinely bestowed on the lesser creations. Much has been said and written about Wild Life in general but research on the social relationship, family ties, courtship, love, affection, care and protection of the young among wild animals still remains incomplete. Sustained and continuous investigation into these matters in the natural surroundings is not feasible in spite of the keenness of the observers and their preparedness to devote their life time to record such interesting episodes, on account of the shy and shifting behaviour of wild animals.

For reasons unknown suddenly the scene of such activities shifts to another place eluding the observer who is unable to keep pace with their swift movements unseen and continue his studies. Therefore whatever evidence of their social conduct in natural state available is only fragmentary and isolated. The detailed knowledge available about their social customs and manners is derived only from the lives of captive animals. Even such isolated instances are amusing and interesting to deserve mention.

MONKEYS

Next to man the biggest social organisation in the animal Kingdom is that of the monkeys. The Monkeys always move in communities. This is because the sex attraction in monkeys is predominant and permanent unlike other animals where it is periodic as "rut" in deer "musth" in elephant and "heat" in

wild dog. Mating in other animals is confined to a certain period in the year and during the rest of the period there is little attraction to keep the sexes together but whereas among the monkeys mating may take place at any time of the year and therefore the social life is permanent. It is an admitted fact that the reproductive instinct is the basis of all social life. Monkeys are generally polygamous. A virulent and dominant male will marry as many wives as he can, maintaining a regular "harem."

Care of the young among the monkeys is akin to human care. From the moment of its birth the baby monkey clings to its mother sucking her teats. The babies are never left alone, they are carried wherever the parents go. As the baby grows old the mother teaches it how to climb. Climbing is first practised on the mothers tail and then over her body. Then the mother starts throwing the baby in the air and clasps it in her arms, training it unconsciously to hold the branches. Their devotion to the young is remarkable. The Monkeys will sacrifice their lives to save their young ones. The *esprit-de-corps* and fellowship are highly developed in them. A dead monkey or a wounded one will attract the whole tribe in the neighbourhood and they will all rally round to render necessary assistance. They behave in the same way whether the object of their affection is alive or dead. A mother will continue to carry about the body of its dead child little knowing it is lifeless.

DEER

Next in the order of social organisation are the deer species. Deer always move in herds. This gregariousness is developed for immunity against attacks of carnivorous animals. The leadership of the herd is annexed by the fully matured stag and he acts as the sentinel. He is virtually the caretaker of the herd. The care and training of the young is entirely left to does. When feeding or resting, the leader is always on the alert, inquisitive to smell, see or hear. The slightest disturbance or 'rustle' is sufficient to put the herd on guard. Many deer have white patch on the rump which is concealed by the tail. On approach

of danger, the deer takes off with its tail up exhibiting the white patch which is a danger signal to the rest of the herd.

When about to fawn, the doe abandons the herd and seeks a solitary sheltered spot to drop her young, the idea being concealment. The fawn lies alone for two to five days and is fed by the mother twice a day. It follows its mother within a few days and they both join the main group.

Fighting among the stags for the supremacy of the herd in the presence of the does is not uncommon among the spotted deer. A stag may get together as many as twenty to thirty females. The stags do not tolerate the presence of another mature male.

In the stillness of the Forests in the nights the bark or bellow of the stag during the mating season is a thrilling experience of a Forest Officer. This call which is an embodiment of lust gathers all the female deer in the neighbourhood.

Spotted deer is the most social of all deer species. They associate with Nilgai, black buck pigs and monkeys and wild cattle. Monkeys are their special friends. Spotted deer can be seen under trees infested with monkeys to eat the leaves and fruit dropped by them.

ELEPHANT

Elephants too are gregarious and their herds vary from 5 to 60 or more. The big tuskers are often seen feeding at some distance from the main herd. It seeks the herd when the urge to mate gets hold of him and then deserts it after the gratification of its desire.

The mother of a young calf is invariably assisted in the care and protection of her baby by another cow elephant who takes on the duties of a guardian and is as careful in nursing the calf as its mother.

When elephants apprehend death they walk miles and miles into the remotest corners of the forests to die unseen. This mystery cannot be explained.



PHOTO : V. P. VENKATACHALAM

KALIJ AND OBSCUROUS PHEASANTS

Elephant is the most sociable and intelligent of all the animals. It lends help in forest work, takes part in all processions, amuses us with its tricks in circuses, and carries happy children on its back.

BISON

Bisons are generally seen in herds of 8 to 12 animals. Such herds are usually composed of family groups. Except during the mating season bulls and cows graze together. The bull with a number of cows establishes his grazing rights over certain areas and keeps out other herds from his domain. Old bulls past the capacity for mating lead a solitary existence.

Bisons associate closely with elephants. This is because of the similarity in their habits as regards food and shelter. Bisons derive benefit from this association as the elephants help them. The high bamboo shoots on which the bison feeds and which are beyond its reach are pulled down by elephants.

TIGERS

Among the carnivores except wild dogs the other animals are not found gregariously in large numbers. Tigers and panthers are seldom seen in batches of more than two to four. These are chiefly composed of single family groups. This is because each tiger hunts for its own food and shares it with the members of its family and further tigers and panthers mate for life; therefore there is nothing common between them to move in large assemblages as in the case of other animals where conditions with regard to food and mating are not so strictly observed. There is a Chinese proverb "two tigers cannot share the same hill."

The mating season among the tigers is marked by noisy demonstrations and roaring. This is to attract the tigress. The tigress gives birth to the cubs either in dense patch of forest, in a cave or under rocks. The nursery is well defended by the mother who takes charge of the protection and care of the cubs. Training in hunting and stalking is given by the mother. *The*

cubs retreat and pounce upon each other. They start practising their craft by stalking the flicking tip of the mothers tail and keep worrying her to gain experience in their profession. The mother hunting with her cubs will disable the animal so that it might not escape the cubs who kill it finally.

JACKALS

The jackals are always found in the company of tigers and they follow them wherever they go to gorge the remains of the kill. It is said that jackals lead the tiger to its prey and they are suitably rewarded by the remains of the meal. Jackals are messmates of hyaenas. Jackals are found singly as well as in packs. When they do not get enough to eat they collect in packs and hunt small deer, or antelope. They also gather in sugarcane plantations and in melon fields of which they are so fond of. They are very secretive in habits and very little is known about their family life.

WILD DOGS

The biggest and the most powerful social organisation is that of the wild dogs and their formation at the time of attack is akin to Military strategy. The Sambhur or deer which is generally their target will not escape their clutches when once it is seen by them. Their organisation is immediately divided into small groups at the sight of the prey and they start attacking the prey from all directions rendering escape impossible. I had the most exciting experience in one of the forest camps where a Sambhur attempted to enter the kitchen tent for refuge ridden by a wild dog on its back and chased by the rest of the tribe. This relationship among the members of the tribe is actuated by the motive of securing food as individually they are too small to tackle a sambhur or deer. A pack of hungry wild dogs will not hesitate to attack a panther or even a tiger.

THE MADRAS ZOO

By

DIWAN BAHADUR R. SUBBAYYA NAIDU, C.I.E.

MY acquaintance with Madras dates from my youthful days. As a young boy I had occasions to visit Madras somewhat frequently. Almost the first place to be visited by visitors to Madras from the mofussil is Madras Zoo. Madras Zoo, situated within the limits of the People's Park would not be missed by visitors especially the newcomers, who are generally inclined to go about sight seeing and the Zoo is probably the first place in their itinerary.

Zooing of animals and birds has advanced to a high level of perfection in European countries. The caging system where the animals and birds are kept locked up behind iron bars is rather rudimental and takes no count of the innate love for freedom inherent in wild life. The caging system has been given up in several countries and the modern tendency is to go in for open air zooing system wherein particular plots are allotted for each species. Precautions are taken to ensure the safety of the animals and of the visitors to the Zoo. Places are provided with shelters for the animals in the form of bushes, trees and rockies with caves wherein the animals can needingly take shelter during rains or from sweltering heat. The Whipsnade Zoo near London which is run on the open air model over very extensive grounds, is an institution providing very many facilities for the animals in a more natural environment. The London Zoo has taken several years to come up to the present position. It was not built in a day and it is only when a Zoo is actually working that one would come to know more and more about the adequacy of the conveniences provided in each section and the needs and improvements necessary in each section, place,

etc. In my opinion, zoos may start small and may gradually build themselves up over a period of years. The aim must not be to start a big zoo gathering large number of animals and birds, etc. Some of these species are costly and may require a very large outlay. When as a boy I first came to Madras, I was advised by some men and women of Madras to see the "Living College" and the "Dead College" the former signifying the zoo of living animals and the latter signifying the collection of the remains of dead animals, such as skeletons, bones, etc. now housed in the Government Museum. Thanks to the exertion of some experienced and intelligent and able Superintendents who took much interest in their work, the Madras Zoo has been running on intelligent lines all along, and occupies a decent place among the zoos of this country. The Zoo shows clear signs of never ceasing anxiety on the part of the authorities to run the institution on modern efficient lines with a fairly decent collection of animals. The late war gave a set back to the progress of the institution. During the war a large number of wild (and costly) animals such as lions had to be destroyed in the interests of the safety of the public. But the Corporation was ever vigilant and never relaxed in its attempt to remodel the Zoo on up-to-date lines. The only compound wall that existed for years around the Zoo precincts consisted of old rusted Zinc sheets used up for years. Almost the first thing I did as soon as I joined as the Commissioner of the Madras Corporation was to replace it by an artistic masonry construction affording good protection and good view of the interior to the visitors above the pathways inside the Zoo. A decent outlook is very necessary for a Zoo. It must be pleasing to the eye. There must be a decent collection of animals, birds, etc., the locations of different species being kept separate from one another. There is found very little illwill and strife amongst the inmates of the Zoo. Madras must be thankful to the officers of the Zoo for the interest they take in their work with an aim to do everything in their power to bring the Zoo up to a decent level. It is better if the Corporation authorities are in very frequent touch with the Zoo. They can then understand the needs well and take steps to supply the needs without delay.

The advantage in Madras is that the Zoo is located within the precincts of a beautiful park. The environment of the Zoo is cool and pleasant and visitors generally feel refreshed at the end of their trip. The pathways of visitors must be maintained in good condition. The remains of an old water course is now maintained as a 'Lake' for boating. The washings and other refuse from the many cages in the Zoo is let into the lake and the Corporation must consider whether the lake or tank has proper maintenance. Proper drainage of the Zoo and proper maintenance of the lake, the unhealthy and dirty water being drained out of the Zoo precincts and the lake being promptly drained and cleaned and refilled by better and more healthy water. The Zoo as it is a very good source of income to the Corporation and the authorities must improve it further in all directions. The expenditure is worth incurring. The Zoo is kept up mainly for the recreation and pleasure and the knowledge of the people at large-the large population of the City and the suburban areas and numerous visitors from mofussil areas and places outside the City. To all such persons, the parks and the Zoo serve as a means of recreation and education much about the various animals coming from several distant lands. The poor animals which have lost their freedom are in caging and have been exported to the Corporation for proper care. When funds are available, the Corporation may constitute a Committee to investigate the conditions of the Zoo and lay down the lines on which the institution should be run in future. Zoos are not prison houses. They are institutions of educative and entertainment value. The animals should have ample scope for free movement and the diet, etc. should be systematically examined and provided for. The Zoo has come up to a much better position than what it was in my own younger days. The Corporation must alter it still further and must improve it in all possible ways. Any money spent on this institution will be a good outlay.



OUR KITH AND KIN

By

R. RANGACHARI, M. A.

Dy. Secretary to the Govt. of Madras, Finance Dept.

WHETHER we believe that there is a common Resident Force informing all Beings and inert matter too, or hold that life on this earth has evolved according to a principle of natural selection, we consider that Man is higher in the scale of development than animals. But strangely enough, Man considers it not undignified to call himself after particular species of animals like the lion, the tiger and the bull, to express his greatness. The Hindu even says that God came down in ages past, to save the world, in the form of the fish, the tortoise, the boar and the lion. His God of Wisdom¹ glories in the face of a horse, while the Benificent God² sports the trunk of an elephant. Of course, there are animals like monkeys, jackals, donkeys, and snakes whose names, we would reserve for those fellowmen whom we do not like. The beauty (or otherwise) and habits of animals come in handy for poets and philosophers when they try to clarify their ideas (or to make up for the lack of ideas).

Beauty: A dancing peacock is a thing of Beauty and therefore a joy for ever. But that cock dances primarily to attract its hen.

“Oh, Lakshmana, look at these peacocks, surrounded by their admiring mates, dancing nicely with their well spread

1. Hayagriva (c. f. the Centaur for a variation.)

2. Ganesha - Vigna Vinayaka.

and shining plumes amidst which passes the gentle wind, as through windows made of marble³. Overcome by passion for its lord who is dancing in the mountain valley, a pea-hen tries to dance in unison. The peacock seems to respond with quickening steps, and the gentle noise that swells from its glittering plumage is like a smile on its visage. Surely, my beloved Sita, when she was carried away by the cruel Rakshasa did not pass through this valley. Or else, these peacocks will not disport themselves so gaily with their mates here!"

Valmiki makes Rama converse thus with his brother Lakshmana, when they wandered desolate, through hill and dale, in search of the lost Sita⁴.

The picture of the dancing peacock is used by poets to explain the mystery of Creation. Here is a paraphrase of Sri Parasara Bhatta's⁵ hymn of praise to the Devi at Srirangam :

"Just as a peacock spreads its plumage and dances before his mate to give her pleasure and win her loving glances that betoken her admiration and delight, so too, Thy Lord, when the time was ripe for it, spread out Himself and displayed to Thy wondering gaze all Matter and Life that lay absorbed in his body at the time of dissolution and brought out this multi-coloured world. This dance of His for Thy joy was called creation."

The idea is that Truth alone exists and it manifests itself as Beauty. Other variants of this theme are indicated in the association of the peacock symbol with *Lord Kumara* and *Goddess⁶ Saraswati* and in the peacock plume on the crest of *Lord Krishna*.

3. Reference is perhaps made here to peacocks with *white* plumage.

4. Compare, what *Bhavabhuti* makes Rama say, on his beholding a peacock at Panchavati :—

"With affection, I remember you, like a son - you whom my Beloved would spur to dance by repeatedly keeping time with her sprout-like hands and would follow every turn of your movement with her eyes that grew more charming with their circular motion and the flickerings of their brows" (*Uttara Rama Charita.*)

5. An archaka of the 12th century A. D. at Srirangam.

6. Sri Gunaratna Kosha.

The fact that neither mere learning nor sensuous beauty is synonymous with Truth is stressed by the association of the symbol of the white Swan—the bird of discrimination—also with Saraswati. The test of Truth is that it should make for universal harmony and this is indicated by the Veena in the hands of the same Goddess. Truth and Beauty would vanish when they are crowed about, as the harsh note of the peacock would repel us. Conversely, inner harmony will make for beauty, as the sweet note of the Kokila (குயில்) will attract us, despite the apparent ugliness of the songster. Here, we may recall the saying about the ridiculousness of the ill-feathered turkey trying to strut about in imitation of the dance of the peacock.⁷ That Truth will always triumph over falsehood is borne out by the symbol of the snake caught in the talons of the peacock of *Lord Kumara* and the garuda of *Lord Vishnu*. The higher stage when darkness and falsehood are transmuted to Light and Truth is symbolised by the snakes that adorn the body of *Lord Siva* and the Serpent *Adi Sesha* that is the inseparable companion⁸ of Vishnu.

Strength: The elephant is pre-eminently our symbol of strength and majesty, coupled with gentleness. It is indeed a grand picture - that of an elephant worshipping with flowers the goddess of Beauty rising out of a lotus like its perfume. Poets never weary of comparing the gait of a hero with that of an elephant and that of a heroine with the steps of a swan. The following stanza from Kamban is well known:—

“ ஓதிமம் ஓதுங்கக்கண்ட உத்தமனுழையனாகும்
சீதை தன்னடையே நோக்கி சிறியதோர் முறுவல் செய்தான்.
மாதவன் தானும் ஆண்டுவந்த நீருண்டு மீனும்
போதக நடப்ப நோக்கிப் புதியதோர் முறுவல் பூத்தான்.”

The lion is of course the king of animals and there is an innate grandeur about it. There is no better picture in poetry of the

7. “கானமயிலாடக் கண்டிருந்த வான்கோழி
தானும் தன் பொல்லாச்சிறகை விரித்தாடினாற் போலுமே.....”

8. “சென்றால் குடையாம் இருந்தால் சிங்காசனமாம்
நின்றால் மரவடியாம் நீன்கடலுள்—என்றும்
புணையாம் மணி விளக்காம் பூம்பட்டாம் புல்கும்
அணையாம் திருமாற்கு அரவு. (பொய்கையாழ்வார்)



PHOTO : V. P. VENKATACHALAM

RHINOCEROS 'KUSHAL'

lion rousing itself from sleep and starting out of its lair than that in *Sri Andal's Tiruppavi* (திருப்பாவை):—

“மாரிமலை முழைஞ்சில் மன்னிக் கிடந்துறங்கும்
சீரிய சிங்கம் அறிவுற்றுத்தி விழித்து
வேரி மயிர் பொங்க எப்பாடும் பேர்த்துதறி
முரி கிமிர்ந்து முழங்கிப் புறப்பட்டு
போதருமாபோலே நீ, பூவைப்பூ வண்ணா! உன்
கோயில் நின்றும் இங்ஙனே போந்தருளி கோப்புடைய
சீரிய சிங்காசனத்திலிருந்து யாம் வந்த
காரியம் ஆராய்த்தருளேலோரெம்பாவாய்.”

But the tiger with its fearful symmetry and burning eyes is more terrifying than the lion. It is significant that Valmiki refers to Sri Rama at the moment of his coronation as “Nara Vyaggra”—a tiger among men.

Gentleness and Service: However, the one animal that merits our worship is the Cow, which Mahatmajji described as a poem of pity. Words cannot sufficiently describe the service it renders to Man, and so the ancients said that the giver of all that we desire is a cow—*Kamadhenu*. The term “Cow” in its wide sense includes also the Bull. We shall indeed be committing a grievous sin, if we harm our bulls and cows in any way. In the Valmiki Ramayana, Bharatha asks his mother Kaikeyi, how she had not the imagination to visualise the burning grief that she would be causing to the mother, Kausalya, when she would have to see her beloved son, Rama going into exile, and instances the story of the Primeval Cow shedding tears from heaven to see its progeny being hard-worked in the hot sun down on the earth. The Bull indeed deserves, to be the symbolic vehicle of *Parvati* - *Parameswara*.

Unstability: The monkey (which is closest to Man) is often ridiculed for its changing nature, unreliability and silly antics. In fact, poets and philosophers call our minds, monkey minds. The Ramayana records that even *Hanuman* showed his monkey-nature at times. This is not meant to dishearten us. On the other hand, we should take courage from the fact that Sri Hanuman became by his self-less service and devotion to God the noblest “Man” of all.

We have now referred briefly to some important classes of animals only. It is not practicable to deal with all the animals that exist in the world. We can only say with *Walter De La More* :—

“What lovely things Thy hand hath made :
The smooth - plumed bird in its emerald shade.
The seed of the grass, the speck of stone
Which the way - faring ant stirs and hastes on !
Though I should sit by some tarn in Thy hills
Using its ink as the spirit wills
To write of Earth's wonders
Its live - willed things,
Flit would the ages on soundless wings
Ere into Z my pen drew nigh
Leviathan told, an the honey fly,
And still would remain my wit to try
My worn reeds broken, the dark tarn dry
All words forgotten, Thou Lord and I.”⁹

Truly, he loveth well who loveth Man, Bird and Beast.



9. Compare :

“வானின் நிழிந்து வரம்பிகர்த மாபுதத்தின் வைப்பெங்கும்
னனும் உயிரும் உணர்வும் போல் உள்ளும் புறத்து முன்னென்ப.....”
(கம்பன்)

THE CITY OF MADRAS



1

Thou Chenna by the seaside
What shall I call these ?
Shall I call thee a city beautiful
With thy watch towers rising gracefully
Against the cloudless azure of the sky ?
Or shall I even call thee a garden city
With the continuous waves
Breaking their flowery foam
Against thy verderous and fragrant feet ?
Whatever else thou art
Thou art really the fairest city of the South.

2

Out of the sands and the pebbles
Out of the huts skirting the seaside
At the behest of an empire call
And our people's desire
Thou hast risen forth
A Glorious City.
All glory to thee !

3

Thou hast seats of learning,
And seats governance,
Halls and palaces, parks and avenues,
Thou holdest aloft a beaconlight
That invites the plenty of other lands ;
Thou holdest the festival of flowers
By days, and by nights
Thou holdest the festival of lights,
In answer to the austere glory of starry night.

4

Thou art the fairest city of the south
Thou Chenna by the seaside !
All glory to thee !

THE CITY OF MADRAS

●

Thou art a glorious city. The setting sun invests thee with a living glory. Even so, even now, my thoughts invest thee with a living glory.

The ocean lord mistakes thy lordly towers and turrets for the thousand hoods of Adi Sessa. He raises himself tiptoe on manes, spreads foam in beautiful patterns, strikes vehemently against the shore in a vain effort to reach the Lotus Feet of the Lord lying recumbent on its body.

The very trees and the plants of the city are full of the same fantasy and become radiant in their flowerlit smile.

The very radios of the city sing loudly, day by day, in praise of the Lord.

The womenfolk in the city, are conscious of the immanence of the Lord. They go into ecstasies. They deck themselves in flowers and ornaments and wander about gaily in an attitude of devout expectation.

Thou seemest a city created for the Lord of the Universe ! Thou art blessed with noble and happy children !

All glory to thee !

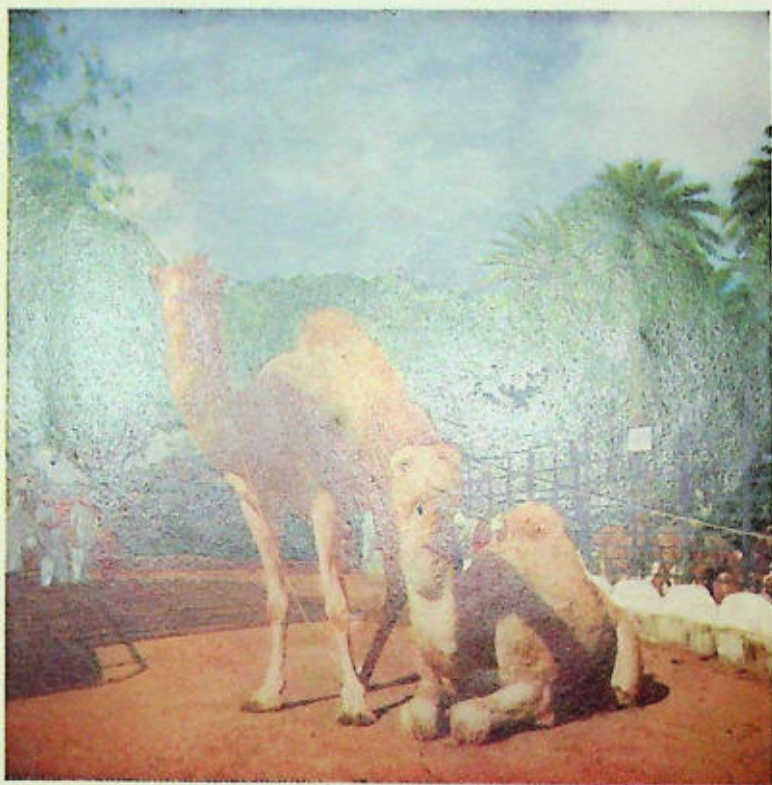


PHOTO: V. P. VENKATACHALAM

CAMELS—SHIPS OF THE DESERT

DELHI



1

Delhi ! Delhi of Delhis !
Old old Delhi ! New Delhi !
Historical Delhi !
Thou art really
The City of cities
The Premier City of India.
Ever aged city of Old India.
Never aging City of New India.

2

Though eternally old
Thou art eternally New.
Thy birth lies hidden,
As a mystery of ages.
The past and the present
Just meet in thee
To form thy glories for thy future.

3

Thy palaces stand for dates
Thy ruins for forgotten empires
Thy Green lawns for the scenes of bloody battles
Thy well-laid gardens for the scenes of historic loves
and intrigues,
Thy forts and ramparts for historic sieges.

4

To the tri-coloured flag
 Flying aloft on thy ramparts
 The country pays obeisance.
 To Thy assembly halls
 Our country looks for governance and wise rulers
 To thy presidential places
 For a wise authority,

5

The wealth of India lies at thy feet,
 The glory of India is in thy hands
 Really thou holdest
 The throbbing heart of Independent India
 A glorious India, our India of the future
 Working for peace and brotherhood
 Among the nations of the world
 All glory to thee !

THE ZOO CENTENARY



1

The Madras Zoo Centenary
Is a Centenary by our Corporation,
By our Mayor and our Commissioner
Not that our City
Is a hundred years old ;
Not that our Mayors and Commissioners
Are now a hundred years old
Not that the men, the citizens of the city
Are now a hundred years old ;
Not even that the Denizens
Of the Forests
The Lions and the tigers,
The elephants and the monkeys,
The winged warblers of the Forests,
That live and move in the Zoo
Are now a hundred years old :

2

It is a centenary
By the Corporation ;
It stands for nothing more than this -
That our Madras Zoo
Is just a hundred years old ;
That the animals have lived there
For just a hundred years ;
That the care for the animals
By our Fathers of the city
Is just a hundred years old ;
That our keepers are feeding the animals
For just a hundred years ;
That our children are visiting the Zoo,
For just a hundred years ;
That our care for even the killers of the Forests
Is just a hundred years old !

3

It is a centenary
 By the Corporation.
 The Zoo has now become
 The Centenary's corner,
 The animal's corner,
 The children's corner,
 The visitor's corner,
 The delightful corner,
 The celebration's corner,
 The Greeniest and the Floweriest corner,
 The corner of Blessings
 By our Almighty Lord

4

Let there lie in Future
 A children's Zoo –
 Where the little ones of our nation
 Can enjoy joy rides –
 A Camel ride,
 An elephant ride,
 A horse ride,
 An ostrich ride,
 A boat ride,
 With wee lions and wee tigers
 Romping and playing to their innocent delight !
 Amen !

E. R. RAJAGOPALACHARI, B.A., L.T.,
Pensioner and Poet.

சென்னை மாநகர்

1

தென்திசைத் திலகமே ! சென்னை வளநகரே !
செங்கதிர் செலுத்தும் செந்தழல் போர்க்கின்றது.
சிந்தனை செந்தழலும் உன்பால் சிறக்கின்றது.
கடலணைந்த மகுடங்கள், கலசங்கள் உயர்த்துவதில்,
ஆயிரம் நாபடைத்த ஆதியம் சேடனை நிகர்ப்பதால்,
பாம்பனை மெத்தையெனும் பள்ளியதில் துயின்றருளும்
எம்பிரான் இங்குளான் என்றதோர் ஏம்பதால்
அருகிடத்தே படர்ந்த ஆழ்கடல் பெருவேந்தன்,
நிவர்ந்து, நிவர்ந்து, நிமலனைப் பார்ப்பதுபோல்,
பேரிசை புரிந்திடும் பேரலைகள் எழுப்புகின்றான்.
ஆடுகின்றான், பாடுகின்றான், ஆனந்தமாய்த் திகழ்கின்றான்.
கரையெடுத்தப் புடைத்துக் கனவேகமில் நெருங்குதல்போல்,
கொதித்தெழும் நுரைகளை கோலமில் எழுப்புகின்றான்.

2

கரையுடுத்தும் பொழில்களோ, கார்வண்ணன் தனக்கு
புன்னகை அமைப்பதுபோல் பூமலர் விரிக்கின்றன.
வின்னது சுடர்க்கின்ற மின்மினி அவைபோல்,
விதங்களில் தீபங்கள் விளங்குகின்ற எங்குமே.
ஒலிபரப்பும் கருவிகள், ஒங்கிசைப் பயந்து,
இன்னிசைப் பாடல்களை எவ்விடமும் விரவுகின்றன.
பூங்கொடி மாந்தர்கள், பொன்னணி மிளிர்ந்திட,
மலர்களைப் பயந்து, மலர்ந்து திரிகின்றனர்.
ஆழ்கடல் வண்ணனுக்கே அமைந்தபோல் பொலிகின்றாய்
சீரியர் வாழ்கின்ற சென்னை வளநகரே !

உன்புகழ் போற்றி போற்றி !

E. R. RAJAGOPALACHARI B.A., L.T.,
Pensioner & Poet.

REMNISCENCES OF THE MADRAS ZOO

By

SRI D. SANKARAN, B.SC.,
Superintendent, (1945 - March 1955).

WHEN I took charge of the Institution on July 25, 1945 the Institution was badly understaffed and cages represented with a few animals. There were practically in the Garden three wild animals on show - Tiger "Frank", Leopardess "Sita" and Himalayan Bear "Vicky." Besides, there were a pair of elephants "Sara" and "Krishna," a pair of Giraffes "Victor" and "Sita," two pairs of Zebras "Iona," "Pipy," "Lulu," and "Poopoo" and a few deer family. The reptile section had a poor collection of snakes and two pairs of crocodiles. A number of wild animals were destroyed in the War; and the institution can still boast of the past collections. Amongst the animals shot dead, was a unique pair of a tiger and a lioness born in the garden and reared together from their infancy.

Exhibits of one kind and another in large number had to be acquired for the gardens. The Government forest authorities, other zoos, rajahs and zamindars were addressed for help to form an up-to-date collection of wild life. In 1946, the Cumbum forest authorities offered a pair of tiger cubs caught in their range. Tigress "Mary" now on show was a collection from Cumbum Forests.

It was in December 1948, His Excellency the Maharajah of Bhavanagar, Governor of Madras, gave a munificent gift of his rare collection of animals Albino Antelopes and Macaw Parrots. These Albino Antelopes had bred in the garden and the Madras Zoo had presented recently in turn a buck to the gardens of

Raj Bhavan at Guindy and a pair of the said antelope to Lucknow Zoo.

During 1949, the Junagadh State offered their gifts of a Tigress, a Black Panther, a pair of Leopards and eight lions. These Gir Forests Lions has prolifically bred and surplus stock were arranged to be disposed of by sales. In 1952 three Lion cubs were sold to a circus in Pakistan at a cost of Rs. 6,000/-. Besides, a pair of camels, two pairs of Adjutant storks, a pair of Demoiselle cranes, two pairs of Pelicans were acquired by purchase from animal dealers in India.

By purchase, by gift and by exchange, the Zoo systematically was adding to its collections. Every species of animals were provided with utmost freedom of movement in captivity. Work on the existing elephant sheds was executed in 1946 by Messrs. Gannon Dunkerley, under their expert plan and it costed a sum of Rs. 10,000/-. Improvements further were effected in small scale, year to year and amenities for the convenience of visitors were provided. As most visitors require guidance and instruction to understand the names of animals displayed, painted lables in regional languages were displayed. Improved enclosures for emus with grass lawns along side, paddocks for zebras with side pathways, new fencing for deer family and lounging yard for visitors were all effected in subsequent years. Visitors to the institution were on the increase every year. A few mammals during rutting season get to mortal combat with each other amongst them. Especially, amongst ruminants and rodents, the body gets mutilated thereby and it is not possible to tell whether or not the animal was ill. In the year 1951, a male spotted deer had its abdomen lacerated badly and the animal succumbed to injury. On two occasions, Mouse Deer had their epidermal skin badly cut. These Mouse Deer were safely dressed up and they survived.

Animals cannot express their sufference. Many ugly accidents can be avoided by forethought and experience. There are certain routine operations which have to be done in all

zoological gardens periodically like that of clipping the overgrown claws of large carnivore, cutting of twisted tusk of tusker elephants, etc. To facilitate mammals and birds for cleaning themselves every time, their yard has to be covered with fresh layer of sea sand.

In India, Madras and Bombay are the only cities which have Zoological Gardens run by the Municipal Corporation. Mysore, Trivandrum and other States have zoos maintained by their own concerned Governments. The zoological gardens of Calcutta, though managed by an executive committee, it is also financed by the West Bengal Government. Now that the Central Board for Wild Life had been set up, much of the responsibilities of Indian Zoos for getting animals had been minimised. The Secretary-General of the Board is now taking keen interest in bringing zoos in India under one standard of maintenance.

A well conducted zoological garden of to-day does everything possible for the health and comfort of its inmates. Mr. B. V. Ramanjulu, F.Z.S., Superintendent, Zoo, will apply all his enthusiasm and extensive knowledge to this task.

“TIGER TIGER”

By

C. E. HOLLAND, F. Z. S.
(Honorary Visitor to the Madras Zoo).



“Tiger, Tiger burning bright,
In the forests of the night,
What immortal hand or eye
Framed thy fearful symmetry.”

WHAT a word picture these few unusual lines conjure up of one of creations most magnificent animals. “Tiger! Tiger!”; these two words alone create excitement when they are uttered; for in themselves they seem to issue a warning of the presence of a ruthless, predatory danger. “Burning Bright!”; one can see the gleaming eyes shining out as incandescent flashes; watching one with calm unhurried watchfulness. Being nocturnal the tiger is always imagined as belonging to the forests of the night. It is only some immortal hand which could have fashioned the strength and muscle of the animal as only an immortal eye could have correctly gauged and measured and put together its fearful symmetry.

What were the first reactions of the first lion in India when he looked up suddenly and saw standing a few paces off, a strange, cool yellow and black striped antagonist as big as himself. For in the earliest days there were no tigers in India; they came down from the cold North; they were lighter coloured, bushier in appearance then; they had come as invaders; they had come to stay. There was no room for the lion and the tiger, the lion lost the battle for existence and the tiger swept forward until he reached Cape Comorin, there the Sea brought him up short; he could not get across Ceylon.

The tiger became a part of India - the symbol of India, but an animal for which there was no sanskrit name; and

through the years, hunters, naturalists and Zoologists studied his ways; firstly in order to meet, with first hand knowledge, the menace he represented and later as an academic subject. What did they learn?

All tigers are born with their full number of stripes and this number persists throughout their lives! the stripes are not the same in number, throughout the species, but vary from beast to beast. Tigers breed at all seasons and before the cubs are born they separate, for the father is an impatient gentleman, not suffering children gladly. The female 'carries' the cubs for approximately $3\frac{1}{2}$ months and the litter may consist of two, three or four, and these cubs will be adult at five years. They are now ready to hunt and kill on their own; as aids to their hunting they have excellent vision, very good hearing but a very, very poor sense of smell. After killing and eating they will retire to some soft barked tree, and standing on their hind legs will scrape and sharpen their claws against the tree in order to remove the particles of meat from their retractile claws. If the tiger is hungry he'll eat a cow in two sittings and will eat a carcase which has been dead at least ten days. After eating he will drink and then retire for the day, and is a magnificent sight as he lies in some shady spot, with his eyes half closed and his ears twitching and the dappled sunlight occasionally bringing

TIGER 'FRANK'





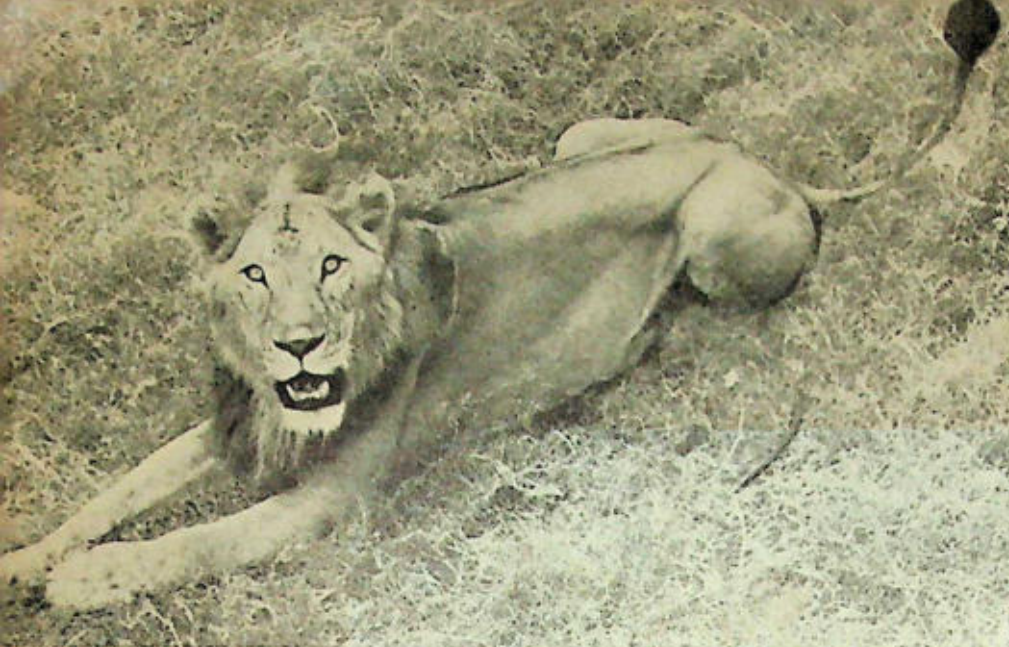
WALLABY AND YOUNG IN ITS POUCH

out the gold of his cost, and the silver of the ruff around his neck.

Tigers seldom if ever climb trees, they have very little need to do this as they do not need protection from other wild animals ; combined with their average weight of around 400 lbs., they possess phenominal strength. I have known a tiger lift a full grown buffalo over a wall.

How often am I asked the question "Is a tiger dangerous?". A man-eater is dangerous of course, but man-eaters are extremely rare, particularly in the South ; of the very, very great majority which are not man-eaters they are - if left unmolested themselves - harmless in perhaps 49 out of 50 cases.

Tigers are disappearing owing to the advance of civilization and therefore it is time a decision was taken to remove them from the list of Vermin, in which they are now ignominiously included in shooting licences. The tiger is a gentleman in his behaviour, he likes to be respected, quite rightly, and in return respects others. He is a magnificent asset to the country's list of natural attractions, especially when seen as he calmly and unhurriedly wends his way down a forest path and crosses some spot of mellow sunlight. If you happen to be there and he sees you, he will stop short and look at you in an inquisitive manner, and like a gentleman will step off the path to let you pass. How happy I am now, that I just stopped and watched the last one I saw like this ; his very beauty made me forget the rifle I so unnecessarily carried.



LION 'LEO'

MOSCOW ZOOLOGICAL PARK

By

M. SOSNOVSKY,

Director, Moscow Zoo, U.S.S.R.

THE Moscow Zoo is the oldest one in the Soviet Union. It was founded and put into effect in February 1864 by the Russian Society for acclimatization of animals and plants, which was headed, by A. P. Bogdanow, a prominent Scientist and a Professor of the Moscow University.

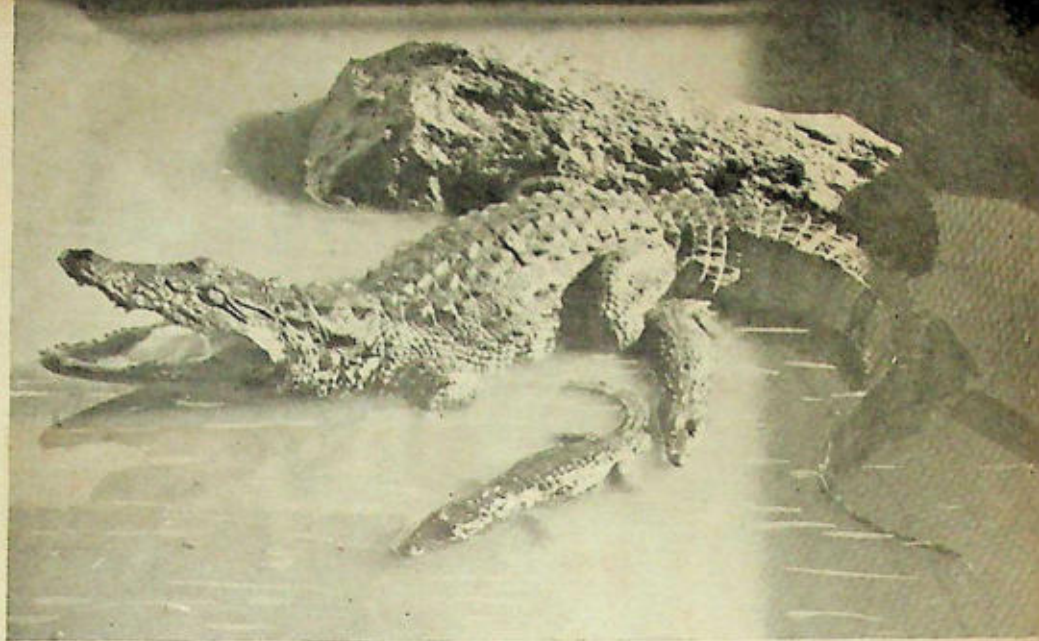
The Government of the Zsarist Russia did not pay proper attention to the zoo, and animals had been purchased by means of the funds collected by advanced professors and students. Buildings and enclosures of the zoo were built at the expense of donations. As a result of it the zoo was dragging out a miserable existence.

After the Great October Socialist Revolution the Soviet Government took notice of the conditions the zoo was under, for



PHOTO: V. P. VENKATACHALAM

TIGER CUB "SATHYA" BORN ON 15-8-1953



CROCODILE AND YOUNG

they foresaw the great future in it for the cultural and educational work. In 1919 the Zoological Park was nationalized by the special decree signed by V. I. Lenin personally and placed at the disposal of People's Commissariat for public education. It was rendered financial assistance and supplied with fodder for animals.

Since then the Moscow Zoological Park has started its work as a scientific-research and a cultural and educational establishment.

At present the zoo is one of the favourite places of the Moscovites and people coming to Moscow. The number of visitors amounts up to more than three million people per annum.

Many excursions around the zoo among visitors and students are organized. Among other features of its work are popular lectures on nature and life of wild animals, popular films' shows on natural history, biological exhibitions, great festivals aimed at promoting children's activity for protecting nature, studying of their native land, getting to know how to use animals and birds for the good of the people.

The whole work of the Moscow Zoological Park is directed for popularizing the spread of knowledge of natural history among



COCKATTOO 'HIRJEE'



MACAW 'PANCHI'

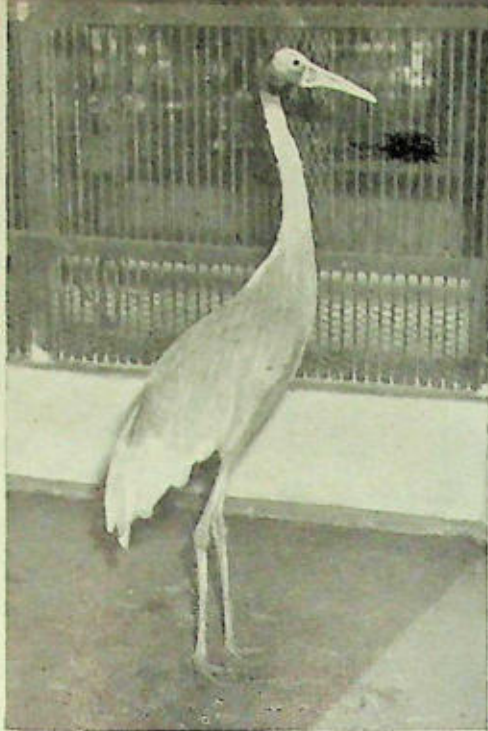
visitors and the organization of special arrangements to help educational establishments of all degrees (schools, technical schools, higher learning institutions) in teaching biological subjects.

The rich collections of animals of the Moscow Zoo contribute to the success of this work, animals being visual-aid appliances. The particular features of their behaviour, way of life convincingly corroborate basic principles and thesis of the Soviet biology based on the materialistic teaching.

The zoological park has at its disposal more than 2,500 specimen of home and foreign fauna. There is an aquarium where there are exhibited more than 100 varieties of the invertebrates and fish.

The terrarium of the zoo comprises some hundred specimen of amphibia and reptilia representing 85 species.

The collection of birds includes black swans, emu, eagles ostriches, harpy eagles, vultures, parrots, pheasants, polar owls, flamingos and many other species.



SARAS CRANE 'NAREE'



PYTHON

Rich is the Mammals' Department with its chimpanzees, gibbons, baboons, different varieties of marmoset, capuchins, hippopotamus, tapirs, rhinoceros, elephants, many varieties of deer, antilopes and wild goats.

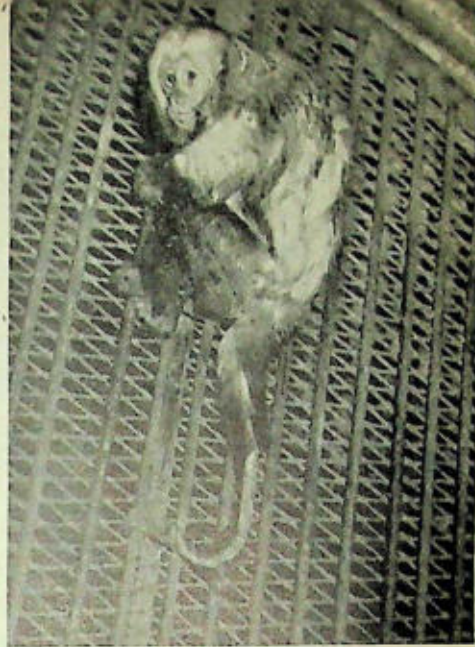
The collection of carnivores is quite a good one with its tigers, jaguars, cloudy leopard, black panther, Himalayan brown and polar bears, mungoose, sables, wolves, dingoes, etc. There are sea-lions, seals and sea-horses in spacious water basins.

It is noteworthy that many species of wild animals breed regularly in the Moscow Zoo—tigers, lions, hippopotamus, jaguars, kangaroos, black swans, ostriches, emus, some varieties of monkeys etc. In 1948–1952, we got the first offspring of Indian elephants. Two new borns have been handed over to other zoos.

The collections of animals of the Moscow Zoological Park are used for carrying out scientific researches. The zoo has two laboratories at its disposal. The one is engaged in studies of the diseases and parasites of wild animals seeking to find methods of treatment and prophylactics, the



BLACK BUCK OF INDIA



CAPUCHIN 'KALAVA'

other is busy with elaborating questions of the feeding of animals, working out scientifically based forms of feeding as well as performing control over the regularity and components of the feeding to be given to the animals. Apart from that zoologists, veterinary doctors and scientific workers of various departments are indulged in studying of some other questions of biology, of the fauna reproduction and growth, adaptability of animals to changing conditions of life, conditioned and unconditioned reflexes, shedding of hair and moults, daily activity and so on.

Some scientific problems of interest are being worked out by the staff of the zoo side by side with scientific workers of the Biology Faculty of the Moscow State University named after TIMIRIAZEV Agricultural Academy, DARWINS Biological Museum and some other scientific-research institutions of Moscow.

Many themes, which have already been carried out, have proved to be of great importance for the national economy of the Soviet Union.

For the first time in the world for example, the biology of the sable, a valuable fur-species has been deeply studied and



SAMBUR AND YOUNG



HIMALAYAN BEAR 'VICKY'

there was an off-spring of the animal under the conditions of the zoo. That brought about the possibility to breed sables on farms. For the time being thousands over thousands of these valuable animals breed regularly under the conditions of captivity in the Soviet Union. The veterinary laboratory had discovered new types of parasite and has worked out methods, of fighting them. The biology of squirrels, hares, martens, badgers and many other animals has been studied thoroughly. Taming of elks has marked the beginning of the work being carried out in the reservations of the U. S. S. R. to transform this wild animal into a domestic one. That would solve the problem of transport in some remote places of our country on the northern forests (Taica). Some interesting experiments have taken place to breed strugeon fish in fresh water reservations what will contribute in the future to the fish reserves of the Soviet Union.

The results of scientific research work being carried out in the Moscow Zoological Park, are being regularly published in the proceedings of its own as well as in various periodicals on biology. Apart from that quite a number of popular scientific books and pamphlets on the life of animals has been published. They are in great demand by the visitors and inhabitants of the City.



GAZELE 'GOMA'



YOUNG BONNET MONKEY 'PREMA'

The Moscow Zoo is in permanent correspondence with all the zoos of the Soviet Union and a number of zoos of other countries.

I hope that my visit to the zoological gardens of the city of Madras will contribute to further strengthening of our ties aimed at exchange of animals as well as exchange of our experiences in the field of popularisation of the biological knowledge and studies of wild animals our zoological parks possess.



POLICE DOGS - THEIR USES AND LIMITATIONS

By

HON'BLE

MR. JUSTICE P. N. RAMASWAMI, I.C.S.



ALTHOUGH the word "dog" originally applied to a particular English breed, it is now used in a general sense to cover all domesticated varieties of the zoological genus *canis*, of which the wolf and the northern jackal of Europe and Asia are familiar wild species. The accepted zoological name is *canis familiaris*.

That the dog became an useful adjunct to man in various activities is evident from very early times. The aboriginal people of Switzerland and Ireland used dogs for hunting and undoubtedly ate dog flesh long before they learnt to till the soil. Hunting scenes depicting the rough form of a dog alongside the huntsmen are seen in cave drawings. One of these drawings is estimated to be 50,000 years old. But the present type of dogs has been evolved only in the course of a long period of time. From the investigation of caves and lake dwellings it is known that Europeans of the New Stone Age possessed a wolf like breed of dogs and a similar breed has been traced through the successive ages of bronze and iron. But the earliest accurate information of domesticated dogs is supplied by Chaldean and Egyptian monuments wherefrom it is evident that several slender dogs of the grey-hound type and a short legged breed of

a terrier type and mastifflike hounds were all in existence in Egypt and Assyria. Then coming to the early Greeks and Romans we find dogs often mentioned in their literature.

In India though the dog has been in existence and probably was more of what is termed the Paraya type doing scavenging work, there is no good historical and accurate information. In fact both the Hindu Sastras as well as Mohammadan sacred literature looked upon dogs as "unclean" animals. In fact one of the few references in the Mahabharata to a dog is that a dog is said to have accompanied Dharmaputra when he is said to have left this world. The story of Arjuna's dog and Ekalaiva is another instance wherefrom it can be spelt that probably hunters used dogs. But our Sastras enjoin that if anybody touches a dog or gets touched by it, purificatory ceremonies have to be undergone. In fact one of the ways of defiling a *homam* is for a dog to pollute it. In Tamil literature also the dog does not figure conspicuously and the only well-known proverb is that a dog does not distinguish between a Sivalinga and an ordinary rock implying that it would defile the one as readily the other. In the case of Mohammadans also probably beyond being used by huntsmen we have no accurate information regarding its use in the household. One pleasing exception is that in the Hindu pantheon there is a minor Dog-god "Kala Bairavar" and in my younger days for a type of cough an effigy of a dog called "நாய் கரக" used to be tied as an amulet to children. The wailing howling of a dog at night was looked upon as the portent of the coming of Messenger of Death in that quarter. This is the background of the history of dogs sufficient for our present purpose.

HYAENA 'HARRIET'



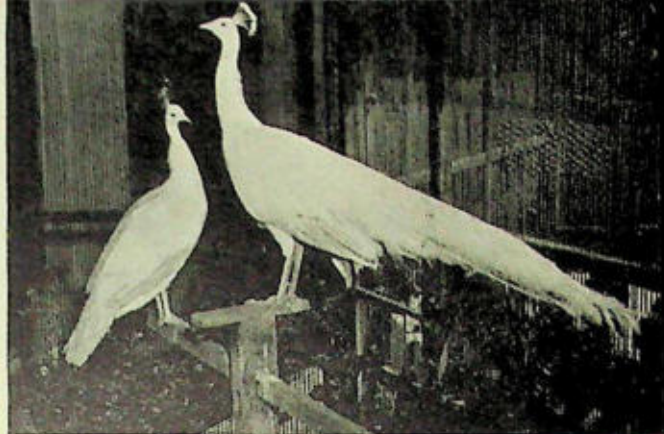
Romans classified dogs under the following heads viz., those which hunted by scent and those which hunted by sight, and house-dogs and sheep-dogs. This corresponds to the modern division of five classes of dogs in addition to the miscel-



PHOTO : V. P. VENKATACHALAM

SILVER PHEASANT

laneous sixth group based upon their uses viz., sporting dogs for hunt on air scent; hounds for hunting primarily by ground scent; terriers which hunt by going to earth; working dogs to serve as guards, guides and herders; toy dogs to serve as companions; and miscellaneous non-sporting group of dogs for a great variety of uses. In fact in 1945, 113 breeds of dogs comprised in these six groups were recognised in the United States of America. We are concerned in this article with only one type of dogs viz., Police Dogs.



WHITE PEA POWL 'SADI' AND 'LEELA'

To understand the uses and limitations of Police Dogs, we must remember the following. In most respects dog's senses are considerably keener than man. In hearing tests conducted by scientists, a German shepherd dog responded from a distance of 26 yards to a command which could not be heard by a man $6\frac{1}{2}$ yards away. The so-called "silent whistles" used by many trainers of hunting dogs demonstrate the great range of a dog's hearing powers. A man standing only a few feet away cannot hear the sound which comes from these instruments. But a dog will respond to the same sound from a distance of more than 75 yards. The reason for this is that the sound range of the human ear is compared to that of a dog is restricted. The dog nose is also so sensitive that it is difficult to comprehend the great range of odours which dogs detect. A piece of wood touched only by the tip of a master's finger can be selected by a trained dog from twenty other identical pieces. Blood-hounds have been known to follow perfectly the trail of a stranger 48 hours after the path was traversed. Dog's sight, on the other hand, is considerably weaker than man's, forcing the dog to use its keen sense of smell and hearing to make identifications. In addition dogs have great sensitivity to movements, however slight. This explains how trained dogs bark the answers to addition and multiplication problems by following the movements of the trainer's hands or jaw which cannot be



ADJUTANT STORKS

detected by the human-eye. The dog is, however, colour blind. Its world is one of white, black and shades of grey. The dog, in short, has no reasoning faculty and is only an animal endowed with certain exceptional powers of scent and hearing and intelligent habits. If we bear in mind the scope of the dog's

senses we will understand its uses and limitations.

On account of these dog's senses in recent years dogs have been trained as

- (a) guide dogs for the blind, and
- (b) dogs have been extensively used during World War II.

The following two extracts from the Encyclopaedia Britannica volume 7, page 496, give concisely the information available on the subject :

7. "*Guide dogs for the blind* :—One of the most concentrated efforts to turn dogs to the use of man has been the training of thousands of guide dogs for the blind. The Germans led this movement by training several thousand dogs to guide soldiers who returned sightless from World War I. Nearly all other countries which participated in that war started similar training programmes. In the United States the Seeing Eye foundation, Morristown, N.J., became the leading school for training guide dogs; several others were established in the middle west and western states.

The German shepherd is the breed most often used for this work, about 90% of all U. S. guide dogs being of this breed. Other breeds sometimes used are the Boxer, Doberman Pinscher and Labrador Retriever. Bitches are preferred for guide service, but temperament is the guiding factor in selecting individual canines for the work.

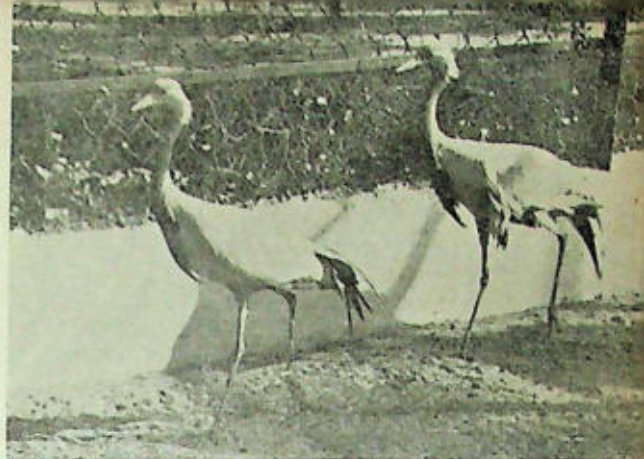
Guide dogs wear a leather harness to which is attached a leather-covered metal hoop which extends to the master's palm. The blind person holds this hoop lightly as the dog walks close to his legs, and is guided according to the pressure exerted by the dog's movements as transmitted through the harness. The

dogs guide their masters at about the same speed as that of the normal walker. They proceed largely without commands except for "right", "left", "forward", and "halt". They guide their masters around all holes and barriers and stop before the going down or up a curb stone. After making such a step the dog waits until the master determines the height of the curb and orders "forward". In addition to serving as a guide animal, the dogs perform such other service as picking up articles which the master may have dropped unintentionally. Such services are rendered without command.

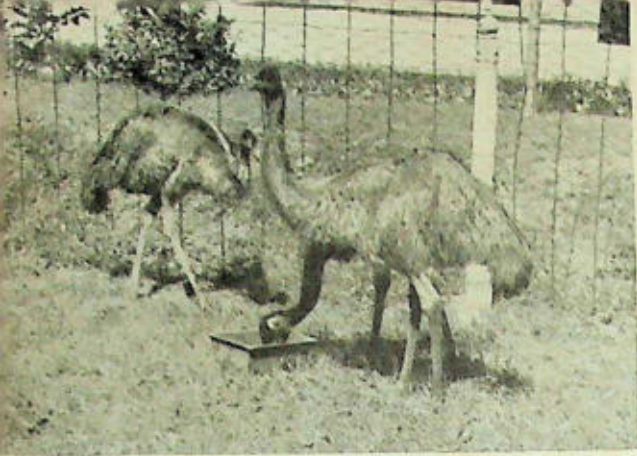
A question commonly asked about guide dogs relates to their ability to follow red, green and yellow traffic signals. In as much as dogs are colour blind, they obviously cannot interpret such signals. In fact, trained dogs do not watch traffic signals. They are trained to watch the flow of traffic and to guide their masters across streets when traffic permits safe movement.

The training of guide dogs is complicated for many reasons. These canines must be taught to judge, for example, the speed of approaching vehicles to determine if there is time to cross the street before the vehicle reaches the blind person's path. Similarly, they must be trained to judge heights to determine if the blind person can pass under a barrier or must walk around it.

Institutions which train guide dogs believe, with good reason, that the work of these canines provides psychological as well



DEMOISELLE CRANES



EMUS

as economic benefits. Not only do the dogs give their masters almost complete independence of human aid, but in many cases have changed their masters' entire temperament and approach to life.

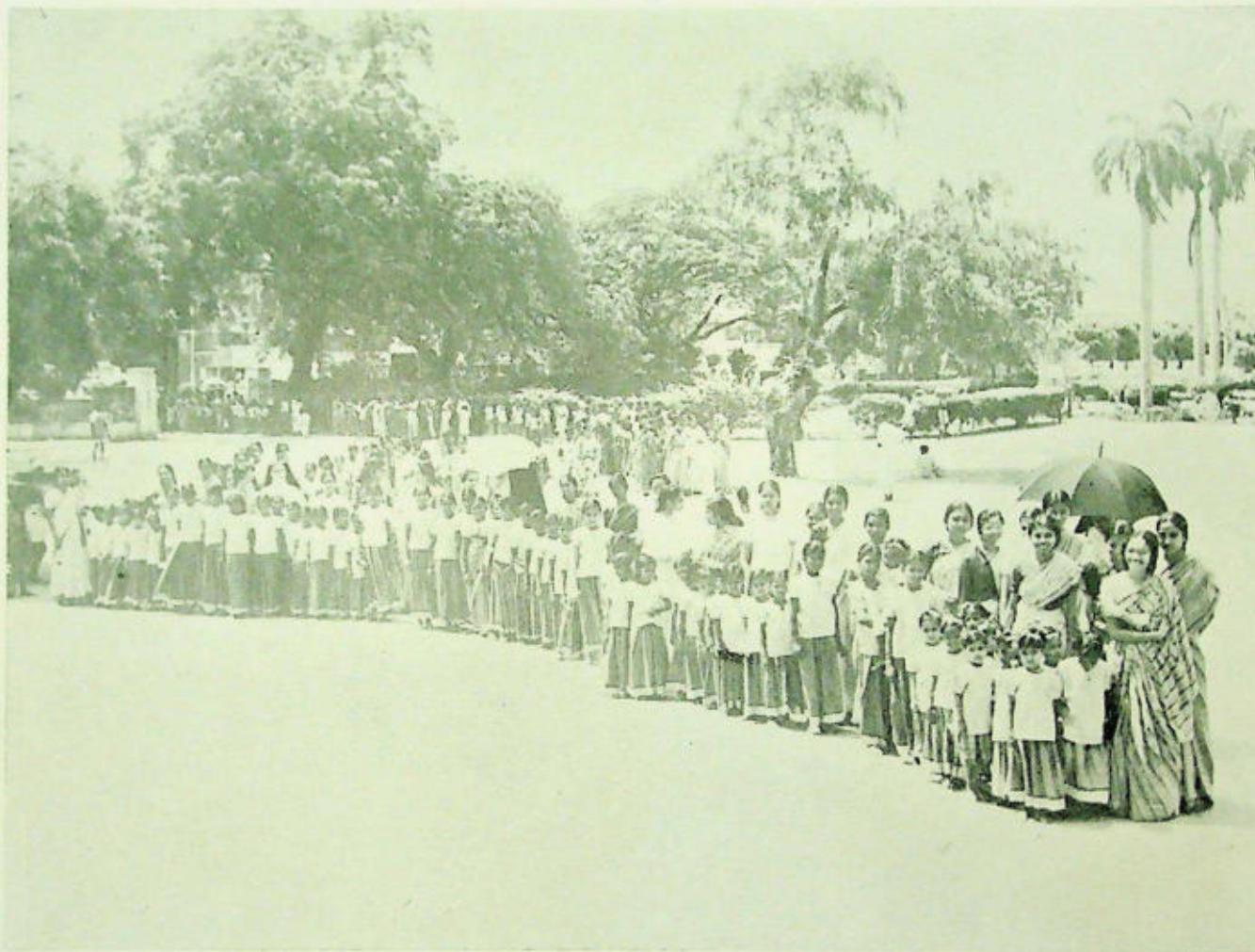
Dogs in World War II:—All of the major powers engaged in World War II used trained dogs in numerous capacities. The United States army organized a K-9 corps as a branch of the quartermaster department for the sole purpose of training dogs for war use. It is known that Germany had 40,000 – 50,000 trained dogs available for service at the start of the war and later gave Japan 10,000 of these. Russia and England also adopted dogs for military purposes.

The major use of dogs trained for the military is that of aiding sentries. The canines are taught to accompany guard soldiers either inside supply depots or outside military buildings or encampments. Under such conditions the dog is expected to range away from its handler, using its nose to find and rout any intruders. Other uses for which war dogs are trained are as messengers, detectors of machine gun nests, pack dogs, sledge dogs and first-aid assistants."

On account of this experience the Police have in recent years, especially in Madras, have been making extensive use of dogs in the prevention and detection of crimes. In regard to this aspect, I cannot do better than reproduce a short extract from my own Magisterial and Police Guide, Vol. II, (M.L.J.) Page 2,119.

"To further police efficiency in the United States the year just closed recorded the introduction of police patrol dogs from Europe; Airedale terriers and German sheep dogs being recognized as animals which can readily be trained in the following of human tracks. First instructed to be obedient,

COLLEGE STUDENTS TAKE ACTIVE PART IN CONDUCTING EXCURSIONS TO ZOO



The Students of Stella Maris College conducting a Group of Orphan Children around the Zoo

—Courtesy—"The Mail,"

jump obstructions, carry missiles and weightier articles, the young dog is then taught to run errands and in doing so to keep his head low, nose to the ground. This is at the end of five or six months. Kindness on the part of the trainer is urged, who caresses, drags a piece of meat over gradually increased distances

affording a trial for scent. Following this the animal is educated to seek out the trainer or his assistant. This accomplished the start and pursuit of a stranger trail is secured. They know only the uniformed man, patrol muzzled which may be released when desirable, and since their presence in an outlying precinct has been had, burglaries there have almost ceased. Their place for duty is in the suburban or outskirt quarters and the experiment so far has afforded no small degree of satisfaction. This is recited as an illustration of the most recent endeavour on the part of the American Police to meet the requirements of the case, where inadequacy of force numerically is said to exist.

We strongly urge on the necessity for training Police dogs in India. The police are inadequate in strength and the dangerous night patrol which is at present a farce will improve very much with Police Dogs and be less dangerous.

Similarly, there is vast scope for the use of blood-hounds in Police work in India as has been found to be the case in Europe, America, South Africa, etc. in the detection of several types of crimes."

May the Police Dogs in Madras which have already proved their worth, flourish and continue to be a worthy ally of our regular Police in the protection of property and detection of crime in our City under the able energetic and wise guidance of our very popular and very practical Commissioner of Police, Sri S. Parthasarathi Ayyangar.



BLACK SWANS 'NISHA' AND 'MIRNA'



OUR ANIMAL FRIENDS - HORSES & DOGS

By

SRI S. PARTHASARATHI IYENGAR

B. A., M. L., I. P.,

Commissioner of Police, Madras.

OF all animals in creation the ones that have been domesticated quite early and have been the constant companion of man through the ages are the horses and the dogs. These two are also the animals most used by the Police.

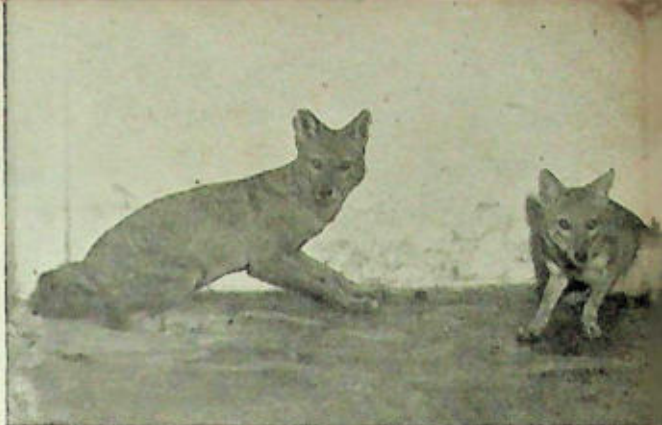
II. HORSE

The horses are no doubt familiar to all of us but their origin and their development in their wild state, their subsequent domestication and their use by man in different ages are not so equally well known.

Wild horses have always been a terror. Their nimbleness and energy and exhibition of visible power must have struck our ancient forbears. Slowly they got them domesticated and they had been put to a thousand uses, ornamental, decorative, entertaining and utilitarian.

We are not in India used to the farm horses but in other countries they have been used in place of oxen. The old English Primers used to have pictures and lessons on them. We know them only as means of transport. Latterly the horse has lost his pride of place in the matter of transport. Years ago, there was

a horse-tram even in our own State at Tiruvellore between the Railway Station and the Town. Four decades ago when I was a young boy, our Madras City was full of horse-drawn carriages, colourful with syces in multi-coloured equipage. The horses and their riders on the Marina were always a beautiful sight. As a youngster I fondly hoped but thought it very unlikely to happen that I too would be riding one of these days. Middle classes had little chance of affording riding and riding was the pastime of the rich and the duty of the lowly poor engaged by them for looking after the horses.



JACKAL 'MANU'

With the coming of mechanised transport and the passing away of the horse-drawn vehicles is it that our horses are to join the long list of animals that have become extinct? "No" the horse is still the man's companion, be he Arab, European, Indian or American. He is still the road-master of places not accessible to mechanised transport and in cities, he is used in Races and by the police and on ceremonial occasions. The Police Horse Squad is the most colourful part of police machinery and at the same time a very useful one. On great occasions, when the public go in concentrated streams to public functions like those arranged during the Prime Minister's visit the Horse Sowars do hard service and what a long line of Armed Policemen would not be able to do, they achieve with grace and ease. Our sporting public like to see them but will not meddle with them at too close quarters and a small section of horses have shown that they can keep a long line of hemming humanity in order and cheerfulness.

Every man at heart is a lover of horse and of riding and at no time can I visualise that the horses will be permitted by man to become extinct.

We are grateful to the authorities organising the Zoological Centenary for having given the opportunity for the Police Horses

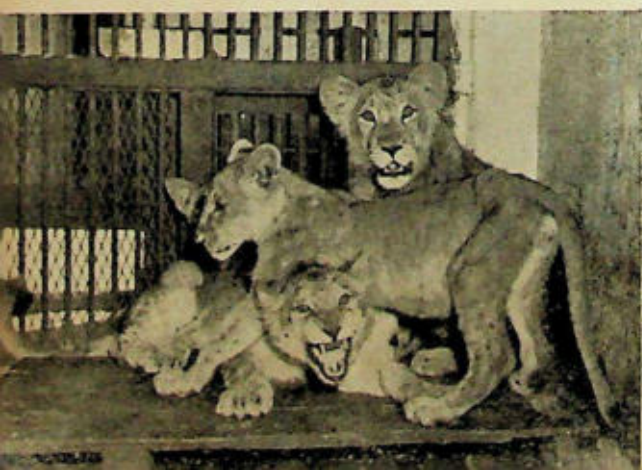


NILGAI 'NEERJAN'



SARAH PERFORMING FEATS

LEO'S OFFSPRING



to be shown to the public in a much more pleasant atmosphere than they are shown during their ordinary course of duties.

* * *

III. AND NOW ABOUT THE DOGS

He belongs to the family that includes the fox, the wolf and the jackal. Despite a probable common ancestry, the divergencies between the species of this family are obvious and large. At one end we have the dog which we trust and which trusts us and at the other the wolf. When we work hard we say we have had a dog's day and one leading a hard life is said to be leading the life of a dog. The dog licks even the foot that kicks him and is faithful even to a hard-hearted master. The nature of the wolf is seen in the sayings that one has to work hard "to keep the wolf from the door" and very often we are bitten by "the wolf in sheep's clothing." It is only when we compare the dog with his cousin, the wolf would be appreciated properly the good and noble spirit of service rendered for its own sake by our canine friends.

The dog is in many ways our benefactor and there is none



The Adjutant Storks surrounded

Courtesy—"The Mail"

more valuable as a companion. He has also specialised in different arts of value to man and while we have a breed of dog for hunting, another for watching and a third for playing with, all have the essential qualities of faithfulness and high sense of duty and loyalty.

Should a Zoo keep many types of dogs? I think they should. Many breeds are becoming rare and it is the duty of persons in charge of the Zoo to get as many breeds as possible so that even apart from dog shows, our citizens from early child-hood get to know their greatest friend in life and appreciate his qualities and treat him as he deserves and get from him such happiness and help as can rarely be obtained from any other.

On the occasion of the Centenary of the Madras Zoo, in the capacity of a citizen and in particular as a Police Officer I would offer my tribute of praise and gratefulness to the dogs, Police and other, and bring to notice of my fellow-citizens the need for a more rational and a more informed manner of dealing with dogs in Madras whether pedigreed ones or the large number of



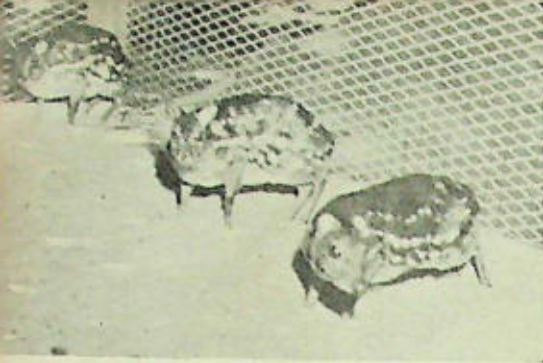
PORCUPINE 'THORNY'



TODDY CAT 'KALLI'



SLOTH BEAR 'RINGO'



MOUSE DEER



BARKING DEER 'SUMMI'

cross bred ones with most of us, or the still larger number who correspond to the pavement dwellers of our City.

I will give only one illustration of the value of dogs to the citizens in Madras City as an example :—

A friend of mine who had been worried by trespass in his garden from the slums nearby and of thefts of vegetables and flower pots etc., got tired of complaining to the local police and instead acquired a nice Alsatian and all his troubles came to an end and in gratitude thereof he has given us free a pup to add to our Police Dogs. I can give many more. I must, however, protest against the boards "Beware of Dogs". It is only an unrecognised intruder that needs beware and rightly so and I am sure the warning is not intended for him.

What would I suggest as a rational approach to the problem? It is necessary that there should be encouragement and improvement in dog breeding for various reasons. First and foremost in accordance with the saying that any person is known by his associates and his friends, the dog lover is sure to be trusted. Secondly as a guard they are more effective than an occasional policeman. Thirdly for game and sport. They are the best playmate for our youngsters. They will never lead them to bad ways as bad friends often do and for sport with or without the rifle they are an asset.

I plead with the brother citizens of Madras on this Centenary of our Zoo for greater attention to our two friends, the Horse and Dog, both in the Zoo and outside.



Klein & Peyerl

PHOTOGRAPHERS

BLOCKMAKERS

30, MOUNT ROAD

MADRAS-2

PHONE: 84167

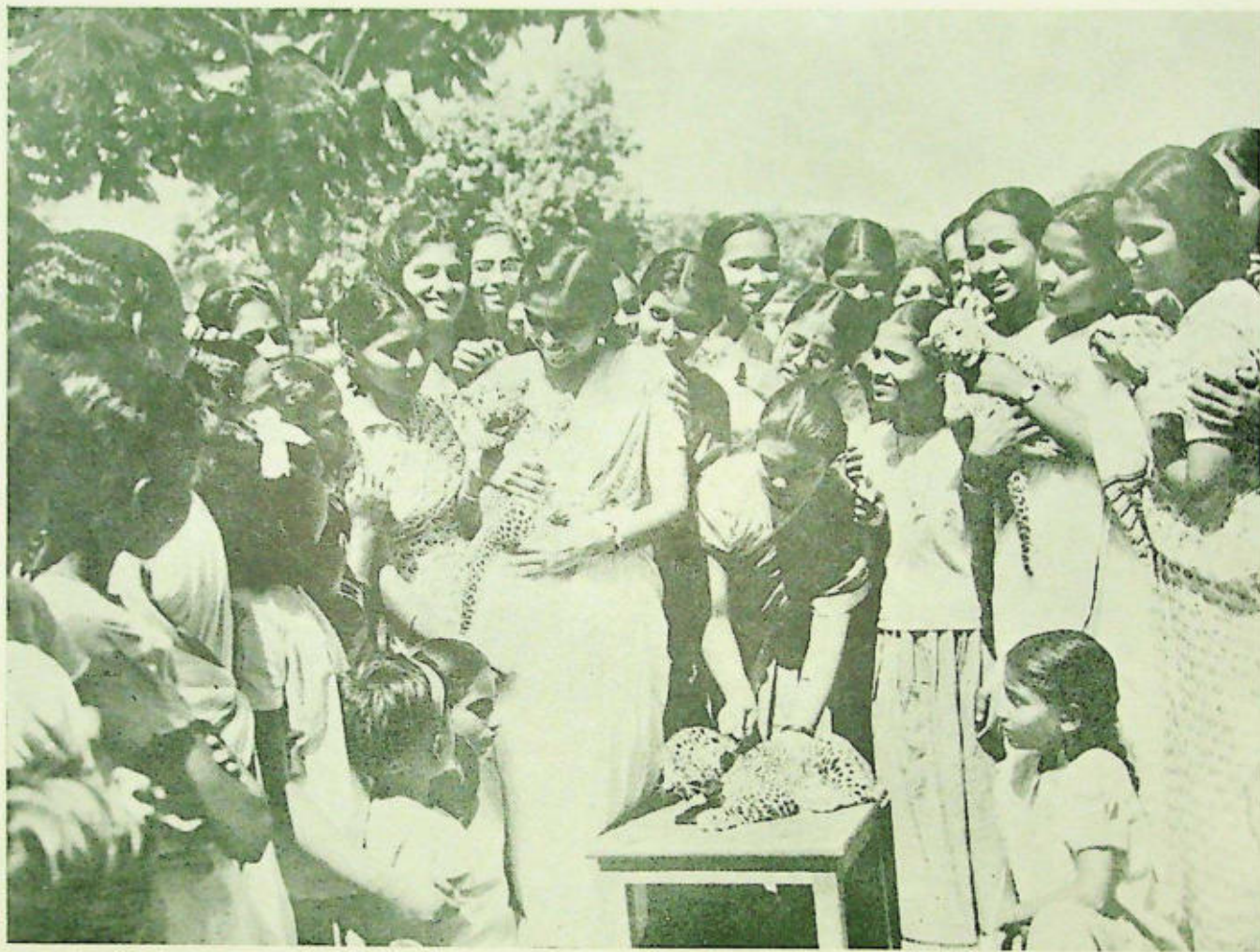


MOTHER AND BABY INDIAN RHINO IN KAZIRANGA, ASSAM

By E. P. GEE

A cow rhino with a calf is not an uncommon sight in Kaziranga Sanctuary, Assam. The calf usually runs in front of its mother, but in the picture shown here the mother is moving off fairly fast to safety, and the calf is running behind her.

Last July a mother rhino was seen by me in Kaziranga with two babies, about the same size as that shown in this picture. As there was no other rhino in the vicinity, and as both the calves were playing together round the cow rhino, I can only presume that this is the first case of a rhino ever being seen with twins. (No photo could be obtained, as it was raining; but a forest guard and the mahout of the elephant also saw the unique sight. Also we called up several villagers to witness the scene.)

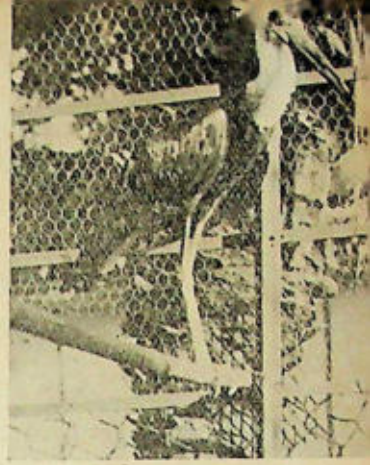


Handling Leopard Cubs is an opportunity to children

—Courtesy—"The Mail"



BEAR-CAT 'BALU'



STORK

ZOOLOGICAL GARDENS AND THE PRESERVATION OF WILD LIFE

By

E. P. GEE,

(Regional Secretary for Indian Board for Wild Life, Assam).

THE distinction between a zoological garden and a zoological park may be briefly summarised as follows :

A zoological garden is usually a place where a large number of the world's mammals, birds, reptiles, fish, etc. as possible are on show to the public in as small an area as possible, say 30 to 150 acres. These animals are usually kept in cages or restricted to small enclosures. The functions of a zoological garden is to show animals to the public as conveniently as possible for their recreation and education, and to provide material for scientific study. A zoological garden is usually found in a large city.

A zoological park, on the other hand, is usually a place where a selection of the world's mammals, birds, etc. are maintained in an environment as far as possible similar to their natural habitat, in an area of some 300 to 600 acres or more. The animals are kept in open fields or small wooded glades or lakes ; and it is the human visitors who are restricted to fenced roadways and paths. It is situated usually outside, but not far from, a large city.

The chief difference, therefore, between a zoological garden and a zoological park is one of interior space and geographical location. The functions and the principles of management are generally similar for both these institutions, and for the purpose of this paper it is proposed to treat them together as one entity.

PREJUDICES SHOULD BE DISCARDED

There exists in the minds of many people, even of the widely-read and well educated, a certain amount of prejudice against zoological gardens which may be roughly analysed as follows. They consider that conditions in captivity are detrimental to the happiness and wellbeing of animals due to lack of space and freedom. This idea is open to question, since it seems based on an anthropomorphic approach to the question. Certain people think that because they themselves enjoy seeing the wide open spaces the animals must react similarly.

It has recently been suggested by eminent biologists, naturalists and others who have studied animal behaviour that, contrary to the prevalent belief, most animals living in their wild state are confined to restricted territories, and that lack of space in captivity is probably not a serious consideration. As evidence of this is the fact that those species which range over the widest areas in their wild state, such as elephants, the larger hoofed mammals and birds of prey, are among the easiest to keep in confinement and usually live to a ripe old age. Birds often do better in small cages than in large aviaries.

If further examples are required, mention could be made of the male gorilla now in the London Zoo which is doing much better in its comparatively small cage than did the two pre-war gorillas in the very large house specially built for them. And there is the instance of the impala gazelles from Africa which never did well in a large enclosure at Whipsnade Park, but which have thrived and bred regularly after being transferred to a small pen in the Regent's Park Zoo in the heart of London.

A further reason for a prejudice against zoological gardens in the minds of some people is the notion that animals are necessarily unhealthy when in captivity. But such people

overlook the fact that the majority of animals are healthier, have a longer average life and are better fed in good zoological gardens than in their wild state. Most of the animals which arrive in the London Zoo, for example, are infested with various parasites which have to be eliminated. The famous hunter F. C. Selous once stated that he could always distinguish the skin of a menagerie lion from that of a wild one because it was healthier and had a longer and glossier coat.

As for longevity Dr. Hindle (1950) has quoted the case of the long-tailed field mouse, which in Britain seldom survives from one winter season to the next but in the London Zoo often lives for three or four years.

Another factor which leads many to suppose that wild animals are unhappy in zoological gardens is the ferocity and struggle they usually display when newly captured. It is well known, however, that this is due almost entirely to their fear of man: once this fear is removed, as quickly happens, the erstwhile wild creature settles down remarkably well and within an incredibly short time actually looks to its human captor for food and attention.

Wild elephants and rhinoceroses captured in India are outstanding examples of quickly losing their fear of man. Captured at all ages from one year to maturity they exhibit a frightening savagery at first, but accept food from human hands within a few days and then can be contentedly ridden by a man after only a few weeks.

It has been observed in zoological gardens that a great many animals not only have no fear of human spectators but actually enjoy being watched by them. This is especially noticeable among apes, monkeys, bears, lions and seals—all of which greatly enjoy the presence of human visitors. As Dr. Hindle (1950) has observed, of the Chimpanzees at the London Zoo there is always at least one individual which actually uses various devices to attract a crowd.

It is sometimes thought that the keeping in captivity of wild animals brought from a cold climate into a hot one, or

vice versa, is cruel. But wild animals on the contrary, have rapid and remarkable powers of adaptation: the hippopotamuses from their hot river in Kenya have thrived and bred regularly in the cold, windy upland park at Whipsnade, and polar bears from the Arctic do well in gardens in a hot climate.

The training of animals in captivity is a more controversial subject. But if the animal being trained is in a healthy condition, and if it is not illtreated in order to make it perform, then there would appear to be no harm done. Dr. Hediger (1950) claims that the training of animals in captivity can provide them with suitable occupation and the means of avoiding monotony and boredom. He believes that the training of animals probably provides them with a new interest, that it is therefore 'healthy, expedient and good' and that it can be regarded as corresponding to some extent with sport and athletic activities for civilized men.

A final aspect of zoological gardens which is apt to arouse some opposition among wild life conservationists is the alleged charge that the trapping of wild animals for the purposes of exhibition to the public constitutes a threat to the preservation of wild life. While this charge may be true in the case of certain rare and vanishing species, especially if captured in an unauthorised manner without due regard to their numbers and breeding seasons, it is not substantiated generally. It has been accepted by most persons qualified to give an opinion in the matter that the wild animals so captured alive for zoological gardens represent only a tiny fraction of the number killed in various ways by destruction of their habitat, by overzealous sportsmen, by crop protectors, by poachers and by commercial dealers in meat, ivory, fur, skins, etc.

It is obvious, of course, that any objectionable aspect connected with the live animal dealing business, such as cruelty and inadequate feeding and housing, should be severely dealt with by legislation.

STANDARDS OF MAINTENANCE

It is generally accepted that the functions of zoological gardens are at the same time recreational and educational



Children admiring the tallest animal of the Animal Kingdom — The Giraffe

—Courtesy— "The Mail"

cultural. Zoological gardens vary considerably in standard of maintenance, from being purely menageries or amusement parks run merely for the recreation of the public on commercial lines for profit, to being institutions maintained primarily for cultural, educational and scientific purposes and only secondarily for recreation.

It has been pointed out by Mr. F. J. Appelman (1951) that for the purpose of classification 'It does not seem adequate to divide zoological gardens into cultural and non-cultural ones, as some non-cultural gardens are, thanks to their better financial position, much more up-to-date and better run and adapted than some poor so-called zoos. The only right discrimination seems to be to divide the zoos into good and bad ones'.

Dr. A. L. Sunier (1952) believes that 'Zoological gardens, like museums, should have education as their first objective, and should be classified according to their efforts and their success or failure and not to their financial resources. Almost equal to their educational work is their important role in acting as scientific research centres.....On the whole, the demand for living wild animals by zoological gardens is negligible as compared with other reasons for disastrous diminution of many representatives of this type of fauna. Only zoological gardens worthy of the name which undertook the double task of education and scientific research should be allowed to acquire rare specimens.'

The general standard of maintenance, then, of a zoological garden as an institution of both educational and recreational value is the most important aspect, and the criterion by which it is to be judged. Of lesser importance is the actual size of the collection of animals exhibited. It is preferable to have fewer animals well maintained than a larger number less well maintained. It is better to have no zoological garden at all than to have one poorly maintained.

NEED FOR PRESERVATION OF WILD LIFE

Having attempted to explain and remove the prejudice real or imaginary, against zoological gardens, and to draw attention to the fact that the objectives should be primarily cultural and

only secondarily recreational, it now remains to explain how such institutions can help specifically in the preservation of wild life.

With the huge increase of human population and agriculture throughout the world, and with the vastly improved means of destruction in the way of firearms, poisons and like, wild life has diminished and is diminishing at an alarming rate. Two obvious methods of rescuing wild fauna from otherwise certain extermination are firstly national parks, nature reserves and wild life sanctuaries, and secondly zoological parks and zoological gardens.

The former method of large unspoilt areas is obviously the more desirable; but here lies a drawback that only a limited few of the world's human population can avail themselves of the opportunity of visiting such remote places, while zoological gardens are easily accessible in cities where there are great concentrations of people.

Dr. Prasad, President of the Indian Republic, has wisely remarked that 'Whatever function the forest performs, the touchstone and measure of its value is human satisfaction.' Similarly it might be said that wild life and its preservation is not an end in itself: the measure of the value of wild life must ultimately be our own satisfaction.

It follows then that the more of the world's animals that can be humanely and attractively exhibited to the public for recreational and cultural purposes the better, provided that rare and vanishing species which are difficult to keep in captivity are expected. It was for this reason that a few years ago the London Zoo wisely and humanely decided to discourage the further acquisition from the bomboo forests of western China of giant pandas, after the mysterious death of the ones in their garden, until more is known of their habits and food requirements.

Shortly after this the Chinese Government placed a total ban on the export of these creatures; and it is believed that there is none now in captivity unless behind the iron curtain.

It has been computed by Francis Harper (1945) that some 77 species of mammals alone have become extinct during the last 2,000 years, the rate of extinction having increased considerably during the last 150 years.

Many species of birds also have become extinct. When the dodo was discovered in 1598 it was not realised that the future of a particular species was in danger, never to be replaced. It had become extinct by 1681. From what is known of this flightless bird, it is possible that it could have been as easily preserved in captivity as it was impossible for it to survive in its wild state. The Labrador duck and the great auk might also have been saved in zoological gardens.

The passenger pigeon, on the other hand, possessed the tendency to gregariousness to such a degree as to make it impossible to survive in any form of captivity, and the last of these birds died in the Cincinnati Zoological Park in 1914.

SOME SPECIES ALREADY SAVED

In comparatively recent years several species have been successfully saved from extinction by man in zoological gardens. The bison of America and of Europe have both been preserved in this way. The great herds of bison on America, popularly called 'buffalo', which once roamed the western plains of the U.S.A. and which are estimated to have numbered fifty or sixty million head, are now extinct in their purely wild state. But a fair number of these animals are still living in a semi-domestic state in parks and zoological gardens throughout the world.

The European bison is believed to be practically if not totally extinct in its wild state, but about ninety head are thriving in captivity in the parks and zoological gardens of the world.

The white-tailed gnu of Africa, a much more interesting antelope than the brindled gnu of that continent, is also totally extinct in its wild state, but successfully preserved in certain farms, parks and gardens, where it now numbers about 1,000 head.

Perhaps the most 'classic' example of a wild animal saved in captivity from extinction is the famous Pere David's deer. Formerly found in the swamps of Honan in China, then later confined to the Imperial Hunting Park south of Peking, the last female in China died in captivity in Peking in 1920. But a few had found their way to the zoological gardens of Europe; and in 1897 two or three animals in Woburn Park in England, home of the Dukes of Bedford, were the tiny nucleus of what is now a strong and vigorous herd of over 300. Deer from this renowned herd are now being sent to zoological gardens throughout the world, and could appropriately be re-introduced into their native haunts in China—if there was the will and the place to receive them.

A bird which has just been reported to have been saved by breeding in captivity in the Hawaiian Island Goose. Sixteen of these birds are now thriving at the Severn Wildfowl Trust, and four goslings have recently been hatched out in Hawaii itself, bringing the total there to fourteen. Only thirty or forty wild birds now exist in the region.

Breeding in captivity has also been suggested as a means of saving the North American whooping crane, and attempts may be made to preserve this bird in a zoological garden in the near future.

SPECIES REQUIRING PRESERVATION

There are many species of mammals and birds which are now in urgent need of preservation in zoological gardens, since their existence is threatened in their native habitats. Of the three species of Asiatic rhinoceroses, all of which are rare and vanishing species, the Javan or smaller one-horned is in the greatest danger. Not more than forty of these rare creatures are reported by A. Hoogerwerf (1954) to exist in their wild state in the Ujung Kulen Reserve of Java. Fortunate indeed will be the zoological garden which will be the first to obtain a pair of this rhinoceros, for at present no representative of this species exists in any zoological garden, although rhinoceroses generally do extremely well in captivity.



Children are seen excited when the Elephant trumpeted

Courtesy.—"The Mail"

The cheetah or hunting leopard is either extinct or practically extinct in its wild state as far as India is concerned; and it is imperative that any representatives of the Indian species still living in captivity should be carefully observed. It is most unfortunate that this animal is one of the very few creatures which have never bred in captivity in any part of the world, as far as is known.

Owing to its large size and the reduction of its habitat the great Indian bustard is becoming extremely rare; and the possibility of rescuing this fine bird and preserving it in zoological gardens should not be overlooked.

The white-winged wood duck of north-east India, recently placed by the Indian Board for Wild Life on the list of birds proposed to be totally protected, is known to thrive in captivity: here is another opportunity of saving from extermination a species before it goes the way of the pink-headed duck.

The Manipur sub-species of the brow-antlered deer, of which there are believed to be only a few representatives alive to-day, cannot possibly be expected to survive in their wild state. The only chance of successfully preserving them is in captivity where they do remarkably well. There is a fine herd of the Burma sub-species in the Rangoon Zoological Garden, and of the Indo-China sub-species in the Vincennes Zoological Garden of Paris.

Many other mammals and birds could be mentioned, which are now becoming rare and should therefore be safeguarded by some of their numbers being maintained in good zoological gardens in India and other countries.

CONCLUSION

There can be little doubt that well administered zoological gardens can be of the greatest direct value in preserving wild life by keeping and exhibiting rare and vanishing species.

There is, in addition, an indirect way: by education of the public, and by drawing their attention to the status of the species in their native haunts, public opinion will then be enlisted to the cause of wild life preservation.

With well displayed legend information about the habits and habitat of each animal exhibited, and with simple but attractive maps showing former geographical range and present restricted distribution, and with further information available in the way of illustrated guide books, booklets, pamphlets, postcards and the like, much can be achieved in the field of education.

Visitors to a good zoological garden who can see animals in healthy and happy condition at close quarters in captivity can surely be led to visualise them in their natural surroundings. And if they cannot themselves go out into the remoter national parks and sanctuaries to see them in their wild state, at least they can determine that they will do all in their power to secure the survival of wild life for their own and for future generations.

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DISEASE CONTROL AND COLONY MANAGEMENT OF PRIMATES

at the
PHILADELPHIA ZOOLOGICAL GARDEN

By

HERBERT L. RATCLIFFE

SUCCESS OR FAILURE in maintaining colonies of apes and monkeys, either for exhibition in zoological gardens or use in laboratories, is determined to a very large extent by two factors; preventing or excluding infections disease and providing an adequate diet. This statement is based upon the results of a study that began at the Philadelphia Zoological Garden in 1901. These observations continue without interruption, and now include records of upward to two thousand animals, among which have been numbers of all common varieties of apes and monkeys as well as many of the rarer or more highly specialized types.

Infectious diseases of infrahuman primates are so closely associated with malnutrition that a separate consideration of the two problems is difficult. Nevertheless, control of nutritional diseases does not reduce the probability that tuberculosis may be introduced at any time into groups of all types of infrahuman primates. Moreover, adequate diets are not satisfactory safeguards when anthropoid apes are exposed to the virus of the common cold and to the organism producing pneumonia.

Tuberculosis is unquestionably the most important infectious disease of infrahuman primates in captivity. Animals may be infected during shipment or may acquire the infection



The Zoo Elephant 'SARAH' performing before the Children

Courtesy.—"The Mail"

Whether animals that have been transported by air will prove to be in better physical condition remains to be determined. Unquestionably, rapid transportation should reduce the frequency of tuberculosis. Still, it should be remembered that natural food supplies for infrahuman primates in the wild must vary with the season. Moreover, there is no evidence that these animals ever are better fed than native human populations that depend upon natural foods. Protein deficiencies, therefore, must be anticipated and, in fact, are obvious to anyone who examines newly imported apes and monkeys. Since studies on protein depleted humans demonstrate, beyond question, that recovery is a matter of careful feeding for months, rather than for days or weeks, it seems obvious that conditioning programs for apes and monkeys must be equally prolonged.

Whenever possible, our practice is to isolate each animal during the quarantine and testing period, but very young apes and monkeys sometimes adjust more readily and recover more quickly when caged in groups. This is especially true of monkeys from the American tropics, which never are fully independent animals. But groups must be arranged, of course, so that all members are about equal in size and physical condition ; otherwise the weaker members may be injured.

At the end of the quarantine period each animal is transferred to an individual cage and fitted with a rolled leather collar and a chain about four feet in length. Both ends are equipped with swivels in order to prevent the chain from becoming hopelessly tangled and twisted as the animal moves about the cage.

Our tuberculin test starts five days before the tuberculin is injected. On the Wednesday prior to the injection, temperatures are recorded for each animal at 3 : 00 P. M. and repeated on the following days, using clinical veterinary thermometers with a separate thermometer for each animal. These records show the highest temperature to be expected from each animal before it becomes accustomed to restraint, and they are listed on individual temperature charts.

On the following Monday morning each animal is briefly restrained and injected subcutaneously with an extract of killed tubercle bacilli, the dosage being 1 to 2 milligrams per kilogram of body weight. About six hours after injection (at 3:00 P.M.) temperature readings are again started, and repeated at intervals of four hours for the following forty-eight hours.

Temperature charts, resulting from animals that are free of tuberculosis, illustrate the usual more or less marked and fairly uniform diurnal swings common to infrahuman primates, with the high points in the afternoon and the low points twelve hours later.

Tuberculous animals show one of two responses to this quantity of tuberculin. The more usual response is a definite rise in body temperature, within twelve hours after injection, well above the highest pre-injection readings. The degree of rise varies through a considerable range, and may be quite irregular. Sometimes, the normal diurnal pattern is reproduced fairly well, but at a distinctly higher level. Again, all similarity to the normal rhythm is lost. But once the temperature is elevated it continues so for the remainder of the observation period.

The second type of response may or may not begin with a sharp rise in temperature, but, however it may start, an irregularly falling temperature becomes evident within twentyfour hours after injection. The temperature of these animals usually falls well below the lowest normal readings within thirty-six hours after injection. These animals usually continue downhill to death in about seventy-two hours.

Admittedly, this method of detecting tuberculosis in infrahuman primates is costly, but then, so is tuberculosis. With one team of trained men no more than eight monkeys may be subjected to the test at one time, and we prefer to have no more than six. At most, the test accommodates one group of animals each two-week period. Still, in our hands, it has been demonstrated to be a completely satisfactory method for detecting and excluding tuberculous animals.

However, it should be emphasized, that, in the presence of severe malnutrition, tuberculin tests of any type may be expected to give false negative reactions. Hence the emphasis on correcting signs of starvation or malnutrition before testing the animals. Any animal that fails to show definite improvement within a month after having been given an adequate diet should be suspected of having tuberculosis.

Twenty-five years ago we separated our visitors' space from the indoor exhibition cages in our monkey house by a solid wall of plate glass, tile, and plaster. Keepers and other authorized personnel are the only humans allowed into the space about the animals. Nine years ago this barrier was reinforced with germicidal ultraviolet lamps. These preventive measures, combined with the tuberculin test described above, have excluded tuberculosis from our collection. No animal is permitted into this exhibition space until its temperature response to tuberculin shows, beyond question, that it is free of tuberculosis.

Essentially the test is an adaptation of that which once was used to detect tuberculosis in cattle. Aside from the time it requires, its chief difficulty, is in interpreting temperature charts of young monkeys in which malnutrition has not been corrected. The body temperatures of these animals are highly unstable. Another difficulty is in training personnel to handle the animals so they are not restrained longer than the three or four minutes needed for each temperature reading and so there is no unnecessary roughness. Otherwise the readings may approach the positive reaction.

During the course of this work we have had abundant opportunity to compare the results of intradermal tuberculin injection with temperature response to subcutaneous injection of this material. Even when tuberculosis was well developed and easily detected by the temperature response, intradermal reactions always were negative. This comparison was done in collaboration with Dr. Joseph Aaronson of the Henry Phipps Institute of the University of Pennsylvania. At the same time

these proven tuberculous monkeys were subjected to X-ray, examination, also at the Henry Phipps Institute, which demonstrated that the disease might be detected in the lungs, by this method, when the lesions were sufficiently advanced. However, the temperature reaction detected the infection about two months earlier, whether or not the disease was conspicuous in the lungs.

We have not found definite evidence that adequately fed baboons and monkeys are susceptible to other infections of the upper respiratory tract and lungs, but chimpanzees, orang-utans, and gorillas are highly susceptible to the virus of the common cold. Moreover, infections by this agent often have been followed by bronchitis and sometimes by lobar pneumonia.

In 1946 we installed germicidal ultraviolet lamps over each of the cages for anthropoid apes in our exhibition house, and have maintained these lamps in continuous operation. The fixtures for the lamps include an open-faced aluminium reflector that blankets the entire cage. The animals have shown no recognizable ill-effects from continuous ultraviolet irradiation, and colds have been reduced to isolated occurrences. Moreover, these lamps prevent rickets in nursing infants that cannot be given supplemental feeding.

The second major problem in maintaining colonies of apes and monkeys is feeding. The nutritional requirements of these animals, in so far as the matter has been studied, seem to correspond closely with those of man. Thus, an adequate diet involves nothing more than recognizing these needs and supplying them by one or another combination of easily available foods. We have chosen to solve this problem by the simpler method, in which a composite ration provides most of the essential food-stuffs in a more or less palatable form. This mixed ration was introduced in 1935 and has been used continuously since then without significant change.

The formula for our composite ration, a dry mixture, is as follows :—

Ground yellow corn	— 15%
Ground whole wheat	— 15%
Ground whole barley	— 10%
Ground rolled oats	— 10%
Peanut meal	— 10%
Soybean meal	— 10%
Alfalfa leaf meal	— 5%
Brewers' yeast	— 10%
Dried skim milk	— 10%
Oystershell flour	— 2%
Iodized salt	— 1%
A-D feeding oil	— 2%

This is prepared in bulk as needed, but never stored longer than two weeks. The mixed ration is supplemented by oranges, kale, and carrots in amounts weighing about twice the weight of the allowances of the ration.

The mixed rations is fed during the mid-morning, and, if eaten completely, as it usually is except when animals are newly received, the vegetables and oranges are given about mid-afternoon. With the exception of the apes, all animals are limited to one orange or less per day; kale and carrots are fed more liberally, but only in quantities that the animals will consume within one or two hours. Water is provided twice daily.

Newly received animals that are in reasonably good condition invariably accept this mixed ration within a day or two. If they refuse it at first, no other food is given, which invariably rapidly increases in palatability. Poorly nourished specimens may be induced to accept it by mixing it with mashed bananas for the first week.

One of the first changes seen in our animals after this diet was introduced was the disappearance of dysentery. In fact deaths from enteritis simply do not occur under this system of



SPOTTED DEER 'BARA'

feeding. These observations are in keeping with more recent studies on nutrition and dysentery in monkeys. Indeed, it is now completely accurate to say that the occurrence of dysentery, or infectious enteritis of any sort, in apes and monkeys is to be taken as an index of malnutrition in the animals.

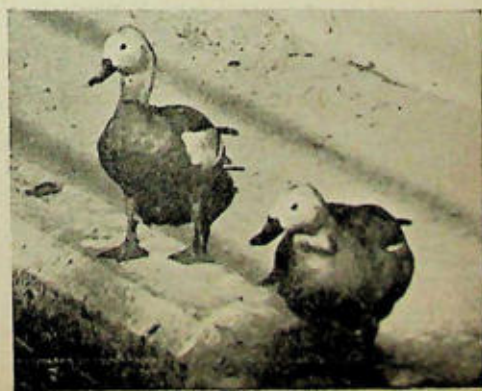
Nematode parasites also disappear rapidly under this system of feeding, although we have not seen fit to study this phase of the reaction in any detail. We have noted, too, that lung mites of Asiatic monkeys tend to disappear within about a year, and they rarely produce more than inconspicuous lesions within this time.

Our experience with this system of feeding over a period of approximately twenty years also demonstrates conclusively, that apes and monkeys are not strictly vegetarians in their food habits, preferences, or needs. The greediness with which many apes, monkeys, and baboons accept freshly ground horse meat,

LAND TORTOISE

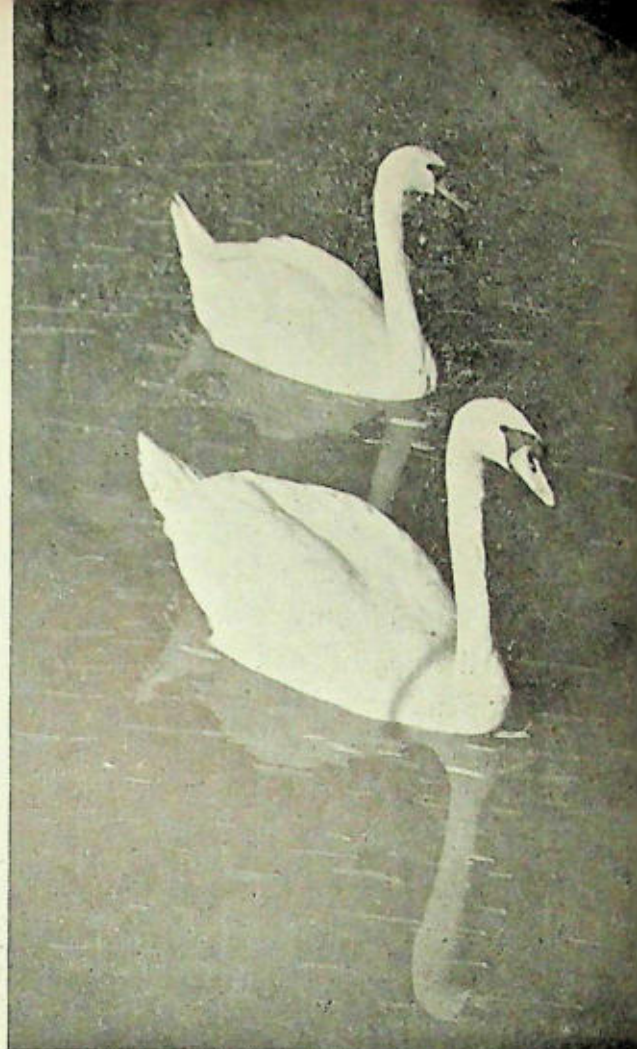


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when they have had no previous experience with this food, is further evidence against this widely accepted belief. In fact, I might add that certain deer (which of course are ruminants) show an appreciable hunger for raw meat.

Once animals are feeding well and have been 'proven' free of tuberculosis they are moved to the monkey house. In zoological gardens where breeding groups are desirable, one adult male with several females is the only satisfactory arrangement for the great majority of species. More than one male in family group usually leads to endless fights and sometimes deaths from injuries. Space allowances of from 100 to 1,000 cubic feet

per animal, depending upon size, are not excessive, although many species can and do accommodate themselves to much less.

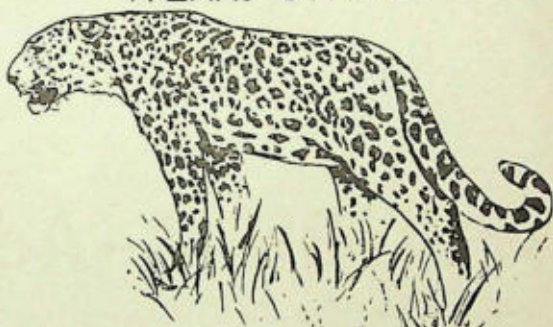
Moreover, the more ample the space and abundant the facilities for exercise, the more quickly the animals develop into robust muscular specimens. Monkeys received from Africa or India, as crowded groups in small shipping boxes that rarely provide more than two or three cubic feet per animal, invariably show relative atrophy of the adrenal cortex. And often, too, this is accompanied by malnutrition and dysentery.

It seems evident that, in addition to adequate nutrition and disease control, success in maintaining apes and monkeys, either in laboratories or in zoological gardens, also depends upon providing ample space and facilities for sustained activity.

[*Courtesy of Philadelphia Zoological Garden from "America's First Zoo." Vol. 7 No. 2 June 1955.*]



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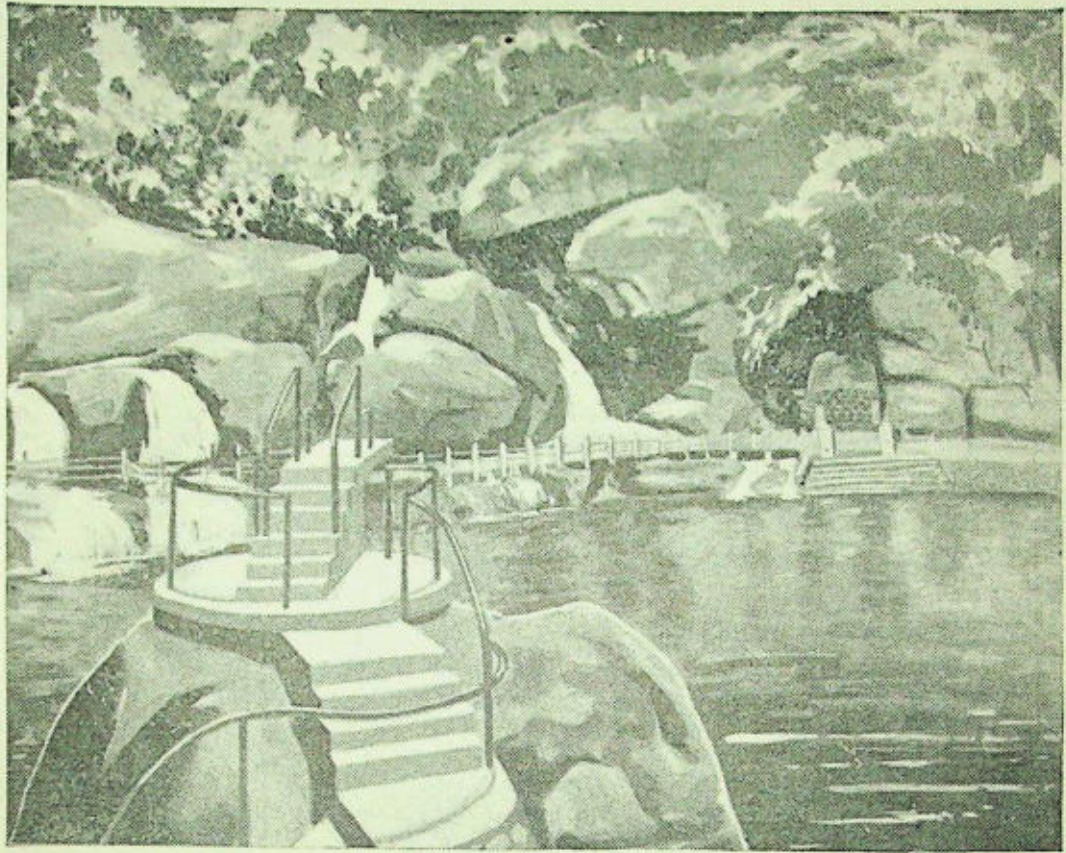
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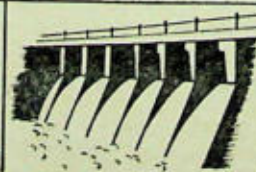
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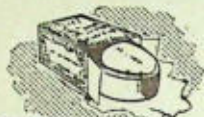
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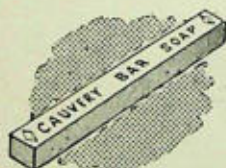
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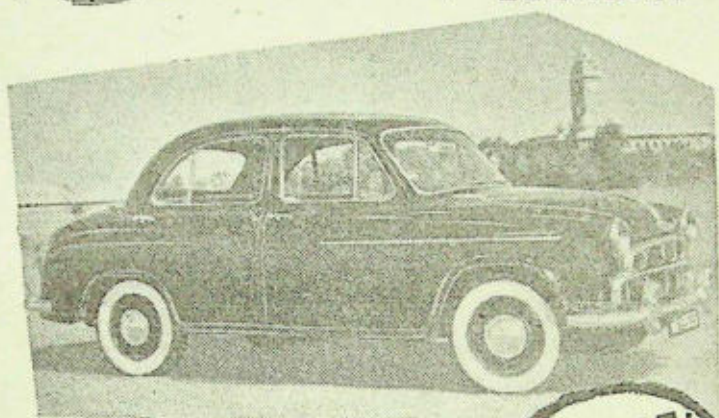
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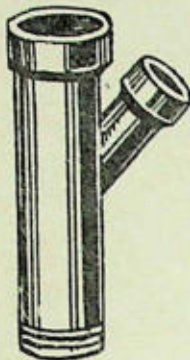
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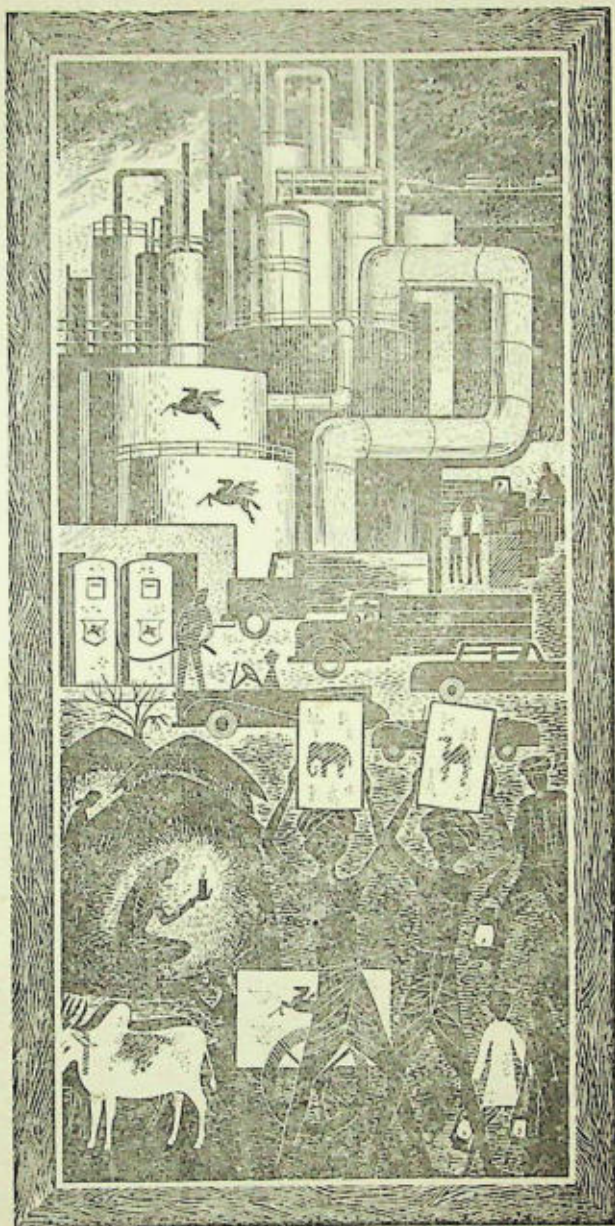
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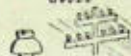
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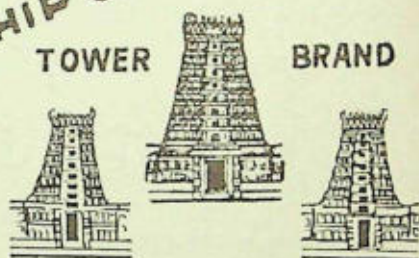
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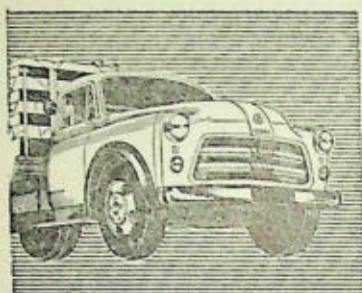
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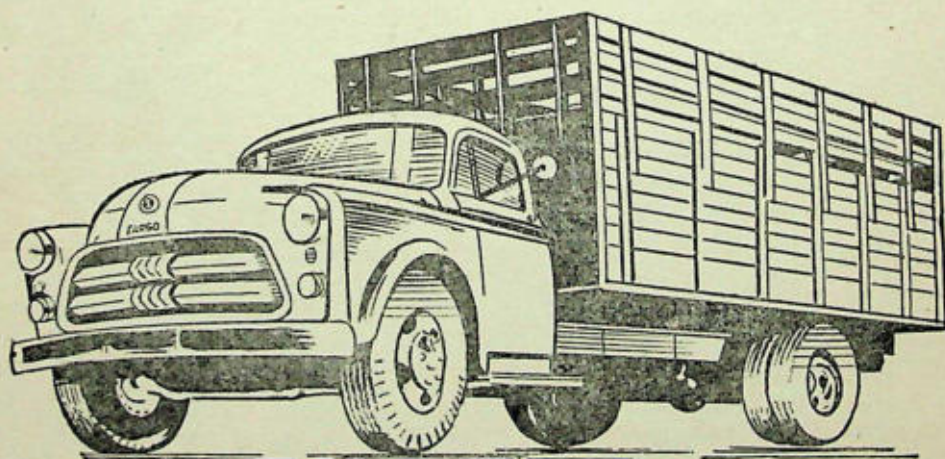
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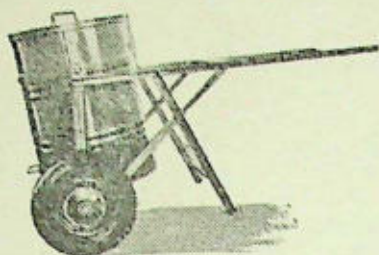
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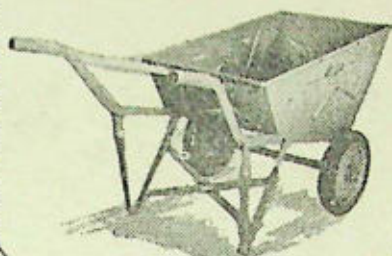
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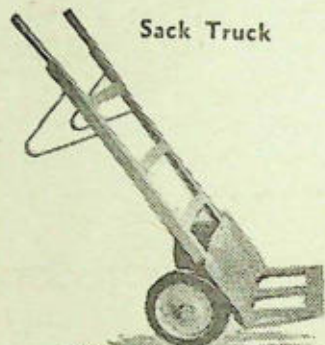
Water Hand-cart



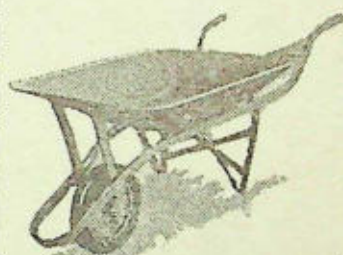
Double Wheel-barrow



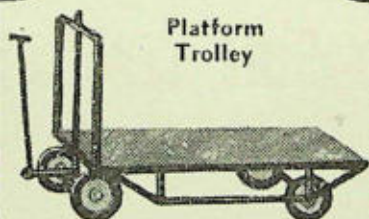
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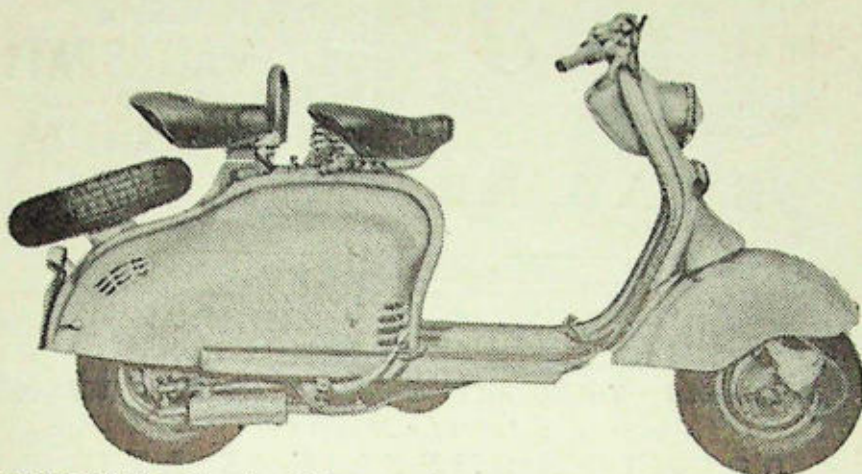
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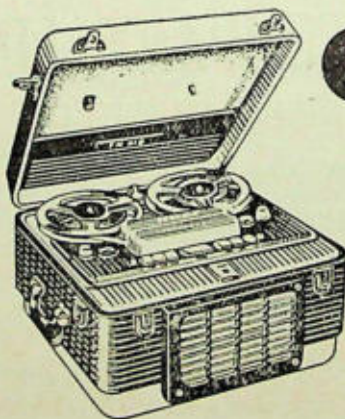
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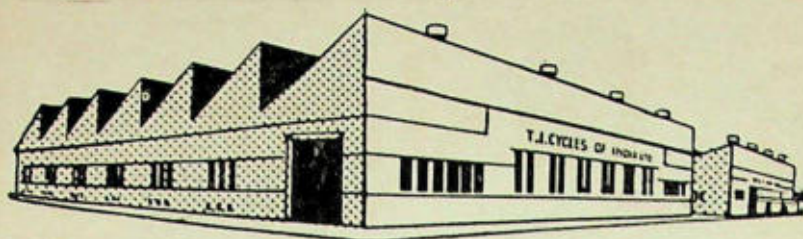
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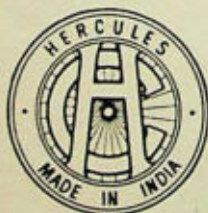
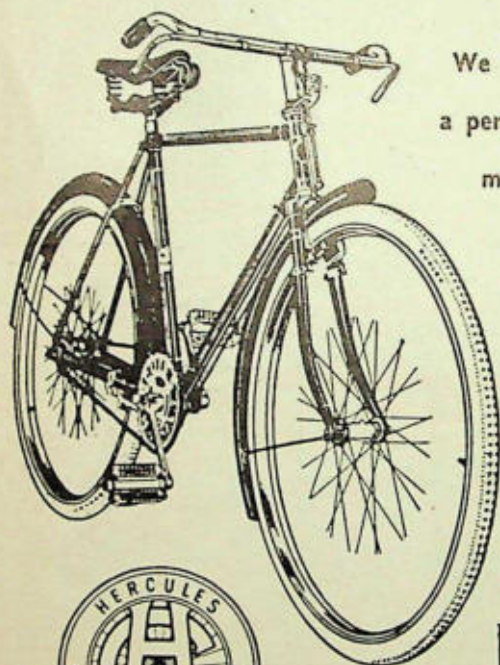
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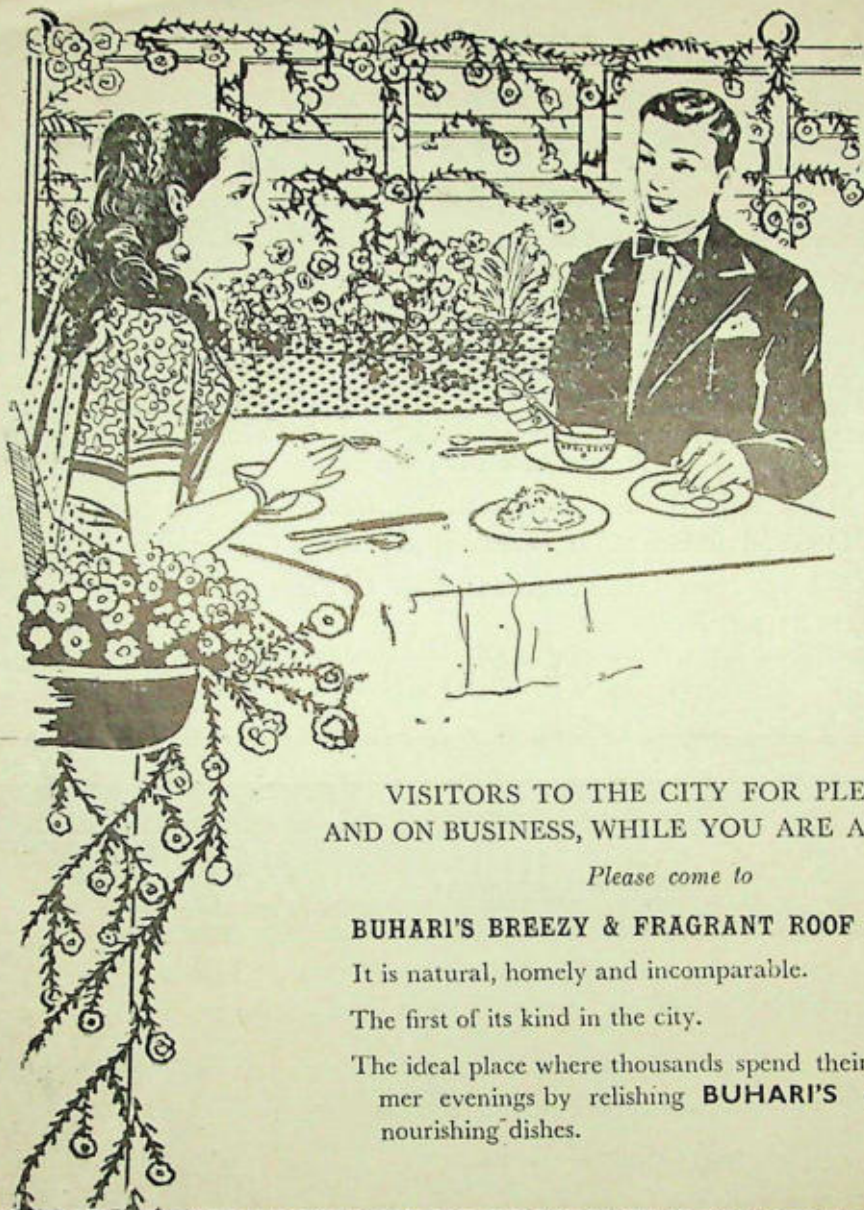


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The South Indian Export Co. Ltd.,
4, MCLEAN STREET, MADRAS-1



(Incorporated in Scotland)

1852 - Also A Centenarian - 1955

Industries Served By Glenfield Products

WATER SUPPLY AND SEWERAGE

Control valves, sluice gates and penstocks of all types: screening plant, sand-washing plant, fire hydrants, flow meters and water level indicators; chemical pumps, treble ram pumping plant, hydrostats and hydraulic rams; all other types of fittings for the control and distribution of water and for sewage disposal.

RIVER CONTROL AND IRRIGATION

Sluice gate installations including sliding, "fixed" roller, "free" roller, radial, tilt-radial, and flap gates, from the smallest units to the largest that can be made.

HYDRO-ELECTRIC UNDERTAKINGS

Specialised control valves, sluice gates, including automatic installations, jet dispersers and devices for automatic penstock protection.

STEAM POWER STATIONS

Circulating water control valves, low pressure steam valves, penstocks and sluices, feed water meters, etc.

DOCKS AND HARBOURS

Valves, culvert penstocks and sluices, hydraulic machinery and pumping plant, hydraulic accumulators and intensifiers up to the largest sizes.

MINING, QUARRYING, IRON AND STEEL AND GENERAL ENGINEERING INDUSTRIES

Equipment of all kinds for water and hydraulic service, high pressure pumping plant, hydraulic testing plant, fire fighting equipment.

CHEMICAL INDUSTRIES

Every type of control valve for water and other liquids including valves of corrosion resisting alloys to all requirements, fluid meters, fire fighting equipment, etc.

BREWERIES, DISTILLERIES AND FOOD PRODUCERS

All types of control valves for water and special valves of in-corrodible alloys for other liquids, fluid meters, fire fighting equipment.

PAPERMAKING AND TEXTILE INDUSTRIES

Screening plant for water, control valves for water and other fluids, flow meters etc.

OIL WELLS AND REFINERIES

Oil valves, drilling valves, and other valves for high and low pressures.

Agents:—THE SOUTH INDIAN EXPORT CO. LTD., 5, McLean Street, Madras-1.