
**Visitors' Experience of
Congo Gorilla Forest
*15 Years After Opening***

**at the Wildlife Conservation Society's
Bronx Zoo**

**Research report prepared by:
People, Places & Design Research**

Visitors' Experience of *Congo Gorilla Forest* 15 Years After Opening

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Executive Summary

This analysis of visitors' experience of the *Congo Gorilla Forest* exhibition at the Wildlife Conservation Society's Bronx Zoo was commissioned to investigate how this 15 year old exhibition is perceived by visitors, and if things have changed since the summative evaluation in 1999-2000. Questions of particular interest are:

- Have the characteristics of visitors seeing this exhibition changed? Has awareness or interest in environmental concepts changed?
- Is the exhibition still appealing to visitors?
- Are exhibit components such as the film and Conservation Choices Computers still used to the same extent? (or do people expect more modern, high-tech components?)
- Is the exhibition still having positive impacts on people's awareness of rain forest conservation issues?
- How much interest do visitors have in some potential new interactive exhibits?

Research method

A random sample of 210 visitor groups was interviewed on the exit pathway of the Congo exhibition (after the Conservation Choices Pavilion). The cooperation rate was 71% (and 5% declined because they didn't speak English). Interviews were conducted in Fall 2013, on weekends, free Wednesdays, and other weekdays, successfully approximating the proportions of visitors interviewed in the original summative evaluation sample (Fall 1999 and Spring 2000).

Is this a fair comparison, or has the audience changed?

A critical foundation for comparing the use and perception of this exhibition now vs. 15 years ago is to know whether the visitor audience is roughly the same, or not. If, for example, there are more people with a higher awareness of rainforests now, that could affect the data about the effectiveness of Congo Gorilla Forest. Or, if there are more families with young children – less likely to read exhibit panels – that too could affect the overall picture of how visitors are perceiving and reacting to the exhibition. Two types of analysis characterize this comparison of the 1999-2000 audience with the 2013 audience: a demographic analysis and a psychographic analysis.

❖ The demographic characteristics of the CGF audience have not changed.

This comparison was not simple, because summer audiences tend to be different than fall and spring audiences. Therefore, visitor characteristics in Fall 2013 were compared to only part of the audience from the original summative evaluation, in Fall '99/Spring'00, to make a fair comparison. That comparison showed no demographic differences,¹ in terms of visitor group type, location of residence, age and gender of the adult interviewed, education level and ethnic identity.

¹ In the 2000 summative evaluation, the summer sample was different in many respects from the fall '99 /spring'00 sample due to seasonal variations (e.g., families, geographic distribution), so it was preferable for the analyses in this study to use comparisons with the previous fall/spring data when possible. However, some of the questions used in this evaluation were drawn from an interview form that was only used in the summer 2000 evaluation, and in those circumstances, additional analyses were conducted to ensure that any differences were not primarily due to different characteristics of the audiences.

- ❖ Psychographically, there are several useful indicators of the audience: (a) their general attitudes about the environment, (b) familiarity with ecological science concepts including rainforests, and (c) prior experience with seeing Congo Gorilla Forest. The results indicate similar patterns of attitude and familiarity now vs. 15 years ago.
 - (a) One way of characterizing visitors' relevant perceptions about conservation and environmental issues is to use a self-rating scale of environmental concern.² The current distribution of attitudes about the environment is approximately the same as it was 15 years ago, e.g., in terms of the proportion of visitors who characterize themselves as 'active supporters of environmental issues.' It is interesting that even though behaviors such as recycling and conserving energy are more widespread now compared to 15 years ago, people's view of their environmental attitude doesn't seem to have changed.
 - (b) Familiarity with four of six ecological concepts has also remained the same over time. Visitors interviewed in 2013 have approximately the same familiarity with 'habitat,' 'canopy,' 'food web,' and 'niche' as visitors did in the Fall '99 /Spring '00 sample. However, visitors do now claim to be more familiar with two terms, 'ecosystem' and 'biodiversity.'
 - (c) An additional psychographic measure of familiarity with ecological concepts is knowledge about rainforests. The proportion of visitors who rate themselves as "very knowledgeable" about rain forests before seeing the exhibit has declined (from 29% then to 15% now). Rainforests used to be a primary environmental issue, and now there are new issues in the media such as climate change and fracking.
 - (d) Compared to the first year after CGF opened, there are now more repeat visitors to this exhibit (10% then, 49% now). Therefore, the data analysis had to consider repeat visitors vs. first-time visitors when examining the exhibit outcomes.

Taking all this into consideration, the composition of the sample of visitors – demographically and psychographically – allows this evaluation to be a fair comparison with the original summative evaluation.

Highlights of the findings

The strongest message that people take away from Congo Gorilla Forest is about conservation, mentioned by 54% of the sample interviewed. This is similar to, but not as strong as, the results in the first year after the exhibit opened (when 67% expressed a conservation message as the main idea). Other comparisons are not so positive: indicators such as curiosity about what goes on in a rainforest, awareness of imminent threats, and understanding basic ecological concepts were all lower now than in the year after opening; declining media use (the film and voting pavilion) was also observed. The difference is not attributable to visitor demographics, but may partly be associated with less public concern about rainforests as other environmental issues have become more prominent in the news (e.g., climate change, ice melting, sea level rise, polar bears). The decline in effectiveness seems to be somewhat greater for first-time visitors, as repeat visitors (some of whom have visited several times) appear to be getting more from the experience, in some ways.

² Visitors were asked: Do you think of yourself as someone who is... 1: an active supporter of environmental issues, 2: very interested but not active, 3: somewhat interested, or 4: not very concerned with environmental issues? We have used this question as a successful indicator of interest in conservation since first developing it in the 1990s for the Monterey Bay Aquarium.

- ❖ Is the exhibition still appealing to visitors? **Yes**
 - ◊ Ratings were “off the chart” before; now, ratings of the exhibition have declined (from 78% high to 57% high ratings) but still indicate a positive experience. After 15 years there has been some wear and tear, some push button exhibits don’t work, and some of the popular activities are no longer there (python thermograph, okapi radio collars, mist). Repeat visitors to the Zoo appreciate CGF more than first-time visitors.
 - ◊ Visitors still say that ‘it’s nice to see gorillas in a natural habitat’ (85% indicated that this had a big impact on them, compared with 86% in the previous evaluation).
- ❖ Is the exhibition still having positive impacts on awareness of rain forest conservation issues? **Not as much**
 - ◊ Visitors still recognize and mention conservation as the main message of this exhibition, although to a lesser extent than before (54% now vs. 67% then).
 - ◊ Visitors still report increased knowledge about rainforests after experiencing CGF (41% indicate a substantial gain). The most notable reports of increased knowledge are among people with a strong interest in environmental issues generally, among adults age 50 and older, and among people who have visited five or more times.
 - ◊ Perceived impacts are significantly lower now for three indicators: the extent of curiosity about what goes on in a rain forest, awareness of imminent threats, and understanding basic ecological concepts. These decreases do not appear to be explained by repeated viewing of the exhibition (i.e., perhaps not paying attention anymore) because first-time Congo visitors are the same or lower than repeat visitors on these impact measures.
 - ◊ Although half of the visitors say they care about saving African rain forests, ratings of how much they care have declined (from 65% high ratings in 2000 to the current 49%). Repeated viewing of CGF has no added effect on caring.
- ❖ Are media components still used to the same extent? **No**
 - ◊ Only 22% of visitors watched the film in the theater (compared with 42% before). Young adults and families with preschoolers are least likely to watch the film.
 - ◊ One of the most dramatic differences is that only 29% of visitors stopped to vote on the Conservation Choices computers (compared to 62% before).
 - ◊ Only 4% played the computer game “Create a Reserve” (no data from 15 years ago).
- ❖ Are visitors interested in potential new interactive components? **Yes**
 - ◊ The most broadly appealing idea was ‘a simulated gorilla nest you can climb into’ (72% high interest), and the second most appealing was ‘simple interactive activities – touch, listen, sniff’ (56% high interest). There was moderate interest in higher-tech devices such as ‘audio guides on your smart phone’ or ‘iPad video stations’ (49% and 34% respectively, which are still substantial proportions of interest).

Overall, *Congo Gorilla Forest* is a positive affective experience for most visitors especially because of seeing gorillas in a natural habitat, and the exhibit provides various educational impacts including a main message about conservation, caring and knowledge about rainforests, and leads some people to be more aware of threats to rainforests. Compared to the stunning effectiveness of this exhibit in the year after opening, these impacts are diminished.

A. Reactions and Patterns of Use

Evaluation questions:

- ♣ Is the exhibition still rated very highly?
- ♣ Who is visiting the exhibition repeatedly?
- ♣ How does use of the media features (the film, the Conservation Choices Computers) compare to 14 years ago?
- ♣ Are visitors interested in potential new media exhibits and activities?

This section presents information that describes the broad outlines of visitors' experience of *Congo Gorilla Forest*, 15 years after the exhibition opened, and results are contrasted with the findings from the 2000 summative evaluation.

The exhibition is still rated highly, but not super high like before (57% vs. 78% high ratings). There are several possible reasons for this decline: there was an excitement factor in 2000 about the new exhibition, there has been wear & tear on the exhibits, and some of the engaging activities such as the python thermograph are no longer there.

About half of the people interviewed were seeing Congo for the first time, and half have seen it before (more repeat visitors rate it highly). It is interesting to know that not everyone has seen it, so it may still offer something to new visitors.

Use of the media exhibits has declined – only 22% watched the film in the theater, and 29% stopped at the Conservation Choices voting computers (previously this figure was 62%). These declines are not simply explained by repeat visitors doing less because they've done it before. Most first-time visitors are also not using these features.

Visitors expressed moderate-to-high interest in four possible new activities for the exhibition. They especially liked 'a simulated gorilla nest you can climb into' (72% high interest). These ideas could help to modernize the exhibition and extend its longevity.

A.1. Ratings of the exhibit

OVERVIEW: Visitors' ratings of Congo Gorilla Forest are significantly lower than they were in the original summative evaluation (57% high ratings now vs. 78% then), although they still indicate a very positive experience. Repeat visitors to the Zoo, regardless of how many times they have seen this exhibition, express higher appreciation than first-time Zoo visitors. Ratings are less heavily influenced by visitors' environmental orientation attitudes than they were previously (a not-quite-significant difference between 'active' environmental supporters, those who are 'very interested,' and those who are 'not concerned' with environmental issues).

What rating would you give this exhibit on a scale of 1 to 10?

	Now <u>Fall 2013</u>	Summative <u>Fall99/Spr.00</u>
high (9-10)	57%	** 78%
medium (7-8)	39%	19%
low (1-6)	4%	3%

Who gives the highest ratings NOW? (overall average: 57% high ratings)

- ** **62%** of repeat visitors to the Zoo (61% if 1st-time seeing Congo; 63% if seen before)
47% of first-time visitors
- ++ **69%** of 'active' environmental supporters
58% of those 'very interested' in environmental issues, but not active
47% of people who are somewhat or not concerned with environmental issues

Who gave the highest ratings THEN? (overall average: 75% 'high' ratings)

- ** **80%** of visitors who watched the film
70% of people who didn't see the film
- ** **82%** of 'active' environmental supporters
80% of those 'very interested' in environmental issues, but not active
57% of people who are 'not very concerned' with environmental issues
- ** **80%** of women
70% of men

** asterisks indicate statistically significant differences between columns (or rows) of figures ($p < .05$)
++ plus signs indicate differences that are not quite statistically significant ($.05 < p < .10$) but which may have some intuitive value.
ns = not statistically significant.

A.2. Patterns of repeat visitation

OVERVIEW: The current *Congo Gorilla Forest* audience, at least in the Fall, is evenly comprised of people seeing it for the first time (51%) and those who have seen it before (49%). First-time visitors are more likely to be young (under 30), and to rate themselves lower on prior knowledge about rainforests compared to repeat CGF visitors (as shown by the asterisks below).

How many times have you seen Congo Gorilla Forest since it opened?

first time zoo visitor	29%
repeat Zoo visitor seeing CGF for first time	22%
seen exhibit 2-4 times	27%
seen exhibit 5+ times	22%

CHARACTERISTICS OF FIRST TIME VS. REPEAT CONGO VISITORS	1 st time in CGF (n=104)	2+ times in CGF (n=101)
<u>Group composition:</u>		
family with any preschoolers	29%	37%
family with school age children	12%	15%
adult-only group	59%	48%
<u>Age:</u>		
		**
18-29	36%	25%
30's	33%	27%
40's	9%	26%
50's	14%	15%
60+	9%	8%
<u>Education level:</u>		
high school	11%	4%
some college	23%	24%
college graduate	37%	41%
graduate school	29%	32%
<u>Prior knowledge about rain forests:</u>		
		**
low	45%	27%
medium	45%	54%
high	10%	19%
<u>Environmental orientation:</u>		
active supporter	17%	29%
very interested, not active	52%	47%
somewhat / not very concerned	31%	24%

A.3. Use of media exhibits

OVERVIEW: Fewer visitors (22%) are stopping to watch the film in the theater compared to 15 years ago. One might assume that this is because there are more repeat visitors who have already seen the film and they are not watching it again; however, this is not the case. Repeat visitors are slightly more likely to watch it. Young adults and families with only preschool aged children are less likely to see the film. Parents with preschoolers often avoid experiences where children are expected to sit quietly for some period of time. Why aren't young adults without children seeing the film? Perhaps this type of "conventional" media isn't as appealing to these young adult digital age visitors. Has there been a change in the method of announcing/attracting visitors into the film?

The videos about research and local people in the gorilla pavilion are watched by 17% of visitors (no comparable figures from the original study). In this case repeat CGF visitors are less likely to stop. The computer game called "Create a Reserve" is rarely used.

Which of these activities did you do today, or on a previous visit?

	Now Fall 2013	Summative Fall199/Spr.00
Watch the FILM in the theater seen previously	22% 8%	** 42% (not asked)
Watch VIDEOS about research/local people seen previously	17% 7%	(not asked)
Play the computer GAME "Create a Reserve" played previously	4% 3%	(not asked)

Who watched the FILM today? (overall average: 22%)

- ** **39%** of 'active' environmental supporters
 - 23% of those who are 'very interested' but not active in environmental concerns
 - 13% of those who are 'not very concerned' with environmental issues
- ** 10% of young adults without children (18-29)
- 12% of families with only preschoolers
- 24% of families with any school-age children
- 43%** of older adults without children (age 40+)
- (ns) 18% of first-time Congo visitors
- 26% of those who have seen Congo 2-4 times
- 33% of those who have seen Congo 5+ times

(ns) = not statistically significant

Who watched VIDEOS today? (overall average: 17%)

**	20%	of first-time Zoo visitors
	30%	of repeat visitors, seeing Congo for the first time
	18%	of repeat visitors who have seen Congo 2-4 times
	5%	of repeat visitors who have seen Congo 5+ times
++	21%	of young adults without children (18-29)
	11%	of families with only preschoolers
	25%	of families with any school-age children
	14%	of older adults without children (40+)
++	25%	of men
	15%	of women

Use of media exhibits (continued)

OVERVIEW OF VOTING: Use of the Conservation Choices voting computers has also declined sharply – 29% of visitors are stopping compared with 62% before. People who have seen the exhibition before are less likely to stop compared to those who are seeing it for the first time, but this doesn't explain the huge decline. There has been a change in these computers – now visitors must enter an email address in order to submit their vote. Very few visitors (7%) said they had entered an email address. However, it doesn't seem likely that this change would explain the decline since people can still use the computers and choose an animal before getting to the request for an email.

Did you stop to vote on touch screens in that last room, today or on a previous visit?

	Now <u>Fall 2013</u>		Summative <u>Fall99/Spr.00</u>
yes, today	29%	**	62%
did previously	8%		n/a
no	64%		38%
submitted email address	7%		n/a
didn't submit	22%		

Who voted today? (overall average: 29%)

**	47%	of families with any school-age children
	31%	of families with only preschoolers
	25%	of adult-only groups
**	35%	of first-time Congo visitors
	22%	of those who have seen Congo before
(ns)	27%	of 'active' environmental supporters
	32%	of those 'very interested' but not active in environmental concerns
	32%	of those 'not very concerned' with environmental issues

(ns = not a statistically significant difference)

A.4. Interest in potential new activities

OVERVIEW: Visitors were asked about their interest in potential new activities, as one way to create a more engaging experience. The most popular and broadly appealing idea was ‘a simulated gorilla nest you can climb into.’ The other three ideas elicited moderate-to-high interest. Additional analyses (below) show that families have higher interest in simple interactives and iPad video stations compared with adult-only groups.

*Here are some ideas for possible new activities in the exhibit.
Would you have high, medium, or low interest?*

	<u>High</u>	<u>Medium</u>	<u>Low</u>
A simulated gorilla nest you can climb into	72%	15%	13%
Simple interactive activities (touch, listen, sniff)	56%	31%	13%
Audio guides you can listen to on your smart phone	49%	28%	23%
iPad video stations to see and find out more	34%	37%	29%

Who has high interest in a NEST?

- ** 78% of families with children
- 76% of young adults (18-29)
- 55% of older adults (40+)

Who has high interest in AUDIO GUIDES?

- ** 70% of repeat visitors who have seen CGF 5+ times
- 36% of repeat visitors who have seen CGF 2-4 times
- 45% of first-time visitors to CGF

Who has high interest in SIMPLE INTERACTIVES?

- ** 66% of families with children (both preschool and older)
- 57% of young adults (18-29)
- 36% of older adults (40+)

Who has high interest in IPAD STATIONS?

- ** 42% of families with children (both preschool and older)
- 27% of adult-only groups

B. Understanding Basic Concepts in Ecological Science

Evaluation questions:

- ♣ Has audience awareness of ecological concepts changed in 14 years?
- ♣ What are the perceived impacts of the exhibition, and how has this changed over time?

One of the primary goals of *Congo Gorilla Forest* was to stimulate awareness of fundamental concepts of environmental science and conservation biology.

One way of assessing this goal was to explore visitors' familiarity with some terms and concepts pertaining to ecology, ranging from common terms such as 'habitat' to more difficult terms such as 'biodiversity.' Results indicate that visitor familiarity with two terms has increased over time (ecosystem and biodiversity), while awareness of the other four terms is about the same.

However, probably more important are the results about whether visitors actually recognized these concepts in evidence in the exhibit. Compared to the Summative Study (2000) some concepts are more recognized now (habitat and ecosystem), and some are less noticed (canopy, food web, niche).

In contrast to 14 years ago, visitors are now significantly less likely to say the exhibition had a 'big impact' on them concerning six of the seven potential impact statements. For example, originally 60% said the exhibition 'increased my curiosity about what goes on in a rain forest' and now 39% say that. The biggest impact of the exhibition is 'it's nice to see the gorillas in a natural habitat,' and that hasn't changed over time.

B.1. Familiarity with ecological terms

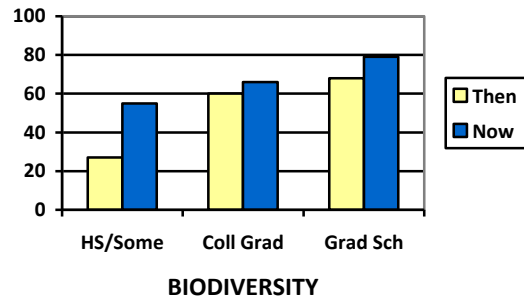
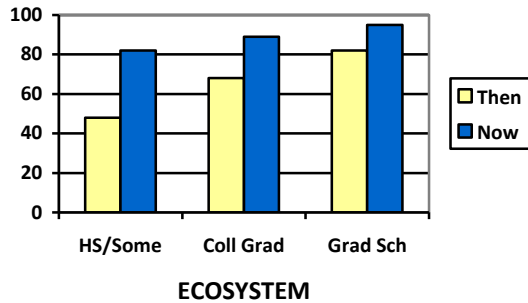
OVERVIEW: Familiarity with two environmental science terms – ecosystem and biodiversity – has increased substantially among first-time CGF visitors over fifteen years. But could this be explained by differences between the fall and summer audiences? Summer visitors are less educated and less interested in environmental issues. Additional analyses (presented on the next page) show that the increased familiarity with ‘ecosystem’ occurs at all levels of education and interest in environmental issues. This indicates broader public awareness. For the term biodiversity it is only the less educated and less environmentally oriented visitors who have increased familiarity now compared to 2000.

Which of the following terms do you know something about?

	<u>Overall</u>	Fall 2013		Summer 2000		
		<u>1st-time in CGF (n=104)</u>	<u>Seen CGF Before (n=101)</u>	<u>Overall</u>	<u>1st-time in CGF (n=205)</u>	<u>Seen CGF Before (n=53)</u>
habitat	98%	97%	98%	90%	90%	90%
ecosystem **	89%	88%	90%	64%	61%	++ 74%
canopy	74%	69%	++ 79%	66%	64%	70%
food web	62%	57%	++ 68%	64%	62%	68%
biodiversity **	67%	68%	65%	49%	46%	++ 60%
niche	45%	40%	49%	49%	46%	57%

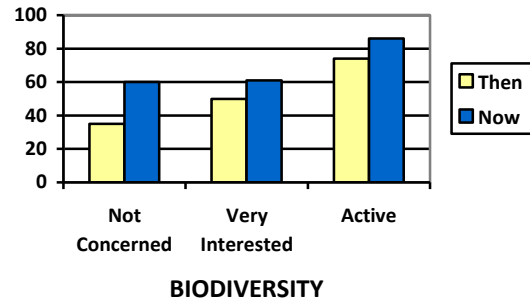
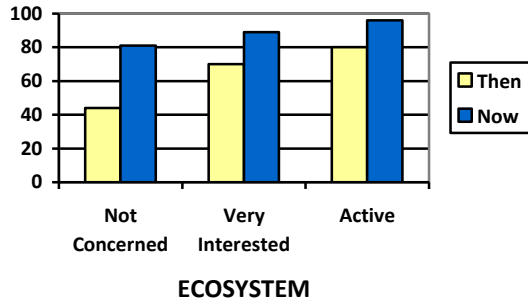
Familiarity analyzed by education:

Familiarity with the term ‘ecosystem’ has increased significantly over time for all levels of education. The increased familiarity with the term ‘biodiversity’ is only significant for less educated visitors (high school or some college).



Familiarity analyzed by environmental orientation:

Familiarity with the term ‘ecosystem’ has increased significantly over time for all levels of environmental attitudes. Familiarity with the term ‘biodiversity’ has significantly increased for less environmentally oriented visitors only.



Ecological terms (continued)

OVERVIEW: Recognition of ecological concepts in the exhibition has increased for two terms (habitat and ecosystem), among people who are 'unconcerned' with environmental issues. Recognition has declined for three terms (canopy, food web and niche). Differences between first-time and repeat CGF visitors (on recognition of ecosystem and food web) are less pronounced than before. Statistically significant differences due to visitors' environmental orientation³ are no longer present as they were in 2000.

Which did you see something about in this exhibit?

		Fall 2013		Summer 2000	
		1 st -time	Seen CGF	1 st -time	Seen CGF
		<u>in CGF</u>	<u>Before</u>	<u>in CGF</u>	<u>Before</u>
		(n=104)	(n=101)	(n=205)	(n=53)
[↑ = increased since 2000]					
[↓ = decreased since 2000]					
↑	habitat	86%	83%	77%	79%
↑	ecosystem	55%	++ 67%	45%	** 64%
↓	canopy	31%	41%	43%	53%
	biodiversity	42%	43%	40%	51%
↓	food web	15%	++ 25%	37%	** 53%
↓	niche	14%	16%	30%	38%

Recognition of concepts in the exhibit, analyzed by environmental orientation:

Fall 2013		<u>Active</u>	<u>Interested</u>	<u>Unconcerned</u>
		(n=49)	(n=103)	(n=58)
	habitat	94%	81%	83% ↑
	ecosystem	67%	62%	53% ↑
	canopy	47% ↓	33% ↓	31%
	biodiversity	49%	41%	40%
	food web	++ 22% ↓	24% ↓	10% ↓
	niche	16% ↓	15% ↓	14%
Summer 2000		<u>Active</u>	<u>Interested</u>	<u>Unconcerned</u>
		(n=46)	(n=141)	(n=75)
	habitat	** 91%	76%	69%
	ecosystem	** 72%	53%	29%
	canopy	** 67%	48%	27%
	biodiversity	** 67%	43%	27%
	food web	** 61%	39%	29%
	niche	** 59%	31%	21%

³ Visitors were asked: "Do you think of yourself as someone who is . . . 1) an active supporter of environmental concerns or 2) very interested in environmental concerns but not active or 3) somewhat interested in environmental issues, or 4) not very concerned with environmental issues?" Categories 3 and 4 are combined.

B.2. Perceived impact of the exhibit on understanding ecology

OVERVIEW: There has been a significant decline in all of the perceived impact statements except for the most popular ‘it’s nice to see the gorillas in a natural habitat.’ In 2000 visitors who saw the film reported more impacts than those who didn’t see it; these significant differences are no longer present. Additionally, most of the previous differences based on environmental orientation are no longer present (data presented on the next page). However, people who have visited CGF five or more times indicated higher perceived impacts for ‘it increased my curiosity about what goes on in a rainforest’ and ‘it helped me understand basic concepts about ecology’ compared to less experienced visitors.

For each of these, would you say the exhibit had no impact, a little impact, or a big impact on you and your family?

	“Big Impact”	
	<u>Fall’13</u>	<u>Summer’00</u>
It’s nice to see the gorillas in a natural habitat	85%	86%
It was fun to learn about the names and personal characteristics of gorillas	54%	** 68%
It increased my curiosity about what goes on in a rain forest	39%	** 60%
I’m much more aware of imminent threats to the rain forest	36%	** 59%
It helped me understand some basic concepts about the ecology of the Congo rain forest	29%	** 41%
It surprised me that science and research are taking place in the rain forest	13%	** 26%

Analysis by film viewing (Fall 2013)

	<u>Saw Film</u>		<u>Didn’t See</u>
	% who said “big impact:”		
Increased my curiosity about what goes on in a rain forest	47%	++	33%
I’m more aware of imminent threats to the rain forest	44%		32%
It helped me understand basic concepts about ecology	36%		24%

Analysis by film viewing (summative 2000)

	<u>Saw Film</u>		<u>Didn’t See</u>
	% who said “big impact:”		
Increased my curiosity about what goes on in a rain forest	69%	**	51%
I’m more aware of imminent threats to the rain forest	66%	**	52%
It helped me understand basic concepts about ecology	48%	**	35%

Significant differences by environmental orientation: (Fall 2013)

	<u>Active Supporter</u>	<u>Very Interested</u>	<u>Not Concerned</u>
	<i>% who said "big impact:"</i>		
It's nice to see gorillas in a natural habitat	81%	88%	82%
It was fun to learn names and personal characteristics	54% ↓	55% ↓	52%
It increased my curiosity about what goes on in RF	** 53% ↓	38% ↓	29%
I'm more aware of imminent threats to the rain forest	41% ↓	36% ↓	31% ↓
It helped me understand basic concepts about ecology	31% ↓	29% ↓	28%
It surprised me that science & research are taking place	10%	17%	10%

Significant differences by environmental orientation: (summative 2000)

	<u>Active Supporter</u>	<u>Very Interested</u>	<u>Not Concerned</u>
	<i>% who said "big impact:"</i>		
It's nice to see gorillas in a natural habitat	** 96%	89%	75%
It was fun to learn names and personal characteristics	** 87%	70%	54%
It increased my curiosity about what goes on in RF	** 74%	66%	42%
I'm more aware of imminent threats to the rain forest	67%	59%	55%
It helped me understand basic concepts about ecology	** 50%	45%	30%
It surprised me that science & research are taking place	28%	25%	26%

Significant differences by familiarity with CGF: (Fall 2013)

	<u>1st-time in CGF</u>	<u>2-4 Times</u>	<u>5+ Times</u>
	<i>% who said "big impact:"</i>		
It's nice to see gorillas in a natural habitat	80%	89%	84%
It was fun to learn names and personal characteristics	47%	59%	62%
It increased my curiosity about what goes on in RF	** 40%	23%	54%
I'm more aware of imminent threats to the rain forest	38%	29%	40%
It helped me understand basic concepts about ecology	** 26%	20%	46%

Another way of investigating visitors' understanding is by asking for an example of what they found out about concepts in ecology. In 2013 there are somewhat fewer 'good' answers (e.g., it's all connected, how rainforest is threatened) on the open-ended follow-up question about what they understand better, compared with answers given in 2000.

(if they chose the impact "helped me understand basic concepts about the ecology")
Give me an example of what you found out about this:

<u>2013</u>	<u>2000</u>	
(n=61)	(n=102)	
13%	22%	how everything works together, all connected
13%	22%	how rain forest is being destroyed, importance of saving RF
18%	13%	how the animals live in the rain forest, their behavior, what they eat
7%	7%	how the animals depend on the rain forest habitat, plants, etc.
0	6%	seeing all the different types of animals
7%	5%	other specific example of an ecological concept
3%	4%	the whole exhibit, everywhere
3%	4%	other / unclear
31%	23%	don't know, no answer

Representative sample of answers (2013)

Everything is all connected, if you get rid of the rainforest, you get rid of the animals

We have to protect their habitat

How they hunt and how we save them

They feed the gorillas collard greens

They're more like a human than I knew

Seeing the kind of habitat they live in

What they eat

How everything has a use

How they live in the canopy

Bringing kids to save the jungle in the movie. You never see kids interacting with the jungle

How much is getting taken out

Things die in a trickle-down effect

The gorillas are vegetarians and don't eat meat to survive

How gorillas affect the planting of the seeds

Interaction of different animals and the environment

Preservation, one road can lead to such devastation

How they survive in environment

That we need to save trees because without them no rainforest- no gorillas and we need to coexist with animals

Interconnectedness between species, trees and environment that creates biodiversity

Different ways poachers hurt the rainforest

Gorillas eat the food and spit it out, five times as much as we do

How much we're losing each year

The canopy

How easily it is destroyed

C. Awareness of Rain Forest Conservation issues

Evaluation questions:

- ♣ Are visitors still getting the idea that the main message of this exhibition is about conservation?
- ♣ Are visitors still learning about specific threats to the rain forest?
- ♣ What impact is the exhibition still having on visitors' level of caring about saving rain forests?

The third major goal of Congo Gorilla Forest was to stimulate awareness of rain forests and to encourage personal action on behalf of imperiled habitats. Although zoo visitors clearly care about animals and their welfare, the crisis in conservation does not seem to be a compelling issue in our society, and the specific content here (gorillas and other animals, African habitats) is so distant and not connected to our everyday life.

In 2000, *the strongest message that people took away was about conservation*, and this hasn't changed, although the proportion who mentioned it is somewhat lower (54% vs. 67%).

In 2000, 59% said that the exhibition impacted their awareness of imminent threats to the rain forest, and now it's 36%. The top two threats people name are hunting and cutting down trees (same as before).

Seeing this exhibition had a significant effect on visitors' ratings of caring about saving rain forests *originally* (48% high caring before entering the exhibition vs. 61% high caring after seeing it once, vs. 80% high caring after seeing it more than once). *Now* the ratings are lower: 52% high caring after the first time seeing it and 45% high caring after seeing Congo two or more times. Although these are still positive outcomes, it seems that saving rain forests is no longer one of the big issues of our time.

One finding in line with this conclusion is that visitors are rating themselves lower on prior knowledge about rain forests (15% say they are very knowledgeable now vs. 29% in 2000). People who have seen Congo five or more times rate their knowledge much higher as a result of seeing this exhibition (50% high knowledge).

C.1. Knowledge of rain forests

OVERVIEW: A small proportion of visitors (15%) rate themselves as highly knowledgeable about rainforests before seeing the exhibition, and this is smaller than the proportion in the 2000 study (29%). This may indicate lower public awareness of rainforest issues now compared with fifteen years ago.⁴ Many visitors (41%) indicated that their knowledge increased by at least two points on the 10-point scale after seeing this exhibition (data presented on next page).

Using a 10-point scale, how would you rate your awareness and knowledge of rain forests BEFORE seeing this exhibit? and now AFTER seeing this exhibit?

	Before CGF Fall 2013	After CGF Fall 2013	Before CGF Fall199/Spr.00
high (8-10)	15%	36%	** 29%
medium (5-7)	49%	46%	48%
low (1-4)	36%	18%	23%

Now who is most knowledgeable AFTER seeing the exhibit? (overall average: 36% high)

**	32%	of first-time visitors to Congo
	29%	of those who have seen Congo 2-4 times
	50%	of those who have seen Congo 5+ times
++	36%	of adult-only groups
	48%	of families with any school-age children
	25%	of families with only preschoolers
**	56%	of 'active' environmental supporters
	34%	of people who are 'very interested' but not active in environmental concerns
	21%	of those 'somewhat' or 'not very concerned' with environmental issues
**	26%	of 18-29 year olds
	25%	of 30-39 year olds
	42%	of 40-49 year olds
	56%	of ages 50+

⁴ It feels like rainforests were a big issue then, and now climate change has supplanted that.

Change in self-rated knowledge from before seeing the exhibit to after seeing it:

stayed the same	35%
increased by 1 point	24%
increased by 2+ points	41%

Whose ratings increased by 2+ points?

**	57%	of people of color
	37%	of whites
++	49%	of people with high school/some college education
	40%	of college graduates
	32%	of graduate school educated

C.2. Awareness of the conservation theme

OVERVIEW: There are somewhat fewer ‘main idea’ answers about conservation compared to 14 years ago (54% vs. 67%), and more answers about gorillas. Both first-time visitors and repeat visitors to Congo showed a similar pattern, so it’s not due to interpretive messages fading into the background among people who have seen them before.

In your opinion, what’s the main idea or theme of this exhibit? Any other idea or message you got?

<u>2013</u>	<u>2000</u>	
54%	67%	conservation, save the rain forest, protect wildlife
26%	19%	gorillas, seeing the animals
17%	14%	show animals in natural habitat
10%	5%	similarities and connections between people and gorillas
8%	13%	show life in the rain forest, how they live
6%	9%	education about the rain forest
4%	2%	humane housing, more space for the animals in the zoo
<1%	2%	biodiversity, interdependence
<1%	2%	tools of research, observing, etc.
6%	2%	other (gorilla facts, they look sad)
<1%	1%	don’t know

Sample of comments, by category (continues on next page)

Conservation:

Saving the Congo

Preservation of the animals

Conservation

Saving habitats to protect species

To protect the lives of the gorillas

Protecting the forest in Africa

Showcase the gorilla, to help preserve the wild life, to learn more about life in the Congo

Conservation of gorillas, for kids to look at the gorillas

To make sure the earth and animals stay safe

How they've been poached and killed, how they are living peacefully in the forest

Habitat disappearing, saving the animals

Conservation, protecting the habitats of the animals

Conservations, protecting the endangered animals, gorillas are peaceful animals

Preserving extinct animals

Saving wildlife, native habitats

Shows how conservation can help, protect the animals

The main idea or theme of this exhibit (continued)

Gorillas, seeing animals:

Seeing the gorillas interact with people, seeing people act like monkeys

We want to see the gorillas

Gorillas in the jungle

Gorillas, the rainforest

Like looking at them, just come for the kids to see the gorillas

Clean, just enjoyed seeing the gorillas, it's very good

Gorillas, other animals

Gorillas, I just came for the gorillas

Come see rare animals

Natural habitat:

Give people the opportunity to see the animals in their approximated habitat

Seeing the animals inside their natural habitat

Freedom. It's great to see the gorillas have so much freedom

Gorillas in their habitat

As natural habitat in the zoo as possible, nice to see them climbing the trees

Recreation of the rainforest, looks very natural

Similarities between people and gorillas/ connecting with gorillas

How they interact with each other, it's crazy how they are so human

Connect with gorillas- to reinstitute a connection to wildlife

How similar to us they are

Gorillas are like humans, they're slow but playful

Gorillas- how friendly they are, they're so interactive

Gorilla intelligence

Show life in the rain forest:

How they live, what they eat

Habitat information about rainforests, adaptations of animals

Education:

Education

Getting to know gorillas, learning about the habitats and behavior of gorillas

See live animals, learning facts about habitat

All other categories:

I feel bad for them, they look at us like we are the monkeys

So that they can feed them, clothe them, keep them warm, it's nice to see the gorillas

Number of gorillas in the wild and where they live

For children- to see how you can find animals and view things in nature

C.3. Awareness of threats to the rain forest

OVERVIEW: Visitors are less likely to say that the exhibition had a big impact on their awareness of threats to the rainforest. Among those who did, the two main threats they mentioned are hunting and cutting down trees, similar to the results in 2000.

For each of these, would you say the exhibit had no impact, a little impact, or a big impact on you and your family? [same question presented in previous section]

	Big Impact	
	Fall'13	Summer'00
It's nice to see the gorillas in a natural habitat	85%	86%
It was fun to learn about the names and personal characteristics of gorillas	54%	** 68%
It increased my curiosity about what goes on in a rain forest	39%	** 60%
I'm much more aware of imminent threats to the rain forest	36%	** 59%
It helped me understand some basic concepts about the ecology of the Congo rain forest	29%	** 41%
It surprised me that science and research are taking place in the rain forest	13%	** 26%

(if they chose the impact 'I'm much more aware of imminent threats to the rain forest')
Give me an example of a threat you weren't aware of before:

<u>2013</u> (n=49)	<u>2000</u> (n=71)	
39%	30%	hunting & poaching, using animals for food
31%	18%	cutting trees for lumber
10%	7%	other threats, e.g., overpopulation, war, pollution
4%	8%	roads, people moving in
2%	14%	animals are losing their habitat
2%	7%	the rate of destruction, severity of problem
2%	6%	gorillas are endangered
0	3%	how fragile it is, everything is impacted
2%	4%	other / unclear
8%	3%	blank, no answer

C.4. Caring about preservation of rain forests

OVERVIEW: Overall ratings of caring about saving rain forests have declined (49% vs. 65%). Previously the repeat CGF visitors gave very high ratings, but now they are not different from the first-time visitors. Additional analyses on the next two pages show that environmentally ‘active’ visitors give higher ratings of caring now, similar to the pattern in 2000, but ratings have declined among those with less interest in environmental issues. Young adults without kids (who are also less environmentally-oriented) give *lower* ratings now, similar to the pattern in 2000, but the families’ ratings have declined. Visitors cited similar reasons for caring as they did in the summative evaluation in 2000.

On a scale of 1 to 10, how much do you care about saving African rain forests?

	Fall 2013		Summer 2000	
	1 st -time in CGF	2 nd + time in CGF	1 st -time in CGF	2 nd + time in CGF
high (9-10)	52%	45%	61%	** 80%
medium (7-8)	24%	32%	20%	14%
low (1-6)	24%	23%	18%	6%

Why?

<u>2013</u>	<u>2000</u>	
29%	26%	to save the animals, share the planet
22%	22%	important to the planet, global ecology, oxygen
13%	14%	it’s important, we need to save it
4%	9%	love nature, beautiful, untouched
5%	7%	for future generations
4%	6%	for human benefits such as resources, medicines
6%	2%	biodiversity, survival of species
1%	1%	am more aware now
6%	3%	can’t help — too far away, no time, no money
3%	2%	other issues in our country are also important
1%	3%	don’t care, it’s not relevant to me
1%	2%	don’t know much about it
6%	6%	other /unclear
1%	2%	no answer

Who is HIGH on caring about saving African rain forests?

	<u>2013</u>	<u>2000</u>	
**	71%	80%	of 'active' environmental supporters
	52%	75%	of those 'very interested' but not active in environmental concerns
	22%	36%	of those 'not very concerned' with environmental issues
**	35%	42%	of young adults without kids (18-29)
	48%	71%	of families with children
	61%	72%	of older adults (40+)
**	68%	70%	among 'high' knowledge
	46%	68%	among 'average' knowledge
	43%	60%	among 'low' knowledge
ns	58%	68%	of visitors who used the conservation choices computers (voters)
	45%	57%	of those who didn't use the computers

Caring about rain forests (continued)Representative sample of comments — “why a ‘HIGH’ rating?”:

*Really important to maintain, preserve the planet because it's not just ours
 We have been poor stewards of the universe
 Because it's beautiful and unique. All of this can be gone.
 These animals need to be loved and saved
 Cause it's all connected
 It's important for earth
 Very big problem, biodiversity is very important for our well-being
 Saving the rainforest is saving the animals
 Balancing ecosystem of the world
 Worth it. They're our fellow primates. All part of this world
 Once it's gone, it's gone. We need the forest to live
 Keep it clean. The forest helps with the climate
 It's in decline. We're animal people. We want to save the world
 Because we need them to survive. If we lose them it would be domino effect
 Natural treasure
 We need them- whole ecosystem will be deteriorated
 You won't have any more animals- extinction of everything. Nothing for next generation
 If rainforest disappears it'll change the whole ecosystem
 Tropical rainforest has most of the biodiversity*

Why a ‘MEDIUM’ rating?

*We have only one nature and we have to share it
 So many of our animals are going away, we need to change the way we do things
 I know how important it is for planet earth
 For future generations
 I love African animals
 Concerned about species extinction, air pollution
 Important diverse ecosystems
 Animal lover, don't want to see their homes destroyed
 Global warming, oxygenates
 I'm for the environment and we need to preserve what we have left*

Why a ‘LOW’ rating?

*We are concerned about what is going on but we don't have much money
 It's important for the animals and the environment
 I'm from Africa and animals should be saved- why not?
 I like the monkeys. That's it
 We have to preserve what we have for future generations
 I run a child abuse clinic, it's hard thinking of animal causes. My focus is human causes
 Life without wildlife is empty/sad-
 It's all interconnected
 Everything is life, we want to keep it from being destroyed
 Other things more important
 I care but am not involved*

D. Characteristics of the Samples

This section presents demographic and psychographic characteristics of 210 visitors who were interviewed in fall 2013, compared with the 250 visitors in the fall/spring sample for the summative evaluation in 2000.

The visitor profiles are remarkably similar; in fact none of the demographics have changed.

It is also interesting that approximately the same proportion of visitors (~25%) see themselves as ‘active supporters of environmental issues.’ Although our society has definitely become more environmentally conscious in the past 15 years (many more people recycle, use efficient light bulbs, etc.) people’s internal definition of ‘active’ has not changed.

D. Characteristics of the Samples

OVERVIEW: The *Congo Gorilla Forest* audience in Fall 2013 is remarkably similar to the summative evaluation sample from Fall 1999/Spring 2000. In fact there are no statistically significant demographic or psychographic differences, with the exception that there are now more visitors who have seen CGF before.

	Now <u>Fall 2013</u> (n=210)		Summative <u>fall99/spr.00</u> (n=250)
<u>Familiarity with Zoo</u>			
first-time visitor	29%		25%
visited in the past year	28%		22%
been before, not in past year	43%	++	53%
seeing Congo for the first time	51%	**	90%
seen Congo 2-4 times	27%		n/a
seen Congo 5+ times	22%		
<u>Residence</u>			
Bronx	3%		5%
Manhattan	12%		12%
other NY city	15%		12%
Westchester county	7%		10%
other NY state	22%		22%
NJ	17%		15%
CT	4%		8%
other US	12%		12%
foreign country	8%		4%
<u>Group Composition</u>			
family with any preschoolers	33%		25%
family with school age children only	13%		14%
adults only	54%		61%
<u>Gender</u>			
man	41%		48%
woman	59%		52%

	<u>Now</u> <u>Fall 2013</u> (n=210)	<u>Summative</u> <u>fall99/spr.00</u> (n=250)
<u>Age of adult</u>		
18-29	29%	24%
30's	29%	26%
40's	18%	25%
50's	15%	17%
60+	8%	8%
<u>Education level</u>		
high school	8%	8%
some college	24%	24%
college graduate	38%	32%
graduate school	30%	36%
<u>Ethnic identity</u>		
African American	4%	4%
Asian American	5%	3%
Hispanic	11%	6%
White	78%	82%
other	2%	4%
<u>Group size</u>		
one	3%	6%
two	41%	44%
three	18%	15%
four	19%	17%
five	9%	6%
six or more	10%	12%
<u>Days surveyed</u>		
Wednesdays (free day)	13%	8%
other weekdays	32%	32%
weekends / holidays	55%	59%
<u>Environmental orientation</u>		
active supporter of environmental issues	23%	26%
very interested but not active	49%	54%
somewhat interested	27%	18%
not very concerned	1%	3%