

**INTENSIVE TROPICAL
WILDLIFE [NON-DOMESTIC] PRODUCTION
SYSTEMS**

**MODULE # II: Zoos
Unit # 5: Zoo Management**

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[OTFAPL]**

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Module II: Zoos

Unit 5: Zoo Management

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Module II: Zoos

Unit 5: Zoo Management

5.1 Learning Objectives

- **Management of Zoos**
- **Zoo Organizations**
- **Zoos Highlighted**

5.2 MANAGEMENT OF ZOOS

Most people have a very limited impression of Zoos. They usually remember it **as the place where they went to as kids**, they therefore believe that it is a place only for children to go. Today, however zoos are very complex situations and work environments.

Why is this so?

(1) The Nature and Type of Zoo Organizations

- (a) Zoological Societies
 - Privately funded
 - Publicly Funded
 - Mixed Funding
- (b) Limited Liabilities or Corporations
- (c) Private Individual's (s') Collections
- (d) Wildlife or Animal Reserves

(2) Human Resource Management

(3) Physical Resource Management

(4) Animal and Exhibit Management

(5) Financial Management

5.3 ZOO ORGANIZATIONS (The Organization of Zoos or the Arrangement of Animals in Zoos)

By Single Species Exhibit

- Single animals or Groups of animals from a single species for exhibit purposes only
- Groups of animals from a single species for exhibit and breeding purposes

By Mixed Species Exhibit

- Mixed Compatible Species within the same enclosure
- Predator-Prey Exhibits

By Species Grouping

- Species within the same family or subfamily exhibited alongside each other.

By Exhibit Themes

By Geographic, Regional or Environmental Themes

5.4 SOME US & UK ZOOS HIGHLIGHTED

5.4.1 The Phoenix Zoo

Location: Phoenix, Arizona

Area: 125 Acres

Arrangement of Exhibits:

- Arizona Trail
- African Savannas
- Amazonia
- Childrens Zoo (7 Acres)
- Deserts of the World
- [Future]

Main/Most Popular Exhibit: - Childrens Zoo: Farm in the zoo and petting facility

Major Scientific Contribution/s: The saving of the Arabian Orynx from a population of only 8 animals in 1963
[slides]

Some Tidbits: - Zoo Started in 1962
One of the oldest Zoo Employees Mr Gene Mohny: 35 years as an animal keeper [now head keeper]who worked with the orynx for over 10 years.
[lides]

5.4.2 San Diego Zoo: The Zoological Society of San Diego

Location: Balboa Park, San Diego, California

Area: 100 Acres

Arrangement of Exhibits: Mesas / Plateaus and Valleys

Main/Most Popular Exhibit: Difficult to Say

Major Scientific Contribution/s: Research Facility, Center for Reproduction of Endangered Species [CRES]
Has established a Frozen Zoo.

Some Tidbits: > 4000 animals, 820 species
- One of the most visited zoos in the World

5.4.3 The San Diego Wild Animal Park

Location: The Dry San Pasqual Valley

Area: 1800 Acres

Arrangement of Exhibits:

- Arabian Desert
 - Asian Plains
 - [Mixed Species]
 - Gervy's Zebras
 - Asian Lions
 - Sumatran Tigers
 - African Elephants
 - Asian Elephants
 - Cheetahs
 - Australian Rain Forest
 - Gorillas
 - Okapis
 - Bongos
 - Baboon Hill
 - Eastern Africa
 - [Mixed Species]
 - Northern Africa
 - Southern Africa
 - [Mixed Species]
 - Asian Waterhole
 - Mountain Habitat
 - Mongolian Steppe
- ALL EXHIBITS SURROUNDED
BY A MONORAIL

Main/ Most Popular Exhibit:- NAIROBI VILLAGE

Major Scientific
Contribution/s:

Their breeding efforts enabled the Southern White
Rhinoceros to be taken off the endangered list.

Over 13 years
calves.

their South African originated colony, produced 59

Some Tidbits:

Formerly dedicated on May 9, 1972.

10 Million US \$ to establish; but it attracts more
than 1,000,000 paying visitors a year.

5.4.4 The Lincoln Park Zoo

Location:

On the lake Michigan front in Chicago

Area:

35 Acres within a Park Complex on the Southern
Shore of Lake Michigan

Arrangement of Exhibits:

- Lester E. Fisher Great Ape House
- Kovler Lion House
- Mc Cormick Bird House
- Crown Field Center
- Penguin and Sea Bird House
- Joseph Regenstein Large Mammal Area
- Sea Lion Pool
- Robert R. Mc Cormick Bear and Wolf Habitat
- Regenstein's Birds of Prey Exhibit
- Antelope/ Zebra Area
- Small Mammal House
- Reptile House
- The Pritzker Childrens Zoo
- 5 Acre Farm in the Zoo

Main/ Most Popular Exhibit: Difficult to say

Major Scientific
Contribution/s: Best success in captive reproduction of Great Apes

Some Tidbits: Opened in 1868 Second Oldest Zoo in the USA

5.4.5 The Shedd Aquarium

Location: On Lake Michigan, Waterfront, Chicago

Area:

Arrangement of Exhibits:

The Original building is the Aquarium, the Oceanarium was later added.

Main/ Most Popular Exhibit: Twice a day, Summertime show with the Trained Dolphins

Major Scientific
Contribution/s: Since 1930 Shedd Staff have collected fishes from all parts of the world including Australia, the Bahamas, Costa Rica, The Dry Tortugas, Fiji, Hawaii, Micronesia, the Philippines, Samoa, Venezuela and the Virgin Islands.

Some Tidbits: -1924
John Graves Shedd Chicago Businessman offered \$2 Million to build the Worlds largest aquarium.
- Opened in 1930
- Over 63 million people have visited it in the last 60+ years.

- The Architecture is also outstanding designed by Graham, Anderson, Probst and White using the Classical Greek inspired Beaux Arts Style of Architecture.
- Own Railroad car to transport water and fishes,
- Owned custom designed 83 ft sea collecting vessel, R/V Coral Reef II for collection expeditions.

At any one time
 > 6000 fishes, reptiles, amphibians, mammals and
 invertebrates ;
 750 species from cold and warm oceans, lakes and
 rivers all over the world.

5.4.6 The Brookfield Zoo

Location: Brookfield , Illinois

Area: 215 Acres

Arrangement of Exhibits:

- Tropic World [Largest indoor zoo exhibit in the world]
- Fragile Kingdom
- Seven Seas Panorama
- Australia House
- Aquatic Bird House
- Pachyderm House
- Reptile House
- Mammal House
- Perching Birds

- Bear Grottoes
- Ibex Island
- Baboon Island
- Wolf Woods
- Indian Lake Trail
- Childrens Zoo
- Habitat Africa

Main/ Most Popular Exhibit:

Major Scientific
Contribution/s:

Some Tidbits: -Opened in 1934
 -one of the first BARLESS
 Naturalistic Zoos

5.4.7 The Milwaukee Zoo

Location: Milwaukee, Wisconsin

Area: 200 acres

Arrangement of Exhibits:

- African Waterhole
- African Savannas
- South America
- Asian Panoramas
- African Panoramas
- North America
- Lake Evinrude
- Animals of Australia
- Aviary

- Aquarium and Reptile [Lake Wisconsin]
- Taylor Humboldt Penguin Exhibit
- Small Mammal Building
- Kids Zoo
- [Stackner Heritage Farm]
- [Dairy Complex]
- [Petting Yard]
- Zoofari Express Miniature Train

Main/ Most Popular Exhibit:

- Kids Zoo
- [Stackner Heritage Farm]
- [Dairy Complex]
- [Petting Yard]
- Aquarium and Reptile [Lake Wisconsin]

Major Scientific
Contribution/s:

Some Tidbits:

- Wisconsin's most popular tourist attraction
- 2,500 animals
- 1.5 million visitors per year

5.4.8 The NYZS, The Wildlife Conservation Society

Location: The Bronx , N.Y

Area: 265 Acres

Arrangement of Exhibits:

- Jungle World
- Wild Asia
- Bengali Express Mono Rail
- Himalayan Highlands

- Africa Plains

-

Main/ Most Popular Exhibit: - Childrens Zoo

Major Scientific

Contribution/s: - involved in over 150 Conservation Projects World Wide

Some Tidbits: Opened in 1899
>4,300 animals, 674 different species
Annual Budget 65M US\$

5.4.9 National Zoological Park: Smithsonian Institution

Location: Washington DC

Area: 163 hilly Acres

Arrangement of Exhibits:

- Education and Information Center
- Cheetah Conservation Station
- Panda House

Main/ Most Popular Exhibit:

Major Scientific

Contribution/s: Contributes to the whole Smithsonian Effort and has
one of the best wildlife and Zoo libraries.

Some Tidbits: Established in 1889
FREE Zoo
Over 3 Million visitors / year

Veterinary

5.4.10 The Conservation and Research Center, Front Royal, Virginia

Location: Front Royal , Virginia
2.5 Hours drive from Washington DC

Area: 3150 Acres

Arrangement of Exhibits: A federal Restricted facility not open
to the General Public

Main/ Most Popular Exhibit: Not applicable

Major Scientific

Contribution/s:

- Reproductive physiology of endangered species;
- Largest herd of "Przewalski's Horses"
Equus przewalskii :
wild horses;
- Reproduction of the Endangered Chinese Tufted

Deer

Some Tidbits:
the turn of the Century

- Breeding of endangered marsupials
- Conservation Biology
- Formerly a US Army Horse Breeding Station at
- USDA Beef cattle Research Station up to 1970's
- Became a rural annex of the National Zoo for the breeding of endangered species for the last 20 years [established 1975] ;
- Used as well for training and research in reproduction of endangered species;
- The Smithsonian main component for Conservation Biology.

Population status e.g. of a 1995 Publication
 Agoramoorthy, G. and Hsu, M. J.(1995):
 white fronted and conservation of red howling monkeys and
 65:158-162 campuchin monkeys in Trinidad_ *Folia Primatol.*

5.4.11 Miami Metro Zoo

Location: Miami, Florida

Area: Total available, 740 Acres but only about 225
 presently in use

Arrangement of Exhibits: Mainly single species exhibits but in large moated
 enclosures

Main/ Most Popular Exhibit: Childrens Zoo

Major Scientific
 Contribution/s: The First Cageless Zoo in North America 25 years
 old. Designed by Dr Hubbell who managed the
 system for most of its life.

Some Tidbits: Almost destroyed by hurricane Andrew , but has
 been successfully restored, except for the large
 Birds of flight cage.

5.4.12 Strictly Reptiles: Private Wildlife Trading House

Location: Hollywood, Florida, North Miami

Ownership:	Private: Ray and Mike van Nostrand
Area:	An old factory/ warehouse facility - 10,000 sq ft covered space; - 20,000 sq ft car lot.
Arrangement of Operations:	In separate rooms
Main/ Most Popular Exhibit:	Nothing exhibited to the public, people come to buy, - reptiles - books on reptiles - poisonous species of animals
Major Scientific Contribution/s	:- The people who work there are the true experts who the scientists consult as they make their living by the successful management of these animals.
Some Tidbits:	The staff there all love their work and their animals Interest in Trinidad Giant Centipede <u>Scolopendra gigantea</u> Interest in Trinidad Chevron Spider <u>Psalmopoeus cambridgei</u> Interest in Trinidad Olive Brown Spider <u>Hapalopus incei</u>

5.4.13 The Bristol Zoo

Location: Bristol Zoo Gardens, Clifton , Bristol, England,
BS8 3HA

Ownership: Bristol, Clifton and West of England Zoological
Society

Founded 1840?

Area: 1 large city block within the old part of Bristol ,
about 8 to 10 acres.

Arrangement of Operations:

Single and Mixed Species Exhibits

Houses

- Reptile House
- Aquarium
- Bug World
- Monkey House
- Floral Display
- Twilight World
- Tropical Bird House

Children's Farm

About 35 single species exhibits

Main/ Most Popular Exhibit:

Major Scientific

Contribution/s:

Some Tidbits: Is embarking on a 3 Million Pounds Sterling self
financing improvement.

5.4.14 London Zoo

Location: Reagents Park, LondonEngland [Headquarters of the Federation of Zoological Gardens , 53 Zoos and Wildlife Centers]

Ownership: The Zoological Society of London
Established 1826.
This society has five operating divisions:
1] **London Zoo;**
2] **Whipsnade Wild Animal Park;**
3] **Institute of Zoology;**
4] **Conservation & Consultancy Division** and
5] **Learned Society**

Area: 36 acres in Reagent's Park in the City of London.

Arrangement of Operations:

The Zoo is Triangular in area and is crossed by the Regent's Canal parallel to the base of the Triangle. The exhibits are arranged as either **single species**, or **similar animal groupings**. They are as follows:

- Camels
- Children's Zoo
- Lion Terraces
- Penguins
- Pet Care Center
- Display Lawn
- Pelicans
- Elephants and Rhinos
- Riding Square
- Play Ground

- Amphitheater
- Reptiles
- Gorillas
- Aquarium
- Otters
- Invertebrates
- Giraffes
- Aviary
- Restaurant and
- Gift shop
- Hoofed Mammals

Main/ Most Popular Exhibit: Difficult to say

Major Scientific

Contribution/s:

Has a very well organized Education Department and learned society.

Produces 2 Scientific Publications

- *Journal of Zoology*

- *International Zoo Yearbook*.

It provided Charles Darwin (a Fellow of the Zoological Society from 1931) with the forum to discuss the “ Origin of Species “.

Some Tidbits:

The Mail on Sunday , London November 12th 1996: put the seven best known Zoos to the family test as follows:

- Monkey World **10/10** Longthorns, Wareham, Dorset

- Chester Zoo **8/10** Caughall Road, Upton, Chester, CH2 1LH

- Port Lympne Animal Park **7/10** Lympne, Kent, Chester, CT21 4PD

- Edinburgh Zoo **6/10** Murrayfield, Edinburgh, EH12 6TS
- London Zoo **6/10** Regents Park, London, NW1 4RY
- Dudley Zoo **5/10** The Broadway, Dudley, West Midlands, DY1 4QB
- Bristol Zoo **4/10** Clifton, Bristol, BS8 3HA

Animal Population:	<u>TYPE</u>	<u># of SPECIES</u>	<u>#of ANIM.</u>
	BIRDS	153	623
	FISH	194	2390
	MAMMALS	97	760
	REPTILES	83	243
	AMPHIBIANS	18	147
	INVERTEBRATES	82	9910
	TOTAL	627 species	14080

5.4.15 Zoos of France

1. PUBLIC/STATE OWNERSHIP – (4 zoos and 1 Aquarium)

- (a) **Le Menagerie de Jardin des Plantes (Paris)**
 - **2nd oldest zoo in the world**
 - **integrated into the Plant Museum**
 - **World Heritage Site**
- (b) **PARC Zoologique de Paris**
Bons de Vincennes (Paris) 1931
 - 150 species of birds
 - 110 species of Mammals
 - \simeq 1000 animals
 - Artificial Mountain Park, Strength ; Primate, Birds,
(a Nocturnal Exhibit) Lemurs
- (c) **Le Parc Zoologique de Cleres (Seine Maritime) 1967**
 - Specialty birds
- (d) **Parc Zoolique de la Haute-Touche: 1964**
d'Azay le Ferron
 - 500 ha one of the largest collection of rare deer
(cervides) of the world
- (e) **Aquarium de Musea Nationale des Arts of Afrique et d'**
Oceanique

2. PRIVATE ZOOS: 28 zoos

Total : 31 zoos

NATIONAL MUSEUM OF NATURAL HISTORY

26 Departments

Zoological park and garden

Botanical Gardens

Zoos: 4

Azay

Paris

Vincennes
"Paris Zoo"

Cleres

Pare de la
Haute Touche

- Menague

Pare de cleres

Director

Marie Claude Bomdel (Vet)

Acting Director

Jacquis Rigalet (Vet)

Administration

Alimentation

Animal
Collection

Veterinary

Maintenance

Francoise Perin
Vet

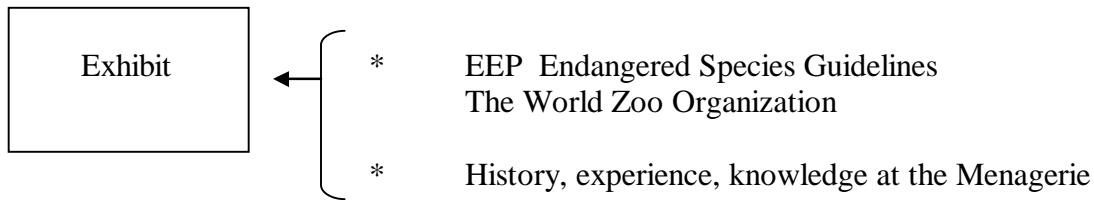
Norin Chai (Vet)

- Enrichment
- Welfare

Exhibit

Collection

J. Luc Buttien (Vet)



All part of Menageris: A World Historic site

5.5 SOME HIGHLIGHTS ON SPECIES WHICH ARE OR MAY BE OF IMPORTANCE TO US IN THE CARIBBEAN

Iguanas
Trinidad Piping Guan
Cocrico
Mountain Chickens
Scarlet Ibis
Manicou (Virginia opossum)
Agouti
Specticled Caiman
Capybara
Guinea Pig
Duck sp.
River prawns

An important successful example

-Cascadura
-Tilapia

5.6 WHERE DO WE GO FROM HERE?

- Proper documentation of the wildlife conservation and zoo initiatives in Trinidad and Tobago and the Caribbean.
- Production modeling of species
 - with the potential for commercialization
 - in need for improving the wild populations
 - on the verge of extinction or critically endangered.
- Collectively work for the Emperor Valley Zoo (EVZ) to be fully accredited to the American Association of Zoological Parks and Aquariums (AZA), our institutions and the Private Sector Community should support the EVZ as best as we can to ensure this.
- Continue to deepen the use of the EVZ as a facility for teaching Zoology, Animal Production and Conservation and Veterinary Medicine.
- Encourage and motivate the staff at the EVZ to continuously seek opportunities at self and skills improvement to deepen and strengthen their activities and the services offered at the EVZ.