

Management of Zoological Parks

the first version of what we now call zoo can be obtained from the ^{Ancient} Egyptian Menagerie. From French menagerie which means management of a family & care of a household. but in the middle of 17th century menagerie was an enclosure where livestock was kept and fattened for the table. Louis XIV - decided to transform the menagerie in his palace at Versailles into what today we would call a zoo - was a abbreviated form of Zoological Gardens

The first phase of zoo or animal keeping)

- ① A For Reverence and brutality.
 - ⓐ as object of worship - in Egypt - lions, baboons, ibis & other fabled captive specimens in tombs, parks & monuments the remains of animals.
 - ⓑ The Pharaohs & Ptolemies sent expeditions abroad to bring back to Egypt exotic creatures. set aside parks in an effort to acclimatize these other than the cow; sheep, horse, dog and cat - which had been domesticated as far back as the Neolithic Age.
 - Ⓒ Garden of Intelligence in China - 1100 B.C. ^{Herodotus the Greek} ^{Plinius the Greek} ^{captivity} ^{plans to Greek} ^{sent animal from his}

Pompeii
 B Ancient Rome used animals for a brutal cult to show power of humans over animal - Professional Gladiators perfected their skill in amphitheatres. To celebrate his Dacian Victory in the year 106 Trajan held games for four months and reported say 10,000 gladiators & 11,000 beasts were killed. For all such acts they need by menageries & between 1BC & AD 14 Augustus kept - could also mean, killed) - 3,500 wild beasts

In the year AD 325 - Constantine the first Roman emperor decreed no gladiator. Justinian decreed otherwise because his wife Theodora a keeper of bears wanted to perform stage & the decree was reversed, as a man - animal could

II - The Mark of Splendour (used in process)

The second phase began with the decline of gladiator games but animals were being collected and given as gifts to kings, nobles and used as display items in processions & ceremonies.

Zoos survived now and circuses flourished throughout and vestiges of supremacy of man over beasts were still being shown. ex - daintiness with his whip, ringmaster, Macho images of the man who can fight with tiger, put his head in a lion's mouth etc etc.

III Science & Education in the Scientific phase.

Other than the Chinese zoo of 1100 BC & Ptolemy II reputed zoo in Alexandria some 500 yrs (300 BC) years later there is little sign that zoos were regarded as institutions for advancement of science & education.

① In 1665 the Versailles menagerie was established with the purpose of understanding more about animal anatomy & biology. William Harvey who made the world understand the circulation of blood was based on work carried out on deers in the menagerie.

② The zoo that played a part in the present National Zoo of France in Paris opened in 1735. Actually this zoo was the result of overthrowing of the Monarchy. The animals in Versailles menagerie and that of the circuses were put together and provided a museum of living animals.

③ The London Zoo was a byproduct of the Zoological Society founded in 1826. In 1829 the animals in various menageries and Tower of London were kept at one place where the members of the Society could visit them for "Advancement of Zoology & Animal Physiology".

The Present Phase IV is Conservation Phase - last

Time ~~is~~ ^{is} being in the turn of the last century 1890s when the eleventh Duke of Bedford - who collected the last of the Père David's deer (Chinese deer) from the forbidden city of Peking and bred them in England which are now housed in the famous WOBURN HERD by 1860 - Dublin, Bristol, Berlin, Frankfurt, Antwerp Rotterdam had started their own zoos for scientific and educational purposes.

The Fourth Phase - A period of Decay;

1918 - 1939 - Two World Wars.

Phase V - (Conservation & Commerce)

The start of the second world war had put many zoos at bay 1945 they began to pick up again and in 1959 it was 305 - the figure in 1978 was 483.

Increasing visitation - creeping up of small menageries, creeping up of land owners and owners in creating safaris - hunted many easy tracks and animal dealers thrived - the peak of this and a sudden increase in number of animals brought to the fore the conservation side of the zoo.

Indian Zoology

II	1921 - Lucknow
III	1935 - Bikaner
IV	1935 - Jaipur

1855 - Madras Zoo
1867 - Tirumala Zoo
1863 - Bimajathi Zoo
1863 - Bombay
1875 - Jaipur Zoo
1875 - Calcutta Zoo
1892 - Mysore

Conservation Zoo

1976 - Mysore
Kempani 1971
Vizay - 1972
Wardha - 19
Raj - ch

1957 - Ahmedabad, 1958 - Baroda, 1958 - Jaipur, 1958 - Delhi, 1958 - Tezpur, 1954 - KTR, 1960 - Orissa, 1958 - Guwahati

① Animal Management -

① (a) obtaining animals & Quarantine

② (b) Housing
 Areas

Caravan sets, Herbivorous sets, Birds, Reptiles, higher house, Admittance check

③ (c) Display

④ (d) Hygiene & Health Care

Protection of city.

Protection of

⑤ (e) Health & Food

convenient to inhabitants -

conside to more natural

⑥ (f) Quarantine

maximum educative value

⑦ (g) Display

protection for vandalism

class of animals viz, predator - prey mix, zoogeographical realm with

② Park & vegetation Management

emphasis on gardens, flowers, shrubs, nature landscaping, deciduous, road, fence track & paths, Litterbins

③ Visitor management -

Law and order, facilitating the Interpretation through guides, Booths, desks (Graphic - rather than text)

④ (a) Management - training

Risk awareness, health support - essential service

Public Relation & Education & Interpretation

A goodwill: focus releases: Public amenities: Transport, parking, Public telephone, Canteen, drinking water, shade maps of points, shelter for sun, picnic spots & souvenir shops.

⑤ (b) Record keeping

⑥ Administration pattern

⑦ Research

⑧ Training staff

Hygiene & Health care

1. Prevention

2. Prophylactic measures

3.

Risk factors:
 - Biting
 - Scratching
 - Defecation
 - Urination
 - Prevalence
 - mediator

Disinfection

Pest/Rodent - Control

Ticks mites

1. Feline distemper
2. Anthrax
3. F. & M. etc
4. R. B
5. Anthrax

Seven Aspects of Zoological Gardens
European India

- ⑥ ~~Staff & Personnel~~
- ② Finance
- ① space
- ⑤ Technique of ~~Management & Display~~
- ③ Organisation
- ④ The Animal
- 7. Research & Planning

Zo Classification in India

Zoo - Zoo
 Administration pattern
 Number of visitors
 Number of species
 Method of Display
 Breeding record
 Veterinary facilities
 Amenities to public
 Educational programmes
 Research facilities

Administrative pattern - Director.

- 1. Zoologist remuneration or honorarium
- 2. Recruitment - Δ training post
- 3. Personnel management $\left\{ \begin{array}{l} \rightarrow \text{Rich animals} \\ \rightarrow \text{health system} \\ \rightarrow \text{Essential service} \end{array} \right.$

* Procurement, Capture & Transfer of animals

- a) From animal dealers
- b) capture from the wild - Prof. Tanguis in 1954
- c) By exchange
- d) Transport & handling of animals = surface air road by professional keepers - Graham
 to other - Dublin, etc. etc.

Quarantine - Location, Penial, but just. Management - Acclimatization

Management :-

1. Conditioning of animals

a. To visitors

b. To ~~food~~ - why.

Artificial food & medication

Precautions

Just doo system
wide moats
fence & wall

Some Indian Safari

1. N2P Lion Safari
2. Borivilli Lion Safari & Herbivore Safari
3. Banarshatti Lion Safari
4. N.W. Safari
5. Kerala / Shimoga - Shimoga
6. Deer Safari in Vizag
7. Porbander Tiger Safari in N2P
8. Deer Parks when people are taken in transport.

- (2) Maintenance of boundary fence or moat
- (3) Maintenance of tracks
- (4) Maintenance of vegetation and other maintenance of other fence

Interpretation of Safari & its educational value.

1. Recorded commentaries
2. Answering guides
3. self operated audio answer Bank

Botanical Gardens

Buddhist - Groves - for Tranquility
Chinese monks - Pine tree.
260 BC Emperor Ashoka began the creation of
Botanical gardens.

Trees are usually regarded as symbols of
fertility.

1. Four kinds of Gardens in Ancient India

1. Ramadodhan - for enjoyment & recreation of Kings & Queens
2. Udyan - Kings & courtiers, dancers, singers.
2. Vriksha vatika - ministers & courtiers.
4. Mandavvan - dedicated to Gods.

(2) Buddhist Groves for tranquility.

(3) Ashoka in 260 BC Gardens for purpose - fruits
shade

(4) Mughal Gardens with high walls - privacy
Amir water, Terraces, flowers & trees

1. Fatai khari Garden - Punjab

2. Mishkat Garden - Kashmir

3. Achlebel - Kashmir

4. Chakhmashai - Kashmir

5. Tay Garden - Agra

6. Shalimar Garden - Srinagar

5. English Garden - Annuals & emphasis on
hedges & Borders.

6. Japanese Look Gardens -

Hill Garden - on hills, ponds, streams.

Flow Garden - artificial, autumn

Tea garden -

Modern botanical gardens ^{objectives}

Botanical gardens for collection ^{& propagation} of species diversity
preservation of gene pools for future

New botanical gardens

~~Singapore Botanical Garden.~~

~~Lullman Botanical Garden~~

~~OOA Botanical Garden~~

Royal Botanic Garden - Kew - 120 ha, 50,000 sp.

(200 yr old) The Royal families private garden -

specific purpose botanical gardens

1. orchid gardens in NE India

2. International tree house in Mauritius 10,000

Management

a) Manipulation of climatic factors.

glass house, temperature house
green house, etc

storage of seed - seed bank in refrigerated containers.

b) Artificial fertilization

c) Use of ^{new} propagation techniques - Grafting etc
seed & tissue culture

~~What are they doing~~

d) Herbarium Museum of Economic Botany