

LIONS AND TIGERS AND BEARS ... OH NO

A presentation by
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The public zoo as we know it today is essentially a 19th Century concept. It emerged in 1828, when the Zoological Society of London opened the doors to its Zoological Garden in Regent's Park. The idea of presenting wild animals in a park-like setting immediately gained enormous appeal. Zoos soon began appearing throughout Europe, Australia and North America. The zoo concept was perfect for the Victorian era. There was a rapidly emerging middle class, the novelty of leisure time for family entertainment, a new focus and belief in things edifying and educational, the opening up of new lands, the growth of empires, exploration of dark continents, discoveries of strange animals. It all combined perfectly to make the zoo a place of tremendous popularity.

For the greater part of their history public zoos remained basically unchanged from that original concept. In recent years, however, we have seen two areas of significant change. Zoos have become increasingly active in breeding programs, especially for some endangered species, and some have been giving increasing emphasis to the development of naturalistic exhibits.

My concern is that these areas of progress are being superimposed on a concept that is insufficient for the coming century, and that the zoo concept is inherently and fundamentally flawed.

The Victorian zoo goers wanted to satisfy their curiosity just to see the size or colors or shapes or patterns of exotic wild animals. That reason for going to the zoo was sufficient for the day. The challenge that faces us now is for our increasingly urban populations to develop understandings of the complexities of nature, and to develop a new respect for nature.

In our technological age we have become divorced from the natural world. Today, only the specialists understand the ecosystems that support our lifestyles. It wasn't always that way. Until very recent times, most people lived in direct contact with the natural world all about them and operated within the limits of nature. Today, with far greater numbers, speed and ignorance, we destroy complete forests on the hills not knowing that it causes the water table in the valleys to collapse; we pour away toxic wastes not knowing that they don't disappear just because they go underground; we exterminate plants and animals that we didn't even name, not knowing what medicinal or food value they might have had. These are the life and death problems of the 21st Century.

Back in the 19th Century, while some people were developing zoological gardens, others were laying out botanical gardens, and aquariums, and establishing museums of other disciplines: astronomy, and entomology, and archaeology and anthropology. And so, on Sunday afternoons, the

industrious Victorian family could choose some place to go and be exposed to some particular subdivision of the curiosities of the natural world.

We continue to perpetuate that subdivided view of nature. In almost every city you find the zoological garden on one side of town, the botanical garden on the other, and the natural history museum somewhere in between. This tidy minded approach stems from an outdated perspective. And it goes against the grain of nature. Furthermore, the amount of destruction and stress that is being placed on our ecosystems is occurring at a rate far in excess of anything similar that has happened in human history. If that story is to be told, and understood, we cannot hope to do it in the piecemeal way that is required by the present disparate natural history institutions that remain from a past era.

Moreover, despite the presence of all our zoological, botanical, and other natural history facilities, we know that, sadly, we have a scale and a pattern of scientific illiteracy that extend unbroken from the video arcade to the White House. If we are to make progress in this area, and help people to develop a holistic view, and a wider perspective, then maybe we need to develop new tools for the job. Merely presenting bits of the picture in different places hasn't worked, and won't work. And what can zoos do about this? Are zoos trapped, by nomenclature, into focusing only on zoology? Must they keep trying to tell the story of nature, restricted to using only one chapter of the book?

Might it be too radical, as one example, for zoos to consider changing their name, so that they could escape the tyranny of one scientific discipline? A name such as "Biological Park," proposed by the Director of the National Zoo, Michael Robinson, doesn't easily roll off the tongue. Certainly not as easily as the word "zoo." But a facility with a broad title, such as that, could develop exhibits that focused on all aspects of the wilderness. The interdependencies among all living things could be revealed and explained. And that includes not just the plants and animals - not just those obvious interrelationships - but all the complexities of an ecosystem.

The challenge facing zoos in the 21st Century is to devise ways in which those stories can be told; to develop exhibits which explain the relationships between soils and flowers and butterflies and snakes and trees and minerals and elephants. And evolution. And extinction.

It would mean a close re-examination of the zoo concept. It would mean some long and concentrated re-thinking. In practical terms it would mean a shift away from that distorted and fragmented view of nature which all zoos present, with their emphasis on the charismatic, and especially the diurnal, social, large, mammalian and usually African species.

It is interesting and puzzling that many species commonly selected for zoo collections are not well suited for this purpose. There is, for example, an unnatural tendency in favor of predators in zoo collections, yet, though often pretty to look at (unlike their more cryptically marked prey) big predators are typically very inactive, especially since their main activity, hunting and killing, is disallowed in zoos. I have come to the conclusion that several zoo favorites should not be exhibited in zoos anyway. I do not believe, for example, that we can adequately meet the behavioral and social needs of any of the bear species, in captivity. And whereas I think satisfactory conditions can be created for the semi-domesticated Asian elephant, I would argue against maintaining the African elephant in captivity. Also, I have yet to see an exhibit area for cetaceans that I considered acceptable.

Part of the problem with trying to create satisfactory living conditions in captivity is simply to do with size. It is difficult and expensive, in land and money, to create good zoo exhibits for big animals. But it is all the big animals that all the zoos seem to think are essential for their collections.

There are perhaps about 30 million species of animals on this planet. Yet, ask people to start naming wild animal species and most will start to falter and stumble after a dozen, and likely run dry at about 20. And the few that they name will almost certainly be those large, charismatic species, and especially the mammals, that you find in virtually every zoo collection - the elephants, giraffes, zebras, hippos, rhinos, chimpanzees, lions and tigers and bears.

Recently, at the Desert Museum, we have been planning a desert grasslands exhibit. There had been a suggestion for a pronghorn exhibit in the grasslands, but I decided it was not appropriate and was chastised for removing "one of the most interesting animals in the grasslands." I felt it was just one of the largest and most visible, not necessarily the most interesting.

In further research about desert grasslands animals, I learned about a little mouse that is a predator. The grasshopper mouse actually kills and eats other small animals. This little creature even stands on its hind legs and bays at the full moon, in tiny high pitched howls, like a wolf. Now, I ask you, is that little mouse not an equally good candidate for "one of the most interesting animals in the grasslands?" And I also ask you, would any zoo visitor be able to tell you even of the existence of this animal? More pertinent, maybe, is that recent research has revealed that the presence of certain species of rodents in the desert grasslands determines whether or not the habitat remains as open grassland or becomes desert scrub. So perhaps mice are equally as interesting an animal as pronghorns, and they might even be more critical to the habitat. Something similar is almost certainly true in most other habitats: it's often the small life forms that have the greatest biomass and consequent influence. Yet these are the animals that are typically ignored in zoos. Thus, without their inclusion in our collections, the interpretations we can give are crippled, and the stories we can tell about management and maintenance of wild habitats are severely compromised.

We all know that the fascination people might have for mice, or pronghorn for that matter, can be an essential hook for attracting attention to the habitat of the animal, and to the interrelationships between all components of that habitat. In this way, zoos have enormous potential to be one of the most influential means for educating people about the natural world. They reach across all age groups, all socio-economic boundaries, and all levels of awareness. They have the capacity to tell people about eco-systems, not just animals, and thereby can have great influence on public understanding and support for wildlife conservation.

Considering that zoos claim to demonstrate the richness and variety of the animal world, they present an alarmingly narrow view. Ninety-five percent of all creatures on earth are smaller than a hen's egg. The selection criterion for zoo collections, with its emphasis on the bigger, the cuter and the more spectacular, results in a skewed and very narrow view of the animal kingdom.

However, I doubt whether many zoos will want to consider changing their emphasis. Most will continue to see their role as places that concentrate on exhibiting the typical zoo species we see today: those charismatic megafauna that so dominate almost every zoo collection. I fear that this view is leading zoos along a cul de sac, and that they will come to a dead end. The countering

argument to this scenario is most likely that zoos are performing a vital role in conservation through coordinated breeding programs with several species. I am tempted to say "only" several species. The AAZPA's 160+ member zoos, with annual operating expenses in excess of one billion dollars a year, and a work force of some 25,000 people, are coordinating Species Survival Programs for just some 60 species of animals: two-thirds of these are mammals, and almost all of them can be classified as "charismatic megafauna." If, as the World Resources Institute, the World Conservation Union, and the United Nations Environmental Programme declare, the problem is conservation of biological diversity, then zoos are not making much of a contribution: and particularly not relative to the combined power of their budgets and the numbers of people they employ, and the millions that visit them.

I believe the greatest contribution zoos can make to conservation is through education, by teaching the importance of saving wild habitats, not just a few wild species. In any case, my belief is that zoos are not the best places for sustained captive breeding programs. Let me put it this way: if one wanted to develop a facility concentrating on the breeding of endangered species, one would not sit down and design a public zoo. Zoos are essentially places for exhibition, and in a zoo operation the resources of space, energy, time and money for a fully fledged breeding program face too many other competing zoo programs.

The breeding of wild animals in captivity should take place in facilities devoted specifically to that task. It is too important, too large and too complicated a venture, to graft onto existing zoo operations. Ideally, the AAZPA should be energetically lobbying to get State, Federal and International government agencies to cooperate in funding and managing endangered species breeding projects, and cooperative wildlife reintroduction programs. It has become clear that the Endangered Species Act is ready for a metamorphosis. If its new form included captive breeding projects this could fit logically with national and world-wide government to government conservation measures in the field. Certainly the loss of wildlife, and especially biological diversity, is a global concern.

If, however, and as is likely, the existing situation will prevail, then I would like to make a plea for, at the least, more regional specialization in the zoos of the next century, so that zoo exhibits and education programs can bring directly home the full message of conservation to their local audiences. In such a mobile population as ours there is little justification for the great duplication of species and exhibits in our zoos. A move to specialization in local habitats would encourage zoo visitors to better value the wildlife and wilderness in their own part of the country.

My own experiences are limited to the American West, but I know that zoo goers in Oregon, Washington State and British Columbia are told much more about the loss of tropical rain forests than they are about clear cutting of the forests of the Pacific Northwest, even though the rate of depletion of our temperate forests is equal to or greater than anything happening in those conveniently distant tropics. The millions who visit zoos in California to see elephants and tigers are somberly told that fur coats and ivory trinkets are shameful, but they receive no information on the vast destruction of the chaparral habitats now almost totally depleted in southern California and replaced with eucalypti, lawns, palm trees and pansies. Of course, the destiny of rain forests, and rhinoceroses, is far removed from our own daily lives and easily elicits sympathy from zoo goers. A focus on the local issues might require visitors to question the consequences of their own lifestyles.

In summary, then, my own wish for zoos of the next century is that they concentrate on their best potential, which is exhibitry and interpretation, and change their emphasis from a concept that is now almost 200 years old: the focus on charismatic and exotic megafauna.

I would like to see a great broadening of the components of the zoo: a focus on all the aspects of the natural world, as opposed to a conscious and conspicuous neglect of the greater part. I would like to see a sharpening of that focus, too, with much more attention to regional elements. Zoos in particular regions could cooperate to avoid duplication. In the Pacific Northwest, for example, Seattle's Woodland Park Zoo could easily specialize, say, in temperate and South American tropical forest exhibits. Northwest Trek already specializes in animals of the local region. Vancouver and Tacoma and Portland could then concentrate on other, different biomes. Between them, all the Pacific Northwest region's wildlife parks could cover a very wide range of the world's bioclimatic zones, each in greater depth than at present. If this cooperation could be expanded to also include the botanical gardens, science museums and natural history museums of the region, then truly significant progress could be made in conservation education. For once, we could, by working and planning together, and by sharing our resources, carry the messages of biological diversity. Similar cooperative planning could be carried out in other regions around the nation, and the sum of the parts could truly be greater than the whole. Ironically, such regional specialization would allow greater diversification, broadening the scope and the opportunities for interpretation of ecosystems, and would greatly expand the zoo concept beyond that which we have inherited from the London of 1828.

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