

The Future of Zoos

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In 2112 people will be looking back on a century of biodiversity losses of heartbreaking proportions, and I wonder what they will think of our zoos who spent so much energy preserving their status quo while doing so little to conserve wilderness habitats or even wild species.

Compared to 100 years ago, zoos today offer excellent medical care and diets, but these simply reflect improvements in human society. And though zoo animals no longer live in barred cages, they often exist in conditions little better than the old menageries. Too many modern zoo spaces are much too small, and while the spaces may look green, the animals have no contact with living vegetation, and shuffle along dusty corridors confined by electric wires.

The main difference from a century ago differences is a new look, which is essentially superficial, and is typically a peculiar distortion of the natural world, since zoos have developed a design vernacular that I think is best described as Tarzanesque. Modern zoos often resemble a Hollywood version of Africa on a B-movie set.

The program for this symposium on The Future of Zoos declares that, "One hundred years ago, our zoos consisted of menageries that displayed exotic species in row upon row of barren cages. Today. Zoos are dominated by multi-species zoo displays that strive to replicate entire ecosystems. " This is a fine ambition, but zoos must make considerable changes not just to reach this worthy goal but simply to begin the journey.

The first step requires acceptance of present shortcomings, awareness of self-delusion and false claims, an earnest degree of self-criticism, and openness to the concerns of others.

The AZA states that, "The survival of the world's endangered species pivots on the conservation and education efforts of modern zoos." They produce statistics claiming that 97% of Americans approve their conservation efforts – a statistic Robert Mugabe would envy. They say that 93% support the conditions marine mammals endure in captivity, which, if true should be a mark of shame not pride.

The AZA asserts that simply visiting zoos directly benefits wildlife conservation, and that seeing an elephant up close inspires visitors to become life-long conservationists who make personal lifestyle changes and donate funds to conservation programs.

With more than 70 million zoo visits each year, why don't we see evidence of these exuberant converts in general society?

Non-zoo funded research shows that any promises by visitors to change behaviors after receiving zoo messages are of brief duration. But the AZA refuses to accept these findings, and keeps promoting zoos as wonderful institutions performing miracles.

In this way the AZA is the biggest threat to zoo progress, even to zoos' survival. In fighting so bitterly to protect the tradition of keeping mega-fauna, they are leading zoos into a dead end. In a rapidly changing world, zoos are in danger of declining into irrelevance while boasting about great achievements.

Most zoo animals are in spaces so inadequate they require toys to distract them from stereotypic behaviors. Public spaces are dreary, visually chaotic and unpleasant. Visitors are offered hot dogs, but rarely vegetarian or ethically sourced foods. Zoo gift stores are usually filled with junk. It is rare to find zoos demonstrating consideration for fair trade, sustainability, environmental pollution, the evils of factory farming, carbon footprints or other basic conservation ethics.

Double-speak, exaggeration and distortion, however, are commonplace. The force and volume of spin-doctoring by the AZA causes not only the public and the media to believe their propaganda but also the people who work and volunteer in zoos. This in turn prevents recognition of zoo inadequacies and the need for serious dialog about overcoming them.

It would be of enormous benefit if the AZA would host symposiums such as this one, openly examining the ethics, the values, and the options for zoos, involving people within and without the zoo world, and do so at least every two years. There is much that is waiting to be done.

There is urgent need for zoos to pay closer attention to the interconnectedness within natural systems and the interdependence between all living things.

There is equally vital need to improve the welfare standards of all beings in their care. Greater commitment to excellence in design is imperative.

There is, too, great need for zoos to broaden their skills by adding scientists in senior positions, particularly ecologists and geologists with their characteristically wide and deep views on nature. Ideally these scientists would emulate the works and ethos of people such as George Schaller and Alan Rabinowitz, two rare exemplars in the zoo world.

Zoos must also better help their communities to appreciate, engage with, support and protect the remnants of the natural world in their regional backyards.

To achieve all this, zoos will have to be more vigilant, self critical, and creative, and employ more diverse skills from the sciences and from the arts to interpret nature.

Among the spectrum of our contextually isolated natural history institutions, each devoted to artificially separated divisions of the natural world, zoos are unique in having responsibility for care of living animals. In that regard we need to remind ourselves of Heini Hediger's words: "The standard by which a zoo animal is judged should be the life that it leads in the wild."

Zoos describe their animals as ambassadors, but fail to treat them with the dignity and respect that is the inherent right of such status. To correct so many zoo shortcomings, I believe welfare should be designated as the central pillar of justification for zoos.

If it was, zoos would come to recognize their inability to meet the needs of charismatic mega-fauna in urban zoos. They would place closer attention on the emotional well-being of zoo animals and support what Cynthia Moss describes as the "elephantine joy" she witnesses among wild elephants. Zoos hate such anthropomorphism. Frans de Waal, however, worries that if we do not endow animals with human emotions "we risk missing something fundamental about animals and about us." Charles Darwin, too, wrote extensively about emotion in animals, and dismissed the notion of human uniqueness.

If we have evolved an innate affinity for the natural world, we should assume that elephants and other intelligent sentient beings also have such psychological, biological and cultural tendencies.

Such considerations would mean no more locking animals indoors, especially for the long winter months, denying them the pleasures of sunshine on their faces, the breeze on their fur, the scents and feel of new growth of living plants; no more spaces too small for running,

chasing, leaping, swimming; no more concrete floors that may look natural but prevent digging or wallowing; no more concrete trees or plastic lianas; no harshly lit and acoustically devastating night cages.

Zoos that cannot conform to these strictures have not only the wrong attitudes but also the wrong animals in their collection, inhabitants from bioclimatic zones too distant from the zoo's own biome.

Zoos with welfare at their heart would raise new standards of awareness of animals' needs; would recognize the impossibility of satisfying the needs of many traditional zoo species; would give new attention to all the small species that do well in captivity, many of which used to be common in zoos but through negligence have disappeared. Zoos would then realize that smaller species can better promote biodiversity awareness and allow more illustrative stories; they would discover they can create and maintain more convincingly naturalistic exhibits; and with very small life forms promote more direct examples of interdependence and interconnectedness, and thereby more effective ecology based stories. Such zoos would also sustain a more caring community.

From this basis zoos truly could begin to become ecology centers, and begin to talk about ecological complexity and ecosystems.

Building exhibits for this purpose will be challenging. Effective communication is always dependent upon effective design, and zoo design is already extraordinarily difficult. For a start there are three clients - animals, visitors, and staff - with conflicting requirements. But the greatest challenge to effective zoo design is that designers, who are hired to solve problems, are very rarely given a well defined problem to resolve. Zoos accept other zoos as the paradigm, using them as exemplars, measuring themselves only against what is done elsewhere.

It is time to ignore what other zoos do. Nature is the norm.

The concept of landscape immersion in zoo design was based upon creating landscapes that looked and felt as natural as possible, for both zoo animals and zoo visitors. Landscape immersion is spoken of today as if it was the standard, but is in fact hardly ever attempted. Most exhibit spaces - or what most zoos unabashedly call "zoo habitats" -- offer nothing of real value to the animals, and the environment for visitors resembles only a suburban park.

Visitors seeing animals in unnatural environments develop poor attitudes towards them. This is why precise representation of nature is

imperative; it is the only context in which to fully appreciate them. It is why the crass artificiality that pervades so many exhibits, demonstrating dominion over animals, is a disservice to wildlife conservation.

I want to suggest some specific actions:

- Hire local landscape architecture firms who have ecology based design experience. Do not allow them to visit other zoos. Allow them to question your goals and your motives. Along the trajectory of their learning curve they will cause you to reconsider assumptions. They will more seek new design solutions. They will not resort to the current cookie cutter approach.
- Include a geologist and an ecologist on the design team.
- Seek every opportunity to demonstrate sustainability, biophilia and welfare as values to share with visitors.
- Appoint an animal representative to every design team - ideally from outside the zoo - and give them responsibility to ask hard questions. "What can I do for mental stimulation in this space? Why are you giving me a concrete bedroom with no windows and fluorescent lights?"
- Maintain a nursery yard for trees and big plants and for tree limbs and big root stumps that are soaked or buried to hasten decay and insect infestation, to recycle through exhibit spaces. If animals are killing trees in exhibits, remember Terry Maples admonition to his staff, "Plant more trees."
- Accumulate a visual library of natural artifacts and conditions to serve as archetypes for zoo exhibits. Throw away photos of other zoo designs.
- Do not place a statue of a tiger at the zoo entrance. Do not stick a big photo of a tiger at the ticket window. Do not mark "Tiger" on a space on the zoo map. Do not write "Tiger" on signposts. Do not name a certain path as "The Tiger Trail." Do not place graphic panels about tigers on the path. Do not place a nameplate on a handrail saying "Tiger." If you feel you have to do any of these things, do not then be surprised if your visitors express frustration at not seeing a tiger at that point.

- Do not delude yourself with talk about designing exhibits in which visitors “make discoveries” or take “journeys of exploration.” Instead, build huge landscapes that simulate a biome, mark the area on the map and at the biome entrance with nothing but a name. Then let visitors use their senses to explore this landscape and try to see they can find, animate or not.
- Within this biome, restrict all interpretive material to spaces distinctly separate from the landscape immersion experience.
- Use the ASDM docent training program as the model for all zoo docents. It is tough, and challenging, very wide ranging, and remarkably effective.
- Question every design and planning decision for its effectiveness in demonstrating the need to explain and to glorify biodiversity. Its loss is the greatest imminent threat the world faces.

The prelude to “The Biophilia Hypothesis” uses compelling language to describe broken elephants in logging camps, referring to them as “but a shadow of their unbowed counterpart in the wild.” Too often this applies to elephants and other big animals in small spaces in zoos.

The prelude also uses E. O. Wilson’s comments on seeing a captive peccary in a Surinam village, “its repertory stunted by the impoverished constraints of human care ... a mute trapped inside an un-natural clearing.”

I will leave it to each of you to consider to what extent any parallels can be drawn between these observations about broken elephants and peccaries and the situations that persist in so many zoos, circuses, aquariums and dolphinariums.

Similarly, the following quotation will have different meanings in different minds, but for me it seemed especially pertinent for our ambitions about future zoos. It is from a New Yorker article about, of all things, ballet, and says, “There is a point in art where aesthetics meets morals – where beauty, by appearing natural, gives us hope.”