WILDLIFE FACILITIES IN THE U.S.A. : A STUDY TOUR

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The Indian Wildlife Health Cooperative Programme (IWHC)

The Indian Wildlife Health Cooperative Programme (IWHC)is a programme which aims to strengthen wildlife health research in India. IWHC is a collaborative programme of the Dehradun-based Wildlife Institute of India and the U. S. Fish and Wildlife Service. The Programme involves four regional centres at veterinary colleges in the north, south, east and west of India. Veterinarians in charge of the regional centres had to complete the nine-month Diploma Course in Wildlife Managment at Wildlife Institute of India.

The training component of the I.W.H.C. programme included a 10 week study tour of wildlife health facilities in the United States for the four member team of centre coordinators.

These facilities were varied and are best described under the following heads:

1. Zoological Medicine Service at Veterinary Colleges
2. Zoos
3. Conservation Centers
4. Wildlife Rehabilitation Centers
5. National Wildlife Refuge System
6. Wildlife Ranching and Farming

Zoological Medicine Service in U.S. Vetinary Colleges:

Americans love keeping pets and dogs and cats are the two most popular species companion animals with parrots, and other such birds also common. However, there is an increasing trend there to keep unusual species as pets – tarentulla spiders, pythons, monkeys, iguanas, llamas, ostriches, tortoises, and even lions arekept. We visited a client in Texas who wanted her veterinarian to pull out the teeth of lion-cub she bought for her grandchildren to play with, but he (thankfully) declined. Magazines about the trade of such exotic pets abound in America.

Almost all the American Veterinary Medicine Teaching Hospitals teach how to care for health problems of such uncommon and wild pets. These teaching hospitals are very much like the clinical departments of our own veterinary colleges but much better equiped and with greater patient care throughtout. The eight stalls at the Intensive Large Animal Care Unit ar Texas Agricultural and Mechanical University are centrally monitored 24 hours by means of closed-circuit TVs.

To a vet from India Veterinary care at these hospitals appear s very expensive. The charge for draining an abscess in an albino rat was $40 (Rs. 1400/-). The bill for investigating the cause of nasal discharge in a parrot came close to $300 (Rs. 10,000/-). The investigation included X-rays, endoscopy, culture and antibiotic sensitivity, anaesthesia and the veterinarians fee. In another case, the owner of a pet camel was before treatment that the attempt to repair the animal's jaw malformation would be a minimum of $ 2000 (Rs. 70,000/-) and that the treatment might not be successful even. The owner simply said, " No problem". The camel did not survive the operation but the owner paid the fee.

The course in zoological medicine is optional for undergraduate veterinary students. A number of veterinary colleges offer post-graduate residency programmes for those who want to specialise in wlidlife and zoo medicine. Completing the residency programme does not launch a veterinarian into a career in zoology medicine, it only prepares him to take a very tough, national-level, board examination administered by the American College of Zoological Medicine. On passing this examination, the Veterinarian is offered the degree of a Diplomate of ACZM, of which only 30 U.S. Veterinarians have so far obtained.

In the United States a distinction is made between zoo medicine and wildlife medicine. The former deals with health care of wild animals kept under captive conditions, such as in zoos or as pets. Wildlfie medicine, on the hand, is concerned with health problems of free-ranging wild animals, such as prevention and control of disease outbreaks in protect ed areas, or those encountered in environmental disasters like oil spills.

In one of the U.S. veterinary colleges, there was a room marked "Department of Alternative Medicine". I thought this department must teach what we in India call "traditional " medicine such as homeopathy, ayurveda, and accupunture as opposed to allopathy. Our tour leader vet clarified, however, that this department had to be created for teaching surgical methods like incision and suturing using inanimate materials like cloth and rubber. There are veterinary students who oppose learning these techniques on live animals on grounds of being inhumane.

Our study tour took us to veterinary colleges at the Univeristy of Wisconsin in Madison, the University of Florida in Gainesville, Colorado State University in Fort Collins, the University of Georgia in Athens, and Texas Agricultural and Mechanical University in College Station.

American Zoos

American zoos are very different from Indian zoos in several respects. There is much greater use of interpretive materials alongside animal exhibits in U.S. Zoos than what we see in India and some of these are interactive. A big balance was kept in the primate exhibit area space and one of its pans had a concrete gorilla of appropriate size and weights. Children are encouraged to step onto the other pan to see how many people it takes to equal the weight of gorilla (an adult gorilla weighs about 170 Kg.)

Near the otter exhibit area in Brookfield Zoo, Chicago, is a wooden board where visitors can smell the scent of an otter. Pieces of hairy coats of different animals are kept at vantage points and visitors are encouraged to touch them to get an

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idea how they feel Visitors are also quizzed about their knowledge on wild animals through the signages. Lifting the signage reveals the answer. Some well-endowed zoos even have interactive computers to convey information.

The traditional approach of exhibiting animals on taxonomic theme is giving way to the much appreciated zoogeographic and habitat themes. At the time of our visit, the Jacksonville Zoo in Florida wasundergoing a major transformation from that of an ordinary zoo of animal exhibits only to that of a zoogeographic theme.

The health care facilities in U.S. Zoos amazed us with their sophistication. The diagnostic lab and the operation room at the Brookfield Zoo had to be seen to be believed Additionally, whether in Brookfield or elsewhere, all clinical records of Zoo animals are kept in computers using a software called MedARKS developed and distributed by International Species Inventory System (ISIS). Because of the uniformity in keeping clinical records in MedARKS format exchange of animals health information between Zoos become much easier. It is also the latest craze among Zoo Veterinarians there to keep in touch with each other through the electronic mail network called the Internet.

Serum, i.e. drawing and storing the serum of an animal everytime it is restrained for whatever purpose, is a routine procedure with some of the more upscale Zoos like Brookfield Zoo and Milwaukee Zoo. Serum banking helps in tracing back how long a disease was latent in an animal.

Animal marking is another hi-tech feature we saw in the U.S.A. When an animal is born, or a previously unmarked animal is brought into the zoo, an electronic chip not much thicker than an ordinary matchstick and only a quarter of its length is inserted beneath the skin by means of a hypodermic needle. A number unique to the chip is electronically enclosed inside it. To read the number a gun-shaped reader is placed near to the skin where the chip was inserted. When the trigger of the reader is pulled the chip number appears on the LCD panel of the reader. Marking animals electronically preserve their beauty which is otherwise marred by ear tags and leg bands.

To promote breeding efficiency of shy species many zoos in the U.S. A. keep such animals "off-exhibit" and visitors are not allowed to view them. Some well-endowed Zoos even have off-site breeding facilities far away from the Zoo proper where animals are kept exclusively for breeding purpose. Off-site breeding centers may be located at a place geographically distant from the main zoo area, but they are properties of the Zoos and are administered by them.

Conservation Centers

Conservation centers are very much like off-site breeding facilities except that they are not owned by Zoos. Animals (usually those species that are rare and therefore command a premium in the trade) are kept here primarily for breeding; surplus stock is sold to earn revenue. Visitors may or may not be allowed into the centers for viewing the animals. Our team went to two such conservation centers, Viz, (a) Fossil Rim Wildlife center at Glen Rose in Texas, and (b) White Oak Conservation Center at Yulee in Florida.

The picturesque Fossil Rim Wildlife Center allows its non-agressive animals like ostriches, elands, waterbucks, giraffe, zebras to roam within the fenced-off boundary in safari-style freedom. Other species like the rhinoceros, cheetah and maned-wolf are kept in enclosures. Fossil Rim also allows visitors inside against payment. The collection at the gate helps to partly finance their breeding programmes.

Fossil Rim has a good Veterinary care and research unit At the time of our visit, Dr. Steve Osofsky, Director of animal Health Services of the Centre, was doing an ultra-sonographic study of ovarian functions of the Great Indian one-horned rhinoceros. That Dr. Osofsky was able to coax the female rhino to insert the ultra sonography probe without physical restraint or chemical immobilization, is a testimony to his skill as wildlife veterinarian. Fossil Rim also offers a Veterinary Preceptorship program of one month duration of which a veterinary student recently availed.

White Oak Conservation Center, on the other hand, is not open to the public. Its full requirement is met wholly by its sponsor, the Gilman Foundation. White Oak has bred very rare Okapi and has also successfully translocated some of them to its native Zaire. As a veterinarian from Assam I was surprised to see a pair of the highly endangered White-winged Wood Duck, which are found in Assam, at White Oak.

Both of the above conservation centers have bred the cheetah so successfully that it became necessary to put a cap on their breeding programmes.

Wildlife Rehabilitation Centers

Wildlife rehabilitation centers are very much like the Bird Hospital in Delhi, but their patients are exclusively wild animals. Wild animals found sick in the field, or victims of accidents are brought in by conscientious citizens to the rehabilitation centers for veterinary attention. These centers have facilities for long-term care of patients. The rehabilitation cases that I saw at these centers had a preponderance of raptors. Once made fit they are released back to the wild at the places where they were originally found sick. The rehabilitaion centers are dependent to a great extent on donation and on the free services offered by volunteers. In addition to regular rehabilitation activities the centre at Willowbrook the one we visited) near Chicago also conducts educational program for children.

National Wildlife Refuge System

The National Wildlfie Refuge (NWR) System of the U.S.A. is very much like India's network of national parks and wildlife sanctuaries. There are over 500 such wildlife refuges in the U.S.A., encompassing almost 92 million acres of land (compared to India's 34.6 million acres), ranging in size from Minnesota's tiny Millelacs which is less than an acre to the sprawling 20 million acres Yukon Dalta in Alaska. These refuges, which provide vital habitats for America's wildlife population, are managed by the U.S. Fish and Wildlife Service.

Our tour took us to three NWR areas in the U.S.A., viz. Horicon NWR in Wisconsion, Atwater's Prairie Chicken NWR in Texas, and Okefenokee NWR in Georgia. Okefenokee is a large

swampy area and on a sunny day one can see more than a hundred alligators basking in the sun. Attwater's Prairie Chickem (*Tympanuchus, cupido, attwaterii*) is an endangered species and the national refuge in Texas happens to be the release site of an intensive APC restocking programme involving breeding of APCs at three facilities, viz., Fossil Tim, Texas A&M University and the Houston Zoo.

In addition to the National Widlife Refuges the U.S. has NationalParks as well. Unlike the objective behind india's national parks the national parkssystem of the U.S.A. was created primarily for protection of areas of great scenic beauty. Wildlife is found in National Parks and they do get protection alongside but their conservation is not the original reason for Parks establishment. Yellow-stone (encompassing parts of Wyoming, Montana, and Idaho), Grand Canyon in Arizona, and Yosemite in California are the three most popular national parks in the U.S.A. The management of the park areas lies with the U.S. National Parks Service. Though our tour did not include any of the national parks there I have mentioned them here to point out the distinction between the objectives of national parks of the U.S.A. and that of India's.

Wildlife Farming & Ranching

Some sixty years ago people of the oil-rich Texas State started introducing and rearing Zoo-surplus, exotic game animals in their ranches for sport-hunting. Today, in Texas, there are more than 100,000 such game animals belonging to over 45 different species, including India's blackbuck, nilgai, chital (popular as Axis deer there), barasingha, and even the rare brow-antlered deer (Burmese subspecies).

Texan Wildlife ranchers love to say that there are more blackbucks in the U.S.A., than there are in India. The barasingha is particularly prized as a trophy animal and they are abundant on the game ranches.

The wildlife ranchers we met were not aware of which barasingha sub-species they were breeding. There was was a herd of 20 Brow-antlered deer in the ranch owned by one Mr. Dale Priour (and there were more such herds in other ranches). Known as the "Eld's deer" there, they were indeed breeding very successfully. Mr. Priour was astounded when we told him that less than 100 of *Cervus eldi eldi*, the Manipur sub-species of Eld's deer exist in the wild. Nilgai is favoured for the plentiful meat it yields. As a marketing strategy one wildlfie meat processor has even renamed the nilgai as the South Texan Antelope and it is doing extremely well with restaurateurs; Chital has made a name for itself as a hardy species and prolific breeder.

In the U.S.A., sport hunting is a multi-million dollar industry. During hunting season wildlfie ranchers invite trophy hunters to their ranches and for a substantial fee allow shooting of game animals. However, a game species listed as "Endangered" in its native country is also given similar status in the U.S.A., and consequently shooting such animals require license. Ranchers are obviously sore at this restriction. They are also not happy at the U.S. government's rule of compulsorily depositing a part of the money charged for shooting down an endangered species for conservation breeding efforts of that species in its native country. Ranchers are fighting against these rules under the banner of Kerrville-based Exotic Wildlife Association.

Apart from rearing game animals for sport hunting a growing number of Americans are taking to rearing deer as intensively as the cows are for beef market. The Heart Bar farm in Texas, one of the largest in the U.S.A., about 4,000 fallow deer in their unit, all of them certified to be TB-free, and about 200 of them are killed every month for their meat. Vension commands a premium price in the meat market, fetching three to four times the price of beef which at $5 per Kg. is one of the costliest among the meat of domestic animals. Besides being enjoyed as an exotic delicacy, another selling proposition in favour of venison is its relatively low fat and cholesterol content which the health conscious Americans find very attractive. Strange as it may sound, the demand for vension in the U.S.A. is largerly met by imports from New Zealand.

Conclusion

The native wild fauna of the U.S.A. is not as diverse as it is in India. However, much of the information on health aspect of major Indian Wildlfie species have been generated in the U.S.A. through researches conducted on these species maintained in zoos there. Veterinarians in India have devoted too long on health care of domestic livestock. It is time that they take interest in understanding the physiology and pathology of our wildlife species in our local environmental conditions as well.

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