An Overview of Zoo Goals and Exhibition Principles

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Zoo Goals: An Overview

Recreation

The term recreation is best considered as re-creation or re-juvenation of the individual owing to a certain quality of experience. For many reasons, humans are attracted to nonhuman animals. Yearly, more than 100 million Americans visit zoos, a level surpassing visitation to professional athletic events or participation in fishing. Perhaps most astonishing about human fascination for wildlife in captivity is that it is so rampant despite the poor conditions of most zoos. More then anything this indicates an overwhelming affection for animal life.

There are possibly as many people who abhor zoos as who love them. Zoo haters are disgusted over the poor zoo conditions as indicated by neurotic behavior and boredom of animals in general. Also, there exists a widespread attitude that wild animals should not be confined. However, zoos are undergoing a revolution that is providing better physical and social environments for animals. The zoo revolution is eradicating boredom and psychopathology by inducing natural behavior and higher activity levels from animals. In turn, such improvements are elevating the recreational quality of the zoo for visitors. As the zoo revolution continues, more and more people are apt to visit zoos and find them both entertaining and rejuvenating. As more zoos follow the lead of Seattle, Washington's Woodland Park, for example, which is replacing small and boring cages with expansive exhibits offering naturalistic features conducive to interesting behavior (See *1*(3):170-177, 1980), perhaps even the zoo haters will be coming.

It is not uncommon among progressive-minded zoo professionals these days to hear disdain for the function of zoos as recreational. This attitude is understandable in that traditionally, zoos have done little but offer amusement along with parklands or picnic facilities. The progressive zoo person sets his or her goals above the old-fashioned recipe of crowding as many exotic animals as possible into an amusement-oriented menagerie to an authentic theme for exhibition intended to educate the public, offer research possibilities, and preserve and propagate species. Nevertheless, recreation remains a primary function of zoos. Most zoo visitors do not seek education in the everyday sense of information transfer. Even the best interpretive efforts attract but a minority of zoo visitors: Most people come to zoos to see animals. We should remember that this experience in itself is worthy and that for many people it has redeeming value.

In the final analysis, most zoo visitors find solace, pleasure, comfort, refuge and esthetic appreciation by experiencing wild animals in proximity. These intangible values, essentially spiritual, go far toward enlightening human beings and promoting a positive attitude of kinship with all life. Perhaps these recreational functions achieve more than is hoped for from educational programs *per se*. In any event, the recreational qualities of a zoo contribute to its education, research and conservation goals. The better a zoo is for its animals, the more appealing it is to

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visitors, and the more receptive are visitors to interpretation and to the conservation ethic. Likewise, the more attractive and entertaining zoo will have healthier and more natural-behaving animals, thus the zoo will be a better facility for research. In summary, recreation is inextricable from and wholly compatible with progressive zoo goals of education, research and conservation.

Education

A formula for education is: education = entertainment + information. Because animals are intrinsically attractive to people, the element of entertainment is given to zoos. As stated above, the entertaining quality of animals is in itself educational in that it expands the heart, mind and spirit, and generates awareness, affection and concern for nonhuman life and its needs. For many segments of society, however, information is valuable and sought after. The zoo can be an exemplary learning/teaching center of the community.

The primary learning/teaching resource of the zoo is its animals, especially their behavior. The zoo reaches its zenith of service when it presents animals that entertain and inform by their behavior, habits and activities, in contrast to the museum, which serves by displaying the variety, forms and physical adaptations of organisms. Educational objectives depend in large part on exhibition of animals in settings and social groupings that promote attractive, natural behavior. Beyond this, the levels of information and interpretation need to be designed for the levels and goals of various individuals and groups.

The general theme of interpretation available to all zoo visitors will strive to relate information to the immediate exhibit itself by emphasizing what is directly observable. Progressive zoo interpretation will focus on behavior patterns and gestures that are most readily observed, and relate these to social organization, communication systems and behavioral and ecological adaptation in general. The traditional interpretive theme of zoos, which lists details about scientific nomenclature, geographic distribution and foods consumed in the wild, attracts much less interest precisely because it does not relate to the immediate experience of living animals on exhibition. These distal aspects of biology are best left to museums and advanced learners.

Special programs are required for advanced learners ranging from lay naturalists to university students. These can encompass anything from special tours to various manuals for self-guided tours, classroom use or research libraries. Films and tapes can be produced for general and special audiences. For area schools, colleges and universities, curricula need to be developed. The progressive zoo represents an ideal setting for instruction in zoology, natural history, functional anatomy, animal behavior, and wildlife biology and conservation. Graduate and professional training can be made available in environmental design, zoo animal behavior, wild animal medicine and so on.

It is the responsibility of the zoo to make known its serious intention to cooperate with natural history groups, schools, colleges and universities. Progressive zoo management should promote and develop such programs, not only to serve the community, but also to benefit the zoo. For example, with the recent acceleration of zoo animal behavior as a scientific field, many zoos have gleaned insights from university students and faculties into the care, management, exhibition, and breeding of animals, not to mention enhanced interpretive programs, publicity and community relations. The growth of scientific interest in zoos and their use as

university training centers is proving to be of primary benefit to zoos and to society at large; as zoos progress, this trend should grow stronger.

Research

Since the early 1970s, the attraction of scientists to zoos has been immense. The scientific potential of zoos, coupled with diminishing opportunities for field research and support, has encouraged the infusion of science into zoos. The marriage of science with zoos contributes to the improvement of all zoo services, at virtually no cost to zoos, and thus should be promoted and encouraged as much as possible.

The scientific study of wild animals in captivity is crucial to the wise management of zoo animals, *e.g.*, exhibition, interpretation, behavioral requirements, propagation, preventive medicine, health and husbandry. On a large scale, zoo research is advancing the preservation of endangered species through propagation in captivity, provision of animals for reintroduction into nature and indication of behavioral and ecological adaptations valuable to preservation of wild populations.

An additional role of zoo research is the development of techniques for studying feral populations. Zoos have been used to develop restraint techniques and to test the suitability of techniques for marking and radio-tracking as well as population indices (*e.g.*, pellet counts of cervids).

Basic science in zoos is contributing to the refinement of behavioral and genetic theory applicable to both nonhuman and human animals. With proper records, zoos offer a unique source of data for testing ideas about social behavior, as kinship and lineages are known. Such basic research also applies to zoo management, as in breeding programs and exhibition of social groups. In summary, zoo science is advancing zoology, psychology, ecology, genetics, physiology, wildlife biology, conservation and veterinary science.

There is a tendency of some people to respond to the words research and science as though these necessarily implied the killing or vivisection of animals. No animals are intentionally sacrificed in zoo research; moreover, the zoo's value to science comes from providing access to observation and harmless inspection of animals.

Animals die in sufficient numbers, even in the finest zoos, to supply specimens for physiological research and for zoological collections of museums which employ such specimens in research and exhibition.

No zoo with progressive management should find it difficult to invite productive scientific involvement, as most zoos are close to one or more college or university. There is one point of caution, however; in the recent history of zoo science, too many projects have been completed without provision of reports or publications to the cooperating zoo. As basic guidelines, the zoo should carefully screen all proposals; maintain final authority over all conduct and activities of investigators in the zoo; permit only those researches that conform with basic zoo practices, policies and objectives; and require via contract submission of copies of all reports and publications from the project. Due acknowledgements to the zoo and assisting zoo staff could also be required.

A final point on zoo research concerns the regular keeping and maintenance of complete and accurate records. Especially significant to zoo research — and equally important to zoo management over the long haul — are records on the origin, history, health, treatment, exhibition and so on of animals, whether acquired from another zoo, from the wild, or born in the zoo.

Conservation

Recreation, education and research programs all contribute to conservation through increased appreciation of wild animals and their needs in nature, concern for endangered species, and the development of scientific and technological means by which to study or conserve wildlife in captivity and in nature. There is much reason to believe that zoos will become the last refuge for increasing numbers of species, extinct locally, regionally or altogether in nature, which have been reintroduced into the wild with success (and failure). Continuing research in zoos and between zoos and wildlife ecologists and conservationists probably will assist reintroduction programs in the future.

For legitimate reasons ranging from potential value as a resource to spiritual values and moral considerations, society seems firmly committed to the preservation of lifeforms. Species endangerment and extinction will increase as human pressures continue to eliminate and alter habitats worldwide; thus zoos will assume a more important function as major refuges for species' survival and perpetuation. In some cases it may be deemed desirable to maintain certain endangered or difficult-to-breed species off of exhibit, though viewing could be possible remotely, e.g., by closed-circuit television. The zoo visitors would approve of any serious efforts to preserve species even if it meant nonexhibition.

To develop most effectively conservation programs in the zoo, cooperative arrangements need be established with pertinent agencies and groups, e.g., state fish & game departments, U.S. Fish & Wildlife Service, cooperating zoos, private conservation groups such as Audubon Society, National Wildlife Federation, International Union for Conservation of Nature and scientific specialists.

Exhibition: Philosophy & Principles

The essence of any zoo or animal park is exhibition of living animals. For the most part, exhibition is an undertaking in what Aldo Leopold described as "recreational engineering." The first and most fundamental goal of exhibition is the development of the individual's awareness and appreciation of living beings and of life itself. When an exhibit meets this standard of recreational experience, it almost always meets the optimal conditions for specialized opportunities in education, research and conservation as well.

The primary consideration in exhibition is the design of physical, biotic and social factors which will encourage the animals' natural behavior and healthy activity levels. Generally, when animals behave naturally, they are attractive and healthy. As the basic aim of exhibition, naturalistic behavior also enhances potential for education, research and conservation.

An exhibit should be a completely integrated system for recreation, education, research and conservation. Although an exhibit may be related to other exhibits by theme, interpretive content, or lifeforms presented, each exhibit should achieve excellence by itself. An exhibit normally will be recreational; however, emphasis on other goals may vary. Moreover, the emphases of an exhibit may change over time; thus it should be planned so that options exist for varying objectives.

The following considerations underlie the creation of a systematic exhibit with optimal potentials:

— How can the animals' natural behavior be induced?

— What will the exhibit communicate to visitors?

— How might the exhibit serve or provide special learning experiences for children, students, teachers, etc.?
— What is the intergrative theme of the exhibit?
  Education? To teach certain principles of ecology, behavior or conservation?
  Conservation? To propagate and preserve genetic potential?
  Research? To advance science, applied science or descriptive natural history?
— Once the theme of an exhibit has been established, have the other exhibition goals been fully integrated into the exhibit?
— Will the exhibit offer new opportunities to gain knowledge in all aspects and goals of exhibition?
— In planning the exhibit, have the appropriate experts and specialists been consulted for advice and recommendation?
— Once the exhibit exists, will the appropriate specialists and groups be encouraged to utilize the exhibit for realization of maximum benefits?
— What future uses or new emphases might be incorporated into or substituted for current uses or themes?