Failing the Grade

Alberta Zoos Five Years On

September 2005

WSPA

World Society for the Protection of Animals

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WSPA is recognized by the United Nations (UN) and works to raise the standards of animal welfare throughout the world. As the world's leading international federation of animal welfare organizations, WSPA develops campaigns and projects in partnership with more than 480 member societies in over 20 countries. Through its campaigns, education, training and animal rescue initiatives, WSPA seeks to ensure that the principles of animal welfare are universally understood and respected and protected by effectively enforced legislation.

About the Contributors

Dr. Ken Gold

Dr. Ken Gold conducted the zoo exhibit audit. Dr. Gold has over 25 years of experience working at professionally accredited zoos including San Francisco Zoo, Zoo Atlanta, and the Lincoln Park Zoo in Chicago, as well as serving as general curator at Apenheul Primate Park, in the Netherlands, regarded as one of the most innovative zoos in the world. Most recently he has served as general curator at the Singapore Zoo and Night Safari, heading up a team of 130 animal care and veterinary specialists and overseeing the care and welfare of over 3500 mammals, birds and reptiles. In addition, he has worked in zoos as an educator, exhibit designer, scientist and researcher. He has visited over 250 zoos throughout the world in every continent where zoos exist.

Dr. Gold earned his PhD in Psychology from Georgia Institute of Technology in 1993, and holds a Masters degree in Biology from San Francisco State University and a Bachelor of Science degree from University of California Davis. He is a specialist in zoo animal management, behavior and design, having published more than 30 articles in these fields. He is a long-standing member of the American Zoo and Aquarium Association, the American Society of Primatologists and the International Primatological Society. He currently works for the American Humane Association Film and TV Unit, monitoring the care and welfare of animals used in filmed entertainment.

Rob Laidlaw

Rob Laidlaw developed the assessment tool that was used to grade the conditions of each zoo exhibit investigated in this report. The *Zoo Exhibit Quick Audit Process* (ZEQAP) was developed for animal welfare inspectors to use in WSPA's international zoo campaigns.

Mr. Laidlaw is a chartered biologist who began his involvement in animal protection work more than 20 years ago. Since that time, he has conducted numerous investigative and legislative campaigns for the protection of wildlife in captivity. These initiatives have involved hundreds of site visits to zoos and wildlife facilities in Canada, the United States and several Asian nations.

Mr. Laidlaw is a former Chief Inspector of the Toronto Humane Society, a co-founder of Zoocheck Canada and a former member of the Board of Directors of the Canadian Federation of Humane Societies. He is currently Project Manager for the World Society for the Protection of Animals and a member of the Board of Directors of Zoocheck Canada.

Foreword

The World Society for the Protection of Animals (WSPA) has been investigating the conditions in zoos across Canada for the last decade. Our last comparative analysis of zoos in Alberta was a report published in 2000 in conjunction with Zoocheck Canada entitled *Prairie Zoos: Captive Wildlife Facilities in Alberta and Saskatchewan*. This report led Gary Mar, the minister then responsible for the province's Fish and Wildlife department, to promise comprehensive changes to the *Alberta Environmental Protection Natural Resources Service Licensing Manual* (1993, revised 1995) that would address the deficiencies outlined in the report.

This spring, WSPA asked a well-respected zoo professional with more than a dozen years experience as an animal care custodian and manager at some of the world's best zoos to examine the current state of Alberta's zoos. The report that follows summarizes his findings after conducting audits of exhibits at four Alberta facilities: Calgary Zoo, Valley Zoo in Edmonton, Discovery Wildlife Park in Innisfail and Guzoo Animal Farm in Three Hills. The first two facilities are municipally run zoos accredited by the Canadian Association of Zoos and Aquariums (CAZA). The latter are privately held facilities of a type WSPA classifies as "roadside zoos."

Roadside zoos are substandard zoological facilities that typically house animals in poor, barren conditions. Most lack trained professional animal care staff and the financial resources necessary to ensure proper animal care and housing. Roadside zoos typically consist of small, ramshackle cages that offer little more than a water bowl, food bowl and a shelter box for each animal to sleep in. Deprived of opportunities to behave naturally, animals in these zoos often become bored and frustrated and exhibit signs of psychological disturbance, including stereotypic behaviours. Many of the practices, some of them quite cruel, which seem to be the norm in roadside zoos, would not be tolerated in professionally-accredited zoos.

Asked to rate Alberta zoo exhibits using WSPA's new Zoo Exhibit Quick Audit Process (ZEQAP), which is based on a list of essential husbandry considerations that should ideally be satisfied in every zoo exhibit, the auditor assigned a failing grade to 11 out of 20 exhibits (55%) he reviewed. His findings demonstrate the gap between the standard of zoo exhibits presented at the two municipally funded facilities and the two private zoos. Of the 10 exhibits at the Calgary Zoo and Edmonton Valley Zoo, only one failed to pass the audit. At the other two facilities, Discovery Wildlife Park in Innisfail and Guzoo Animal Farm in Three Hills, all 10 exhibits received a failing grade.

Many of the roadside zoo exhibits were without adequate shelters, shade or privacy forcing the animals to sit in the rain or endure the scorching summer sun and denying them all opportunities to remove themselves from public view. Primates were housed in exhibits with few places to climb and with little to no enrichment. Tigers which are adept swimmers and spend much of their time in water; were housed in small, featureless enclosures without pools. Few of the exhibits at these two facilities had educational signs in place with information about the species and its conservation status. Instead of providing the public with opportunities to observe animals in a natural environment, visitors to these zoos could see a baby snow monkey wearing diapers on a leash, a lion housed with a dog and could even get their photograph taken while kissing a fully grown grizzly bear.

Though the difference between professional and roadside zoos is apparent, at all four zoos visited, many animals were observed to be exhibiting some form of abnormal and/or disturbed behaviour. Numerous animals were pacing or rocking back and forth. Others appeared lethargic.

While animal welfare is WSPA's primary concern, we would be remiss if we did not address the very real danger these roadside zoos pose to human safety. At both roadside zoos, bears, tigers and other big cats were kept behind flimsy fences that were less than three metres high (< 10 ft) without an overhang. Equally as disturbing is the fact that many dangerous animal exhibits lacked proper stand-off barriers and few possessed the secure secondary containment (shift) areas and double entry gates necessary to ensure the safety of staff and the public when servicing the cage. Staff must actually enter the cage in order to clean it or supply fresh food and water.

Alberta's Sustainable Resource Development (SRD) issues permits authorizing the keeping of wildlife in zoos under the *Wildlife Act*. Zoos must pay an annual permit fee and submit a zoo development plan; however, there have traditionally been very few conditions attached to these permits. The licensing manual contained a number of requirements for zoos, among them: that zoo personnel be properly trained, that enclosures be appropriate to the species held, that veterinary care be provided; however, the requirements were vaguely worded and have never been properly enforced by Fish and Wildlife personnel. In recent years, as part of an effort to address deficiencies at Guzoo Animal Farm, more specific conditions have been attached to the permit for this facility.

This winter, SRD's Fish and Wildlife Division at long last initiated a review of the current standards and licensing regime. All Alberta zoos have been issued six month permits. These zoos will then be given a one year phase-in period to meet the new standards.

WSPA cannot comment on the substance of these standards as we have been denied our request for stakeholder status in this review, as has our member society Zoocheck Canada (in spite of our long-established efforts to improve the welfare of zoo animals in the province). During the initial comment period, only the zoos themselves will be allowed to comment. Our concern is simply stated: in allowing the very zoos that will be affected by the proposed changes to dominate the zoo standards development process, does the Alberta government run the risk of producing standards that are toothless and ineffective?

This report reveals that many of the same deficiencies in animal care and public safety that were documented in the past continue to exist today. Any new standards promulgated will need clarity and specificity. There will also need to be a change in the culture of enforcement with respect to zoos as there were few consequences in the past for zoos that failed to submit adequate development plans, failed to keep proper records or flaunted their permit conditions.

The province must move to address animal welfare and public safety at Alberta's roadside zoos once and for all. And they must do so soon. The goal of any new zoo licensing regime should be to ensure that all Alberta zoos be required to operate at a professional standard or be closed. The appalling conditions observed at Discovery Wildlife Park and Guzoo Animal Farm are unacceptable. Unless and until the problems identified in this report are addressed, Alberta zoos and the Alberta government itself will continue failing the grade.

Overall impressions

By Dr. Ken Gold

Having visited more than 250 zoos in the Americas, Europe, Asia, Australia and New Zealand, I was anxious to see Alberta's zoos. I visited a total of four zoos during my time in the province. The Calgary Zoo and Edmonton's Valley Zoo, both accredited members of the Canadian Association of Zoos and Aquariums (CAZA) were light-years ahead of the other two non-CAZA zoos: Guzoo Animal Farm and Discovery Wildlife Park.

Calgary Zoo was one of the best zoos I have ever visited, with spacious, natural exhibits for most of their animals. The primate and elephant areas need updating, but enclosures for hoofstock and bears were very good. Valley Zoo had some quality exhibits, but needs to update and add additional space to many of the older exhibits including their sea lions, swift fox and elephants. Animal care and management appeared to be very professional at both of these institutions. This was in striking contrast to the other two facilities I visited.

Guzoo Animal Farm and Discovery Wildlife Park were less professional, privately managed operations. Discovery Wildlife Park featured several animals used in shows, and for a donation you could even kiss a full grown grizzly bear. They exhibited tigers and lions behind low fences, a huge security risk. A hand-reared Japanese macaque monkey was tethered to a leash, bouncing around in the gift shop. The animals had little shelter and even less enrichment and most lived in uninspiring environments.

Guzoo was even less professionally run, with many animals being housed in inadequate, unsafe enclosures. One lion was observed being kept behind a six foot fence living with a domesticated dog; a tigerwas housed alone behind a nine foot fence; and a group of wolves lived behind a fence approximately seven feet high. The low height of all of these fences posed a serious safety risk to both staff, visitors and neighbors.

Many of Guzoo's animals were kept in inappropriate social groupings, including all of the primates I observed which were housed alone. Most of the exhibits were spartan and had no enrichment for the animals, and many were too small for them to express a full range of natural behaviors.

At both Guzoo and Discovery Wildlife Park I was also alarmed at the lack of appropriate safety barriers and safe management techniques for the proper care and maintenance of the animals. A number of enclosures had no shift areas to secure dangerous animals, necessitating staff entry into enclosures for cleaning and maintenance. Many of the exhibit barriers were substandard, creating a high risk of animal escape. The use of flimsy materials, design flaws (such as inappropriately low fences), and lack of basic safety measures (such as locks on doors and gates), present unacceptable safety risks to the animals, staff, visitors and the community at large.

Though the province of Alberta regulates the keeping of wildlife in captivity under the Wildlife Act, few conditions are imposed upon zoos at the present time (though I understand this process is under review). As the majority of exhibits I audited failed to meet essential conditions, it appears to me that the current system is not working. Since legislation currently provides the opportunity for government authorities to add specific conditions to each zoo permit, it is shocking that so many exhibits did not satisfy basic housing and husbandry conditions which are critical to each animal's well-being.

In the U.S. zoos must be licensed and inspected by the U.S. Department of Agriculture and must meet baseline standards of animal welfare as set out in the Animal Welfare Act. It is highly questionable whether the two non-accredited zoos I visited, would be allowed to operate in the United States.

While it is encouraging to know that the Alberta Government is currently reviewing their zoo standards and licensing regime, to be effective and meaningful the province must give serious consideration to ensuring that any new standards developed cover all aspects of zoo management. Furthermore, these standards should be detailed and specific with regard to what is expected of zoo owners in terms of animal care and management. My assessments may serve as a useful guidepost in that they point out specific deficiencies in zoo management that need to be addressed. It is my hope that the Province will enact stronger and more comprehensive welfare and safety standards for all zoos and wildlife displays so that the problems in this report do not continue to occur in the future.

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WSPA'S 2005 ZOO AUDIT

METHODOLOGY

During the first week of June 2005, an independent consultant working on behalf of WSPA surveyed four Alberta zoos. Utilizing WSPA's Zoo Evaluation Quick Audit Process (ZEQAP), a new assessment tool designed to help auditors identify deficiencies in zoo exhibits, the consultant was asked to rate five animal exhibits at each zoo visited. Scores were assigned to each exhibit out of 50. In addition, the auditor was asked to make his way around each zoo facility and to form his impressions of each zoo as a whole.

While ZEQAP can be used effectively by anyone who has read the introductory material provided in the next section, for this survey WSPA chose Dr. Ken Gold, a zoo professional with more than a dozen years experience as a researcher, educator, zoologist, and animal management specialist at small, medium, and large professionally accredited institutions in the United States, Europe and Asia.

The full results of Dr. Gold's audits can be found in Section B. For purposes of comparison, we have presented a summary of these results in report card form along with the auditor's comments on each exhibit. We have also provided an average score of all five exhibits and assigned an overall pass or fail for each zoo audit based on whether a majority of the exhibits passed or failed. As the ZEQAP is not meant to be an assessment of the entire zoo, these passing or failing grades are not necessarily a reflection of the zoo as a whole.

In Section C we have provided a series of graphs to allow the reader to compare more easily how the various zoo exhibits surveyed stack up against one another. Section D presents our conclusions as well as our recommendations to zoo owners and the Alberta government.

SELECTING EXHIBITS TO BE AUDITED

The auditor was asked to assess at least five exhibits, drawing ideally from as many of the following groups as possible:

- Bears
- Primates
- Big cat species, especially larger species such as tigers
- Wolves
- Ungulate
- Other Small Mammals

These groups were chosen to provide us both with a point of comparison between zoos and to ensure some variety in the types of enclosures that were selected. While not every zoo houses the same species of animals, it is likely that in most cases they each would have species belonging to the groupings above.

SELECTING ZOOLOGICAL FACILITIES TO BE AUDITED

Four Alberta zoos were audited during this most recent zoo survey. Two zoos surveyed (Discovery Wildlife Centre and Guzoo Animal Farm) are non-accredited facilities that WSPA classifies as roadside zoos. For comparative purposes, the other two zoos visited (Calgary Zoo and the Edmonton Valley Zoo) are accredited members of the Canadian Association for Zoos and Aquariums (CAZA).

CAZA was established in 1975 and is a non-profit organization whose stated purpose is "to promote the welfare of and encourage the advancement and improvement of zoology, education, conservation and science." CAZA promotes a voluntary accreditation program for zoos that includes guidelines and standards addressing a number of areas of zoo operations.

While the two CAZA-accredited zoos were selected for the audit primarily for comparative purposes, the zoo audits hopefully will provide food for thought for managers at these institutions as well. As the ZEQAP model is based upon conditions that should be present in all zoo exhibits, not only is it possible to obtain a perfect score, in an ideal world all zoo exhibits would do so. While the CAZA-accredited facilities in most cased performed better, the results may surprise.

As we are in all cases highlighting deficiencies in exhibits, it is hoped that all zoo owners and managers, from the CAZA-accredited facilities down to the roadside zoos, will look closely at where their exhibits lost points and strive to address the deficiencies identified, not only in the exhibits assessed, but in all of their exhibits.

Section A

Zoo Exhibit Quick Audit Process (ZEQAP)

Auditing terrestrial mammal exhibits

INTRODUCTION

WSPA's ZEQAP (Zoo Exhibit Quick Audit Process) provides a relatively simple approach to auditing terrestrial mammal exhibits. Because the ZEQAP is based almost entirely on specific, critical housing and husbandry points, it can be used by anyone who has reviewed the methodology and orientation materials.

The ZEQAP is focused entirely on individual exhibits and is not an audit of general zoo operations. It deals with 11 critical exhibit areas.

HOW ZEQAP WORKS

- Each exhibit is assigned a starting score of 50 based on a series of conditions that must be met. Points are deducted based on deficiencies in the exhibit. An exhibit must retain 40 points to pass.

- The ZEQAP presents the auditor with a series of factual statements. These statements are divided into 11 categories or sections, each assigned a numerical score. (For example, the section on Behaviour is assigned five points; the section on Privacy is assigned two points.)

- Auditors must determine whether or not each statement is true. If they are unable to make a determination for a particular statement, they leave it and move on to the next statement.

- Points are deducted from the assigned score in each section if the statement is not true, as this represents a deficiency in the exhibit. For example, in the section on shelter, the auditor is presented with the statement, "Shelters are present in the exhibit." If no shelter is present, two points would be deducted from a total of five assigned to this section as indicated. Note: our auditor in many cases deducted partial scores.

- The lowest possible score in each section is zero.

AUTOMATIC AUDIT FAILURE

The presence of any of the following critical deficiencies results in the exhibit automatically failing the entire audit and receiving a score of zero.

- Severely cramped conditions (or restraints) that prevent normal postural adjustments and movement in any direction of less than three body lengths (including tail).

- 90 - 100% hard or wire substrates

- Barren exhibits lacking any usable features or furnishings

ANIMAL WELFARE

Animal welfare involves more than just satisfying physical needs or the absence of injury or disease. While physical functions and overall condition are an important aspect of welfare, an animal's welfare can still be poor in the absence of obvious physical problems. For example, if an animal is frightened, bored, frustrated, anxious or subject to chronic stress, they may appear "normal" but not be experiencing good welfare.

Many animals housed in behaviorally impoverished environments experience a decrease in behavioural variability and an increase in behaviours directed at themselves (e.g., hair pulling) or their immediate surroundings (e.g., bar licking).

In an effort to cope with frustration, boredom and other chronic stressors, they gradually close themselves off from their environment, rather than interact with it. They may become inactive; sitting, lying or sleeping for abnormally long periods of time. Some develop stereotypic behaviours, defined as prolonged, obsessive, repetitive, apparently purposeless activities that do not occur in the wild and that usually indicate poor welfare.

Most stereotypic behaviours occur when animals have failed to cope with or remove themselves from stressful situations. Common stereotypies include rocking, pacing, head weaving and tongue playing.

Satisfying the behavioural requirements of wildlife in captivity is essential to their welfare, yet it is an area that has routinely been overlooked or ignored by many zoos.

The notion that animals should live their lives according to pre-arranged schedules in sterile, easy-to-clean surroundings is antiquated. "Total institutionalized care" in which animals have no ability to make a meaningful contribution to the quality of their own lives is detrimental to their well-being. All captive animals must be given some control over their environment and an opportunity to make choices.

ENCLOSURES

Enclosures must be designed to make animals feel comfortable, secure and should encourage a full range of species-typical movements and behaviours. The physical environment provided to captive animals is directly linked to animal welfare because it is what the animal interacts with on a daily basis.

A variety of enclosure types are in use today. They include cages made of bars and concrete, islands surrounded by moats, and naturalistic exhibits that mimic a part of the animal's natural habitat. Naturalistic environments are usually better for animals because they typically provide a far greater range of behavioural opportunities.

The shape of an enclosure can be an important factor in animal housing. Arboreal mammals require high enclosures that allow them to climb, while many group-housed animals should be kept in enclosures that are free from dead ends or sharp corners where dominant animals can potentially trap subordinate cagemates.

The right enclosure shape can make the animal's living space more complex, interesting, secure and ensure that there are areas in which they can escape from public view. When assessing whether or not an enclosure permits normal movement and natural behaviours, the auditor considered how each animal would move about and behave in a natural setting.

SPACE

Space is a critical consideration in wild animal housing. The size of zoo enclosures is usually determined by available space and budget and not on the biological and behavioural needs of the animals themselves. For this reason, most zoo exhibits tend to be smaller than they should be.

There are several methods to determine whether or not a captive enclosure is appropriately sized. One method is to compare the space allocated to each animal in the exhibit to the space that that same animal might inhabit in the wild. Of course, almost all zoo enclosures are thousands or millions of times smaller than the spaces that animals inhabit in the wild. There is no upper limit on enclosure size. It is always better for animals to have more space than they need, than to need more space and not have it. In almost all cases, bigger is better. However, it is also important to realize that a large barren, enclosure can be as damaging to an animal's well-being as an enclosure that is too small. While enclosures should be as large as possible, they should also be of good quality.

To assess whether or not each enclosure was adequately sized for the species it contained, the auditor considered whether each animal in the enclosure had sufficient room to move about naturally (to fly, run or swim at speed), to express a broad range of species-typical behaviours and to feel secure.

BARRIERS

The barriers that confine animals should be solidly constructed, free from defects, species-appropriate and able to safely contain the animals.

Materials like weld-mesh and bars can often be cheaper than many alternatives and if used creatively with an understanding of an animal's biology and behaviour, can form effective enclosures that provide opportunities for animals to climb or perch.

Moated enclosures are often used because they look better to visitors, but they are very expensive, take up a lot of space and they are often constructed without thought for animals that may inadvertently fall into them. Dry moats should contain some soft substrate material to prevent injury if animals fall into them, while wet moats should be designed to allow animals to get out quickly and easily.

Glass and other transparent barriers have become increasingly popular, but they are expensive and can make temperature and humidity difficult to control as they restrict air flow.

When assessing the physical condition of an enclosure, particular attention should be paid to areas

where different materials meet (e.g. wooden fences to brick walls, wire mesh to wooden frames etc.). Movement between these materials may result in signs of wear, so these areas should be considered as potential weak points. Together with the normal daily wear and tear caused by the animals and the staff caring for them, these factors in combination may be enough to cause failure at these points, such as broken wires/masonry, rusted metal, rotten wood, etc. Whatever the failure, it may represent a danger to animals, staff and the visitors.

Whenever weld-mesh, chain link or other materials are affixed to a post or support structure, they should ideally be fixed to the interior side of the support to prevent detachment if an animal pushes or leans against it. As well, fences containing animals that dig should be buried at least one metre into the ground and angled inward at a 45 degree angle to prevent them from digging out beneath the fence. For animals that climb or jump, fencing should be high enough to prevent them from jumping over, with a section angled inward at a 45 degree angle at the top.

Like all aspects of enclosure design and management, barriers need to ensure that they contain all animals in their enclosures safely and effectively.

Some zoos also restrain animals within enclosures, such as elephants which are often chained by one front leg and one rear leg. Restraining an animal by chains or tethers can lead to frustration and boredom as animals are thwarted in their attempts to move and behave normally. Elephants and other animals should not be chained or tethered for long periods.

SUBSTRATES

A critically important facet of captive animal husbandry is the provision of suitable substrates (floor surfaces). Since all terrestrial animals have evolved specific physical and behavioural traits that allow them to exist comfortably on particular kinds of substrates, those substrates should be provided.

Concrete, gunite (a molded, concrete-like material used in many zoo exhibits) and hardpan (earth compacted to a concrete-like consistency) substrates are not acceptable. While hard surfaces may be desirable from an animal management standpoint because they are relatively easy to clean and prevent animals from digging out of their enclosures, they are antithetical to good animal husbandry. Hard surfaces can be uncomfortable or physically damaging to animals; increase the thermal load animals experience by radiating heat in hot weather and cooling down rapidly in cold weather; are inherently boring; and they hinder public education by presenting animals in a way that removes them from their natural ecological context.

Wire floors are probably the worst and are usually used for convenience reasons, because they allow feces to drop through, making it easier to sweep away. Wire floors can cause discomfort, pain, infection and injury, even when great care is taken to choose the most appropriate type and gauge of wire.
Wire floors also make heat regulation difficult, because air flows freely through the floor from below, as well as through any other barriers that are constructed of wire. In certain circumstances, they also make it difficult to provide proper bedding, since straw, wood chips and other materials may work their way through the wire, exacerbating the already problematic thermal situation.

Animals must not be forced to live on uncomfortable, physically damaging, inherently boring surfaces. They must be provided with soft substrates that are comfortable and that provide a range of behavioural opportunities.

PERMANENT EXHIBIT FEATURES & NON-PERMANENT FURNISHINGS

Environmental enrichment is a dynamic process in which structures, furnishings and husbandry practices are changed with the aim of increasing behavioural opportunities available to animals and encouraging the expression of species-typical behaviours and movements.

Satisfying the behavioural requirements of wild animals in captivity is essential to their welfare. Captivity imposes biological and behavioural constraints on animals that they may have no natural way of coping with. Since the nature of their confinement often offers few opportunities for coping, especially when compared to the range of options that would typically be available to them in the wild, they must be given as complex an environment as possible. All captive animals must be given some control over their environment and an opportunity to make choices.

Since most zoo conditions are not going to change right away, enrichment should be integrated into each animal's daily management routine. Under no circumstances, should enrichment be considered an add-on to get to when time or finances allow.

In addition, it is critical that enrichment be viewed as a dynamic process that requires thought, effort, evaluation and revision. It is not as simple as throwing an object into a cage. Introducing novel objects to animals may encourage brief sessions of activity, but the novelty of those objects will quickly fade as familiarity with them grows. Keeping animals occupied and stimulated is a challenging task that requires effort.

While environmental enrichment can take many forms, most of it falls into one of four basic categories: permanent exhibit features, furnishings, objects and management. Object and management enrichment is not meant to be included in the ZEQAP.

Structural enhancement through the provision of permanent exhibit features (e.g., contoured surface topography, giant rocks, mature trees, streams, pools) must be carefully considered during the initial exhibit design phase, since the likelihood of those features being changed after construction is minimal. Of course, it goes without saying that the biology and behaviour of the species to be confined must be a major factor in all decisions regarding which features to incorporate into an exhibit.

One often overlooked aspect of enclosure design is the use of vertical space. Incorporating appropriate design features and structures that allow utilization of the vertical dimension will increase opportunities for movement and exercise, even for animals that are mostly terrestrial in nature.

There are an almost endless variety of furnishings that can be incorporated into exhibits. Numerous publications are now available outlining enrichment items and strategies for a range of animal species. Organizations such as the Association of British Wild Animal Keepers produce books about enrichment.

In addition, monthly magazines like The Shape of Enrichment outline new enrichment items and techniques, and numerous zoos have compiled their own lists of enrichment items and devices that they're pleased to distribute to interested parties.

Some examples of furnishings are small trees, branches, logs, log piles, small rock piles, brush mounds, root balls, moveable sand/bark/mulch pits, other novel substrates, nesting boxes, pipes, tubes, visual baffles, shade structures, moveable climbing apparatus, platforms, hammocks, bungee cords, rope ladders, hanging rings, scratching posts, pools, streams, sprinklers, brushes, and puzzle feeders.

FOOD ENRICHMENT

Food-related enrichment strategies are a particularly important facet of enrichment programming. For many species, food acquisition activities represent a significant percentage of their daily routine. In fact, the process of acquiring food is extremely important for nearly all animals, with most species having evolved specific physical and behavioural traits that aid food acquisition activity.

Study of the activity budgets of wild animals provides a basis for comparison with captive animals. Food acquisition activity can comprise more than half of a wild animal's daily activity, so it's important that expression of species-typical food-related behaviours in captive animals be encouraged and facilitated by animal caretakers.

Historically, zoos have fed their animals infrequently, often once or twice a day according to a fixed schedule. This virtual elimination of food acquisition activity leaves animals bored and inactive. Increasingly, staggered feeding schedules, the introduction of live food items, hiding of food items, painting food treats such as jam or honey in hard to reach locations to encourage stretching and climbing, whole carcass feeds for carnivores, the provision of multiple foraging opportunities for Ungulate and other strategies that make animals search and work for their food are being employed.

Making animals work for their food may sound rather harsh, but it was discovered quite some time ago that captive animals, if given the choice, would often rather work for their food, than accept identical, free food offered without any work involved. They preferred to be doing something. The idea that animals should be fed on a fixed timetable with no variation as part of a regime of total institutionalized care should be considered an anachronistic method of animal husbandry that is no longer acceptable.

SHELTER & PRIVACY

Shelter is an important aspect of animal husbandry and one that surprisingly is often overlooked or ignored. Shelters can be artificial structures (e.g., wooden boxes), the interior of buildings, underground dens, hollow trees or even dense thickets of ground level vegetation. Shade shelters may simply be camouflage netting draped on top of a cage, purpose-built canopies or even large trees that animals can stand under.

Sufficient shelter should be available at all times for all animals to retreat from adverse weather conditions or to remove themselves from excessive sunlight if they need to. Shelter should not be reliant on indoor holding areas alone, but should be available in the main exhibit area as well. When animals are housed in groups, all individuals must be able to access shelter at the same time, even if they are unlikely to do so. As well, shelters should be constructed so there is no possibility of dominant animals trapping subordinate animals inside.

Shelter boxes should be weatherproof and raised off the ground if flooding is a concern. In cold climates, sleeping boxes should also have an appropriate door flap or covering so that heat generated by the animal is trapped in the interior of the shelter. In addition, sleeping boxes should be freely accessible to the animals, contain bedding materials and their interiors should not be open to public view.

Privacy areas are also important as animals must always have the opportunity to remove themselves from public view or, in some cases, the view of their cagemates. Strategically placed visual baffles and the provision of multiple shelters may satisfy this need.

Lack of privacy is particularly problematic when viewing stations allow visitors to get so close to the animals that their "fight or flight" response (the distance at which an animal would want to flee from or defend itself against a potential threat) is triggered. Violation of the "fight or flight" distance can result in high levels of stress and/or attempts to flee, often resulting in physical injury or, in extreme cases, death.

Privacy from cagemates can also be an important husbandry consideration. Many animal species establish social hierarchies in captivity, where dominant individuals exercise first choice of food, preferred areas for resting, sunning, etc. For this reason, it is important that subordinate animals not only be able to avoid physical contact with dominant cagemates, but that they be able to remove themselves from visual contact as well.

Privacy can also be important for species that delineate territories through visual means. Placing them together in groups in plain view of each other can be very stressful.

ENVIRONMENTAL CONDITIONS

Animal welfare is based, in part, on an animal's ability to successfully adapt to changes in environmental conditions without suffering. So all captive animals should have conditions of temperature, humidity, light and ventilation compatible with their biology and behaviour. Audits of environmental conditions must be conducted from the animal's perspective. In this investigation, the auditor assessed environmental conditions from the level of the animal, while examining the sections of the enclosure the animal needs and prefers to use.

Conditions of high temperature and humidity can be problematic in captivity. Many animals, particularly mammals, have the ability to elevate internal heat production when they get cold, but they have greater difficulty cooling themselves down when they get excessively hot because they can only

reduce heat production to a level compatible with continuation of their basic metabolic processes. This may not be sufficient to deal with conditions of high heat, so captive animals must be given the opportunity to thermoregulate by moving to cooler, shady areas such as forest cover, burrows, rock cavities, pools, etc. They must also be provided with potable water at all times.

Also problematic is the structuring of zoo husbandry practices around staff timetables. Doing so often ignores the need of animals to maintain natural cycles, such as a normal photoperiod. While this is less of a problem for animals housed in outdoor exhibits, unless they are out of their normal geographic range and biological and behavioural cycles are related to or dependent on a natural photoperiod, it can be a real problem for animals housed inside. The activity budgets of animals in the wild are often influenced by the amount of light and dark they experience. While animals living in equatorial regions tend to have relatively constant hours of light and dark, this changes substantially as you move further from the equator. This should be a consideration when dealing with animals in captivity. Turning the lights on when staff arrive in the morning and shutting them off when they go home may not be an appropriate husbandry protocol for many species.
Light and ventilation are important husbandry considerations. If a species is nocturnal it should not be forced to be active or on constant display during the day, unless displayed in a suitable reverse lighting, nocturnal exhibit. Inadequate ventilation in any enclosure may result in over-heating and unnecessary stress. As with other aspects of ZEQAP, if it was not easy to see or to check if sufficient ventilation was available in an enclosure, the auditor was instructed not to deduct marks.

DRINKING WATER

All enclosures should be outfitted with a supply of fresh, potable water at all times. In group housing situations, each enclosure should contain a sufficient number of watering stations to prevent dominant animals from monopolizing access to drinking water. In cold climates, drinking water should be presented in a way that it does not freeze solid.

SAFETY

Zoological facilities should always operate in a manner that ensures the safety of animals, staff, visitors and persons living adjacent to zoo property.

All enclosures should be designed with enough space and complexity to ensure that animals will not be preoccupied with escape. Contented animals that are able to engage in a range of normal behaviours are less problematic in this regard.

All barriers (including gates and doors) must be constructed with the physical abilities of the animals in mind. Walls must be high enough that animals cannot jump over them, moats must be wide enough that animals cannot jump across them and fences must be strong enough that animals can't push them over.

Extra attention should be paid to gates and doorways. They should fit snugly against fences and walls, leaving no gaps in between and they should not bend or warp when locked. Doors and gates should always open inwards and sliding barriers should be built so that animals cannot lift them off their hinges or tracks.

Enclosures should ideally be equipped with double door entry systems that allow staff to enter through one door, closing it behind them, before opening a second door into the exhibit. This prevents the inadvertent escape of animals who may 'sneak' past the person entering the exhibit. While this system is advisable for all enclosures, it is absolutely essential for exhibits housing potentially dangerous animals.

As well, all enclosures housing potentially dangerous animals must be equipped with secondary containment (shift) areas, where animals can be secured during routine enclosure maintenance, cleaning or for veterinary purposes. This area should be secured by a sliding door that can be safely operated from outside of the exhibit.

All enclosures should be locked, regardless of species. Not only does this prevent animal escapes, particularly with intelligent animals that can learn to open doors and gates, but it may prevent entry into exhibits by trespassers, vandals and thieves.

A stand-off barrier to keep visitors a safe distance from the animal cages is also important. Visitors should not be able to put their fingers, hands or arms into cages or even make contact with the cage itself. This protects both visitors and animals and prevents the transmission of disease between animals and humans.

The following items are not included in the ZEQAP but are important in any evaluation of overall zoo security.

An essential component of any zoo security program is a perimeter fence. Some zoo associations have made perimeter fencing a mandatory requirement for accreditation. Perimeter fencing should ideally be two metres in height, topped with barbed wire and the base of the fence should be buried into the ground to a depth of at least one metre or affixed to a concrete curb or base. Not only will a perimeter fence discourage escaped animals from leaving the zoo grounds, it will also discourage unwanted entry by human trespassers and feral animals. Large trees that overhang the fence should be trimmed to ensure that they do not fall, thereby creating openings that animals could escape through.

Night lighting should be considered in key areas as an aid to security personnel.

Emergency protocols to deal with animal escape, keeper or visitor injury, natural disasters and other problematic situations must be developed and implemented. Drugs to immobilize potentially dangerous, escaped animals and firearms to prevent loss of life should be on site and in good working order. All staff should be familiar with emergency plans and protocols, which should, ideally, be laid out in an emergency procedures manual that all staff are required to review.

SIGNAGE

Signs on and around exhibits are covered in the ZEQAP. Signage should provide accurate information about the animal's biology, behaviour, natural lifestyle and conservation status. They should be located in a prominent, easy to see location for both children and adults. They should not be situated behind viewing stations or in other locations where they may be overlooked.

ANIMAL SHOWS

Circus-type animal performances and other kinds of demonstrations are common in zoos throughout the world. These shows sometimes involve segregation of animals and sometimes harsh training methods. Animals should not be used in these kinds of shows.

Section B

Alberta Zoo Audits

WSPA
World Society for the Protection of Animals

Zoo Report Card

Essential Conditions Test

Alberta

Name of Zoo: Calgary Zoo

Location: Calgary, Alberta

Auditor: Ken Gold

Date Visited: June 5, 2005

Exhibit	Appearance (5)	Behaviour (5)	Exhibit Space (10)	Barrier (3)	Substrate (5)	Features & Furnishings (5)	Shelter (5)	Privacy (2)	Environmental Conditions (5)	Safety (3)	Signage (2)	Total Score (50)	Comments Areas in need of improvement	Pass or Fail Pass = 40 or above
Elk	5	5	10	3	5	3	2	2	3	2	2	**42**	Wonderful exhibit. Large enclosure with varied topography, plenty of grass to graze and a pond to cool off in. No shelter was observed. Public stand-off barrier could be breached by visitors in places. No moveable enrichment items. Minimal shade.	P
Grizzly Bear	5	5	10	2	5	5	5	2	4	3	2	**48**	Excellent exhibit promoting species-typical activities and behaviour. Varied topography with majority of exhibit on a gradual slope. Many natural features such as rocks, logs and vegetation. One bear was thoroughly engaged; playing in the running water and pool that was provided. A log was provided in the pool for enrichment and one bear played with this. Minimal shade. Hotwire used in primary barrier with mesh.	P
Timber Wolf	5	5	9	2	5	5	5	2	4	3	2	**47**	Excellent exhibit. Varied topography with natural features such as rocks, logs, trees and vegetation. Although wolves had places for privacy, they seemed a bit stressed by visitors watching them. Minimal shade. Hot wires used in primary barrier.	P
Siberian Tiger	5	5	10	3	4	5	4	1	3	3	2	**45**	Three tigers were rotated in and out of a large exhibit with many natural features such as logs, rocks, trees and diverse vegetation. A pond was provided and the tiger spent some time swimming and playing with a log in the water. Ropes and boomer balls were provided for environmental enrichment. The exhibit was big enough for the tiger to run at top speeds.	P
Japanese Macaque (snow monkey)	5	5	10	3	5	5	5	2	3	3	2	**48**	Large exhibit. Excellent use of vertical space. Branches, ropes and platforms provide many climbing opportunities. Minimal shade.	P

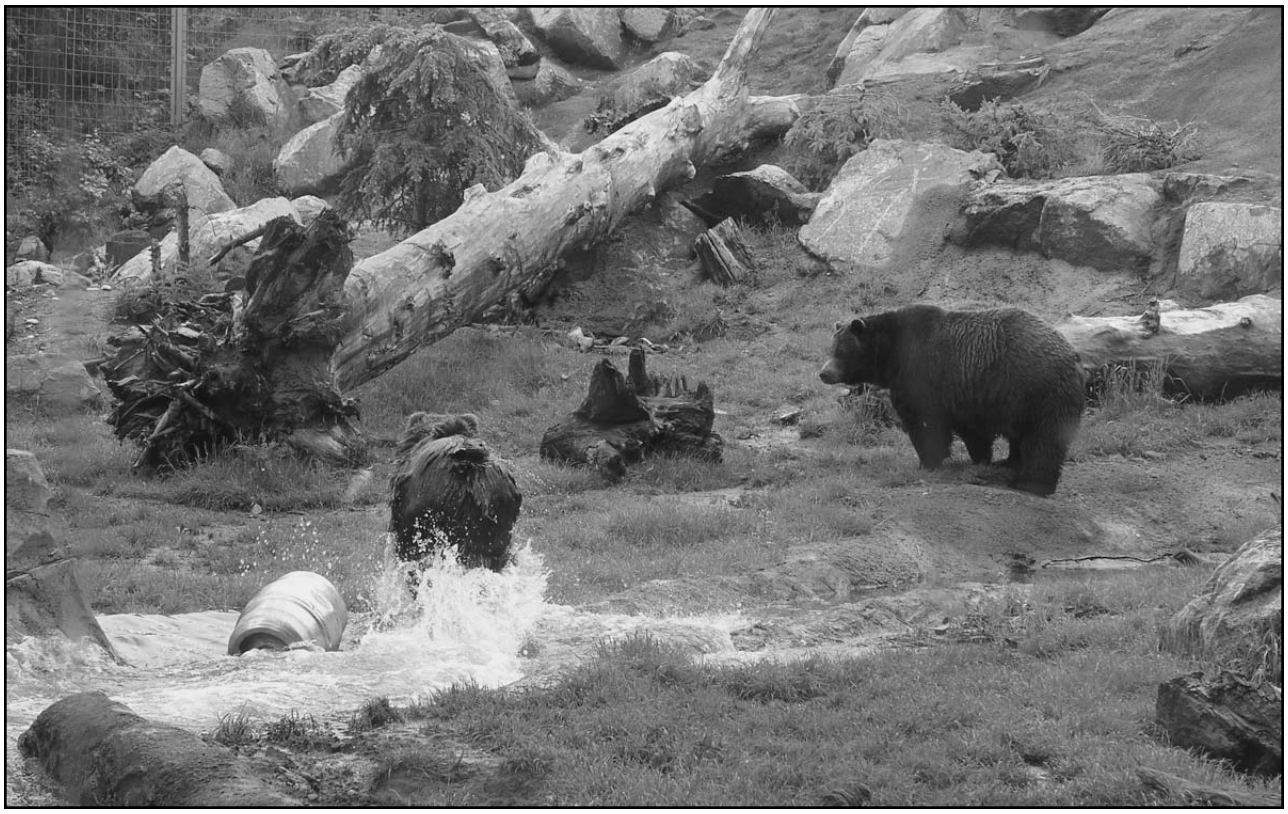
Average Score
based on a review of 5 exhibits: **46**

Did the majority of the 5 exhibits pass or fail? P

Additional Comments	Indoor primate exhibits were substandard. New indoor giraffe exhibit was substandard and very small. Hippo exhibit also very small. Outdoor elephant exhibit was an old style design - lots of hanging enrichment but still too small.

This audit examines essential conditions for zoo exhibits. Scores <50 indicate one or more deficiencies that need to be addressed. Scores <40 indicate an unacceptable level of deficiencies.

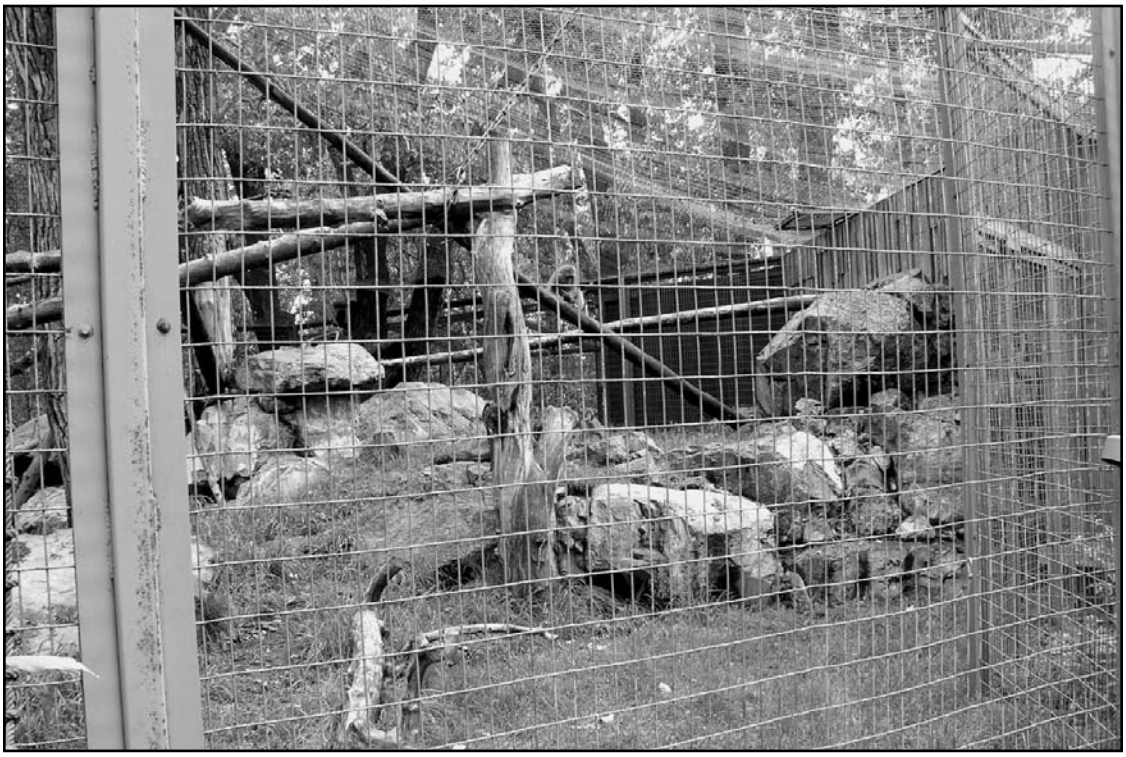
Calgary Zoo					
Exhibit	Elk	Grizzly Bear	Timber Wolf	Siberian Tiger	Japanese Macaque
1. Appearance					
Animals appear generally healthy and free from visible signs of injury or disease (no ripped ears, noses, missing digits/limbs/tails, open sores, abrasions, difficulty standing, walking, breathing, etc.) (2)					
Animals free from overgrown hooves, nails, claws, teeth, etc. that may impede movement or create discomfort when eating (2)					
Animals all have good fur/feather/skin condition (1)					
Animals appear of reasonable body weight and condition. Not grossly overweight (excessively thick bodies, fat rolls) or grossly underweight (gaunt, protruding bones) (1)					
Section score	5/5	5/5	5/5	5/5	5/5
2. Behaviour					
Animals not displaying abnormal, stereotypic or self-directed behaviour (2)					
animals not used for circus-type acts (2)					
Social animals housed in appropriate families/groups/herds (i.e., not alone) (2)					
Animals interested and/or active and/or engaged with their surroundings (1)					
Public feeding is not allowed (1)					
Section score	5/5	5/5	5/5	5/5	5/5
3. Exhibit Space					
Exhibit large enough to permit normal movement (such as flying, running or swimming at speed) and natural behaviours (4)					
Exhibit provides enough space for animals to feel secure (no triggering of fight/flight response) (4)			-1		
Exhibit provides/exploits available vertical space (2)					
Exhibit is not overcrowded (2)					
Section score	10/10	10/10	9/10	10/10	10/10
4. Barrier					
Barriers in good shape (no excessive paint peeling, rust, broken areas, etc.) (2)					
Barriers safe for the animals (no sharp edges, protruding wires, deep moats with hard floors, wet moats that can trap fallen animals, etc.) (1)					
Hot wires used only as supplementary barrier (not primary barrier) for potentially dangerous animals (1)		-1	-1		
Section score	3/3	2/3	2/3	3/3	3/3
5. Substrate					
Majority of exhibit substrate soft (75%) (2)					
Substrate facilitates/encourages species-typical movements and behaviours (such as burrowing, digging, foraging, running, hoof wear, etc.) (1)					
Substrate topography varied (not entirely flat) (1)				-1	
Substrate free from significant water saturated or flooded areas (1)					
Section score	5/5	5/5	5/5	4/5	5/5
6. Features & Furnishings					
Exhibit contains a variety of usable, species appropriate permanent features and furnishings (2)	-1				
Exhibit contains sufficient quantity of permanent features and furnishings to allow all animals to use them at the same time (2)					
Features and furnishings encourage/facilitate species-typical movements and behaviours (1)					
Features and furnishings encourage/facilitate use of all areas of exhibit (1)					
Furnishings not excessively worn, damaged, in need of repair or replacement (1)					
Furnishings can be moved, changed or modified easily (1)	-1				
Section score	3/5	5/5	5/5	5/5	5/5
7. Shelter					
shelters are present in exhibit (2)	-2			-1	
Shelters provide protection from the elements (e.g., sun, rain, snow, wind, heat, humidity) (1)	-1				
Animals are allowed free access to shelters (1)					
Shelters can accommodate all animals at the same time if necessary (dominant animals cannot monopolize shelters) (1)					
Shelter contains bedding material and/or species-specific soft substrates, where appropriate (1)					
Section score	2/5	5/5	5/5	4/5	5/5
8. Privacy					
Exhibit contains multiple privacy areas that allow animals to remove themselves from public view or, if necessary, the view of cagemates (2)				-1	
Privacy areas can accommodate all animals at the same time, if necessary (dominant animals cannot monopolize shelters) (1)					
Visitors cannot view animals from all sides or surround animals. (1)					
Section score	2/2	2/2	2/2	1/2	2/2
9. Environmental Conditions (Total score 5 points. If outdoor/indoor exhibit – divide total of both sections (maximum 10 points) by 2)					
outdoor exhibit					
Climate extremes are properly mitigated (especially for arctic and tropical animals) (2)	-2	-1	-1	-2	-2
Exhibit is environmentally varied (shade areas, pools, etc. – not uniform throughout) (1)					
Exhibit is not situated near loud or excessive noise (1)					
Exhibit is free from garbage and excessive excrement build up (1)					
Potable water is available to all animals (1)					
Section score	3/5	4/5	4/5	3/5	3/5
indoor exhibit					
Environmental conditions are species-appropriate (2)					
Exhibit is environmentally varied (shade areas, pools, etc. – not uniform throughout) (1)					
Exhibit is not situated near loud or excessive noise (1)					
Exhibit is free from garbage and excessive excrement build up (1)					
Potable water is available to all animals (1)					
Section score					
10. Safety					
Barrier appears solidly constructed and sufficient to contain animals (2)					
Exhibit appears free from visible defects (1)					
Suitable stand-off barrier prevents public contact with cage and animals (1)	-1				
Exhibit gates and doors are locked (1)					
Double door entry systems for exhibits housing potentially dangerous animals (1)					
Shift areas, to confine animals during cleaning, etc., with solid doors that can be opened/closed from outside the exhibit (1)					
Section score	2/3	3/3	3/3	3/3	3/3
11. Signage					
One or more explanatory signs at exhibit (2)					
Signs in a prominent, easy to see location for both children and adults (1)					
Signs provide accurate information about the animal's biology, behaviour and conservation status					
Section score	2/2	2/2	2/2	2/2	2/2
Total Exhibit Score	42/50	48/50	47/50	45/50	48/50
Automatic Audit Failure?					
* Severely cramped conditions (or restraints)					
* 90-100% hard or wire substrates					
* Barren exhibits lacking any usable features or furnishings					
Final Exhibit Score	42	48	47	45	48



The grizzly bear exhibit at the Calgary Zoo is a good example of what can be done with enrichment. While the exhibit could be much larger, it has quite a number of useable features, furnishings and objects from a moving stream, a pond to wade in, logs, roots, rocks, immature trees, steel barrels, etc. The bears were observed utilizing a number of these at the time of the auditor's visit.

The main tiger exhibit at the Calgary Zoo is one of the few tiger exhibits in the country that includes a pond large enough for the tiger to swim in. It is likely large enough for the tiger to run at full speed and is naturally varied with rocks and logs, trees and different types of vegetation that provide shade and privacy. Boomer balls, ropes and other objects were observed in the exhibit.

This elk is housed in a large enclosure with a pond. The sloped hillside allows the animals to retreat from public view.



This snow monkey exhibit makes good use of vertical space. There are several branches, rocks and ropes for the monkeys to climb.

WSPA
World Society for the Protection of Animals

Zoo Report Card

Essential Conditions Test

Alberta

Name of Zoo: Discovery Wildlife Park

Location: Innisfail, Alberta

Auditor: Ken Gold

Date Visited: June 4, 2005

Exhibit	Appearance (5)	Behaviour (5)	Exhibit Space (10)	Barrier (3)	Substrate (5)	Features & Furnishings (5)	Shelter (5)	Privacy (2)	Environmental Conditions (5)	Safety (3)	Signage (2)	Total Score (50)	Comments Areas in need of improvement	Pass or Fail Pass = 40 or above
Black Bear	4	0	4	2	3	0	5	1	2	0	0	21	automatic failure – critical conditions not met Male is very overweight and appears to be human-oriented. Open, flat and featureless exhibit with no environmental enrichment. Bears not provided with anything to climb. No privacy. No visual barriers between this exhibit and adjacent tiger and llama exhibits. Hot wires used with mesh fencing as primary barrier. No educational signage.	F
Siberian Tiger	5	1	6	2	3	1	4	0	2	1	0	25	Open exhibit with flat terrain. Tigers not provided with opportunities to climb or swim. No privacy. Tiger locked out in the rain. Locked shelter was inadequate. No environmental enrichment. Low primary barrier (only 3 m) with one strand of hotwire on the top- animal could potentially jump out, if motivated. Public stand-off barrier is insufficient. No educational sign.	F
Lion	5	2	6	2	3	0	4	0	2	0	1	25	Lions locked out in rain with very little protection. Locked shelter was inadequate. Very little enrichment provided. No privacy. No climbing opportunities. Public stand-off barrier insufficient. No double door entry or secondary containment area (shift cages) for safely entering/cleaning exhibit. Low primary barrier (only 3 m) with one strand of hotwire on the top - animal could potentially jump out if motivated.	F
Japanese Macaque (snow monkey)	5	4	4	1	3	0	0	0	2	0	2	21	Small exhibit. Predominately flat. One young male was taken from family group and hand-raised. Macaques were locked out in the rain as shelter box was locked. Plastic tub offered minimal shelter but was not large enough for all of the monkeys to fit under comfortably. Rust and loose wires, gaps in gate could pose a safety risk to animals. One of the gates had no lock, just twisted wire to hold it closed	F
Deer	5	3	10	3	4	0	3	2	3	0	1	34	Deer are very human-oriented (more focused on visitors than conspecifics). This is an abnormal behaviour frequently caused by allowing public feeding. Open, featureless exhibit. Little to no shade. Minimal enrichment. Shelter is inadequate for all of the animals to share comfortably. No public stand-off barrier. No double door entry or secondary containment area (shift cage).	F

AUTOMATIC FAILURE

Average Score (based on a review of 5 exhibits): 21

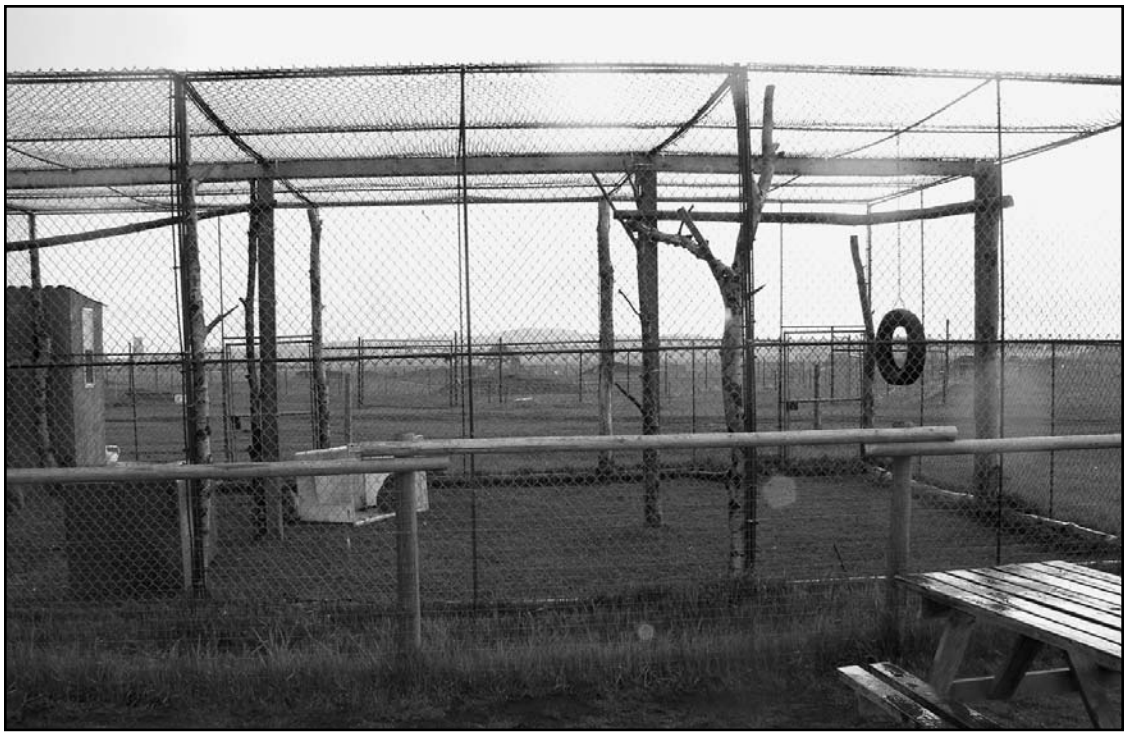
Did the majority of the 5 exhibits pass or fail? F

Additional Comments

Public can have their picture taken kissing a full grown grizzly bear. Some animals used in movie productions and shows on zoo premises. Shelters for carnivores were made out of metal. All enclosures were flat except for a few hills around the shelters. All enclosures were lacking in enrichment materials. Some dangerous animal exhibits had inadequate public stand-off barriers that a child could easily cross. A zookeeper mentioned that a male tiger had an injured foot. Public could surround Muntjac exhibit from all sides. A zookeeper mentioned that the antelope were on loan from the Calgary zoo.

This audit examines essential conditions for zoo exhibits. Scores <50 indicate one or more deficiencies that need to be addressed. Scores <40 indicate an unacceptable level of deficiencies.

Discovery Wildlife Park					
Exhibit	Black Bear	Siberian Tiger	Lion	Japanese Macaque	Deer
1. Appearance					
Animals appear generally healthy and free from visible signs of injury or disease (no ripped ears, noses, missing digits/limbs/tails, open sores, abrasions, difficulty standing, walking, breathing, etc.) (2)					
Animals free from overgrown hooves, nails, claws, teeth, etc. that may impede movement or create discomfort when eating (2)					
Animals all have good fur/feather/skin condition (1)					
Animals appear of reasonable body weight and condition. Not grossly overweight (excessively thick bodies, fat rolls) or grossly underweight (gaunt, protruding bones) (1)	-1				
Section score	4/5	5/5	5/5	5/5	5/5
2. Behaviour					
Animals not displaying abnormal, stereotypic or self-directed behaviour (2)	-2	-2			-2
animals not used for circus-type acts (2)	-2	-2	-2		
Social animals housed in appropriate families/groups/herds (i.e., not alone) (2)					
Animals interested and/or active and/or engaged with their surroundings (1)	-1		-1	-1	
Public feeding is not allowed (1)					
Section score	0/5	1/5	2/5	4/5	3/5
3. Exhibit Space					
Exhibit large enough to permit normal movement (such as flying, running or swimming at speed) and natural behaviours (4)	-2			-2	
Exhibit provides enough space for animals to feel secure (no triggering of fight/flight response) (4)	-2	-2	-2	-2	
Exhibit provides/exploits available vertical space (2)	-2	-2	-2	-2	
Exhibit is not overcrowded (2)					
Section score	4/10	6/10	6/10	4/10	10/10
4. Barrier					
Barriers in good shape (no excessive paint peeling, rust, broken areas, etc.) (2)				-2	
Barriers safe for the animals (no sharp edges, protruding wires, deep moats with hard floors, wet moats that can trap fallen animals, etc.) (1)					
Hot wires used only as supplementary barrier (not primary barrier) for potentially dangerous animals (1)	-1	-1	-1		
Section score	2/3	2/3	2/3	1/3	3/3
5. Substrate					
Majority of exhibit substrate soft (75%) (2)					
Substrate facilitates/encourages species-typical movements and behaviours (such as burrowing, digging, foraging, running, hoof wear, etc.) (1)					
Substrate topography varied (not entirely flat) (1)	-1	-1	-1	-1	-1
Substrate free from significant water saturated or flooded areas (1)	-1	-1	-1	-1	
Section score	3/5	3/5	3/5	3/5	4/5
6. Features & Furnishings					
Exhibit contains a variety of usable, species appropriate permanent features and furnishings (2)	-2	-2	-2	-2	-2
Exhibit contains sufficient quantity of permanent features and furnishings to allow all animals to use them at the same time (2)	-2		-2	-2	-2
Features and furnishings encourage/facilitate species-typical movements and behaviours (1)	-1				
Features and furnishings encourage/facilitate use of all areas of exhibit (1)	-1	-1	-1		
Furnishings not excessively worn, damaged, in need of repair or replacement (1)		-1			
Furnishings can be moved, changed or modified easily (1)				-1	-1
Section score	0/5	1/5	0/5	0/5	0/5
7. Shelter					
shelters are present in exhibit (2)		-1	-1	-2	-1
Shelters provide protection from the elements (e.g., sun, rain, snow, wind, heat, humidity) (1)				-1	
Animals are allowed free access to shelters (1)					
Shelters can accommodate all animals at the same time if necessary (dominant animals cannot monopolize shelters) (1)				-1	-1
Shelter contains bedding material and/or species-specific soft substrates, where appropriate (1)				-1	
Section score	5/5	4/5	4/5	0/5	3/5
8. Privacy					
Exhibit contains multiple privacy areas that allow animals to remove themselves from public view or, if necessary, the view of cagemates (2)	-1	-2	-2	-2	
Privacy areas can accommodate all animals at the same time, if necessary (dominant animals cannot monopolize shelters) (1)					
Visitors cannot view animals from all sides or surround animals. (1)					
Section score	1/2	0/2	0/2	0/2	2/2
9. Environmental Conditions (Total score 5 points. If outdoor/indoor exhibit – divide total of both sections (maximum 10 points) by 2)					
outdoor exhibit					
Climate extremes are properly mitigated (especially for arctic and tropical animals) (2)	-2	-2	-2	-2	-2
Exhibit is environmentally varied (shade areas, pools, etc. – not uniform throughout) (1)	-1	-1	-1	-1	
Exhibit is not situated near loud or excessive noise (1)					
Exhibit is free from garbage and excessive excrement build up (1)					
Potable water is available to all animals (1)					
Section score	2/5	2/5	2/5	2/5	3/5
indoor exhibit					
Environmental conditions are species-appropriate (2)					
Exhibit is environmentally varied (shade areas, pools, etc. – not uniform throughout) (1)					
Exhibit is not situated near loud or excessive noise (1)					
Exhibit is free from garbage and excessive excrement build up (1)					
Potable water is available to all animals (1)					
Section score					
10. Safety					
Barrier appears solidly constructed and sufficient to contain animals (2)	-2	-2	-2		
Exhibit appears free from visible defects (1)				-1	
Suitable stand-off barrier prevents public contact with cage and animals (1)	-1	-1	-1		-1
Exhibit gates and doors are locked (1)				-1	
Double door entry systems for exhibits housing potentially dangerous animals (1)	-1	-1	-1	-1	-1
Shift areas, to confine animals during cleaning, etc., with solid doors that can be opened/closed from outside the exhibit (1)					-1
Section score	0/3	1/3	0/3	0/3	0/3
11. Signage					
One or more explanatory signs at exhibit (2)	-2	-2			
Signs in a prominent, easy to see location for both children and adults (1)	-1	-1			
Signs provide accurate information about the animal's biology, behaviour and conservation status	-1	-1	-1		-1
Section score	0/2	0/2	1/2	2/2	1/2
Total Exhibit Score	21/50	25/50	25/50	21/50	34/50
Automatic Audit Failure?	yes				
* Severely cramped conditions (or restraints)					
* 90-100% hard or wire substrates					
* Barren exhibits lacking any usable features or furnishings	0				
Final Exhibit Score	0	25	25	21	34



The Japanese macaques in this exhibit were locked out of their shelter forcing them to take refuge from the rain in a plastic bin. Ropes, platforms and branches should be added to this exhibit to maximize use of vertical space and increase climbing and perching opportunities.

A tiger paces stereotypically at Discovery Wildlife Park. Flat with few features and furnishings, this exhibit also lacks shade and privacy opportunities.

This newborn macaque was taken from its family group by the zoo owners and is now kept on a leash indoors where it is being hand-raised.

This muntjac exhibit can only be regarded as inadequate. Muntjac are a nocturnal deer species and need considerably more shade and privacy than afforded by this shelter.

WSPA
World Society for the Protection of Animals

Zoo Report Card

Essential Conditions Test

Alberta

Name of Zoo: Valley Zoo

Location: Edmonton, Alberta

Auditor: Ken Gold

Date Visited: June 2, 2005

Exhibit	Appearance (5)	Behaviour (5)	Exhibit Space (10)	Barrier (3)	Substrate (5)	Features & Furnishings (5)	Shelter (5)	Privacy (2)	Environmental Conditions (5)	Safety (3)	Signage (2)	Total Score (50)	Comments Areas in need of improvement	Pass or Fail Pass = 40 or above
Siberian Tiger	4	3	7	3	5	5	4	1	4	3	2	**41**	Male tiger had a bony behind, appearing underweight. Both tigers paced stereotypically. Exhibit lacked privacy, shade and protection from the elements.	P
Coatimundi	5	5	8	3	5	5	4	0	3	1	1	**40**	Small exhibit. No privacy. No double door entry or secondary containment area (shift cages) for safely entering/cleaning exhibit.	P
White-handed Gibbon	5	4	7	3	4	3	5	0	2	3	1	**37**	Small exhibit. Gibbons were locked outside in rain with minimal shelter. No privacy areas in display area.	F
Addax	4	3	10	3	5	5	4	0	3	3	2	**42**	A large spacious exhibit. Only two addax were in an exhibit with zebu, which is not a natural social grouping. The addax had broken horns. No visual barriers between adjacent exhibits. A natural barrier of rocks and trees kept the addax away from the public.	P
Spider Monkey	5	5	7	3	4	5	5	2	3	3	1	**43**	No sign to educate the public about this species and its conservation status. Small exhibit. Minimal shade.	P

Average Score
based on a review of 5 exhibits: **41**

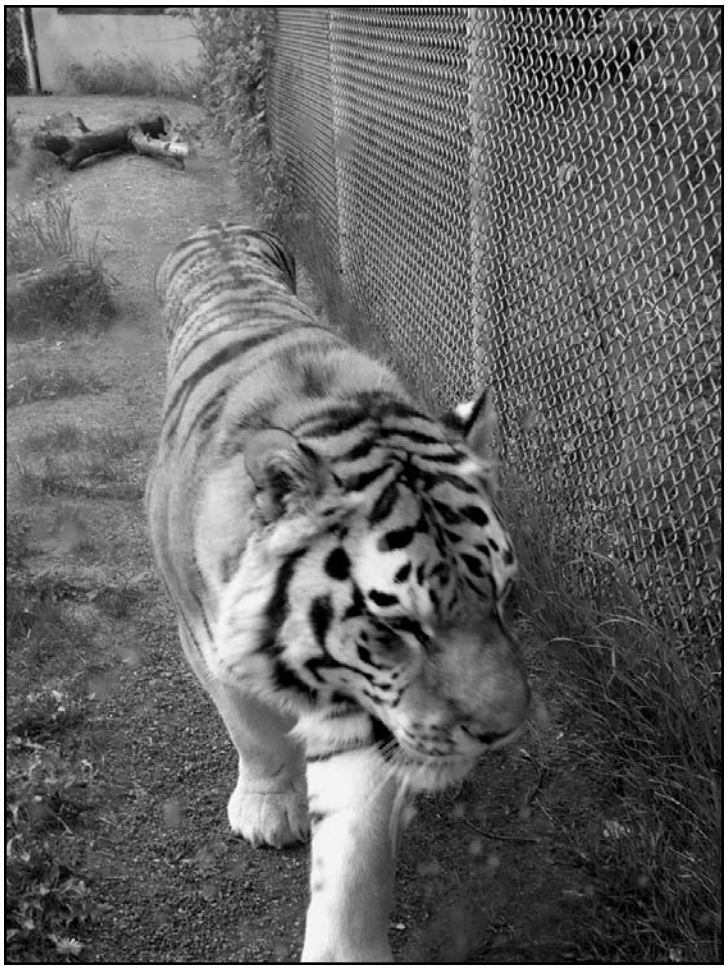
Did the majority of the 5 exhibits pass or fail? P

Additional Comments

Many of the outdoor primate exhibits were designed with a "storyland" theme. Red panda exhibit needs more useable vertical space. Swift foxes exhibited stereotypic pacing in tiny enclosure that could be surrounded from all sides. Ring-tailed lemurs were housed indoors in a small exhibit with minimal enrichment. Indoor sea lion exhibit was very small and lacked enrichment. Two species of elephants (one Asian female and one African female) were housed together in as small enclosure with minimal enrichment.

This audit examines essential conditions for zoo exhibits. Scores <50 indicate one or more deficiencies that need to be addressed. Scores <40 indicate an unacceptable level of deficiencies.

Valley Zoo					
Exhibit	Siberian Tiger	Coatimundi	White-handed Gibbon	Addax	Spider Monkey
1. Appearance					
Animals appear generally healthy and free from visible signs of injury or disease (no ripped ears, noses, missing digits/limbs/tails, open sores, abrasions, difficulty standing, walking, breathing, etc.) (2)					
Animals free from overgrown hooves, nails, claws, teeth, etc. that may impede movement or create discomfort when eating (2)					
Animals all have good fur/feather/skin condition (1)				-1	
Animals appear of reasonable body weight and condition. Not grossly overweight (excessively thick bodies, fat rolls) or grossly underweight (gaunt, protruding bones) (1)	-1				
Section score	4/5	5/5	5/5	4/5	5/5
2. Behaviour					
Animals not displaying abnormal, stereotypic or self-directed behaviour (2)	-2				
animals not used for circus-type acts (2)					
Social animals housed in appropriate families/groups/herds (i.e., not alone) (2)				-2	
Animals interested and/or active and/or engaged with their surroundings (1)			-1		
Public feeding is not allowed (1)					
Section score	3/5	5/5	4/5	3/5	5/5
3. Exhibit Space					
Exhibit large enough to permit normal movement (such as flying, running or swimming at speed) and natural behaviours (4)	-1	-2	-1		-1
Exhibit provides enough space for animals to feel secure (no triggering of fight/flight response) (4)	-1		-2		-2
Exhibit provides/exploits available vertical space (2)	-1				
Exhibit is not overcrowded (2)					
Section score	7/10	8/10	7/10	10/10	7/10
4. Barrier					
Barriers in good shape (no excessive paint peeling, rust, broken areas, etc.) (2)					
Barriers safe for the animals (no sharp edges, protruding wires, deep moats with hard floors, wet moats that can trap fallen animals, etc.) (1)					
Hot wires used only as supplementary barrier (not primary barrier) for potentially dangerous animals (1)					
Section score	3/3	3/3	3/3	3/3	3/3
5. Substrate					
Majority of exhibit substrate soft (75%) (2)					
Substrate facilitates/encourages species-typical movements and behaviours (such as burrowing, digging, foraging, running, hoof wear, etc.) (1)					
Substrate topography varied (not entirely flat) (1)			-1		-1
Substrate free from significant water saturated or flooded areas (1)					
Section score	5/5	5/5	4/5	5/5	4/5
6. Features & Furnishings					
Exhibit contains a variety of usable, species appropriate permanent features and furnishings (2)					
Exhibit contains sufficient quantity of permanent features and furnishings to allow all animals to use them at the same time (2)					
Features and furnishings encourage/facilitate species-typical movements and behaviours (1)			-1		
Features and furnishings encourage/facilitate use of all areas of exhibit (1)			-1		
Furnishings not excessively worn, damaged, in need of repair or replacement (1)					
Furnishings can be moved, changed or modified easily (1)					
Section score	5/5	5/5	3/5	5/5	5/5
7. Shelter					
shelters are present in exhibit (2)	-1	-1		-1	
Shelters provide protection from the elements (e.g., sun, rain, snow, wind, heat, humidity) (1)					
Animals are allowed free access to shelters (1)					
Shelters can accommodate all animals at the same time if necessary (dominant animals cannot monopolize shelters) (1)					
Shelter contains bedding material and/or species-specific soft substrates, where appropriate (1)					
Section score	4/5	4/5	5/5	4/5	5/5
8. Privacy					
Exhibit contains multiple privacy areas that allow animals to remove themselves from public view or, if necessary, the view of cagemates (2)	-1	-2	-2	-2	
Privacy areas can accommodate all animals at the same time, if necessary (dominant animals cannot monopolize shelters) (1)		-1	-1	-1	
Visitors cannot view animals from all sides or surround animals. (1)		-1	-1	-1	
Section score	1/2	0/2	0/2	0/2	2/2
9. Environmental Conditions (Total score 5 points. If outdoor/indoor exhibit – divide total of both sections (maximum 10 points) by 2)					
outdoor exhibit					
Climate extremes are properly mitigated (especially for arctic and tropical animals) (2)	-1	-2	-2	-2	-2
Exhibit is environmentally varied (shade areas, pools, etc. – not uniform throughout) (1)			-1		
Exhibit is not situated near loud or excessive noise (1)					
Exhibit is free from garbage and excessive excrement build up (1)					
Potable water is available to all animals (1)					
Section score	4/5	3/5	2/5	3/5	3/5
indoor exhibit					
Environmental conditions are species-appropriate (2)					
Exhibit is environmentally varied (shade areas, pools, etc. – not uniform throughout) (1)					
Exhibit is not situated near loud or excessive noise (1)					
Exhibit is free from garbage and excessive excrement build up (1)					
Potable water is available to all animals (1)					
Section score					
10. Safety					
Barrier appears solidly constructed and sufficient to contain animals (2)					
Exhibit appears free from visible defects (1)					
Suitable stand-off barrier prevents public contact with cage and animals (1)					
Exhibit gates and doors are locked (1)					
Double door entry systems for exhibits housing potentially dangerous animals (1)		-1			
Shift areas, to confine animals during cleaning, etc., with solid doors that can be opened/closed from outside the exhibit (1)		-1			
Section score	3/3	1/3	3/3	3/3	3/3
11. Signage					
One or more explanatory signs at exhibit (2)					
Signs in a prominent, easy to see location for both children and adults (1)					
Signs provide accurate information about the animal's biology, behaviour and conservation status		-1	-1		-1
Section score	2/2	1/2	1/2	2/2	1/2
Total Exhibit Score	41/50	40/50	37/50	42/50	43/50
Automatic Audit Failure?					
* Severely cramped conditions (or restraints)					
* 90-100% hard or wire substrates					
* Barren exhibits lacking any usable features or furnishings					
Final Exhibit Score	41	40	37	42	43



This Siberian tiger appeared to be underweight and paced back and forth repeatedly.

Visitors can view the gibbons from all sides. This exhibit lacks privacy areas and does not have sufficient space for these animals to fully display natural behaviours. Gibbons can cover 50 feet in just one swing.

This spider monkey exhibit is very small and attempts to compensate by making some use of vertical space by putting ropes across the exhibit for the monkeys to climb and swing from.

Two species of elephants (one Asian and one African female) were housed together in a small, barren enclosure with minimal enrichment. Elephants are wide ranging, highly intelligent, extremely social animals that require large complex spaces and appropriate social environments. Some zookeepers and elephant trainers are beginning to publicly speak out against keeping elephants in zoos. Some zoos, like the San Francisco Zoo and Detroit Zoo have moved the last of their elephants to sanctuaries.

WSPA
World Society for the Protection of Animals

Zoo Report Card

Essential Conditions Test

Alberta

Name of Zoo: Guzoo Animal Farm

Location: Three Hills, Alberta

Auditor: Ken Gold

Date Visited: June 5, 2005

Exhibit	Appearance (5)	Behaviour (5)	Exhibit Space (10)	Barrier (3)	Substrate (5)	Features & Furnishings (5)	Shelter (5)	Privacy (2)	Environmental Conditions (5)	Safety (3)	Signage (2)	Total Score (50)	Comments Areas in need of improvement	Pass or Fail Pass = 40 or above
Black Bear	4	2	7	0	4	2	4	1	2	0	1	**27**	Male is overweight and too human-oriented (more focused on visitors than conspecifics). Female paced in stereotypic fashion. Rusty fence. Hot wires used for primary barrier. No double door entry or secondary containment area (shift cage) for safely entering/cleaning exhibit. Food dumped on floor of exhibit (some rotten).	F
Timber Wolf	5	3	4	3	3	5	4	2	2	0	0	**31**	Small, flat exhibit. Lacked shade. Dirty water. Flooded in some areas. Barriers inadequate in places. Public could potentially reach through fence and get bitten. No double door entry or secondary containment area (shift cages) for safely entering/cleaning exhibit. No educational sign.	F
Siberian Tiger	5	4	0	1	1	0	3	0	1	0	0	**15**	Small, flat enclosure with minimal enrichment. Dirty water. No privacy. Flooded in some areas. No double door entry or secondary containment area (shift cages) for safely entering/cleaning exhibit. No educational sign.	F
Hybrid Baboon	4	3	0	0	2	0	5	2	2	1	0	**19**	Baboon housed alone - inapprpropriate social grouping. Appears overweight (possibly result of unrestricted public feeding). Very small enclosure with minimal opportunity to use vertical elements. No enrichment. Primary barriers made of rusty deteriorating mesh and corrugated metal siding. Baboon could put arms through gaps in fence, grab free roaming birds and dogs.	F
White-tailed Deer	5	4	10	3	3	0	2	1	1	0	0	**29**	No water source observed. Public feeding encouraged. Shelter, fence and gates have sharp edges. Shelter is deteriorating. No public stand-off barrier. No double door entry or shift cages for safely entering/cleaning exhibit. No educational signage.	F

Average Score
based on a review of 5 exhibits: **24**

Did the majority of the 5 exhibits pass or fail? F

Additional Comments

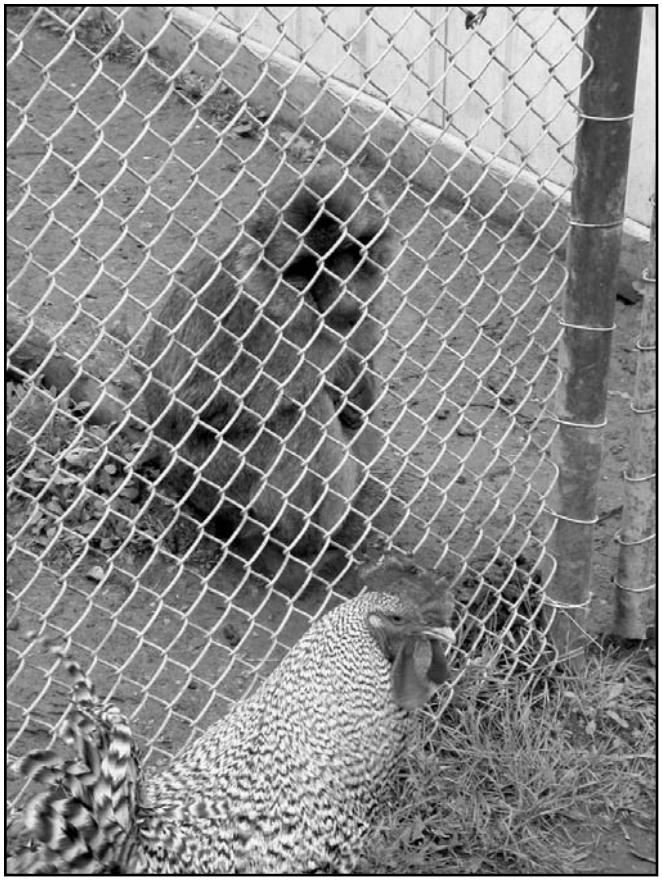
Visitors encouraged to feed animals bread provided by zoo in big freezer that was not working; some loaves were moldy. Many animals were housed in inappropriate social groupings (capuchin, barbary macaque and baboon were all housed alone and one lion was in an exhibit with a domestic dog). A two-year-old lion was behind a low fence - could potentially leap over, especially from park bench. More than 15 domestic dogs were allowed to freely roam the zoo premises - could spread disease and harass other animals. Most enclosures did not have secondary containment areas or double door entries.

This audit examines essential conditions for zoo exhibits. Scores <50 indicate one or more deficiencies that need to be addressed. Scores <40 indicate an unacceptable level of deficiencies.

Guzoo Animal Farm					
Exhibit	Black Bear	Timber Wolf	Siberian Tiger	Hybrid Baboon	White-tailed Deer
1. Appearance					
Animals appear generally healthy and free from visible signs of injury or disease (no ripped ears, noses, missing digits/limbs/tails, open sores, abrasions, difficulty standing, walking, breathing, etc.) (2)					
Animals free from overgrown hooves, nails, claws, teeth, etc. that may impede movement or create discomfort when eating (2)					
Animals all have good fur/feather/skin condition (1)					
Animals appear of reasonable body weight and condition. Not grossly overweight (excessively thick bodies, fat rolls) or grossly underweight (gaunt, protruding bones) (1)	-1			-1	
Section score	4/5	5/5	5/5	4/5	5/5
2. Behaviour					
Animals not displaying abnormal, stereotypic or self-directed behaviour (2)	-2				
animals not used for circus-type acts (2)					
Social animals housed in appropriate families/groups/herds (i.e., not alone) (2)					
Animals interested and/or active and/or engaged with their surroundings (1)		-1		-1	
Public feeding is not allowed (1)	-1	-1	-1	-1	-1
Section score	2/5	3/5	4/5	3/5	4/5
3. Exhibit Space					
Exhibit large enough to permit normal movement (such as flying, running or swimming at speed) and natural	-2	-2	-4	-4	
Exhibit provides enough space for animals to feel secure (no triggering of fight/flight response) (4)	-1	-2	-4	-4	
Exhibit provides/exploits available vertical space (2)		-2	-2	-2	
Exhibit is not overcrowded (2)					
Section score	7/10	4/10	0/10	0/10	10/10
4. Barrier					
Barriers in good shape (no excessive paint peeling, rust, broken areas, etc.) (2)	-2		-1	-2	
Barriers safe for the animals (no sharp edges, protruding wires, deep moats with hard floors, wet moats that can trap fallen animals, etc.) (1)				-1	
Hot wires used only as supplementary barrier (not primary barrier) for potentially dangerous animals (1)	-1		-1		
Section score	0/3	3/3	1/3	0/3	3/3
5. Substrate					
Majority of exhibit substrate soft (75%) (2)			-2		
Substrate facilitates/encourages species-typical movements and behaviours (such as burrowing, digging, foraging, running, hoof wear, etc.) (1)				-1	
Substrate topography varied (not entirely flat) (1)		-1	-1	-1	-1
Substrate free from significant water saturated or flooded areas (1)	-1	-1	-1	-1	-1
Section score	4/5	3/5	1/5	2/5	3/5
6. Features & Furnishings					
Exhibit contains a variety of usable, species appropriate permanent features and furnishings (2)	-1		-2	-2	-2
Exhibit contains sufficient quantity of permanent features and furnishings to allow all animals to use them at the same time (2)					
Features and furnishings encourage/facilitate species-typical movements and behaviours (1)	-1		-1	-1	-1
Features and furnishings encourage/facilitate use of all areas of exhibit (1)			-1	-1	-1
Furnishings not excessively worn, damaged, in need of repair or replacement (1)				-1	
Furnishings can be moved, changed or modified easily (1)	-1		-1	-1	-1
Section score	2/5	5/5	0/5	0/5	0/5
7. Shelter					
shelters are present in exhibit (2)					-1
Shelters provide protection from the elements (e.g., sun, rain, snow, wind, heat, humidity) (1)			-1		-1
Animals are allowed free access to shelters (1)					
Shelters can accommodate all animals at the same time if necessary (dominant animals cannot monopolize shelters) (1)					
Shelter contains bedding material and/or species-specific soft substrates, where appropriate (1)	-1	-1	-1		-1
Section score	4/5	4/5	3/5	5/5	2/5
8. Privacy					
Exhibit contains multiple privacy areas that allow animals to remove themselves from public view or, if necessary, the view of cagemates (2)			-2		-1
Privacy areas can accommodate all animals at the same time, if necessary (dominant animals cannot monopolize shelters) (1)					
Visitors cannot view animals from all sides or surround animals. (1)	-1		-1		
Section score	1/2	2/2	0/2	2/2	1/2
9. Environmental Conditions (Total score 5 points. If outdoor/indoor exhibit – divide total of both sections (maximum 10 points) by 2)					
outdoor exhibit					
Climate extremes are properly mitigated (especially for arctic and tropical animals) (2)	-2	-2	-2	-2	-2
Exhibit is environmentally varied (shade areas, pools, etc. – not uniform throughout) (1)			-1	-1	-1
Exhibit is not situated near loud or excessive noise (1)					
Exhibit is free from garbage and excessive excrement build up (1)					
Potable water is available to all animals (1)	-1	-1	-1		-1
Section score	2/5	2/5	1/5	2/5	1/5
indoor exhibit					
Environmental conditions are species-appropriate (2)					
Exhibit is environmentally varied (shade areas, pools, etc. – not uniform throughout) (1)					
Exhibit is not situated near loud or excessive noise (1)					
Exhibit is free from garbage and excessive excrement build up (1)					
Potable water is available to all animals (1)					
Section score					
10. Safety					
Barrier appears solidly constructed and sufficient to contain animals (2)	-2	-2	-2		-2
Exhibit appears free from visible defects (1)				-1	
Suitable stand-off barrier prevents public contact with cage and animals (1)					-1
Exhibit gates and doors are locked (1)					
Double door entry systems for exhibits housing potentially dangerous animals (1)	-1	-1	-1		-1
Shift areas, to confine animals during cleaning, etc., with solid doors that can be opened/closed from outside the exhibit (1)	-1	-1	-1	-1	-1
Section score	0/3	0/3	0/3	1/3	0/3
11. Signage					
One or more explanatory signs at exhibit (2)		-2	-2	-2	-2
Signs in a prominent, easy to see location for both children and adults (1)		-1	-1	-1	-1
Signs provide accurate information about the animal's biology, behaviour and conservation status	-1	-1	-1	-1	-1
Section score	1/2	0/2	0/2	0/2	0/2
Total Exhibit Score	27/50	31/50	15/50	19/50	29/50

Automatic Audit Failure?					
* Severely cramped conditions (or restraints)					
* 90-100% hard or wire substrates					
* Barren exhibits lacking any usable features or furnishings					
Final Exhibit Score	27	31	15	19	29

A dog and young lion are housed in a very small exhibit together in direct violation of Guzoo's permit conditions. The lion paced stereotypically. The primary barrier is quite low from a public safety perspective, which could pose a risk of escape. Parts of this exhibit were flooded.



This baboon could potentially grab the birds and dogs that passed by it through the gaps in the primary exhibit barrier. Most of the exhibits at this facility lacked educational signs. The sign on this baboon exhibit read "spider monkey."

A hole in the primary barrier used in the cougar exhibit is repaired with a patch of fencing material. Many of the exhibit barriers at Guzoo Animal Farm are insecure and in various states of disrepair.

Mounds of shredded paper used presumably to cover feces are consumed by goats and pigs. Though these animals have strong digestive systems, the colored paper has no nutritional value and the ink may contain harmful chemicals.

Many water bowls were dirty and some were even empty.

An excessive amount of feces was observed in some exhibits and outside of the enclosures in public areas as well. Several dogs, horses, donkeys, ducks and a cat were permitted to run around the zoo unattended, in contravention of permit rules. This could induce stress in some of the animals and can also facilitate the spread of zoonotic disease.

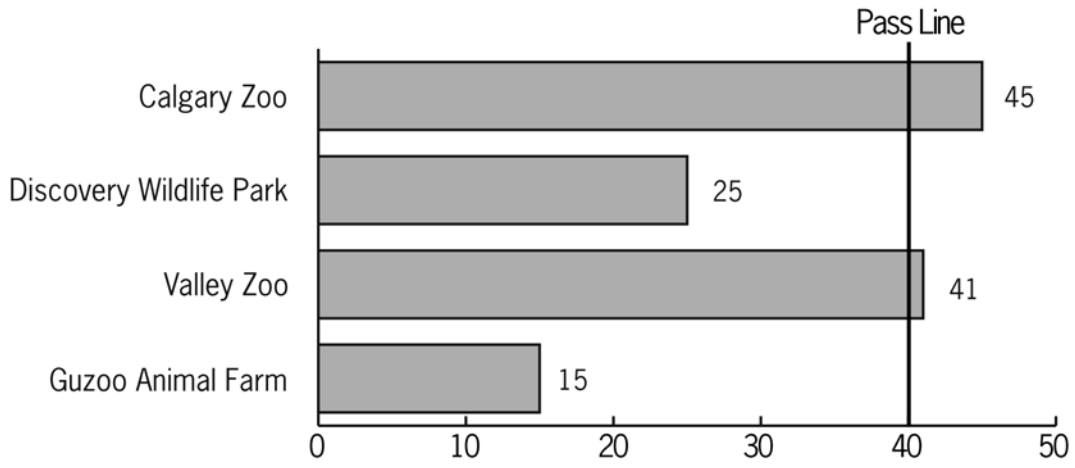
A dog carrying the leg of a dead animal in its mouth.

This black bear paced back and forth along the exhibit barrier, taking exactly fifteen steps in each direction. This stereotypic behaviour is a sign of psychological disturbance.

Section C

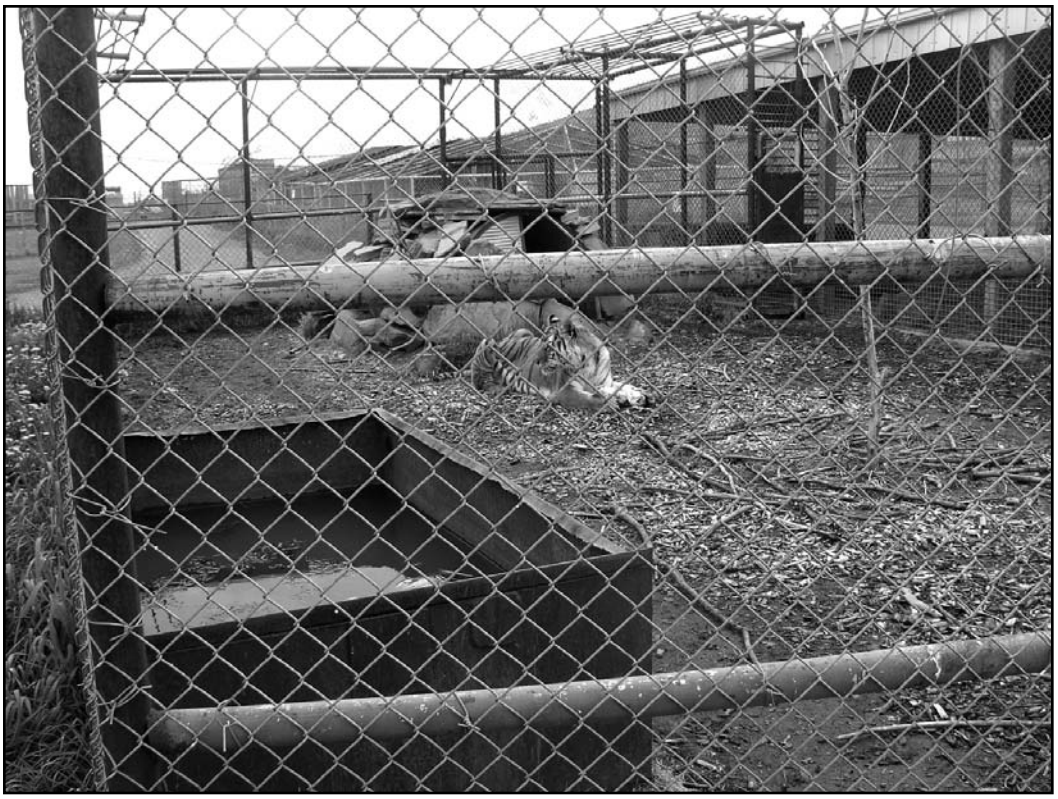
Zoo to Zoo Comparisons

Tiger Exhibits



The tigers exhibits at Guzoo Animal Farm and Discovery Wildlife Park were extremely problematic. Both were small, barren exhibits, that did little to stimulate the animals' natural behaviours. Neither exhibit was sufficiently big enough to allow the tigers to run at speed. Tigers in the wild are excellent swimmers and spend much time in the water, yet neither exhibit provided a pool sufficiently large enough for the tigers to swim in. A lack of opportunities to exercise and express natural behaviours can lead to a variety of physical and behavioural problems, including lethargy, obesity, and/or stereotypic pacing. Attempts should be made to better furnish these exhibits to encourage the animals to be more active.

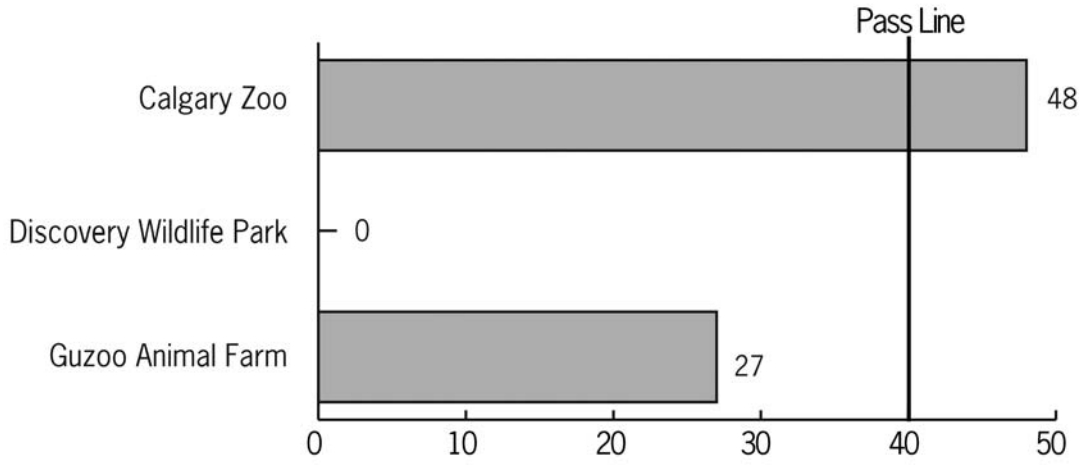
In contrast, the tiger exhibits at Alberta's two municipal zoos both featured pools for the tigers to swim in. Both were larger enclosures, though the Valley Zoo exhibit could stand to be larger still. Of the four exhibits, the tiger exhibit at Calgary Zoo was the best. Furnished with a number of rocks and logs for the tigers to climb and a pond for the animals to swim in, this exhibit was quite likely large enough for the animals to run at speed. Boomer balls, ropes and other objects were placed in the exhibit for enrichment. It should be noted that the Calgary Zoo's secondary tiger exhibit was much smaller and quite muddy. However, this second enclosure was still better furnished than two tiger exhibits at the roadside zoos, and the zoo's three tigers were apparently being rotated between the two exhibits so that all would have the benefit of the larger enclosure at least some of the time.



Guzoo Animal Farm's tiger enclosure was small, featured no enrichment and very little in the way of cage furnishings, had dirty water and an inappropriately hard substrate. This was the worst tiger exhibit seen in Alberta.

The tigers at the Calgary zoo were in a large and naturally varied exhibit with a pond. Various objects were placed in the exhibit for enrichment.

Bear Exhibits



The worst bear exhibit, that observed at Discovery Wildlife Park, automatically failed the audit because it is completely barren. There was nothing in this exhibit to stimulate activity and not even one tree for the bears to climb or to provide shade. One bear which appeared overweight was too human-oriented and seemed oblivious to its surroundings.

The exhibit at Guzoo Animal Farm has a metal framed children's jungle gym that is inappropriate for bears. A fair bit of exhibit space is taken up by the jungle gym along with piles of branches and logs which restricts the space left over for the bears to run and move about more freely. One of the bears housed in the Guzoo exhibit paced stereotypically taking exactly 15 steps in each direction. Neither bear exhibits had shift areas or double door safety porches to allow the cage to be serviced safely.

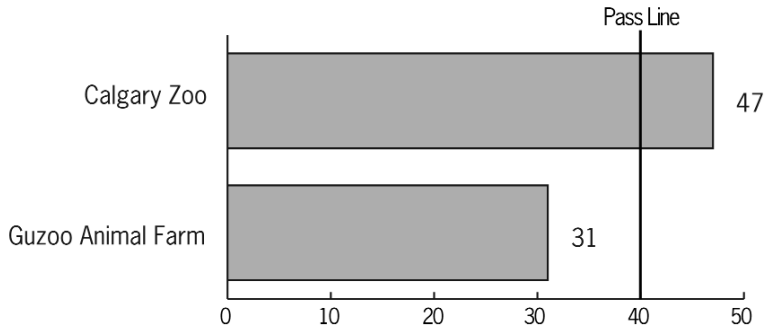
Only the bear exhibit at the Calgary Zoo passed the audit. The exhibit was topographically varied, with the majority of the exhibit on a gradual slope with logs and rocks to climb. A stream ran through the exhibit into a small pond. A log was provided in the pond for enrichment and the bear was quite engaged with this. Though black bears are good swimmers neither of the two non-accredited facilities provided pools for their bears. Both grizzly bears and black bears will use pools to cool off in.

This grizzly bear at the Calgary Zoo played with a log in the water. The exhibit is topographically varied with many different natural features.

A bear feeds on a pile of mostly moldy bread at Guzoo Animal Farm. Bread is not nutritionally adequate for bears and other wild animals. The bears did not have easy access to drinking water let alone a pool to swim and bathe in.

The bear exhibit at Discovery Wildlife Park automatically failed the audit because it is completely barren. The bear paddock has no moveable furnishings or enrichment. The fixed furnishings are also few and consist of the bear's trailer/shelter, a tub of water, and an open-ended culvert, apart from the trailer, the only shade in the enclosure.

Wolf Exhibits



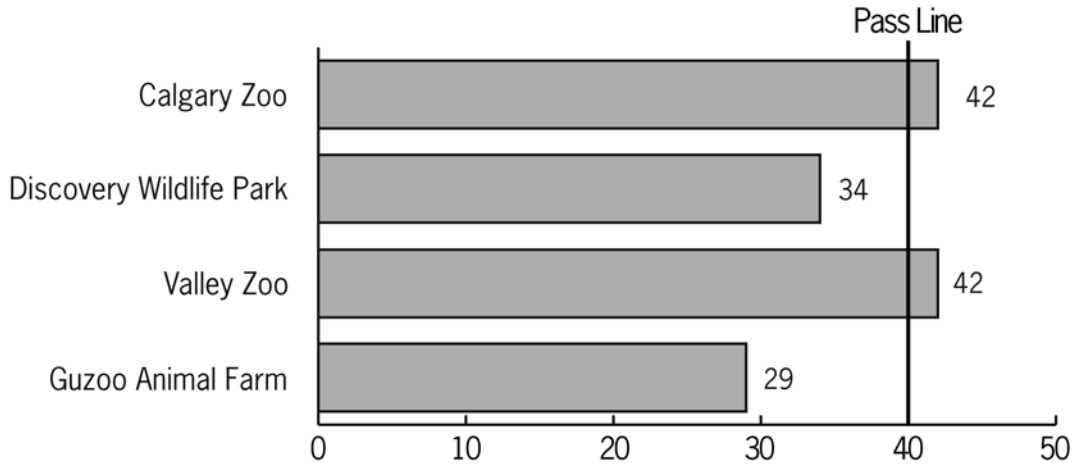
Only two wolf exhibits were assessed during this investigation. Though the Valley Zoo had a wolf exhibit, it was not audited because the animals were not visible to the public at the time of the audit. The wolf exhibit at the Calgary Zoo passed the audit whereas the wolf exhibit at Guzoo Animal Farm failed. The exhibit at the Calgary Zoo lost marks for lack of shade and sufficient space for each animal to feel adequately secure. It had plenty of rocks and trees and hollowed out logs for shelter. The exhibit was topographically varied with the lowest area of elevation near the public stand-off barrier.

The exhibit at Guzoo Animal Farm failed the test because it did not provide adequate space, shade, shelter or privacy for its wolves. The terrain was flat with little variation and the enclosure was not properly secured to meet professional safety standards. There were also no visual barriers between the wolf exhibit and the nearby ungulate exhibits. This could cause stress for both species but particularly for the prey animals. Additional points were deducted because there was no educational sign for this exhibit and the public was encouraged to feed the animals.

The wolves are in a topographically varied exhibit at the Calgary zoo with many natural features and furnishings, including rocks, trees and hollowed-out logs.

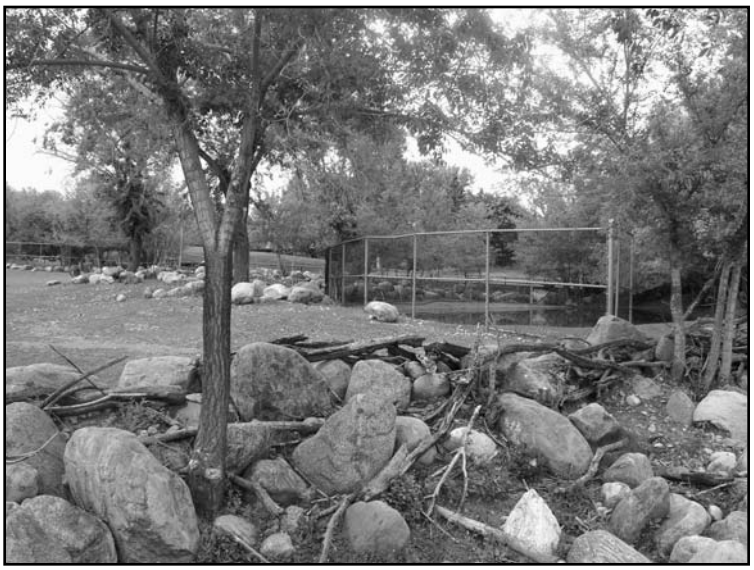
The wolf exhibit at Guzoo Animal Farm is flat and devoid of trees. This wolf has broken through a fenced-in area likely created to protect the dead tree.

Ungulate Exhibits



The elk exhibit at the Calgary Zoo was varied in terms of shape and topography providing a number of places for the animals to retreat from public view. The exhibit lost marks for lack of shade and because the stand-off barrier was inadequate in some places. The addax exhibit at the Valley Zoo was large and flat. The exhibit lost marks for lack of shade and privacy. The trees in this exhibit were surrounded by rocks so they were not accessible to the animals though it created a more natural looking primary barrier.

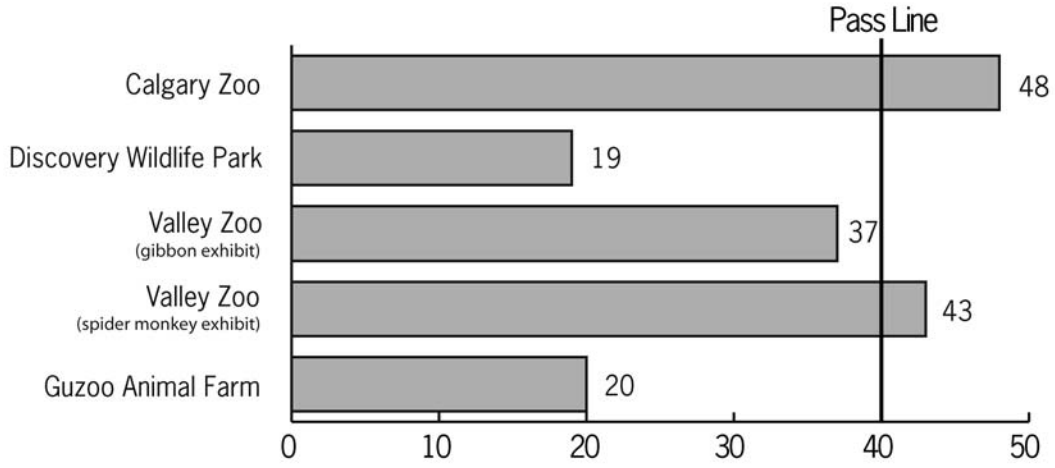
The deer exhibits at Discovery Wildlife Park and Guzoo Animal Farm failed the audit because they provided little to no shade and were without adequate shelters. The deer at both of these facilities were in the auditor's view "too human-oriented" (more concerned with the public than with their cagemates), possibly as a result of the public feeding going on at these facilities.



This Addax exhibit at the Edmonton Valley Zoo is naturally varied and has a pond, though these desert antelopes are unlikely to make much use of it. A natural barrier made with rocks and trees on a slope kept the animals at a distance from the public, encouraging natural behaviours.

This fence is in a state of disrepair with several protruding wires that could cause injury to the animals.

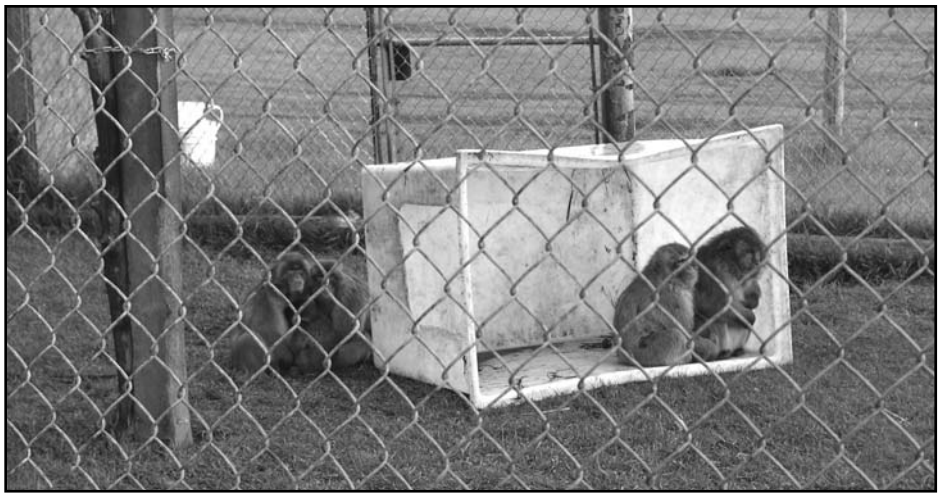
Primate Exhibits



Discovery Wildlife Park and Guzoo Animal Farm had the worst primate exhibits. Guzoo's baboon exhibit was small, flat and lacked climbing opportunities. The exhibit's lone baboon was not engaged with its surroundings and appeared instead to be focussed on the public, possibly looking for food hand-outs. It should be noted that extremely social animals such as primates suffer when housed alone. This baboon had difficulty climbing about in its cage. It nearly slipped off of the chain link fence and narrow bars as it tried to keep itself high above the ground. The branch that was provided in this enclosure did not even reach far enough to provide easy entry into the shelter. The snow monkey exhibit at Discovery Wildlife Park was also small and grossly substandard. The monkeys were locked out of their shelter and sought refuge under a small plastic bin while it rained. A tire and some branches were provided for climbing. The primary barrier was inadequately locked with a twisted wire.

Of the five primate exhibits audited, only two received passing scores. The Calgary Zoo's snow monkey exhibit was by far the best primate exhibit of the five that were audited. It made optimal use of vertical space providing places for the animals to climb on as well as ropes for the monkeys to swing on. The spider monkey exhibit at Valley Zoo, though it received a passing score, lost marks for being too flat and open to the elements. The auditor also deducted partial marks in the space category meaning that it was not large enough in his opinion for the animals displayed.

Valley Zoo's gibbon exhibit failed to achieve a passing score. Like the spider monkey exhibit, the auditor deemed it too small. It also lost marks due to a lack of useable furnishings and insufficient privacy. All animals should be provided with the opportunity to remove themselves from the view of visitors and their cage mates. Zoo animals that are forced to be on public display at all hours of the day without any privacy areas may be chronically stressed, resulting in physical and behavioural problems. The gibbons did not appear engaged with their surroundings.



These snow monkeys are locked out of their shelter box, forcing them to seek refuge in this white plastic bin. Not really a shelter at all, it affords little protection from rain, cold, wind or summer sun. Translucent, it would provide only limited shade and might amplify heat. Dominant animals would likely monopolize its use.

The snow monkey exhibit at the Calgary Zoo makes excellent use of vertical space. There are a variety of branches, ropes and platforms for the monkeys to climb on and a pool to swim in.

With few places to climb, this lone baboon struggles to place both of its feet on the boards of the primary exhibit barrier.

Section D

WSPA's Conclusions and Recommendations

WSPA's Conclusions and Recommendations

The four Alberta zoos reviewed here are a study in contrasts. On one side, we have Alberta's two municipal zoos, the Calgary Zoo and Edmonton's Valley Zoo; on the other side, the roadside zoos, Discovery Wildlife Park and Guzoo Animal Farm.

As many as 11 out of 20 exhibits (55%) failed the audit. All but one of these exhibits were found at either Guzoo Animal Farm or Discovery Wildlife Park. Dirty or empty water bowls, filthy cages, snow monkeys locked outside in the rain, a baboon with little to climb and lions and bears in featureless enclosures with no privacy, barely any shade and nothing much to do. These are just some of the problems observed at these two facilities.

That so many exhibits failed WSPA's audit is especially galling given that the audit itself is designed to identify essential housing and husbandry conditions. Ideally, every zoo exhibit should be able to satisfy these conditions and receive a perfect score (at the very least, they should come close!) The fact that so many exhibits failed, indicates critical deficiencies in exhibit design, many of which can have a significant negative impact on the physical and psychological well-being of the animals.

And while there is a marked difference between the standard of care and exhibit design at the municipally run zoos versus the private zoos, they all had deficiencies that need to be addressed. A number of exhibits at Calgary Zoo and Valley Zoo in Edmonton also lacked adequate shade, privacy and environmental enrichment, though the situation was nowhere near as dire as at Discovery Wildlife Park or Guzoo Animal Farm. Stereotypic behaviours, such as pacing and repetitive rocking movements, were observed at all four zoos investigated in this report.

The auditor, in his additional comments, noted that a number of exhibits at Calgary Zoo (indoor exhibits for primates and giraffe and the outdoor elephant exhibit) and Valley Zoo (sea lion, elephant, swift fox and ring-tailed lemur exhibits) were substandard and/or too small in his opinion.

Only eight out of 20 exhibits (40%) satisfied all of the necessary safety conditions. In order to receive a perfect score for safety, the exhibit had to have solidly constructed barriers with secure locking mechanisms, proper stand-off barriers to prevent public contact with the animals as well as a double door entry system and a secondary containment (shift) area to ensure the safety of staff and the public when servicing the enclosures of dangerous animals. As many as seven exhibits (35%) were so poor from a public safety standpoint, they received a score of zero in this section of the audit.

Legislation is clearly needed to address the numerous deficiencies in animal housing, care and safety documented in this report. The Alberta government must strengthen its zoo regulations and enforcement measures so that every animal receives an acceptable level of care. No animal should be left behind.

Recommendations for zoo owners and managers

Dr. Gold suggested that some dangerous animals could potentially escape from their exhibits, if they were sufficiently motivated. Higher fences with proper overhangs would eliminate this threat. Another safety concern is the ease at which the public can have direct contact with potentially dangerous animals either because of inadequate stand-off barriers or because the zoo actually encouraged contact. Public stand-off barriers should be in place in front of all zoo enclosures and positioned at an appropriate distance from primary cage barriers to prevent contact with the animals. Some dangerous animal exhibits lacked double door entry systems and shift areas forcing staff to enter enclosures for cleaning or to supply fresh food and water. Even though the animals may be accustomed to the primary caretakers, a secondary containment area eliminates all risk of attack. Double door entry is recommended for all dangerous animals.

Since this audit identifies serious deficiencies within each zoo exhibit, it is our hope that zoo managers will address these as quickly as possible. Some of these deficiencies can be addressed very easily with minimal resources. For instance, some exhibits did not allow the animals any privacy. Boxes made of durable materials, large rocks, trees and vegetation, brush piles, hollowed out logs that open away from the public and fences are just a few of the materials that can be used as visual baffles to create privacy areas. In some cases, shelter boxes were provided for the animals in the display area but their doors were locked. At the time of this audit, these animals were forced out on display in the rain. Regardless of the weather conditions, all animals should have access to shelter and privacy areas at all times.

All animals should be provided with an opportunity to remove themselves from the view of visitors and, if necessary, their cagemates. Zoo animals that are "locked out", deprived of shelter and privacy areas, or otherwise forced to be on public display can suffer from chronic stress resulting in physical and behavioural problems. Certainly visitors expect to see the animals when they pay their admission but visitor expectations should never override the welfare needs of the animals.

At some zoos, exhibits were placed side by side with only a wire mesh fence between them. Visual barriers should be constructed between inappropriate neighbours such as a predator species and their prey, as they should between nocturnal species that are active during the evening and those that are active during the day. This could reduce stress levels and decrease the potential for conflict between animals in adjacent cages.

Many animals were observed exhibiting stereotypical behaviours. In some cases, a program of environmental enrichment might generate new activity, displacing aberrant, stereotypic behaviours with more normal ones in the process. It is important to note that psychological well-being is every bit as important as physical well-being, so when animals are psychologically distressed or disturbed, zoos should respond with the same level of urgency as they do for physical illness.

With the exception of the Calgary Zoo, most of the exhibits observed provided little to no environmental enrichment. Enrichment items and techniques are often very easy to deliver and may greatly improve the quality of the animals' lives. Enrichment is a way of compensating for a least some of the deficiencies inherent in captive environments. Different forms of enrichment can be used to encourage species-typical behaviours, thus enhancing animal welfare. Enrichment should not be viewed as an 'added extra' but a requisite of good captive animal husbandry, important to ensure good welfare and

therefore just as important as providing food and water. There are many useful resources, such as *The Shape of Enrichment*, a quarterly publication that provides information on environmental enrichment items and techniques for captive animals (subscriptions are available on www.enrichment.org)

A few animals were human-oriented, appearing more interested in receiving attention from visitors than interacting with their cagemates. This could be the result of public feeding or zoo hand-rearing the animals, sometimes for "circus-type" performances. Discovery Wildlife Park goes so far as to allow the public to kiss a grizzly bear. Not only can these activities be detrimental to the welfare of the animals but they also promote a false image of wildlife, contradicting the primary objective of zoo education. From both an educational and welfare perspective, all efforts should be made to encourage the expression of natural, species-typical behaviours. Allowing the visitors to have direct contact with potentially dangerous animals is clearly a huge public safety risk that needs to be prohibited immediately. It should be recognized that many animals, from deer to bison, from monkeys to reptiles, may harbour diseases which are transmissible to humans and so the best practice is to prevent the public from coming into contact with them.

Lack of shade was a problem in most of the exhibits audited in this investigation. Some tree trunks were protected with wire mesh so that the animals could not climb or scratch them. Zoo owners/managers are sometimes reluctant to invest in planting more trees if an animal is likely to damage and destroy them. Just because maintaining trees in an exhibit may be difficult, they should still be included.

Many of the exhibits at Discovery Wildlife Park and Guzoo Animal Farm were quite barren leaving the animals few opportunities to express natural behaviours. One exhibit at Discovery Wildlife Park was so barren the auditor registered an automatic failure for this enclosure, assigning it a score of zero - the only enclosure of the 20 we looked at to receive this dubious distinction. A more stimulating environment could quite easily be achieved simply by adding logs and a pool in the bear exhibit. Similarly, more ropes and branches in the primate exhibits and platforms and pools in the tiger exhibits would substantially improve the behavioural opportunities for these animals.

Recommendations for the Alberta government

This report points to the need for strong provincial legislation to regulate zoos under one comprehensive licensing regime that protects both animals and the public from undue harm. The zoos that are able and willing to conform to acceptable animal welfare and public safety standards should be required by law to do so and those that can't should be closed.

The following are some basic recommendations for improving the regulation of Alberta zoos:

1. Improving the welfare of zoo animals should be the overriding objective of Alberta's new zoo regulations.
2. The Alberta government should follow the lead of other Canadian provinces and adopt a policy that restricts the number of zoos in the province. P.E.I has adopted a policy to

discourage new zoos from opening. In B.C, consideration is given to the number of zoos already in the area before approving an application for a new one. In Manitoba, the government maintains the authority to limit the number of licenses that may be issued.

3. Licenses should only be renewed after a comprehensive inspection covering all aspects of zoo management and animal care. Inspections should be carried out annually by a team composed of two or more veterinarians, biologists or captive wildlife specialists.
4. The licensing regime should allow for unannounced inspections to be carried out, either on a "spot check" basis or as a response to a specific complaint. Frequency of inspections should vary with the facility's history of compliance. Permits should be subject to revocation for non-compliance.
5. Zoo standards should cover all aspects of acceptable captive wildlife management, in particular animal housing, husbandry, and public safety, and zoo licenses should be granted on the basis of compliance with these standards.
6. Any standards promulgated should be clear and easy to interpret to foster a better culture of enforcement. For example, the existing licensing manual for zoos calls on the development plan to include provision of “facilities appropriate for the species to be held.” Properly interpreted this should have prevented the kinds of gross deficiencies noted in this most recent audit. Fish and Wildlife staff have complained in the past that this is too vague. Similarly, any penalties for non-compliance should be clearly articulated in the new licensing manual so enforcement personnel are clear on what course of action to take.
7. The standards should set out essential conditions respecting the location, dimension, construction and maintenance of enclosures (for each species or species group) to protect against suffering, to provide adequate shelter and privacy, to facilitate safe cleaning, to prevent escapes and to prevent public contact. These standards should be specific to the particular physical and behavioural needs of each species on display.
8. Potentially dangerous animals should be specifically listed in the new zoo regulations with special conditions pertaining to their safe keeping. There should be no contact between the public and dangerous animals.
9. Specific standards should be developed to ensure the safe and humane transport of each species or species group which sets out minimal conditions for the size of the vehicle and the containment area and a schedule for the provision of food, water and rest.
10. Any animal showing signs of psychological disturbance should be attended to with the same urgency as a physical illness, with expert help called upon if necessary to put in place every possible measure to alleviate that condition. If this fails, then a veterinarian, ASPCA inspector or member of another recognized agency or organization should be empowered to advise and carry out either relocation or euthanasia of that animal.
11. All zoos should be required to develop and implement species appropriate environmental enrichment to improve the welfare of each animal.
12. Permit applicants should be required to show documented evidence that they have undergone some formal training relating to the care and keeping of the species under their care and sufficient resources to keep the facility operational.
13. Zoo owners should be required to have and maintain public liability insurance for $3-5 million. In light of the recent $2.5 million judgement awarded an Ontario couple mauled by tigers while visiting a Safari Park, the current Alberta requirement of $1 million in liability insurance should be deemed insufficient. The permit should be revoked if the insurance is not maintained for the entire permit term.