

San Francisco Zoo  
African Savanna Exhibit

Summative Evaluation  
Winter 2006



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Visitor Studies Services



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## Introduction

The San Francisco Zoo (Zoo) contracted with Wendy Meluch of Visitor Studies Services (VSS) in early 2006 to design and conduct a summative evaluation of the African Savanna exhibit which opened in spring of 2005. This summative evaluation includes three components: an unobtrusive tracking and timing study of 76 visitors; a cued exit survey of 80 visitors; and unobtrusive observations of about 60 visitors at two giraffe feedings.

All data collection was conducted in February of 2006 which is in the midst of the rainy season. Data collection took place on days without any precipitation, under clear to overcast skies in weather that was usually breezy with temperatures that ranged from cool to warm, and occasionally hot, in the sun. Data collection took place during a vacation week for local schools and on weekend days.

For this research, VSS established zones within the exhibit. Please see Appendix B for an exhibit map with zones indicated.

## Executive Summary

A three-pronged summative evaluation of the San Francisco Zoo's new African Savanna exhibit shows it to be very well received by visitors and successful at meeting key affective and cognitive goals. Visitors to this exhibit, especially those who attend a giraffe feeding, enthusiastically demonstrate admiration and wonder towards wildlife, emotional connections to the animals, and excitement at close and unusual viewing opportunities.

Visitors care deeply about the quality of life for these animals and readily state that they feel the animals have a good home in this exhibit. Respondents are strongly impressed by the naturalistic habitat and grouping of species together. This not only makes them sensitive to the Zoo's effort to provide a natural environment, it provides them with new information about animal interactions and what life in the wild is really like.

Though few visitor comments specifically illustrate awareness of the Zoo as an agent of conservation, many evidence learning about conservation and concern about the urgency of this issue in the Savanna and/or the world. In addition to learning about conservation issues, many visitors cite specific facts about the animals that they learned, often by means of their own observations.

About half of visitors make use of, and appreciate the exhibit vistas at the ticket and entry plazas. In the exhibit itself, visitor dwell times range from 2:08 to 23:11 and average 12:55. A large majority of visitors visit almost all zones of the exhibit.

Typical of zoo visitors, relatively few subjects read signs or labels while in the African Savanna exhibit. The Giraffe Lodge and Donga enjoy the highest percentages of readers. Audio boxes and the Donation Station are virtually unattended to with less than a tenth of visitors engaging with them.



## Summary of Findings

Key among goals for the African Savanna exhibit are that visitors...

- gain a sense of admiration and wonder towards wildlife.
- make an emotional connection that results in their caring about the animals on exhibit.
- are excited at seeing wildlife from an unusual and unexpected perspective.
- understand that the Zoo goes to great effort to insure that animals in the Zoo have a good home.
- learn that the Zoo is committed to wildlife preservation and conservation.

This research documents great success regarding the first four of these points, and somewhat limited success on the last. Each of these goals is discussed below, followed by a discussion of other significant findings in this three-pronged research effort.

### **Do visitors gain a sense of admiration and wonder towards wildlife?**

### **Do visitors make an emotional connection that results in their caring about the animals on exhibit?**

### **Are visitors excited at seeing wildlife from an unusual and unexpected perspective?**

Yes! Visitors to this exhibit, especially those who attend a giraffe feeding, enthusiastically demonstrate admiration and wonder towards wildlife, emotional connections to the animals, and excitement at close and unusual viewing opportunities.

The estimated 60 visitors observed during two giraffe feedings almost universally express amazement, amusement and/or curiosity about the animals. Visitors are enthusiastic about being near, and sometimes even feeding the giraffes: *Wow! Is that cool or what?; Wow! It's amazing. We're lucky today.* Visitors exclaim about the giraffes' beauty and striking features: *Oh, she's cute! Oh, she's gorgeous!; Look at how they can put their neck all around; They have really long legs.* Visitors make personal connections to the giraffes: *What are their names?; Hi, giraffes! Nice to see you again!; I want to pet it, please!*

A visit to the exhibit, even in the absence of attending a giraffe feeding, engenders a similar range of responses to questions on the Exit Survey. In responding to open-ended questions, 35% of survey participants express an affective impact of the exhibit; they describe a sense of wonder or appreciation and/or some sort of emotional connection with the animals. Comments range from general, *...appreciate the animals & the beauty of them,* and *...wildlife is beautiful; looking at these animals gives you a wonderful feeling,* to more specific comments, *storks could look so funny,* and *giraffes are tall & awkward-looking, but run & walk with a surreal grace.*

Visitor comments about this habitat, presented below, show a great deal of care and empathy for the animals and their quality of life.

### **Do visitors understand that the Zoo goes to great effort to insure that animals in the Zoo have a good home?**

Yes, a large majority of visitors recognize that these animals have a good home. More often than specifying that "the zoo cares" (10%), visitors react to the beauty of the habitat and its naturalistic look. The most frequent type of reaction to, or observation about, the exhibit involve comments about how natural the setting is for the animals, often acknowledging that varied species are living together as they would be in the wild (68%). These comments also reveal tremendous empathy for the animals in this and other exhibits, *...sweet animals not alone in cages.*



Visitors perceive that this exhibit is... *to show these animals as close to their natural habitat as possible, that this zoo shows... animals in a more natural habitat than is shown in standard zoo environments, and that... the animals live together in the wild as opposed to being caged off as they normally are in a zoo.*

Visitors observe that... *animals can live in zoos comfortably, and that visitors themselves can... feel better about the way animals are treated.*

### **Do visitors learn that the Zoo is committed to wildlife preservation and conservation?**

Though relatively few visitors comment specifically on the Zoo's role as an agent of conservation (4%), many visitors perceive and contemplate messages about conservation (28%). Respondents also recognize the educational intent of the exhibit to make visitors more aware of animals and their habitats (43%).

Visitors are clear that the exhibit helps them... *understand the delicate balance of life in the Savanna; makes them... more aware of this environment & conservation; and helps them... appreciate the importance of the large land animals & the need to preserve their habitats. One visitor sees the exhibit as an attempt to... establish a basis for conservation & preservation of African mega-fauna & flora.*

### **Do visitors evidence learning?**

Yes! In addition to learning about conservation issues (see above), 35% of Exit Survey respondents go beyond recognizing the educational nature of the exhibit to volunteer specific information learned. Many comments focus on giraffe necks and tongues, but a few comment on kudus, dik diks, relationships between animals or their endangered status.

### **Do visitors like the exhibit?**

Yes! Without directly being asked if they liked the exhibit, 35% of Exit Survey respondents offer responses that evidence their delight with the exhibit, it makes them happy and they feel grateful. Many visitors offer general pats on the back for staff, *Beautiful exhibit!; Keep up the good work!*, and the like. Several write more specific comments... *We find the new exhibit beautiful & enjoy the integration of lots of animals in a large habitat & the pathways that wind through it -- lovely!*, and... *Great exhibit. Love that it seems so open for the animals.*

### **Other trends in visitor responses**

These ideas appear in visitor responses less frequently than those discussed above, but address some specific interests of Zoo staff.

- A few visitors go beyond "habitat" and "ecosystem" to specify that the exhibit includes African flora in addition to the animals. (9%)
- Visitors acknowledge changes at the Zoo and/or this new exhibit. (8%)
- Visitors are moved to self reflection. (8%)



### **Do visitors notice and appreciate Savanna vistas at the ticket and entry plazas?**

Yes. Nearly half of Exit Survey respondents report that they paused to take in the view at the ticket booth plaza, and just over half did so at the entry plaza. A few respondents also offered comments, all of which were positive.

### **How long do visitors spend in the African Savanna exhibit?**

The average dwell time among 76 visitors in the Tracking and Timing study is 11:55 minutes with a minimum of 2:08 and a maximum of 23:11. Note that though all study subjects were identified and tracked from the main entrance near the introductory sign, they are free to choose several different paths within the exhibit area. Several members of this sample chose not to enter the central section of the exhibit, greatly shortening their dwell time.

Exit Survey respondents were timed in Zones 3 through 9. A comparison of visitors from both studies who used the same route through the exhibit (Zones 3 – 9), finds their average dwell times to be 9:55 (Tracking and Timing) and 11:52 (Exit Survey respondents), showing a difference of 1:57 seconds. We expect cued visitors to spend more time in exhibits than un-cued subjects. This reflects the heightened attention that comes with being cued (being asked to participate in a study of the exhibit and knowing that a questionnaire form awaits them at the end).

All data collection was conducted in February of 2006 which is in the midst of the rainy season. Data collection took place on days without any precipitation, under clear to overcast skies in weather that was usually breezy with temperatures that ranged from cool to warm and occasionally hot in the sun. Had this research been done in warmer, less breezy weather, visitor dwell times may well have been longer.

### **How do visitors use paths, signs and audio boxes?**

Logically, the greatest percentage of visitors in this Tracking and Timing study are seen along the first path just after the Entry Overlook (a.k.a. Welcome Deck). Ranking second in visitation is Donga (the central viewing plaza). Naturally, longer dwell times and more visitor stops to observe animals take place in Donga than in any other part of the exhibit.

A large majority of visitors visit almost all zones of the exhibit. Visitation to the Aviary, Acacia Plaza and adjacent paths, Zones 10 – 12, drops substantially. Low visitation to these areas may result from their placement relative to the most obvious viewing areas in the exhibit, and the “service area” look behind the Lodge.

Typical of zoo visitors, relatively few subjects read signs or labels while in the African Savanna exhibit. The Giraffe Lodge and Donga enjoy the highest percentages of readers. Audio boxes and the Donation Station are virtually unattended to with less than a tenth of visitors engaging with them.

Less than a fifth of visitors in this sample were observed to read the introductory panel. Observation of visitors in this area suggests that the panel would get more attention were it placed on the wooden wall just to the left of the Entry Overlook structure as one approaches it. This spot is more exposed and better lit than the panel’s current location.



## Tracking and Timing Findings

<b>Total Time spent in exhibit*</b> (n=76) (shown in minutes and seconds)	
Mean	11:55
Minimum	2:08
Maximum	23:11
Median	11:24
Mode	13:00-13:59

\*Total exhibit times do not include time spent at the Lemur Forest vista located off of Zone 2.

<b>Total Time spent in Aviary</b> (n=18) (shown in minutes and seconds)	
Mean	2:26
Minimum	:03
Maximum	4:41

<b>Total Time spent in Giraffe Lodge*</b> (n=10) (shown in minutes and seconds)	
Mean	:41
Minimum	:07
Maximum	2:02

\*Note that giraffes were not present in the Lodge during Tracking and Timing data collection. Please see below for Giraffe Lodge Observations.

<b>Total Number of Stops in exhibit</b> (n=76)	
Mean	7.45
Minimum	1
Maximum	18
Median	7
Mode (bimodal)	5 and 6

<b>Comparison of Time Spent: Survey Respondents vs. Tracking Subjects</b> (average times shown in minutes and seconds)	
Tracking and Timing subjects Zones 3-9 (n=46)	9:55
Cued Exit Survey respondents Zones 3-9 (n=80)	11:52

We expect cued visitors to spend more time in exhibits than un-cued subjects. This reflects heightened attention that comes with being cued (being asked to participate in a study of the exhibit and knowing that a questionnaire form awaits them at the end).



Pathways used through the exhibit (n=76)	
Frequency	Path Description:
46	Zones 1 through 9 and out to the gorillas
10	Zones 1 and 2, then through 12, 11, and 10 and/or 9, then exit to gorillas
4	Zones 1 through 5, turn around through Zone 2 to Zones 12, 11, 9 and out to gorillas
3	Zones 1 through 2 and exit to primates or mandrills
2	Zones 1 through 10 and out to the gorillas through Zone 9
2	Zones 1 and 2, then through 12 and exit to gorillas
2	Zones 1 through 5, turn around through Zone 2 to Zones 12, 13, 11 and out to gorillas (to the north of the Aviary)
2	Zones 1-3, turn around to Zones 12 and 11 and out to the gorillas (north of the Aviary)
Other: 1 Each	Zones 1 through 5, turn around and exit to primates or mandrills
	Zones 1 through 8, turn around and exit through Zone 1
	Zones 1, 2, 12, 11, 9 out to gorillas
	Zones 1 through 7, then turn around and out through 12, 13, and out to mandrills
	Zones 1 through 7, then off the path, return to path, Zones 7 through 2 and out to mandrills
44	Included the Lemur Forest vista off of Zone 2 in their routes described above

Please see Appendix B for a map of the exhibit with Zones indicated.





## Use of Paths, Signs and Audio Boxes

The following table details the number of visitor stops, reading behavior, and use of audio boxes and the donation station. Logically, the greatest percentage of visitors in this study (93%) are seen along the first path (Zone 2) just after the Entry Overlook (Zone 1). Ranking second in visitation (85%) is Donga (the central viewing plaza, Zone 5). Naturally, longer dwell times, 3:21 minutes on average, and more visitor stops to observe animals take place in Donga than in any other part of the exhibit.

A large majority of visitors visit almost all zones (Zones 1 – 9; 69% - 93%). Visitation to the Aviary, Acacia Plaza and adjacent paths, Zones 10 – 12, drops off to under 25%. Low visitation to these areas may result from their placement relative to the most obvious viewing areas in the exhibit, and the “service area” look behind the Lodge. That visitors need to enter the Aviary through doorways is a natural impediment. The Giraffe Lodge received only 13% of visitors in this study; note that giraffes were not present in the Lodge during data collection for this study.

Typical of zoo visitors, relatively few subjects read signs or labels while in the African Savanna exhibit. The lack of animals in the Lodge during data collection may account for it receiving the most readers, with 40% of visitors to the Lodge pausing to read. Donga enjoys the second highest percentage of readers with 38% of visitors to this area stopping to read at least once, and up to seven times. Audio boxes and the Donation Station are virtually unattended to with less than 10% of visitors engaging with them.

The first row of the table addresses not a zone, but the introductory panel just before the Entry Overlook. Only 17% of visitors in this sample were observed to read the panel. Observation of visitors passing through this area suggests that the panel would get more attention were it placed on the wooden wall just to the left of the Entry Overlook/Welcome Deck structure as one approaches it. This spot is more exposed and better lit than the panel’s current location.

A significant number of visitors evidence confusion at the point where they must make a hard right turn and go down hill toward the first tunnel and into Donga (the juncture of Zones 2 and 3 on the map in Appendix B). Because the tunnel approach interrupts the line of site between this spot and Donga, some visitors are unclear about where this path leads and so opt away from it. Some type of wayfinding device at this point would be helpful to visitors and possibly boost visitor dwell time in, and coverage of the exhibit.



## Tracking and Timing Findings – Use of Signs and Audio Boxes

Zone	Zone Description	No. visitors to enter this zone (n=76)	Ave. length of stay among users in minutes and seconds	% of users to stop and watch animals at least 1 time	Range of how many viewing stops users make	% of users to glance at animals without stopping	% of users to read at least one sign or label	Range of how many reading stops users make	% of users to use Zoo Box audio recording or Donation Station (Zone 8)
	Introduction Sign (before Zone 1)	21%*	0:10	--	--	12% (glance at sign)	100%*	1	--
1	Entry Overlook/Welcome Deck	80%	0:52	91%	1-3	5%	20%	1	6%
2	Path from Zone 1 to the right turn into the exhibit	93%	1:51	34%	1-3	41%	3%	1	3%
3	Path that curves down hill to the right and to the first tunnel	85%	:45	26%	1-4	12%	10%	1-2	--
4	First tunnel	--	--	--	--	--	--	--	--
5	Donga - Central Viewing Plaza	81%	3:21	98%	1-7	2%	38%	1-7	2%
6	Second tunnel	--	--	--	--	--	--	--	--
7	"Outer Path" near hoof stock barn and zoo camp area	74%	1:50**	32%	1-4	24%	--	--	--
8	Overlook/Viewing Deck where Donation Station is located	69%	1:23	84%	1-3	15%	18%	1	2%
9	"South Path" which leads from Zone 8 to Aviary	81%	2:19	65%	1-5	23%	2%	1	--
10	Aviary	23%	2:26	83%	1-6	6%	28%	1-2	--
11	Acacia Plaza and adjacent paths	23%	2:39	78%	1-3	0%	11%	1	--
12	Road/path behind the Giraffe Lodge	24%	1:35	11%	1	32%	--	--	--
13	Giraffe Lodge***	13%***	0:41***	60%	1	30%	40%	1	--

\*All subjects in this sample passed by the Introduction Sign; 17 were observed to read it.

\*\*This data includes one subject who left the path to watch animals near the fence for about 10 minutes. Excluding his stay, the average dwell time in Zone 7 is 1:41.

\*\*\*Note that giraffes were not in the Lodge during Tracking and Timing data collection. See Giraffe Lodge Observations below.



## Tracking and Timing Sample Profile and Visit Description

<b>Gender</b>	<b>% (n=76)</b>
Male	42%
Female	55%

<b>Estimated Age Decade</b>	<b>% (n=76)</b>
20	30%
30	22%
40	34%
50	4%
60	7%
70	1%

<b>Group Type</b>	<b>% (n=76)</b>
Adults and children	58%
Adults only	40%
Adult alone	3%

<b>Number in Group</b>	<b>% (n=76)</b>
1	1%
2	38%
3	20%
4	24%
5	9%
6	3%
7	--
8	3%



## Giraffe Lodge Observations

Researchers observed visitors in the giraffe Lodge during two 4:00 feeding sessions. Visitor comments make clear their excitement about being very close to the animals, their amazement at the animals themselves, and demonstrate the powerful affective impacts of this type of encounter.

Visitors are enthusiastic about being near, and sometimes even feeding the giraffes: *Wow! Is that cool or what?; Wow! It's amazing. We're lucky today.* Visitors exclaim about the giraffes' beauty and striking features: *Oh, she's cute! Oh, she's gorgeous!; Look at how they can put their neck all around; They have really long legs.* Visitors make personal connections to the giraffes: *What are their names?; Hi, giraffes! Nice to see you again!; I want to pet it, please!*

### Visitor comments heard on February 11 – Downstairs (n~25)

- You like him? Tell me what he was. (Child answers, "A giraffe.") What does that start with? A "G"? They're sharing. They're eating from the same trees.
- Wow! Wow!
- Look at that!
- How old are they? (Asked volunteer/keeper)
- Now they look a lot better than when they were at that other pen.
- Oh, she's cute! Oh, she's gorgeous!
- She said they'll live 'til 25 or so.
- We're watching the giraffes now. They're so cute! (Spoken on cell phone)
- Look at that tongue! *Aaaarr-aarr-aarr!* (Makes sound while mimicking giraffe moving tongue around.)
- Yes, that's their supper! That's right. Now we know why they came in here.
- Look at them with their big necks.
- This is fun! That was cool!
- He's got a neck there! Look at that!
- Look at how they can put their neck all around.
- When do they get full grown? (Volunteer/keeper responds, "About 6.")
- Giraffe! I want it!
- Volunteer/keeper: They start lining up about an hour before they come in.
- What are their names? Do they have that somewhere?
- Hi, giraffes! Nice to see you again!
- Did you see his tongue?
- Wow!
- Yum, yum!

### Visitor comments heard on February 23 – Downstairs (A = adult; C = child; n~35)

- A: Wow! Stylin'! (Response to Lodge door opening automatically)
- A: Aren't they pretty animals?
- A to C: Delicious vegetables are delicious.
- C: Oh, look!
- C: I want to pet it, please!
- C: They have really long legs.
- C: How many are there?
- C: I want to go up there! (Response to group being up on the catwalk feeding a giraffe banana pieces. Comments like this were made by many people—adults and children—when they noticed it.)

Continued...



- A: I love the tongue.
- A to C: Oh, look at that tongue! Did you see the tongue?
- C: Awesome! So cool!
- C: Is it nine feet tall, Mama?
- A: Wow! Is that cool or what?
- C: Look at their door!
- A: This is brand new! I never saw this before.
- A: You wanna go upstairs?

**Visitor comments heard on February 23 – Upstairs**

(Two groups of about 12 people each were invited upstairs to see and feed a giraffe)

- A: Wow! Look at it!
- C: That's so big!
- A: He's tall.
- C: Oh, look at that tongue.
- C: I don't want to do it. (Referring to feeding giraffe.)
- A: This is so great!
- A: That was really good! That was great! (Response to giraffe giving woman a "kiss," or taking a banana that she held in her mouth.)
- C: I'm scared. (Persuaded to give giraffe banana. Smiles and giggles afterward.)
- A: Wow! It's amazing. We're lucky today.
- C: Bananas! I love bananas!



## Summary of Exit Survey Findings

The table below shows how many visitors struck on each of the response categories at least one time across all questions in the questionnaire form. For lists of verbatim responses, please see Exit Survey Responses below.

Response Category	% (n=80)
Visitors understand that the Zoo intends to present animals living together as they would in nature, and/or in a naturalistic setting. *	68%
Visitors perceive an intent to educate and/or pique the interest of visitors.	43%
Visitors express an affective impact of the exhibit: they describe a sense of wonder or appreciation and/or some sort of emotional connection with the animals.	35%
Visitors go beyond recognizing the educational nature of the exhibit to cite specific information learned.	35%
Visitors delight in the exhibit, it makes them happy and they feel grateful.	35%
Visitors perceive and contemplate messages about conservation.	28%
Visitors sense that the Zoo is caring and careful with the animals. *	10%
A few visitors go beyond "habitat" and "ecosystem" to specify that the exhibit includes African flora in addition to the animals.	9%
Visitors acknowledge changes at the Zoo and/or this new exhibit.	8%
Visitors are moved to self reflection.	8%
Visitors have suggestions.	6%
Visitors specifically acknowledge that the Zoo is an agent of conservation.	4%

\*Experience with zoo visitors in other research projects suggests to the researcher that visitors understand the use of naturalistic habitats for animals in captivity as a measure of good care on the part of the zoo. VSS's work with the San Francisco Zoo's Lemur Forest, and numerous studies with visitors at the Oakland Zoo find this association in the minds of visitors.



## Exit Survey Responses – Visitor Understanding and Reactions to Exhibit

Visitor responses to open ended questions are shown below grouped by topic which they invoke. Responses that touch on more than one topic will appear in more than one grouping as appropriate. Duplicative comments are eliminated from this list or representative responses.

Open ended questions on the Exit Survey are as follows...

- What would you say is the main purpose of this Africa Savanna exhibit?  
To show...  
To make people...
- What is one new idea you are taking away with you?  
I didn't know, or I never realized that...  
and/or  
It reminded me that...
- Anything else?

Visitors understand that the Zoo intends to present animals living together as they would in nature, and/or in a naturalistic setting. (54)

What would you say is the main purpose of this Africa Savanna exhibit?  
To show...

- African animals & habitat.
- African animals in a natural habitat setting.
- African animals in natural environment.
- African animals in their natural habitat & interacting with each other.
- all animals getting along.
- animals from the Savanna in an environment that more closely resembles their natural habitat.
- animals in a more natural habitat than is shown in standard zoo environments.
- animals in better settings & more natural.
- animals in their natural environment demonstrate co-existence & social behaviors.
- animals native to the African Savanna region. To help educate people regarding animals & environment.
- how animals act in their natural habitat.
- how animals interact in natural habitat.
- interaction between animals & how beautiful they are up close.
- many different species of animals you might see in Africa.
- sweet animals not alone in cages.
- the animals & plants as close to their natural habitats as possible.
- the animals live together in the wild as opposed to being caged off as they normally are in a zoo.
- these animals in a natural habitat, up close.
- these animals in the most native habitat possible & similarities between San Franciscan & African climates.
- to show these animals as close to their natural habitat as possible.

Continued...



What would you say is the main purpose of this Africa Savanna exhibit?  
To make people...

- appreciate how they live in the wild.
- appreciate subtle interactions (must be patient, difficult to do with a 6-year-old).
- aware how the animals react together.
- aware of the different species.
- aware of the interaction of species & how all is intertwined.
- connect with the animals & observe them (in natural type environment).
- feel like they are seeing animals in their habitat
- learn & experience co-existence & social behaviors.

What is one new idea you are taking away with you?  
I didn't know, or I never realized that...

- ostriches & giraffes are friends; also giraffes lick buildings.
- there are so many kinds of animals.
- zebras & giraffes co-existed peacefully.
- a Savanna could be endangered; that such strange-looking, unmatched animals live in harmony.

What is one new idea you are taking away with you?  
It reminded me that...

- some animal species can co-exist with one another.
- animals are prettier in their natural environment.

Anything else?

- Great exhibit. Love that it seems so open for the animals.
- We find the new exhibit beautiful & enjoy the integration of lots of animals in a large habitat & the pathways that wind through it -- lovely!
- The last zoo I went to 15+ years ago, all animals were in cages. It is nice to see the animals in open space.

Visitors perceive an intent to educate and pique the interest of visitors. (34)

What would you say is the main purpose of this Africa Savanna exhibit?  
To show...

- from the signs. I'd say it was education as well as entertainment. The animals are beautifully exhibited but preservation is explained too.
- obviously to show the animals but also to bring about a greater understanding of them.
- to familiarize city folk with African animals & plants.
- to let children & adults acquaint themselves with other life.
- to teach & preserve.

Continued...





What would you say is the main purpose of this Africa Savanna exhibit?  
To make people...

- appreciate the importance of the large land animals & the need to preserve their habitats.
- appreciate the Savanna.
- aware of different animals not found in North America.
- aware of the animals & their environment.
- aware of the different species.
- aware of the type of animals in Savanna.
- aware of their surroundings.
- aware of these great animals.
- better understand animals & their environments.
- enlightened.
- feel better about the way animals are treated; educate.
- get a better sense of the animals.
- happy & better educated.
- interested in them.
- knowledgeable about the African wildlife.
- knowledgeable about them.
- learn more about the animals.
- more aware of animals [being] interesting in a more natural environment.
- more aware of this environment & conservation.
- more aware.
- more interested & knowledgeable.
- stop & think & consider species outside of U.S.A.
- think about different habitats.
- understand & appreciate animals & nature.
- understand animals.
- want to learn more & feel like them to feel in an African environment.

Visitors express an affective impact of the exhibit; they describe a sense of wonder or appreciation and/or some sort of emotional connection with the animals. (28)

What would you say is the main purpose of this Africa Savanna exhibit?  
To show...

- interaction between animals & how beautiful they are up close.
- show beauty of the large African grass animals.
- sweet animals not alone in cages.
- the fantastic animals of Africa.

What would you say is the main purpose of this Africa Savanna exhibit?  
To make people...

- appreciate forms of wild life
- appreciate the animal kingdom.
- appreciate the animals & the beauty of them.
- appreciate the beauty of nature.
- appreciate their uniqueness.

Continued...



- aware of all the beautiful animals in Africa.
- aware of the beauty & uniqueness of the African ecosystem.
- aware of the problems regarding the Savanna; it helps personalize it so if you hear about problems regarding the Savanna one is more likely to help.
- connect with the animals & observe them (in natural type environment).
- ooh & ahh!
- realized that wildlife is beautiful; looking at these animals gives you a wonderful feeling.
- want to learn more & feel like them to feel in an African environment.

What is one new idea you are taking away with you?  
I didn't know, or I never realized that...

- how graceful giraffes are.
- storks could look so funny.
- the giraffes moves so elegantly.
- we had such beautiful creatures.

What is one new idea you are taking away with you?  
It reminded me that...

- Africa is very beautiful & endangered.
- animals are prettier in their natural environment.
- giraffes are tall & awkward-looking, but run & walk with a surreal grace.
- giraffes are the coolest looking animals on the planet.
- how majestic these animals are.
- nature is amazing!
- the Marabou stork is funny looking.
- there is so much beauty in the world.

Anything else?

- I love animals.
- I think this is a very pretty exhibit. It's also large, which I think is great. I went to the Dallas zoo & the giraffe exhibit was so small, it made me feel bad for these large animals.
- The last zoo I went to 15+ years ago, all animals were in cages. It is nice to see the animals in open space.

Visitors go beyond recognizing the educational nature of the exhibit to cite specific information learned. (28)

What is one new idea you are taking away with you?  
I didn't know, or I never realized that...

- a giraffe has the same amount of neck bones as we do (humans) their tongues are blue.
- a Savanna could be endangered; that such strange-looking, unmatched animals live in harmony.
- a six-foot neck had as many bones as a human does.
- eucalyptus is a native plant to their environment. I didn't realize.
- fragility of Savanna.
- giraffe has the same number of vertebrae as human beings.



Continued...



- giraffes eat wood sidings.
- giraffes like ostriches
- giraffes weren't timid.
- how endangered some species are.
- how graceful giraffes are.
- how much variety there was amongst the flora.
- how short giraffes are.
- I watched a giraffe drink today. Never realized how they bend to drink.
- kudu were so tall.
- marabou feathers (from boas, slippers, etc.) come from the marabou stork.
- my girlfriend didn't know the difference between a tiger & zebra. Now she does.
- purple tongues. I want a purple tongue to eat leaves.
- Savanna animals were so big.
- some animal species can live together
- that there was a difference between reticulated giraffes & giraffes.
- that zebras are so similar to horses.
- the giraffes moves so elegantly.
- there are two kinds of giraffes & the reticulated ones have a smaller habitat.
- there was an animal called a dik-dik.
- there was an animal called a Great Kudu.
- yellow-backed dukive hides in debris.
- zebras & giraffes co-existed peacefully.

Visitors delight in the exhibit, it makes them happy and they feel grateful. (28)

What would you say is the main purpose of this Africa Savanna exhibit?  
To make people...

- enjoy & see nice animals & see where they come from
- enjoy all.
- enticed to enter the exhibit.
- feel happy & fresh air nice [&] plants
- happy & better educated.
- happy!
- it['s] very relaxing.
- smile.

What is one new idea you are taking away with you?  
I didn't know, or I never realized that...

- since I've seen it before, I don't really read the signs. I just enjoy the grasses & the animals.
- ... Just here for enjoyment.

Anything else?

- Beautiful exhibit!
- Beautiful exhibit!
- Great exhibit. Love that it seems so open for the animals.
- Great job!!!
- I appreciate the African vegetation so nicely shown.



Continued...



- I like this exhibit & I come here whenever I have an opportunity.
- I think this is a very pretty exhibit. It's also large, which I think is great. I went to the Dallas zoo & the giraffe exhibit was so small, it made me feel bad for these large animals.
- It is vital.
- It looks great. Haven't been here in ten years.
- Keep up the great work.
- Love the zoo!
- my family particularly enjoys this exhibit along with the lemurs.
- San Francisco Zoo is a lovely place to be on a nice day; it's a good walk.
- Thank you!
- We find the new exhibit beautiful & enjoy the integration of lots of animals in a large habitat & the pathways that wind through it -- lovely!
- We had a lot of fun.
- Wonderful exhibits, plenty of details.

Visitors perceive and contemplate messages about conservation. (22)

What would you say is the main purpose of this Africa Savanna exhibit?  
To show...

- how these animals could be extinct.
- African animals before they're all gone.
- from the signs. I'd say it was education as well as entertainment. The animals are beautifully exhibited but preservation is explained too.
- to teach & preserve.

What would you say is the main purpose of this Africa Savanna exhibit?  
To make people...

- aware of the issues facing the African Savanna.
- think about saving Savanna.
- realize the importance of their habitat.
- care & save & protect.
- more aware of this environment & conservation.
- understand the delicate balance of life in the Savanna.
- more aware of the African ecosystem in its entirety.
- appreciate the importance of the large land animals & the need to preserve their habitats.

What is one new idea you are taking away with you?  
I didn't know, or I never realized that...

- how fragile the environment is in the African Savanna.
- fragility of Savanna.
- a Savanna could be endangered; that such strange-looking, unmatched animals live in harmony.
- how endangered some species are.



Continued...



What is one new idea you are taking away with you?  
It reminded me that...

- how fragile our ecosystem is.
- fragile animals need to co-exist [with] us.
- African animals' habitat is disappearing.
- we all need to be better informed about other countries ... we need to be concerned.
- Africa is very beautiful & endanger[ed].
- conservation is a daily task.
- I want to help preserve them.
- it is so important to preserve animal habitats & promote the environment!
- it is endangered.
- the importance of saving the environment.

Anything else?

- Our primary goal is to expose our daughter to animals & ensure that she is sensitive to their survival.

Visitors sense that the Zoo is caring and careful with the animals. (8)

What would you say is the main purpose of this Africa Savanna exhibit?  
To show...

- sweet animals not alone in cages.
- animals in a more natural habitat than is shown in standard zoo environments.

What would you say is the main purpose of this Africa Savanna exhibit?  
To make people...

- care & save & protect.
- feel better about the way animals are treated; educate.

What is one new idea you are taking away with you?  
It reminded me that...

- animals can live in zoos comfortably.
- zoos tend to be "uncomfortable" & unnatural for animals; we must move towards providing more appropriate environments for them here at the zoo. [this respondent also commented on appreciating the naturalistic environment for these animals]

Anything else?

- A great exhibit, much better than what had been provided for these animals.
- I think this is a very pretty exhibit. It's also large, which I think is great. I went to the Dallas zoo & the giraffe exhibit was so small, it made me feel bad for these large animals.





A few visitors go beyond “habitat” and “ecosystem” to specify that the exhibit includes African flora in addition to the animals. (7)

What would you say is the main purpose of this Africa Savanna exhibit?  
To show...

- to familiarize city folk with African animals & plants.
- to establish a basis for conservation & preservation of African mega-fauna & flora.
- animals & plants.
- the animals & plants as close to their natural habitats as possible.

What would you say is the main purpose of this Africa Savanna exhibit?  
To make people...

- feel happy & fresh air nice [&] plants

What is one new idea you are taking away with you?  
I didn't know, or I never realized that...

- eucalyptus is a native plant to their environment. I didn't realize.
- since I've seen it before, I don't really read the signs. I just enjoy the grasses & the animals.
- Savanna & California supported some plant life.

Anything else?

- I appreciate the African vegetation so nicely shown.
- great exhibit. love that it seems so open for the animals.
- how great the San Francisco bay area is.
- I liked the plants a lot.

Visitors acknowledge changes at the Zoo and/or this new exhibit. (6)

What is one new idea you are taking away with you?  
I didn't know, or I never realized that...

- this area had been redone.
- this zoo had this exhibit.

What is one new idea you are taking away with you?  
It reminded me that...

- I need to visit the San Francisco Zoo more often to find out about the different changes.

Anything else?

- I like what you've done with the zoo. Nice improvements!
- It looks great. Haven't been here in ten years.
- The exhibit & remodel looks great.



- The last zoo I went to 15+ years ago, all animals were in cages. It is nice to see the animals in open space.



Visitors acknowledge that the Zoo is an agent of conservation. (3)

What would you say is the main purpose of this Africa Savanna exhibit?  
To show...

- To establish a basis for conservation & preservation of African mega-fauna & flora.
- from the signs. I'd say it was education as well as entertainment. The animals are beautifully exhibited but preservation is explained too.
- to teach & preserve.

Visitors are moved to self reflection. (6)

- I want to take my children to Africa.
- I want to visit Africa.
- the world is bigger than the Bay Area.
- we are not alone on this world.
- we need to get out more.
- when I was a child coming to this zoo.

Visitors have suggestions. (5)

- More information about each animal along the trail.
- Raising admission costs by 20% wouldn't decrease the amount of people that would come to the zoo. Help offset maintenance costs.
- Suggestion: more education signs, more active docents to explain details.
- what are the birds on the ground? I didn't see signs.
- Wish there was more informative displays about the animals' habitat & coloring.

Other Responses:

- animals live to play & sleep.
- children need to know.
- How great the San Francisco Bay Area is.
- I don't spots that big. [sic]
- I enjoyed the lemur exhibit.
- in a jungle.
- there were no elephants.
- there's a zoo so close to the Bay Area.



## Survey Responses – Use of Vistas at Ticket Booth and Entry Plaza

<b>Did you see the African Savanna exhibit from the ticket window area? (n=80)</b>	
Yes, but I/we didn't stop to look.	14%
Yes, and I/we paused to look at it	48%
No	28%
No, we are members so we don't wait in the ticket line.	10%

### Comments

- Beautiful
- Beautiful
- Great
- It is incredible.
- It's lovely -- a real enticement to enter the zoo & see more.
- It's very nice to see it from outside the park.
- I've stopped lots of times in the past.
- Love tour
- Nice
- Nice view
- Saw giraffe
- Terrific
- The children visited there while I stood in the ticket line (good idea)!
- Very nice
- We were in line & could see the zebras.

<b>Did you see the African Savanna exhibit from the entry plaza? (n=80)</b>	
Yes, but I/we didn't stop to look.	18%
Yes, and I/we paused to look at it	53%
No	28%

### Comments:

- Looked Great.
- Very nice
- Wonderful



## Survey Responses – Sample Profile and Visit Description

<b>Is this your first visit to the San Francisco Zoo? (n=80)</b>	
Yes	34%
No	66%

<b>Are you a member? (n=80)</b>	
Yes	20%
No	74%
Reciprocal member of other zoo	6%

<b>How many are in your group today? (n=80)</b>	
1	1%
2	43%
3	24%
4	19%
5+	14%

<b>Group Description (n=80)</b>	
Respondent alone	1%
Respondent with other adult(s)	36%
Respondent with children	21%
Respondent with adults and children	41%

<b>Gender (n=80)</b>	
Male	46%
Female	53%



<b>Age Decade</b> (n=80)	
20's	25%
30's	18%
40's	36%
50's	13%
60's	4%
70 +	3%

<b>Do you have any special interest, knowledge or training in African animals?</b> (n=80)	
Yes	23%
No	76%

If yes, what? (15 offered explanations)

- Artist; many trips to Africa
- Bio 1B
- I am interested in knowing about them.
- I enjoy watching them all.
- Interest!!!
- Lay naturalist
- Lions
- Lions are sick!!
- Love to look at them here, then I go to Africa to see them in their own environment.
- Photo
- The African elephant
- The animals of eastern Africa
- They are very interesting & my younger sister & I read books together about them.
- Worked at Oakland Zoo
- Zoology



## Appendix A – Methodology

In this research, protocol and questions for the Tracking and Timing study and the cued Exit Survey follow Beverly Serrell's widely accepted method in her book, Paying Attention.<sup>1</sup> Both studies use a probability based, random sampling method.

### Sample

The nature of a zoo visit is determined in large part by the visitors. Those visitors with very young children have two main priorities: to keep track of the toddlers; and to look at the animals. Generally speaking, these visitors can't or don't want to focus on anything else, such as labels. For this reason the target audience for this evaluation was limited to adults who were visiting with or without children; children in the group being of school age (about five years old and up). This method was adopted in 2003 for the Lemur Forest Summative Evaluation as well.

Giraffe Lodge observations did not track individual subjects.

### Tracking & Timing

Questions of visit length and use of exhibit elements are best answered with an unobtrusive tracking and timing study. In this type of study, visitors are not influenced by being cued and are not aware that they are under observation. It is a rigorous test of an exhibit.

Subjects for this study were identified at the Introductory Panel and tracked until they exited the exhibit by means of any of several possible outlets. While being observed, subjects' movements and activities are recorded manually on the map and data sheet found in Appendix B. To conform to ethical standards of the field, no identifying information is recorded about subjects such that they remain anonymous.

### Cued Exit Survey

Respondents for the Exit Survey were invited to participate as they entered Zone 3. Because visitors can choose so many different paths through the exhibit, several of which quickly lead away and don't enter the central exhibit area, we intercepted visitors at a point on the trail where they were "committing" to visit the bulk of the exhibit.

Upon agreeing to participate, randomly selected visitors we're given a card with their entry time and asked to hand that to the researcher waiting for them at the end of a the path. When they did this, their entry and exit times were recorded on the questionnaire form. Visitors completed the forms themselves. Respondents could choose between coupons for a free drink or a free train ride as a thank you gift.

### Giraffe Lodge Observations

Observation of visitors attending the giraffe feedings were made unobtrusively; the data collector manually recording visitor comments as conditions allowed.

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<sup>1</sup> Serrell, Beverly, *Paying Attention: Visitors and Museum Exhibitions*, American Association of Museums, 1998



## Appendix B – Tracking and Timing Data Sheet and Map

Observer: _____	<b>CO</b> = call over; <b>D</b> = discuss (re: exh.) <b>R</b> = read; <b>RA</b> = read aloud <b>PO</b> = pointing out <b>S</b> = sit <b>G</b> = glance as walk <b>PX</b> = photos <b>X</b> = stop to watch animals/read  Animals: <b>Active</b> ; <b>Quiet</b> ; <b>Mixed</b> ; <b>Close</b> ; <b>Eating</b> Number in Group: _____; Gender: M F Group: Alone; A+K; A only; Age: _____
Date: _____	
Time Enter: _____	
Time Exit: _____	
Total Time: _____	
# Stops > 3 sec: _____	

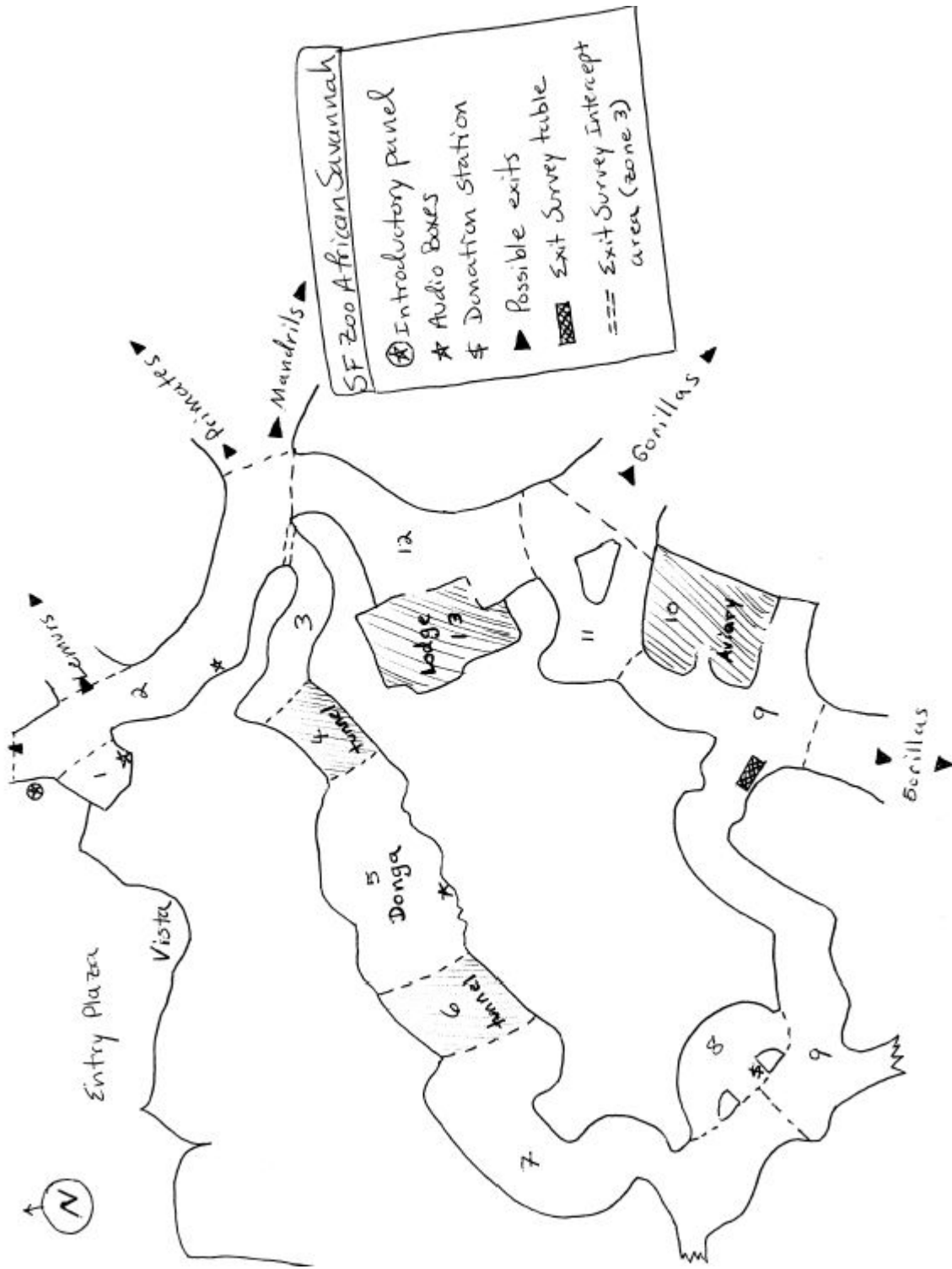
Zone	Behaviors		Enter T	Exit T	Tot.T
	humans	animals			
Introduction Sign		--	stop?		
Lemur Forest vista		--			
1. Welcome Deck	aud				
2. First Path	aud				
3. Curve Down					
4. 1 <sup>st</sup> Tunnel		--			
5. Central Plaza	aud				
6. 2 <sup>nd</sup> Tunnel		--			
7. Outer Path					
8. Viewing Deck					
	Don.Sta.	--			
9. South Path					
10. Aviary					
11. Acacia Plaza					
12. G. Lodge path					
13. Giraffe Lodge		--			

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_







*Thank you for helping the Zoo by answering these questions. Your input will help us continue to provide the best possible zoo experience for you and your family.  
We appreciate your time and clear handwriting.*

1. Please tell us a bit about yourself and today's visit. Thank you for circling one answer per line.

a. Is this your first visit to the San Francisco Zoo?	Yes	No					
b. Are you a member?	Yes	No	Reciprocal member of other zoo				
c. Your gender?	Male	Female					
d. How many are in your group today?	1	2	3	4	5 or more		
e. Are you here...	Alone	With adults	With children	With adults + children			
f. Your age?	20's	30's	40's	50's	60's	70's or over	
g. Do you have any special interest, knowledge or training in African animals?	Yes	No					
If yes, what?							

2. Did you see the African Savanna exhibit from the ticket window area?

- Yes, but I/we didn't stop to look.                      Comments:
- Yes, and I/we paused to look at it.
- No.
- No, we are members so we don't wait in the ticket line.

3. Did you see the African Savanna exhibit from the entry plaza?

- Yes, but I/we didn't stop to look.                      Comments:
- Yes, and I/we paused to look at it.
- No.

4. What would you say is the main purpose of this Africa Savanna exhibit?

To show... \_\_\_\_\_

To make people... \_\_\_\_\_



5. What is one new idea you are taking away with you?

I didn't know, or I never realized that... \_\_\_\_\_

and/or

It reminded me that... \_\_\_\_\_

6. Anything else?

\_\_\_\_\_ (please use other side if necessary)

**Thank you !**

-----  
on reverse...

**Data Collectors:**

Date: \_\_\_\_\_

Time Enter: \_\_\_\_\_ Time Exit: \_\_\_\_\_ V

**Weather:** sunny breezy brisk warm overcast \_\_\_\_\_

**Animals:** active quiet I can't tell

**Visitorship:** heavy moderate light

Other comments:

Signature of data collector attesting to the integrity and accuracy of the data in this questionnaire: \_\_\_\_\_