IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

AMERICAN SOCIETY FOR THE PREVENTION OF THE CRUELTY TO ANIMALS, ET AL.,

Plaintiffs,

CA No. 03-2006
Washington, DC
February 4, 2009
2:10 p.m.

VS.

FELD ENTERTAINMENT, INC.,

PM Session

Defendant.

.....

TRANSCRIPT OF BENCH TRIAL
BEFORE THE HONORABLE EMMET G. SULLIVAN
UNITED STATES DISTRICT JUDGE

APPEARANCES:

For the Plaintiffs:

KATHERINE A. MEYER, ESQUIRE HOWARD M. CRYSTAL, ESQUIRE TANYA SANERIB, ESQUIRE Meyer, Glitzenstein & Crystal 1601 Connecticut Avenue, NW Suite 700 Washington, DC 20009 (202) 588 5206

For the Defendants:

JOHN M. SIMPSON, ESQUIRE LISA ZEILER JOINER, ESQUIRE LANCE L. SHEA, ESQUIRE KARA L. PETTEWAY, ESQUIRE Fulbright & Jaworski, LLP 801 Pennsylvania Avenue, NW Suite 500 Washington, DC 20004

(202) 724–6522

Court Reporter:

Lisa M. Hand, RPR Official Court Reporter U.S. Courthouse, Room 6706 333 Constitution Avenue, NW Washington, DC 20001 (202) 354-3269

Proceedings recorded by mechanical stenography; transcript produced by computer-aided transcription

1	<u>I N D E X</u>				
2	WITNESS	DIRECT	CROSS	REDIRECT	RECROSS
3	For the Plaintiff:				
4	JOYCE H. POOLE, PH.D	4/29	93		
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

PROCEEDINGS 1 2 THE COURT: Proceed. 3 Thank you, Your Honor. We'd like to MS. MEYER: 4 call to the stand Dr. Joyce Poole. 5 Thereupon, 6 JOYCE H. POOLE, Ph.D., 7 the witness herein, having been first duly sworn, was examined 8 and testified as follows: 9 DIRECT EXAMINATION 10 BY MS. MEYER: 11 Good afternoon, Dr. Poole. Q. 12 Α. Good afternoon. 13 MS. MEYER: Your Honor, in light of the defendants' 14 Daubert challenge for Dr. Poole, I do intend to spend a little 15 bit of time qualifying her before I tender her as an expert. 16 BY MS. MEYER: Dr. Poole, would you please state your full name for 17 18 the record. 19 Dr. Joyce Hathaway Poole. Α. 20 And where do you live? 0. 21 I currently live in Norway. Α. 2.2. And where were you born? Q. 23 Α. I was born in Germany. 24 Where did you grow up? Q. 25 I grew up in Africa. Α.

- 1 Q. And do you have a doctorate degree?
- 2 A. Yes, I do.

7

15

16

17

18

19

- Q. What is that in?
- 4 A. Animal behavior.
- 5 Q. Where did you earn your doctorate?
- 6 A. University of Cambridge.
 - Q. When did you get your doctorate degree?
- 8 A. 1982.
- 9 Q. And did you have any particular area of study for your 10 doctorate degree?
- 11 A. My thesis was "Musth and male-male competition in the 12 African elephant."
- Q. Did you study any particular research methodologies at Cambridge?
 - A. Well, my thesis was a focal animal sampling, and I used also scan sampling for my thesis.
 - Q. And is that -- are those methodologies based on observations?
 - A. Yes, they are.
 - Q. And who taught you this method of research?
- A. Well, it's an established methodology. There's a very well-known paper by Jeanne Altmann, 1974, but it was taught to me by Professor Robert Hinde, who's a professor of the Royal Society.
- 25 Q. And do you know of any other scientists who were

- 1 trained by Professor Hinde in behavioral research?
- A. One that everyone in this room probably knows is Jane Goodall.
 - O. Who is Jane Goodall?
 - A. Jane Goodall is very well-known for her studies of the chimpanzees of Gombe Stream National Park in Tanzania.
 - Q. Are these research methodologies that you've described relied on by scientists in your field?
 - A. Yes, they are.
 - Q. Where do you currently work?
- 11 A. Well, I currently, my field work, I have two field 12 sites, one in Kenya in Amboseli National Park, and now another 13 in Sri Lanka, in Minneriya and Kaudulla National Park. But my 14 home office is in Norway.
 - Q. And do you currently have any other projects underway?
- 16 A. You mean non-field projects?
- 17 | Q. Yes.

5

6

7

8

9

10

15

20

- A. I do a lot of advocacy work, speaking out on behalf of elephants in various places, in the wild and in captivity.
 - Q. Prior to your current endeavors, where did you do your field study?
- 22 A. Sorry. Can you repeat that?
- 23 Q. Where have you spent most of your time in the field?
- A. Most of the time. Most of my since I was 19 I've been involved in the Amboseli Elephant Research Project in

1 Amboseli National Park, Kenya.

2.2.

- Q. Could you tell Judge Sullivan what the Amboseli Research Project is?
- A. It is the longest study of African elephants, or actually of any elephants in the world. It was started in 1972 by Cynthia Moss, and she's still running the project. It has databases over all these years on many, many thousands of observations of individual elephants, their life histories, groups of elephants, how they form and families form and split up and so on. And it's relied on by people all over the world.
- Q. And so how long have you actually worked with the Amboseli Research Project?
 - A. Since 1975.
 - Q. What does your work entail, briefly?
- A. Well, I've done a number of different studies. My early work was a study of musth in African elephants. I discovered musth in African elephants and went on to describe it. I've studied, done a very long-term study of acoustic communication and visual-tactile communication. I've done a study survey, actually not in Amboseli, or including Amboseli and other areas, on the effects of poaching on the age structure and reproductive patterns of elephant populations.

And I've worked with my colleagues on a number of different studies in Amboseli on elephant cognition, on

demography, on social learning, on leadership of females, male ranging patterns and so on.

- Q. And you mentioned to Judge Sullivan that scientists, others rely on the work that is done at Amboseli?
 - A. That's correct.

2.2.

2.5

- Q. Can you give us some idea of the other scientists who are associated with the project. You mentioned Cynthia Moss.

 Are there others?
 - A. Yes. Cynthia Moss. Dr. Keith Lindsay, Dr. Phyllis
 Lee, Dr. Karen McComb, Dr. Beth Archie, Dr. Lucy Bates, Hamisi
 Mutinda, Kadzo Kangwana. These are all doctors. I'm sure
 there are still more.
 - Q. Okay. How many hours of field study have you had in connection with this project?
 - A. Well, it's kind of hard for me to add all those up, but I do know that as of the end of 1989 I had spent eight years living in a tent and going out with elephants six days a week. So quite a bit of time.
- Q. How many elephants do you think you have observed over your lifetime?
 - A. Well, close observations on the particular population in Amboseli, which currently numbers 1,550 or so elephants. But I have observed elephants in many different national parks, in Kenya and outside Kenya, and I would say between 10,000 and 20,000 elephants.

- 1 And what species of elephants are you studying in the 2 Amboseli Research Project?
 - Α. The African savanna elephant.
 - Has your work that you've done at Amboseli been relied Ο. on by scientists who study Asian elephants?
 - Yes, it has. Α.

4

5

6

7

8

9

10

11

- Can you name any experts who -- experts in Asian Q. elephants who have relied on the work that has been done at Amboseli?
 - I suppose the most notable would be Professor Raman Sukumar.
- 12 Who is he? Ο.
- 13 He is the preeminent specialist on Asian elephants.
- 14 And are you familiar with a book that was published by Ο. 15 Professor Sukumar in 2003 entitled "The Living Elephant"?
- 16 Α. Yes, I am.
- 17 This is a copy of the book right here. Q. something that you cite in your report; is that correct?
- 19 Α. Yes, I have.
- 20 And how would you describe this book? Ο.
- 21 Well, it's a very detailed book on -- well, on all Α. 2.2. three species, but with most emphasis on the Asian elephant.
- 23 Q. And do you know how this book is regarded in the 24 scientific community?
- 25 Α. Dr. Sukumar is very highly regarded from all elephant

- biologists, and of course it's regarded as a key document in the study of Asian elephants.
 - Q. Is your research work cited by Dr. Sukumar in this book?
 - A. Yes, it is.

4

5

6

7

8

9

15

16

17

18

19

20

21

2.2.

23

24

- Q. In fact, if I turn to the reference section, would you be surprised to find out that your work, where you are the principal author, is cited no less than 12 times by Dr. Sukumar in his book?
- 10 A. I would not.
- 11 Q. Have you collaborated with Professor Sukumar on any projects?
- 13 A. Yes, I have.
- Q. Can you explain what they are?
 - A. In the over the course of the last year I've worked with Dr. Sukumar and with several other elephant biologists, key elephant biologists, in writing a charter for elephants.

 And that's the other people have been Cynthia Moss, Andrea Turkalo, Katherine Payne, so the experts, the key experts on the three elephant species. And the charter was to provide sort of guiding principles based on elephant biology, to form a touchstone for anyone wishing to address the interests of elephants.
 - Q. Do you collaborate with other scientists in the course of doing your research?

1 A. Yes.

4

5

6

- Q. Do you share your behavioral observations with other scientists as part of doing your research?
 - A. Yes, I do.
 - Q. Do they in turn share their observational -- behavioral observations with you?
 - A. Yes, they do.
- Q. And do you sometimes rely on information you obtain from other scientists in the course of doing your research?
- 10 A. Yes.
- 11 Q. Have you ever been employed by any governmental
- 12 entities?
- 13 A. Yes, I have.
- 14 | O. Which one?
- 15 A. The Kenya Wildlife Service.
- 16 Q. When was that?
- 17 **A.** Between 1990 and 1994.
- 18 Q. What was your title?
- A. I was hired by Dr. Richard Leakey to head the elephant program for the Kenya Wildlife Service, and I was responsible for setting management policy for the country and the
- 22 conservation and management of the country's 25,000 elephants.
- Q. Who is Dr. Richard Leakey?
- A. He's a very well-known paleontologist and
- 25 conservationist.

- 1 Q. Are you familiar with the Asian elephant?
- 2 A. I am.

6

7

14

15

17

- Q. It's a different species than the African elephant; is that correct?
 - A. Yes, in fact it's a different genus.
 - Q. And did you study the Asian elephant at all in connection with obtaining your Ph.D?
- A. I did in the sense of very detailed literature
 research, because my study, as I explained, was on musth and
 then male-male competition, and musth had been known about for
 centuries in Asian elephants, but we had only just discovered
 it in African elephants, so I was doing comparison between the
 two species.
 - Q. Have you attended conferences on elephants with other scientists who are Asian elephant experts?
- 16 A. Yes, I have.
 - Q. Have you had an opportunity to observe Asian elephants in the wild?
- 19 A. Yes, I have.
- 20 O. When?
- A. I have in 19 -- let's say 1995 in India, in 1993 in Sri
 Lanka, in 1993 -- sorry, 2003 in Sri Lanka, and again in 2008,
 23 2006 in Thailand. I think that's it.
- Q. Are you currently involved in the study of Asian elephants?

1 A. Yes, I am.

2

5

6

7

15

23

- Q. Can you explain what you are doing?
- A. I'm working together with my husband and a Sri Lankan conservationist, Manori Gunawardena.
 - Q. Can you spell that?
 - A. Yes. M-A-N-O-R-I, G-U-N-A-W-A-R-D-E-N-A, Gunawardena.
 - Q. Who is Manori Gunawardena?
- A. Manori has studied Asian elephants for, gosh, 10 years or so, done a lot of conservation work. Her work is mainly focused on conservation and ranging patterns. But she has also done some social behavior work. So we're collaborating now to do a study of the a study and particularly a conservation project on the Minneriya Kaudulla elephant population.
 - Q. When did you begin that project?
- 16 A. In August of last year.
- 17 Q. August of 2008?
- 18 A. Yes.
- 19 Q. And how did that collaboration come about?
- A. When I was in Sri Lanka in 2003 Manori came up to me and said, told me that she wanted to do a social behavior study and she wanted to work with me.
 - Q. How many Asian elephants in total would you say you've had an opportunity to observe in the wild?
- 25 A. Let's see. At least a thousand, about a thousand.

- Q. And does that include both adults and young Asian elephants?
 - A. Yes, it does.

2.2.

- Q. Are there physical differences between the two species?
- A. Yes, there are.
- Q. Could you describe what they are?
- A. Well, some obvious differences are Asian elephants have very small ears, African elephants have large ears. African elephants' backs are concave or curved down, and Asian elephants' are convex. Asian elephants have two domes on the tops of their heads. They have one finger-like tip at the end of their trunk, and African elephants have two. They have thinner-looking skin anyway, African elephants have thicker skin.

African elephants, both males and females, carry tusks, although there are some tuskless females, whereas Asian elephants, the females are either tuskless or have vestigial, what they call tushes. And also in Asian elephants many more of the males are tuskless than in African elephants.

MS. MEYER: I'd actually like to show Your Honor a photograph that is Figure 1 of Dr. Poole's report.

MR. SHEA: Objection, Your Honor. Hearsay.

THE COURT: Counsel.

MS. MEYER: These are photographs of the two, just to show you what the two different species look like.

1 THE COURT: There is an objection. Do you want to 2 respond to it? 3 These are simply demonstrative tools to MS. MEYER: 4 show you the difference between the two species. We're not 5 offering it for a statement of any kind. 6 THE COURT: All right. I'll allow them. 7 figures? 8 MS. MEYER: Yes, just to show you the -- what the two species look like, Your Honor, since Dr. Poole was just 9 describing them. 10 11 THE COURT: She described them. 12 BY MS. MEYER: 13 Dr. Poole, are there similarities between the two 14 species? 15 Α. Yes, there are. 16 What are they? 0. 17 Well, they are extremely social animals. They live in 18 family, matriarchal family groups. Families range in size 19 from two to 40 individuals. They have very sensitive skin. 20 They have -- sorry, I've lost my train of thought here. Yeah, 21 the skin has sensory, sort of sensory nodes in the skin that 2.2. has been used by, actually for centuries by mahouts to control 23 the elephants.

They have very sensitive feet. Because they have

cells that can sense vibrations, and also in the trunk, they

24

are both able to detect seismic vibrations. They are both able to produce very low frequency sounds, in fact sounds below the level of human hearing, and they use those sounds to communicate with one another.

They live in what we call a fission-fusion society; that means, very similar to humans, they live in these family groups, but families are not together all the time. They split up for maybe days at a time and come back together again. So they use this acoustic communication and the seismic communication to keep in touch with one another. They have extraordinary sense of smell, and again, that's very important in their social life.

Q. Are both --

2.2.

- A. I could go on and on.
- Q. Are both species intelligent?
- A. They are both very intelligent. I wanted to say I went through the film "The Lord of the Jungle," and as I said earlier, one of my expertises is on the visual and tactile displays of elephants. So I went through that and just looked at, made a note of all the different displays and signals that I saw, and I counted 86 of them that I knew, and of those, 85 are also seen in African elephants. So they are very similar.

And then going to the cognition, as I said, they are very intelligent animals. They are one of the few nonhuman animals capable of tool use, capable of simple

modification of or manufacture — modification I guess is a better word, of tools. They are capable of empathy. They are self-aware. They have an understanding, a rudimentary at least understanding of death. So we're talking about a very complex, very complex animal.

- Q. And do both species move in the wild? Are they mobile in the wild?
- A. Very mobile. They travel anywhere from sort of eight to 15 kilometers a day on sort of an average day. Home range size is comparable, it tends to be a bit smaller in Asian elephants, but the average range size in Asian elephants is about 177 square kilometers, thereabouts. African elephants' may be a bit bigger, but the range is in Asian elephants is somewhere between 50 square kilometers to almost 7,000 square kilometers; African elephants a hundred to 11,000. So they are very similar.
 - Q. Can you describe how an elephant uses its trunk?
- Well, that is actually something that is very important for my work, because as I said, I study elephant communication, and I'm very interested in what causes elephants to vocalize, and trying to really get in their 2.2. minds. And the tip of the trunk is very, very key to that, because where the tip is pointing is where their mind is focused. So if you watch an elephant's trunk you can really get an idea of what it's going to do next.

So in addition to smelling with their trunk, they use the trunk for all sorts of things. And they are busy with smaller and bigger movements all day long. So they may — for instance, just feeding for elephants is, you know — just the difference between different kinds of grass, they use the trunks in different ways. They may use it to scrape off the dirt. They can use it to break open the heart of a palm. They use the trunk to break a branch and scrape the thorns off and so on. And of course they use the trunk for tactile, taking care of babies, and so on.

They move from one feeding site to another. And they move of course for keeping track of meeting up with the members of their family, staying in touch with members of their family. Males of course move even more than females, especially when they are in musth. I can go on. You have to stop me.

- Q. The use of the trunk that you described is true for both Asian and African elephants?
 - A. Yes, that's true for Asian and African elephants.
 - Q. Do both Asian and African elephants experience pain?
- A. Yes, they do.

2.2.

- Q. What is your basis for saying that?
- A. Well, I mean, I think that's an established fact, that we are -- you know, we have evolved, we all have the same sensory, basic sensory makeup, so all mammals, all vertebrates

- feel pain. That has been established. But you can see it on elephants. I mean, for instance, I once watched a female approach an electric fence, and one member of her family was watching and winced as the female reached up toward it. So not only do they feel pain, but they are empathizing with others, anticipating the others that they are close to may feel pain.
 - Q. I'd like to show you your curriculum vitae if we could, which is Appendix A to Dr. Poole's report. And I'd like to ask you if this CV is an accurate recitation of your education and professional work experience?
- 12 A. Yes.

9

10

11

15

16

20

- Q. And is there anything that needs to be added to this to get it up to date?
 - A. I believe there were -- I have to put on my glasses. I believe there's two papers there that are now in print.
- 17 Q. I think if we go to Page 3 of the CV.
- 18 A. Yes, the ones in press and published as sole or first 19 author, the one at the top there is — should be 2009.
 - O. That would be the first one listed?
- 21 A. Yes, Poole and Granli.
- Q. In the middle of the page. The "Mind and Movement" piece?
- 24 A. Yes. And the second one should read 2008.
 - Q. And that would be the "Elephant Sociality and

1 Complexity" article? 2 Α. Yes. 3 And if we can just go to the -- actually, looking at Ο. 4 this page, is this the beginning of the list of your --5 THE COURT: Can I ask a question? You said in 6 response to the question, do elephants feel pain, if I 7 understood you correctly, you said "we," referring to 8 humans --9 THE WITNESS: Yes. 10 THE COURT: -- have the basic, what, sensory 11 perceptions? Is that what you said? Or sensors or --12 THE WITNESS: Well, basically we have the same 13 physical makeup. 14 THE COURT: Right. 15 THE WITNESS: Brains --16 THE COURT: As elephants? 17 THE WITNESS: -- and the whole neurological system. 18 THE COURT: So, physiologically, because there is a 19 similarity, then there's the conclusion that there must be the 20 perception or the feel of pain then, by elephants? 21 THE WITNESS: Well, they have actually done studies 2.2. that say fish feel pain and shrimp feel pain and mammals feel 23 pain. I don't actually have those works in my head. It's not 24 really my field. But I know from papers that come across my

desk that yes, that's absolutely true. But in terms of my own

observations, you know, I've seen cases where a male who had, we call it twisting disease — it's a kind of virus that the elephants get — and during that time they walk in a very funny way, and he was removing stones from the road so that he didn't have to step on them, you know.

THE COURT: To avoid pain?

THE WITNESS: To avoid the pain, yeah.

BY MS. MEYER:

2.2.

- Q. And looking at this page and the next couple of pages,

 I just wanted to ask you, is this a list of your -- the

 publications that you have either been the principal author on

 or the coauthor of?
- A. Yes. There are a couple of three that are missing on papers authored with others. Three on elephant cognition that are with a lead author.
 - Q. I actually --
- 17 A. Lucy Bates.
 - Q. I actually have I wanted to read those into the record, if that would be all right. These are three publications that were not on your CV, if that would be all right. The first is a Bates, et al. It's entitled "Do Elephants Show Empathy?" and was published in the Journal of Consciousness Studies in 2008. Is that correct?
 - A. (Nodded affirmatively).
 - Q. And the second is Bates and Poole, it's entitled

- "Elephant Cognition," and it was published in Current Biology,
 Volume 18, Number 13; is that right?
 - A. Richard Byrne's there as well.
- 4 Q. Okay. I don't have a date for that one.
- 5 A. The consciousness, yeah, that's -- I think that's -- 6 that's 2008.
 - Q. And the third is Bates, et al., "African elephants have expectations about the locations of out-of-sight family members," published in the Royal Society Journal in 2007?
 - A. Is that -- I think -- is that 2007 or 2008?
- 11 Q. 2008. You probably know better than I do.
- 12 A. Yeah.

7

8

9

10

20

21

2.2.

23

24

- Q. Now, Dr. Poole, have you had any experience observing captive elephants?
- 15 A. Yes, I have.
- Q. And I'm talking other than your experience in observing the elephants in this case?
- 18 A. Yes, I have.
- 19 Q. What has that experience been?
 - A. I studied, I actually studied some captive elephants or semicaptive elephants, orphans that were being kept in Tsavo, and wrote a paper that was published in Nature on elephants capable of vocal imitation. So that is another example of their cognitive abilities. So that was a study in captivity.

25 And I've also observed elephants in captivity as

part of a welfare case that took place in South Africa back in 1998. I've observed captive elephants in Thailand as part of an elephant reintroduction program. I've observed captive elephants at the elephant transit home in Sri Lanka. In India as well, and of course in the sanctuaries and various zoos in this country and in the circus in Norway.

- Q. Dr. Poole, do you know what a bull hook is?
- 8 A. Yes, I do.

1

2.

3

4

5

6

7

9

10

11

12

13

14

15

16

18

19

20

- Q. You were shown some bull hooks at the CEC inspection that you conducted; is that correct?
 - A. Yes, I was.
- Q. Do you believe that you have sufficient expertise regarding elephants to render an expert opinion in this case regarding how Asian elephants are affected by the use of a bull hook?
 - MR. SHEA: Objection; leading.
- 17 THE COURT: I'll allow it.
 - THE WITNESS: I didn't even hear what you said because I was remembering Botswana as well for the captive elephants.
- 21 BY MS. MEYER:
- Q. I'll repeat the question. Do you believe you have sufficient --
- 24 THE COURT: Refrain from leading, too.

BY MS. MEYER: 1 2 Do you believe that you have sufficient expertise to 3 render an opinion in this case regarding the use of the bull 4 hook on Asian elephants? 5 MR. SHEA: Objection. THE COURT: I'll allow that. 6 7 THE WITNESS: Yes, I do. 8 BY MS. MEYER: 9 And do you believe you have sufficient expertise 10 regarding how -- regarding elephants to render an expert 11 opinion as to how keeping Asian elephants in chains would 12 affect them? 13 MR. SHEA: Objection, leading. 14 THE COURT: Overruled. 15 THE WITNESS: Yes, I do. 16 MS. MEYER: Your Honor, I'd like to tender Dr. 17 Poole as an expert on elephant behavior. 18 THE COURT: Any voir dire? 19 VOIR DIRE EXAMINATION 20 BY MR. SHEA: 21 Good afternoon, Dr. Poole. Q. 2.2. Good afternoon. Α.

If it please the Court, I'm Lance Shea, here on behalf

of Feld Entertainment. Dr. Poole, you have never trained an

23

24

25

Q.

elephant, correct?

- 1 A. I have never trained an elephant.
- 2 Q. And you've used an ankus or bull hook only one time,
- 3 | isn't that true, on an elephant named Abu in Botswana?
 - A. I have held a bull hook and was shown how to use it,
- 5 yes.

- 6 Q. I see. And in what year was that, do you recall?
 - A. I believe that was 1994. '94. Yeah, 1994, I think.
- 8 Q. Then you've not used a bull hook other than to sit on
- 9 Abu's back and steer him around; is that right?
- 10 A. That's correct.
- 11 Q. Dr. Poole, you have observed captive elephants in
- 12 Thailand in 2006; do I understand that correctly?
- 13 A. I hope that's the correct date, but I think so.
- 14 Q. But that was for a period of only two to three days;
- 15 | isn't that right?
- 16 A. It was a very short period, yes.
- 17 Q. And then you've observed captive elephants in India in
- 18 | 1996; is that correct?
- 19 A. 1996, yes, I think it was 1996. Yes.
- 20 Q. And that was for a period of two to three days total,
- 21 was it not?
- 22 A. That's correct.
- 23 Q. And you've observed wild elephants in Sri Lanka
- 24 | in 2003; is that correct?
- 25 A. That's correct.

- 1 Q. That was for a period of two weeks; isn't that right?
- 2 A. That was two weeks, yes.
 - Q. As of the time of your deposition in this case, back in, I believe it was August, that was the sum total of the observations you had made of wild Asian elephants; true?
 - A. That's correct.
 - Q. And you have not observed wild Asian elephants since that time; is that true?
- 9 A. That's not true.
- 10 Q. All right. And that is in current research work in 11 Sri Lanka; is that correct?
- 12 A. That's correct.
 - Q. Now, you'd formed your opinions in this case by the time of your deposition, hadn't you?
- 15 A. Yes.

4

5

6

7

8

13

14

16

17

23

24

- Q. Now, you've not written articles specifically on Asian elephants, correct?
- A. I have written a book on elephants that includes —
 well, includes, then it was both species, because the African
 forest elephant hadn't been determined to be a separate
 species, so I have written a book on both African and Asian,
 and my thesis covers a lot on Asian elephants.
 - Q. Dr. Poole, when you gave your deposition in this case do you remember us talking about your writings on Asian elephants?

- 1 A. I don't particularly recall talking about them, no.
- 2 Q. I'd like to show you page 102 of your deposition.
 - A. Okay.

- 4 Q. Beginning on line 19. Do you have that in front of
- 5 you, Dr. Poole?
- 6 A. I do.
- 7 Q. I asked you: Do you have any writings on wild Asian
- 8 elephants at all? Answer: Specifically on Asian elephants
- 9 only?
- 10 A. Uh-huh.
- 11 Q. Question: Yes. Answer: I don't believe so. Did I
- 12 read your testimony correctly?
- 13 A. That's correct.
- 14 Q. Dr. Poole, you're not a veterinarian; is that correct?
- 15 A. I'm not a veterinarian, no.
- 16 Q. You're not a medical doctor, true?
- 17 A. I am not a medical doctor.
- 18 Q. You're not a neurologist, correct?
- 19 A. Correct.
- 20 Q. And not a pathologist; is that correct?
- 21 A. Correct.
- 22 Q. Not a psychiatrist; is that correct?
- 23 A. Correct.
- 24 Q. And not a psychologist; is that true?
- 25 A. Correct.

- 1 Q. Dr. Poole, you've never worked for a zoo; isn't that 2 correct?
 - A. That's correct.
 - Q. And you've never worked for a circus, correct?
- 5 A. Correct.
- Q. The only zoo elephants that you have observed, Asian elephants directly was in a zoo in Belgium; is that true?
- 8 A. No.

- 9 Q. Dr. Poole, you're not a member of the Elephant Managers
 10 Association, are you?
- 11 A. I am not.
- 12 Q. Not a member of the International Elephant Foundation;
 13 is that correct?
- 14 A. I am not.
- 15 Q. Not a member of the American Zoo and Aquarium
- 16 Association; is that correct?
- 17 \blacksquare A. I am not.
- Q. And not a member of the British and Irish Association of Zoos and Aquariums; is that correct?
- 20 A. I'm not.
- Q. Also, you've never been asked to consult with any of those entities, have you?
- 23 A. Not that I can recall.
- MR. SHEA: Your Honor, those are my questions at this point. We object to Dr. Poole's admission as an expert

to the extent it covers Asian elephants specifically, because she's not trained them and she has spent very, very limited time observing them in the wild or in captivity.

THE COURT: All right. Thank you, counsel. Any further voir dire?

MS. MEYER: No, Your Honor.

THE COURT: I'll let the witness testify. I'll reserve ruling on the issue of expertise and the Daubert issue raised. The objection is noted. Go ahead.

DIRECT EXAMINATION CONTINUED

BY MS. MEYER:

2.2.

- Q. Dr. Poole, can you describe for Judge Sullivan in a bit more detail some of the normal behaviors of elephants, starting with your basis for saying that they are intelligent?
- A. You mean just an example on a particular day, what one might observe?
- Q. You mentioned that you mentioned use of tools before. Are there any other examples of the intelligence of elephants that you could describe to the Judge?
- A. Well, one of the, as I mentioned, Your Honor, I studied elephant communication, acoustic communication in particular, and one of the interesting things that elephants do, they have a call that means I want to go this way, let's go together. And one member of a family will stand pointing the direction she wants to go, and then she uses intention movements,

swinging her foot and calling. And she calls and then she waits a minute and she calls again and waits, and waits for the family to gather around her.

2.2.

And it's usually not the matriarch, the leader of the family, it's usually a younger member of the family that does it. And I've been with elephants several times when there has been a disagreement about the direction in which they would go for the day.

And on this one particular story I'll tell you, the matriarch decided she wanted to go in the opposite direction, so she turned and faced the other way, and she started giving "let's go" rumbles and, you know, indicating that she wanted to go in the opposite direction. And they carried on, and started what I call a discussion, where they went back and forth, and other members of the family got involved in this discussion, which was obviously a disagreement in the family. And eventually, after two hours, they came to an agreement and they took the middle road. So they went to the southeast instead.

But that kind of complexity is observable on a daily basis, that kind of decision-making, negotiation, which I think is very complex.

There's been a whole paper on empathy and the way that they will help an injured elephant. If an elephant has fallen, how they will come to it and try and lift it and try

and help it. They will remove foreign objects. If an elephant has been darted, they will come and remove the foreign object from an elephant.

2.2.

I have watched elephants around other dead elephants, and they will come and try and lift the dead or immobilized elephant. In fact when they are darting elephants, very often you have to use a helicopter because you have to chase the family members away, because they will come and sometimes stand on either side of the elephant and try to prop her up to prevent her from falling.

And I watched, I watched an incredible scene, a birth of a baby, and it was amazing because just before the birth happened, we knew there was going to be a birth because all the elephants were smelling on the ground, and they were rumbling and trumpeting and getting very, very excited. And this baby was born, and the rumbling and the screaming and the sort of ceremony of it went on for 45 minutes.

And during that, it attracted a young male, who then smelled the female and thought that she was in estrus and tried to mount her, with this tiny baby underneath her. And immediately the matriarch and the sister came and stood on either side of her body, pressed up against her, to prevent this male from coming down and landing on the baby.

So it was that kind of forethought and planning that the elephants are able to take that shows again their

intelligence on a sort of daily basis.

2.

2.2.

- Q. How about an elephant's memory? We've heard that they have long-term memories. Is that correct?
- A. That is correct. Elephants do have long-term memories. There have been studies in Amboseli. There's actually one going on at the moment that is again using elephant calls and what we call playbacks. You do experiments where you play the sounds of particular individuals to other individuals, and then you can test whether the family is able to recognize those calls or not. And they've been able to show through these experiments that females are able to recognize the voices of up to 200 individuals.

In addition to that, they've been able to show that families who are led by an older matriarch, one who has a lot of experience, is wiser and has that long experience, are able to make these discriminations much better than families who are led by a young matriarch.

- Q. And you've mentioned the matriarch several times. Could you describe what the basic social system is for elephants?
- A. Yeah, the elephants live in family groups, both Asian and African elephants live in family groups that range from in Amboseli from two to 45 individuals; in Asia they tend to be a little smaller, but in this population that we're working on now, we have seen a family group of about 40 individuals.

So it looks similar.

2.2.

And above the level of the family group is what they call bond group. So that's two families that have a very close relationship. Usually they had been a family before and the family became too large; there was a bit of competition, and then they split along matrilineal lines. But they retain a very close relationship. And members of a family or members of a bond group have a special greeting ceremony, so when they have been separated for any length of time, they come together and they have particular calls that they give, and they spin around and clank their tusks together in a very kind of joyful celebration or ceremony.

Above the level of the bond group is something we call a clan. So there are these different multi-tiers in the relationships between elephants, and they are able to keep in touch with one another over several kilometers, even to recognize the voices of other animals up to two kilometers away.

I wanted just to say that a female elephant will meet perhaps a hundred different individuals in the course of her daily wanderings, and a male in musth maybe up to 200 individuals. So they really — it is a very large and complex society.

Q. And in the wild how long does the calf stay with the mother?

MR. SHEA: Objection, leading.

THE COURT: I'll allow it.

THE WITNESS: A calf is born into a family and a female stays with her mother for life. A male will leave his natal family at an average age of 14.3 years old. And after that he may join other families for a while and eventually go off and spend time with other adult males when he's sexually inactive. When he's sexually active, then he comes back and joins female groups and searches for receptive females.

BY MS. MEYER:

2.2.

- Q. Have you over observed elephants' behavior around an elephant that has died?
- A. Yes, I have.
 - Q. What have you observed?
- A. I observed a female named Polly die, and I observed three young males, they found her soon after she died, and they spent, I can't remember how long it was, a couple of hours trying to lift her, pulling on her trunk and on her tusks. And that afternoon I had to inform the rangers that an elephant had died. And they came and removed her tusks because not to let them get in the hands of poachers.

I went back the next day to see her, and I was —
I found one of the males who had been there was still standing over her. In fact, there were three males standing over her body then, touching her face where the tusks had been removed.

And this was the same male who had been with her earlier.

Q. Is there any general consensus in the scientific community concerning the way elephants behave around deceased elephants?

MR. SHEA: Objection, leading.

THE COURT: I'll allow it.

THE WITNESS: I actually didn't say that elephants have been seen to try and feed injured elephants that have had their trunk damaged. They've even been seen to try and give food to an elephant who has died. They cover, they will cover a dead elephant. And they show — they show particular interest in the bones of other elephants. They are not interested in the bones of, say, buffaloes or hippos, but they show particular interest in the bones of elephants. So it does appear that they have an understanding of death and they understand that those bones came from elephants.

BY MS. MEYER:

2.2.

- Q. Have you had occasion to see how elephants behave around water?
- A. Almost every day that I'm in the field I see them around water.
- Q. Could you describe how elephants normally behave around water?
- A. They usually, at least in Amboseli, they usually go out of the park at night and come into the park, into the swamp

system, during the day, and the first thing they do is to
drink. They're thirsty. After that then they will go in and,
if the water is deep enough, they will swim. If it's not very
deep, then they will roll around in the mud.

I've watched — in one part of Amboseli the swamp is very deep, and I've seen a large adult male go completely upside down so that all four feet were sticking up in the air. So they really have a great romp, even the older animals will get in there and splash around and have a wonderful time.

- Q. I'd like to show Dr. Poole a portion of a film that is entitled "Elephant -- Lord of the Jungle," by Bedi Films.
- 12 It's Plaintiff's Exhibit 113 and there's been no objection to this, Your Honor.
- 14 THE COURT: All right. Go ahead.
- 15 BY MS. MEYER:

5

6

7

8

9

10

- Q. Before we show it, Dr. Poole, are you familiar with this film?
- 18 A. Yes, I am.
- THE COURT: 113, I don't think there's any objection. It's admitted.
- 21 MS. MEYER: Thank you.
- 22 BY MS. MEYER:
- 23 Q. Are you familiar with this film?
- 24 A. Yes, I am.
- 25 Q. I want to show you a portion of it and then ask you

- 1 some questions about it.
 - A. Okay.

2.2.

- Q. And the portion -- for the record, the portion we are showing is time-stamp 24:14 to 27:3.
- 5 (Video played)
 - Q. I wanted to ask you if you can tell Judge Sullivan what we've just observed, whether that's the normal way elephants behave.
 - A. That is a very typical scene, a bathing scene for elephants.
 - Q. Could you describe briefly what we've what we've just seen there, in terms of how the elephants interact with each other?
 - A. Yeah. Elephants I mean, that was very gentle kind of pushing and shoving and roughhousing in the water. And then at the end there was some mud wallowing, so elephants like to, they like to swim, and then afterwards they tend to get down in the mud. I mean, that wasn't very muddy. Usually they get into some really good mud, get themselves covered with mud and then usually dust, throw dust on their bodies afterwards.
 - Q. And can elephants swim?
 - A. Elephants are the best swimmers of any land mammal. We actually have Cynthia managed to get on film a newborn baby suckling under water, just with the trunk, like a snorkel out.

- 1 So they are very capable swimmers.
 - Q. Is that true of both Africans and Asians?
 - A. Yes.

2

3

4

5

6

7

8

9

10

11

14

15

18

19

21

2.2.

25

THE COURT: You said the best swimming mammal?

THE WITNESS: The best swimming of any land mammal.

THE COURT: Land mammal.

THE WITNESS: Yes.

BY MS. MEYER:

- Q. Can you describe for Judge Sullivan -- unfortunately I have to ask this question -- the normal body posture of an elephant when it defecates?
- 12 A. Standing, just standing normally. They tend to spread 13 their back legs and lift their tail.
 - Q. Have you ever seen an elephant squat on its hind legs to defecate?
- 16 A. I have not seen that.

17 MR. SHEA: Objection.

THE COURT: It is leading, but what is the answer?

THE WITNESS: No.

20 BY MS. MEYER:

- Q. Would that be a natural way for an elephant to defecate in the wild?
- A. Standing, just standing normally is the natural way to defecate, yes.
 - Q. How long do elephants live in the wild?

- A. The oldest animal we have in the Amboseli population is almost 70, and if you take away, if you exclude elephants who have been killed by people or have died as a result of wounds inflicted by people, then the median life span for females is 56 years old.
- Q. And how do the life spans of elephants compare to the life spans of humans?

THE COURT: Are you talking about elephants in captivity or elephants in the wild? What are we talking about?

THE WITNESS: This is in Amboseli, the population where I've worked. So this is based on the life history of these known individuals.

I think that's a difficult question, because that very much depends on which country are you looking at. But I suppose it's comparable to countries where there's no medical care. Anyway, they are both very long-lived species. I think we can say that. Long-lived mammals.

19 BY MS. MEYER:

2.2.

- Q. Are captive elephants domesticated?
- A. Are captive elephants domesticated? No. Captive elephants are not domesticated. That has been you know, for a very Asian elephants for 5,000 years have been captured and tamed. And for a very long time in the literature these elephants have been referred to as

domesticated elephants. And they are domesticated in the sense that they are part of the economic, socioeconomic system, living with people, working for people, but they are not domesticated in the Darwinian sense.

2.2.

In the Darwinian sense you start by bringing in, say, wild animals, and then you isolate them from the wild population and do selective breeding so that you end up with a breed like a dog, like the difference between a dog and a wolf. But in elephants that has never happened. So they are still at that very beginning stage where they are used by people, but they are no different from wild populations.

So they are not domesticated in the Darwinian sense, which is really important in this case, because we're talking about what is the natural behavior. We're talking about the natural behavior, and then you need to compare it to wild elephants. You can't call it a circus elephant as if somehow a circus elephant is another breed, because they are not. They are still, genetically, they are exactly the same as wild elephants. Because over time what has happened is that because elephants don't breed that well in captivity, traditionally in Asia baby elephants or elephants were captured in the wild and brought in. So each generation they were brought in. And even the ones who then may be bred in captivity, they were females who were let loose at night and they would mate with wild males.

1 So as long as the population is not isolated, it 2 cannot become domesticated in that genetic or Darwinian sense. 3 Dr. Poole, if Asian elephants at defendants' Center for 0. 4 Elephant Conservation are routinely kept chained on concrete 5 for 15 or more hours each day, do you have an opinion as to 6 whether this practice is likely to harm the elephants in any 7 way? 8 Objection, assumes facts not in evidence 9 and lacks foundation. 10 THE COURT: Why don't you lay more foundation, 11 counsel. 12 MS. MEYER: Your Honor, we're starting with an 13 expert witness and we do intend obviously to prove the facts 14 that we've alleged in this case. 15 THE COURT: Lay a foundation for her to render that 16 opinion though. 17 MS. MEYER: Okay. 18 BY MS. MEYER: 19 Dr. Poole, do you have a basis for rendering an opinion 20 about how the normal behaviors of an elephant would be 21 affected by the elephant being placed on chains? 2.2. Objection, leading and same objections. MR. SHEA: 23 I'll allow it. She asked whether she THE COURT: has a basis for it. 24 25 THE WITNESS: Well, I mean, I have spent 33 years

of my life studying wild elephants and working for their conservation and welfare. My whole sense of what an elephant is is not just what it looks like but how it behaves, because that's what I study; I study animal behavior. So just like any of us can see — walking down the street can see that a person is acting strangely, so I can see that elephants are acting strangely.

2.2.

THE COURT: So the basis for your answer is your observations.

THE WITNESS: My observations, yes.

THE COURT: What else? Your studies, I assume.

THE WITNESS: My studies, all the material that I was given, the number of hours that elephants have been on chains, being in the train, being on cement, being — I mean, based on my knowledge of how elephants are in the wild and how much time they spend walking and how important it is for them to be with their offspring, how important it is — how much joy they show when they come back together —

THE COURT: During a working day, how often do you spend time observing elephants?

THE WITNESS: Oh, that's what I do. So I go out, I leave camp --

THE COURT: I know, that's why I asked the question. How often during a working day -- how long is your typical day?

1 THE WITNESS: I go out, I leave -- it depends on 2 what kind of work I'm doing. But when I'm doing communication 3 work, because the wind picks up in the middle of the day, I'm usually spending the morning hours. And then I go out again 4 5 in the evening. 6 THE COURT: So morning hours, what is the range 7 That's argumentative -- relative. THE WITNESS: In the old days, when I was doing the 8 9 other studies, like six hours out a day. 10 THE COURT: Observing? 11 THE WITNESS: Yes, observing. And then I would see 12 hundreds, literally hundreds of elephants, because when I was 13 doing the musth studies I was going from group to group 14 following these musth males who were looking for females. 15 THE COURT: How do you make your observations? 16 What is your day like? You get up, you go out. 17 THE WITNESS: I have what I call a focal animal, so 18 I have a particular group or a particular individual that I'm 19 looking for. I go find them, I sit down, and I have a data 20 sheet and I'm -- I say, okay, every minute on the five minutes 21 I'm writing down certain information. Any interaction that 2.2. happens, I'm writing that down. 23 THE COURT: Are you elevated, aloft, or are you on

25 THE WITNESS: No, I'm in a car.

24

the ground?

1 THE COURT: In a car?

2.2.

THE WITNESS: In a car, yeah. So I just note every posture, ever ear fold, every movement of the trunk, everything is written down, and what are the consequences of those behaviors.

THE COURT: You're able to locate the elephant — the elephants — well, are you able to locate individual elephants?

THE WITNESS: Yes, they are all known individually.

THE COURT: How do you know?

THE WITNESS: It's easy actually.

THE COURT: Tell me how easy it is. You're the expert. I need to know.

THE WITNESS: African elephants are easier for me, because I'm used to them. But, you know, if they've got big ears, if they have got notches and tears on the ears. They've got venation patterns just like a human fingerprint. So those are the — and of course tusks. So in the very beginning that's what you look at. And of course they are different sizes, because they are different ages; they continue to grow throughout life.

And after a while it's just how they walk. So I got to the point where I could identify my focal males, my big males, from two kilometers away. I could just see the way an elephant was walking and say that's so-and-so. And I'm also

like that with some of the families, because I know where to expect to find some of them. What sort of group size. So I have -- I can sort of say I think that's the Echos family.

THE COURT: You assign them names?

THE WITNESS: Every elephant has a name.

THE COURT: You assign the names?

THE WITNESS: Yes.

2.2.

THE COURT: That is for purposes to be able to identify and keep track of them?

THE WITNESS: Yes. So there is a catalog of pictures of each elephant. So we're doing the same thing in Sri Lanka now. In fact it's online. We've got this fantastic online searchable ID database. Right now there's only a few elephants on there, but it's working. So you can code in — and with Asian elephants you have different characteristics, like how the ears fold, whether they're flopping forward or back, whether they have these tushes or not. Again, the notches and tears. But also the tails, because the tail hair and the shape of that tail hair is very distinguishing as well. So you code in a couple of these markers and push search and up comes your elephant.

THE COURT: Go ahead.

MR. SHEA: Objection, Your Honor, still assumes facts not in evidence. Ms. Meyer was asking about things at the Center for Elephant Conservation, and this witness has no

foundation, none shown for that. And the question did assume 2 facts not in evidence.

> I'll allow the answer. THE COURT:

MS. MEYER: I'd like to ask that question again if I could, Your Honor.

> THE COURT: Go ahead.

BY MS. MEYER:

1

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2.

23

24

2.5

If Asian elephants at defendants' Center for Elephant Conservation are routinely kept chained on concrete for 15 or more hours each day, do you have an opinion as to whether this practice is likely to harm the elephants in any way?

I think --Α.

Same objection. MR. SHEA:

I think it would be very detrimental, THE WITNESS: very harmful to the elephants to be held in that way.

BY MS. MEYER:

- Can you explain why you say that?
- I think it's harmful to the elephants in the sense of keeping an animal, particularly an animal of that size, an animal that is in sort of perpetual motion in its natural state, to be holding it still like that, without being able to move properly. I think it's harmful in the sense that it's not able to -- an animal that is so tactile and so communicative and so extremely social, that it's not able to be with other members of its family or other close associates

freely.

2.2.

I think it's harmful in the sense of what it does to their feet, which, you know, has been shown where elephants are chained and where they are kept sedentary, damage to their feet. So there's lots of ways in which it harms the elephants.

Q. And if the Feld Entertainment elephants that travel on the road for the circus are kept chained on railroad cars for up to 20 consecutive hours --

THE COURT: I want you to refrain from leading, counsel. At some point you're going to ask me to credit testimony. I want to be able to credit, if appropriate, a witness's testimony and not counsel's leading questions. So ask a direct question. She's an expert. I don't want her led.

BY MS. MEYER:

Q. Would elephants who are -- if elephants were kept chained on trains for long periods of time, do you have an opinion as to whether or not that would harm them in any way?

MR. SHEA: Objection, assumes facts not in

evidence.

THE COURT: I'll allow it. Go ahead.

THE WITNESS: Well, as an elephant biologist, as one who has studied wild elephants, I have to say that I'm -- I feel horrified by what I've seen, and the amount of time

that elephants are on -- chained, and particularly on the train where it's a very closed space, where they have --

THE COURT: What, though, is the impact, if any, on the elephant as a result of that condition that you've just described?

not a vet. I can read a lot about what happens to their feet and what happens to their bodies. But for me it's just, taking an animal that is so social and so intelligent and where movement is so much a part of their life, and also where the low frequency communication, to put them in a train where it's just constant noise, it's that tiny cramped space, they are not able to move, I mean, I just — it really, it very upsets me, it really upsets me.

BY MS. MEYER:

2.2.

- Q. Did you have an opportunity to participate in the court-ordered inspection at Feld Entertainment's facility in Polk City, Florida?
- A. Yes.
- Q. As part of that inspection did you have an opportunity to observe the conditions in which some of the elephants were kept in one of the barns there?
- 23 A. I did.
 - Q. Do you recall the names of any of the elephants that you were inspecting at the CEC?

A. Yes. In the barn it was Jewell, Zina, Lutzi. There was Tova, although she wasn't part of the inspection. Then there was Susan and Mysore.

2.2.

- Q. And how long were you able to observe the elephants in the barn?
- A. Gosh, we went in there, I think at 3:10, and we were out at 18:25 or something like that. So over three hours.
- Q. Could you describe the conditions that you observed in the barn?
- A. It's a large echoey space, metal structure with a cement floor. It's very barren. The elephants are all, they're chained on two legs, a front and back leg. They are all facing in one direction. Nothing for the elephants to do in there. They were given a bit of hay. As I guess I was explaining earlier, elephants, they are generalist feeders, they feed on all sorts of things, but they were just given hay, which is there's nothing really to do with it, you just grab it and shove it in the mouth, there's no preparation, so it's not a very intellectually stimulating activity. And other than that there was nothing for them to do.

Jewell started swaying almost immediately, and so did Zina. But over the course of the afternoon, I think by 4:00 o'clock, another two had started to sway, who did so intermittently, and actually all of the elephants swayed

during the time I was there.

2.2.

THE COURT: What do you mean by that term?

THE WITNESS: Swaying? I actually use the term swaying to cover what might be called head bobbing in some cases, or weaving in other cases. I've sort of lumped them all together. But it's a repetitive movement. And usually with elephants, I mean with, say, carnivores, they tend to pace back and forth in a cage. But elephants tend to stand and do this kind of (indicating), either weaving like this (indicating), or this or (indicating), just swaying, or forward and backward. They have —

THE COURT: Like I'm rocking in my chair, am I swaying?

THE WITNESS: Exactly.

THE COURT: I'll stop.

THE WITNESS: And I mean, some of it, it's --

THE COURT: What is that indicative of? Are you making observations — do you have an opinion as to what that is indicative of?

THE WITNESS: Well, it doesn't occur in the wild.

I have never seen it in the wild. Elephants may stand under a tree when they are dozing and, just like any of us would, you stand like that for a while and then you might stand like that for a while (indicating). But that's a very different thing from what we're observing. My personal opinion about it, I

1 think what happens is --2 THE COURT: Your expert opinion, if you have an 3 expert opinion about the swaying? THE WITNESS: My expert opinion is that you stick 4 5 an animal on chains early on, you take it away from its 6 companions, it becomes an isolate. And at the same time it's 7 an animal that is used to -- it has evolved to walk, it's evolved to walk long distances. It has a huge home range. 8 9 And you're keeping it so that it can't basically move its 10 legs. So it starts by taking, you know, steps, and can't go 11 anywhere, and this eventually becomes this kind of just 12 swaying pattern. 13 MS. MEYER: Why don't we actually show Judge 14 Sullivan a clip of the video that was taken at the CEC 15 inspection in the barn, because I think that would help. 16 is -- there's no objection to this. This is part of the CEC 17 inspection. 18 THE COURT: Is this 113? 19 MS. MEYER: This is 142. 20 THE COURT: Any objection to its admissibility, 21 counsel? 2.2. Not to the film clip of the inspection, MR. SHEA: 23 no.

THE COURT: Admit it. We just need to have a clear

record as to whether or not this is coming in -- you're

24

1 offering it and whether there are any objections.

2.2.

(Video played)

MS. MEYER: Yes, Your Honor. I was going to, after her testimony was done, I was going to move in the exhibits that I had used in her testimony. But I can do it any way.

THE COURT: It's not a jury, you don't have to be that formal. Especially if there's no objection, admit it and --

MS. MEYER: So we'll take a look at this video.

BY MS. MEYER:

Q. If you could actually describe to Judge Sullivan as we're watching it, what you're talking about, Dr. Poole, I think that would be helpful.

THE WITNESS: The first elephant is — the closest elephant is Jewell, and then Zina. If you notice, with Jewell, her — they each have sort of their own pattern. With Jewell she tends to swing one foot to the side. As she goes onto the chained leg, she swings that food sideways. And she did that — I fast-forwarded through the whole thing, and she did that almost every time that she was in view. Whereas, Zina you see tends to rock sort of forward and backward.

Susan, because she has a wound in her foot, does much less, her rocking is not so exaggerated as these two. So sometimes their swaying is sort of continuous, sometimes, as in here, she stops for a moment and then she starts up again.

1 But there is basically nothing for these elephants to do.

You can hear that the acoustics in that room isn't particularly good. And they just got that hay, and they are chained.

BY MS. MEYER:

2.2.

- Q. Can you describe to Judge Sullivan how they are chained?
- A. They are chained on one foreleg and one hind leg, usually alternate legs. There was one elephant who was -- I guess it was Mysore, who was chained with both chains, front and back on the same side, because she had some problems, I believe, with one of her legs.
- Q. How does the behavior that you observed during the inspection of these elephants compare to the behavior of wild elephants that you've observed?
- A. Well, there's really I mean they're just totally different. So, this is not normal elephant behavior. They can't engage in normal elephant behavior because they are chained. It's not possible for them.
- THE COURT: That's something that you don't observe in --

THE WITNESS: Never, in all the years I've seen elephants, 10,000, 20,000 elephants, I've never observed this behavior.

I want to say one of the -- Susan also was, she was

lifting up — she has a problem with one of her feet. And I sat for half an hour and monitored how many times she raised her foot. So she kept lifting her foot off the ground. It was obviously giving her some pain.

BY MS. MEYER:

2.

2.2.

- Q. During the court ordered inspection at the CEC did you have an opportunity to observe any of the Feld Entertainment employees interact with the elephants?
 - A. Yes, I did.
 - Q. Who did you observe?
- A. Well, I observed Gary Jacobson, and I observed the handler -- I don't know what his name was -- and I observed the elephants' reaction when Pat Harned came into the barn.
 - Q. What did you observe about Mr. Jacobson's and the other handlers' interaction with the elephants?
 - A. I have -- I've seen a lot of -- I have seen people and their interactions with captive elephants in many different places. And this was the first time that I had seen such -- well, it was just a very cold relationship. It was just shouting commands to the elephants. So there was no -- I've seen people hug the elephants and talk to the elephants and sing to the elephants or -- a very kind of cozy relationship. And this was not that at all.

There was a lot of — I guess it was just Gary Jacobson who was barking commands at the elephants, so each

command he gave the elephant, he said the elephant by name and then gave a command, like "come here" or "lie down" or "foot," whatever the command was. When Pat Harned came into the barn, the two elephants that were near the door where he came in froze. And when elephants freeze it's because they are — it's often because they are alarmed by something. They freeze, they listen, they smell. So that's a very typical in the wild indication that they've heard something and they are alert to something that they are paying attention to.

2.2.

The other thing was just the way in which the elephants were kept by the handler and by Gary Jacobson during the whole time that we were outside. The elephants were just — had to stay in a line. They were lined up standing parallel to one another, and if they moved out of that line at all they were then told to get back in line. So they had sort of no freedom of movement out there.

Q. I wanted to show you some of the photographs that were taken of the elephants in the barn, and ask you — just to show you the chains that were used on the elephants. If we can do that. These are also in Exhibit 113, and also I think May Call 54, and they are not objected to.

MR. SHEA: Your Honor, we do not object to those particular portions of Exhibit 113. It's a composite exhibit with many parts. We do — so not the Elephant in the Jungle and not this, but we do have objections to other portions of

that exhibit. 1 2 THE COURT: To other portions of 113? 3 MS. MEYER: I'm sorry. I misspoke. I was talking 4 about Will Call Exhibit 118, which are the photographs that 5 were taken at the CEC inspection, as well as photographs taken -- as well as May Call 54, which are some additional 6 7 photographs. 8 THE COURT: Are you offering 118? 9 MS. MEYER: Yes. 10 MR. SHEA: No objection to 118. 11 THE COURT: 118 is admitted. What is the other 12 exhibit? 13 MR. SHEA: For Exhibit 54, we object only to photographs taken of electric prods. They're irrelevant and 14 15 immaterial to this case; they are not at issue. 16 THE COURT: Which photos are they? 17 MS. MEYER: We're not showing any of those, Your 18 Honor. 19 THE COURT: I want there to be a clear record. 20 This is 113 on the screen now? 21 MS. MEYER: Actually, right now what I was only 2.2. showing -- I'm sorry for confusing the record. What I was 23 only showing was Exhibit 118, Numbers 23 and 19, but we might as well move them all into evidence, all of 118. 24 25 THE COURT: It's going to be easy, if there are no

1	objections, let's admit the documents.
2	MS. MEYER: Right.
3	THE COURT: Are there no objections to those two,
4	counsel?
5	MR. SHEA: We're not objecting to 118. And to
6	THE COURT: 118 is admitted.
7	MR. SHEA: To 54 we're objecting only to pictures
8	of electric prods, they are not properly at issue in this
9	case.
10	MS. MEYER: We're not seeking to admit those.
11	THE COURT: What are you admitting with respect to
12	54?
13	MS. MEYER: Everything else that is in May Call 54.
14	THE COURT: How many photos make up 54? I don't
15	need to see them. Just tell me how many there are.
16	MS. MEYER: Apparently it's 308.
17	THE COURT: So, all the photos in 54 are admitted
18	with the exception of the electric prods. Correct, counsel?
19	MR. SHEA: That's correct, Your Honor.
20	THE COURT: So, Exhibit 54 is admitted as well.
21	MS. MEYER: We can get you the numbers for those.
22	THE COURT: I don't need them, I just want a clear
23	record. 54 comes in, all the pictures come in, with the
24	exception of the prods, so it's part of the record.
25	

BY MS. MEYER: 1 2 As part of the inspection that you attended at the CEC, 3 Dr. Poole, did you have an opportunity to observe the washing 4 of the elephants that was done? 5 Yes, I did. You don't want me to comment on this? 6 I didn't hear that. Yes, I'm sorry. We're back to the 7 chains. 8 Α. Well, that's --9 MR. SHEA: Objection. Is there a question? 10 THE COURT: There was a question five minutes ago 11 before I started this. 12 I got off track, too. MS. MEYER: 13 THE COURT: You wanted the doctor to tell us 14 something about that photo there. 15 MS. MEYER: Yes. 16 This is 113? THE COURT: 17 MS. MEYER: 118. THE COURT: What did you want the doctor to tell 18 19 us? 20 BY MS. MEYER: 21 Tell us what we're looking at here. Q. 2.2. It's in evidence. It speaks for THE COURT: 23 It's an elephant foot and a chain. itself. 24 Go ahead. 25 THE WITNESS: By the hairy legs, I can see it's

1 Zina, and she's chained by her right front foot there, and I 2 quess her rear left foot. She's standing on concrete. 3 can see it's a relatively short chain. And there's just a bit 4 of hay at her feet. 5 BY MS. MEYER: 6 And is this typical of how the elephants were chained 7 that you observed in the CEC barn? 8 MR. SHEA: Objection, leading. 9 THE WITNESS: It is typical. THE COURT: It's leading and it's fairly 10 11 argumentative. What does this photo represent? I saw the 12 chain, so what is the significance of this photo of Zina 13 chained? 14 THE WITNESS: Well, it's just an example of what 15 it's like for the elephants in terms of the space, they can't 16 move, they can't -- or they can't move more than a step 17 forward or backward or a step to each side. They are on 18 concrete floor, they have a pile of hay, and that's it. 19 THE COURT: Is this fairly typical? 20 THE WITNESS: Yes, this is very typical. This is 21 typical of the time that they spend in the barn. 2.2. THE COURT: For this particular case and for this 23 circus? 24 THE WITNESS: For the elephants at the CEC, as far

as I know, because I didn't see elephants elsewhere.

1 THE COURT: Before you ask the next question -- I'm 2 sorry, go ahead and ask the follow-up question. 3 BY MS. MEYER: I wanted to -- there is another photograph that we 4 5 wanted to show. 6 THE COURT: Go ahead. What is the exhibit number? 7 We're still in 118, Your Honor. MS. MEYER: 8 THE COURT: All right. What does this picture 9 show? 10 THE WITNESS: Is this the one you wanted to show 11 me? 12 MS. MEYER: Yes. 13 THE WITNESS: Well, it shows the same thing, just 14 elephants standing on concrete at the CEC in the barn. 15 THE COURT: What is the impact of the concrete, if 16 any, on the elephants? 17 THE WITNESS: Yeah. Based on what I have read, 18 what happens is that in the wild elephants have -- they have 19 very padded feet. They walk on their toes, and their toes are 20 sort of encased in a cushion. And there is sort of a 21 wrinkle -- the sole of the foot is kind of wrinkled skin. And 2.2. when they are walking in the wild, then the foot wears evenly 23 as they walk over. But when they are standing in concrete, and maybe even caused by the swaying, where they are putting 24

pressure on one part of the foot, I'm not sure about that, but

it could explain why the foot then begins to wear unevenly.

2.2.

THE COURT: But you're not sure about that?

THE WITNESS: Oh, I have read it, I have read it, but I have only read it in one place. So the foot starts to wear unevenly, and because they are standing on concrete and because they are urinating and defecating, you get, in the fissures of the foot, you can get infections starting.

So a way of dealing with that is to pare the sole of the foot down. And that's part of the husbandry that is carried out in the circus and in zoos. But if it's not done — A, if it's done too much, you get a very smooth foot that has no pad left on it at all, or no — I don't know what you call it, the callous or — anyway, it gets too pared down. And in other cases it's not done properly and then you get these big sort of lumpy bottom of the foot that is not normal.

So this standing on concrete, first of all, none of us like to stand really on a hard surface for hours on end.

So I think it's painful for the elephants, it's uncomfortable, which may also explain why they are rocking, to relieve that kind of pressure. And on top of that, then they get the infections in the feet which lead to all sorts of problems.

THE COURT: Before you get to another area, I have a note, my jury has a verdict. I'm going to have to take the verdict. So I'll have to ask the doctor to step down for a few minutes. I have to conclude another case that is going

1 on. We'll call you back in a few minutes.

Counsel, you can leave your materials there, they will be fine. I'd just ask you to make a little room on one side of the table for the Government counsel. Just move your materials to the center there.

BRIEF RECESS

2.2.

2.5

AFTER RECESS

THE COURT: Go ahead. Proceed.

MS. MEYER: Thank you, Your Honor. Dr. Poole, when you participated in the inspection at the Center for Elephant Conservation, did you have an opportunity to observe the gait of the elephants?

- A. Yes, I did.
- Q. What did you observe?
- A. That all five of the elephants that we were inspecting had an abnormal gait.
- Q. Can you be a little more specific about what you mean by an abnormal gait?
- A. Well, each one was a little bit different. One -- I think it's Lutzi, has a stiff front left leg, I'm if I'm not wrong. But each one was not walking with ease and was not walking with a normal gait for an elephant.
- Q. And what significance does this have for you?
- A. It means that they have some problem with their -- either their feet or their hips or their -- with their leg

1 bones or maybe the spinal cord.

- Q. And how did the gait of the elephants you inspected at the CEC compare to what you see in the wild?
- A. Well, both the gait was abnormal and also I noticed the elephants had difficulty getting up and down. It was quite different from elephants of the their age in the wild who have a normal gait and don't have difficulties getting up or down, let's say, into the swamp and out of the swamp or lying down and mud wallowing and getting up again.
- Q. And during the inspection, at what point in the inspection did you have an opportunity to see the elephants getting up and down?
- A. When the elephants were being washed, each one was asked to lie down and asked to get up again.
 - Q. And what did you observe?
- A. Well, I noticed that they got down extremely slowly and appeared to be having difficulty both getting down and getting back up.
- 19 Q. Have you ever seen elephants in the wild who exhibited 20 signs of lameness?
- 21 A. Occasionally.
- 22 Q. How often do you see that?
 - A. Maybe once a month or -- yeah -- but it's usually -- or if, you know, if an elephant is lame or showing signs of lameness, then we look to see what might be causing it. Most

often it's a wound of some sort, usually inflicted by a spear or an arrow, and then we call the vets down. The elephants also get — particularly young males, get something we call twisting disease, which we think is a virus that usually comes in the rainy season, and then they get a very strange gait when they walk, they walk like this (indicating). But it comes and lasts for a few weeks and then dissipates again. So — but we have not, as far as I can remember, we do not have or have not had an elephant with a chronically abnormal gait except, sorry, there's one female who has — who has broken her ankle in the past and she walks with a limp.

Q. Based on your collaboration with scientists who study
Asian elephants in the wild, has it ever come to your
attention that there's a problem with lameness in Asian
elephants in the wild?

MR. SHEA: Objection, leading.

THE COURT: I'll allow it.

THE WITNESS: I have spoken with Manori, who is my colleague in Asia, and she says, no, that — well, that arthritis, at least, is not something that is treated in the wild. That elephants, yes, there are some elephants that are lame from, let's say, buckshot or from other wounds inflicted by people. But that, yes, the gait abnormality or chronic problems with the gait is not typical of wild Asian elephants.

2.2.

BY MS. MEYER:

2.

2.2.

- Q. Dr. Poole, in preparing your expert report, did you have an opportunity to review video footage that showed how the Ringling Brothers elephants who travel with circus are maintained when they are at an indoor venue?
- A. Yes, I did.
 - Q. What did you review?
 - A. I reviewed five and a half hours of they call it security, the security video, from the MCI Center in Washington.
- Q. And I'm going to show a clip from that, but before I do, I want to know if you could basically tell the Judge what you observed when you reviewed that video?
- A. I could see about five elephants in view. They were chained in a very sort of cramped quarters, low ceiling, cement floor, concrete floor, chained on short chains, a little bit of hay around their feet, and repetitive movements or just sort of standing there.
- Q. And I'd like to actually show a clip from that video footage. And, for the record, this is video footage that was obtained via subpoena that was served on the MCI Center, Your Honor, in March of 2004, and it's Exhibit 145-B and we're going to show a clip that is time stamped 2:01:41 to 2:02:55.
- MR. SHEA: Yes, Your Honor, we object. There's no foundation. This has not been authenticated. It's

irrelevant. These are Red Unit elephants, not Blue Unit elephants which are at issue, therefore, no elephants that are at issue. Therefore, it's cumulative and a waste of time and should be out under 403.

THE COURT: I'll allow it over objection.

MS. MEYER: Also, for the record, the defendant did not object to the authenticity of this videotape.

(Video played).

BY MS. MEYER:

2.2.

- Q. Perhaps, as it's playing, Dr. Poole, if you could tell Judge Sullivan what you were talking about when you watch this video.
- A. Well, you can see the elephant in the middle is holding there completely still, and the elephant on the particularly on the right there is rocking back and forth. Well, there's just nothing for them to do in there. So, they're just chained on concrete on short chains, very short chains, with no ability to move to move anywhere and with nothing with nothing to do.
- Q. And based on the -- you said you watched about five and a half hours of this video footage, how does what we're seeing here compare to the five and a half hours that you watched?
- A. Well, it looks like it's the same bit of video that I watched. There was one period of 13 minutes where the elephants, which turned out to be 10 elephants, were taken

- out, presumably for a performance, they put the headdresses on first and then took them out and brought them back 13 minutes later.
 - Q. And for the other period of time that you watched the video, what were the elephants doing?
 - A. Just the same as what we're observing here.
 - Q. Okay. And is the clip that we just watched representative of the rest of the MCI Center video footage that you reviewed?
 - A. Yes, it is.

2.2.

- Q. And do you have an opinion as to whether this kind of treatment that we're seeing here harms the Asian elephants?
- A. Well, absolutely, I think it arms Asian elephants in the same way that standing in the train or standing in the barn. But this is this and the train is even worse than in the barn because it's cramped and it's underground or looks like it's underground in the basement. I just don't think it's a way to treat an intelligent social animal.

THE COURT: What's the significance of the fact that it may be underground?

THE WITNESS: Well, nothing really, it's just dark, no natural light. I don't know, it's -- for me, I just -- it's beyond anything I can imagine doing to an animal like an elephant.

25 BY MS. MEYER:

- Q. Dr. Poole, based on what you see here, are these elephants able to socialize with each other?
 - A. Well, they are able to reach out and touch one another.

 They can reach one another. But that's extent of their ability to socialize.
 - Q. Can they all interact with each other?
 - A. No, they cannot. They can just interact with the closest neighbor.
 - Q. And with respect to the elephants that you saw when you inspected the elephants in the barn at the CEC, were they able to socially interact with each other?
 - A. No, just the ones who were closest neighbors were able to, they were able to touch one another.
 - Q. Dr. Poole, you said earlier that you are familiar with an instrument called a bull hook, is that correct?
 - A. That's correct.

3

4

5

6

7

8

10

11

12

13

14

15

16

17

18

19

20

21

2.2.

- Q. I'd actually like to show Dr. Poole two of the photographs taken at the CEC inspection, and these are from Exhibit 118, which has already been admitted into evidence, and it's Photograph Number 20 and 22, and ask you if these are photographs of bull hooks that —
- THE COURT: What are those pictures of?
- MS. MEYER: Thank you.
- 24 THE COURT: Counsel, I don't want to you lead now 25 because at some point -- I don't want to keep saying this, at

```
1
    some point you're going to ask me to credit testimony and I
 2
    want -- if it's appropriate, I want to credit the testimony of
 3
    a witness as opposed to the statements of an attorney.
 4
    I'll ask you --
 5
                MS. MEYER: Thank you, Your Honor.
 6
                THE COURT: -- to refrain leading. Just tell us
 7
    what that is.
 8
                THE WITNESS: Those are the bull hooks that I
9
     observed at the CEC.
10
                MR. SHEA:
                           Your Honor, could we make them, for the
11
    record, of the -- of some sort of production number or
12
    something on this? This is a large exhibit and we would like
13
    to be able to --
14
                            This is part of 118, is that correct?
                THE COURT:
15
                MS. MEYER:
                            Yes.
16
                            What is the page number or --
                THE COURT:
                MS. MEYER: This is --
17
18
                THE COURT: -- page number or -- how many photos
    are there in 118?
19
20
                            I said -- I'm sorry, I thought I said
                MS. MEYER:
21
     this was Number 20, Number 20.
2.2.
                THE COURT: Is that Number 20 a sole exhibit?
23
                MS. MEYER:
                            The photographs are numbered, Your
24
    Honor, within 118.
25
                THE COURT: Is Number 20 a composite of pictures?
```

```
Is that the only picture in Number 20?
1
 2
                MS. MEYER: Yes, this is Number 20.
 3
                THE COURT: Is there an objection to Number 20?
                           I believe it's already in evidence, Your
 4
                MR. SHEA:
 5
    Honor.
 6
                THE COURT: All right. Then what's your objection
 7
    then?
 8
                MR. SHEA:
                          Your Honor, she should -- 118 has
9
    hundreds of pictures in it, she's showing one picture --
10
                THE COURT: This is Exhibit Number 20, if I
11
    understand it correctly.
12
                MS. MEYER: This is Exhibit 118, Number 20 -- at
13
    Page 20.
14
                THE COURT: What's your objection to this?
15
                           I have no objection other than I was
                MR. SHEA:
16
    asking if we can track it for the record, Your Honor, so that
17
    we know that it's Photograph Number 20.
18
                THE COURT: I can totally agree with that.
19
    imperative, I mean, it's your case. The case may not conclude
20
    in this court, and if there's a sloppy record then that's
21
    going to hamstring any other court from reviewing what we did
2.2.
    here. So, it's very important that counsel be clear with
23
    regards to what we're looking at and what the numbers are.
24
    So, this is Picture 20 of Exhibit Number 118.
25
                MS. MEYER: That's right, Your Honor. Now, I'd
```

1 like to look at Number 22 from Exhibit 118.

THE COURT: All right.

THE COURT: What's that?

THE WITNESS: These are also bull hooks -- among the bull hooks that we saw at the CEC.

THE COURT: All right.

BY MS. MEYER:

2

3

4

5

6

7

8

- Q. And did you have an opportunity to inspect these bull hooks?
- 10 A. Yes, I did.
- 11 Q. And can you tell Judge Sullivan what you found?
- 12 A. Some of them were extremely sharp. They would
 13 certainly rupture my hand if I pulled down on the bull hook.
- 14 I held it on my hand, it was painful. It was very sharp.
- Q. Dr. Poole, in preparing your expert report, did you have an opportunity to review videotape of Ringling Brothers employees using bull hooks on elephants?
- 18 A. Yes, I did.
- Q. And did you have an opportunity to review what has been marked as Plaintiff's Exhibit 132?
- 21 A. Yes, I did.
- Q. And is that the same compilation of videotape that you address in Appendix E to your report?
- 24 A. Yes, it is.
- Q. I'd like to show a sample of that videotape, but before

I do, I want to ask you if you employed any particular methodology when you were reviewing that compilation of videotape?

2.

2.2.

- A. I went through the videotape and I wrote down every time a bull hook was used on an elephant, and wrote down whether it was the the point of the bull hook was used on the elephant, whether the hook was used to pull the elephant, or whether the bull hook was used to hit the elephant. And I then wrote down what where on the body of the elephant was being poked or hooked or hit, and what seemed to be the objective of the person who was doing the action, and how the elephant responded.
 - Q. Why did you employ that particular methodology?
- A. Well, it's the same that I do when I'm -- if I do playback experiments and I have videotape, that's exactly what I do. I go through the videotape and write down exactly the point and what was happening, what the behavior was.
- Q. Before we show a sample of that, can you tell us, based on your review of that videotape, what you saw in terms of the way the bull hook was being used?
- A. Well, Your Honor, I have not had experience with the bull hook before, and what I noticed was there was a kind of clear pattern in how the bull hook was used, that I actually wasn't aware of before. But I guess it's kind of obvious, if a person wants to get an elephant to move back, then the

person will use the point of the bull hook to push the elephant away. If it wants the elephant to come toward it, it uses the hook part to pull the elephant toward it. If it wants to stop the elephant from doing something, it may hit the elephant or, again, push it with the — or poke it with the pointed part.

2.2.

And the parts of the body that were most often hit or hooked or poked are the ears, around the temporal gland on the side of the face, under the trunk, on the front of the trunk, under the chin, around the mouth, around on the feet, on the legs, particularly on the side of the leg, the upper leg, and I also saw it on the side of the body, I saw it in the anus, inside the mouth. I think that pretty well covers the parts of the body, so, depending on —

And what came across was that this seemed to be a routine use of the bull hook to get the elephants to — particularly to stay in line if they were, say, going on their way to a performance, then the elephants are off chains, they're supposed to stand still, and of course, elephants want to move all the time, and they are very exploratory, they want to use their trunks all the time to check out what's happening. Every time they try and explore anything or take a step, they get poked or pushed back with the bull hook. If they are not walking fast enough, then the hook is used to drag them along. Getting out of the train, this hook is used

to pull them down to get them to come faster.

2.2.

So, to me, it seemed like a very routine use of the bull hook just to get elephants to do what is needed to exist in the kind of lifestyle that they have, the sort of commanding control lifestyle in the circus.

MR. SHEA: Your Honor, we object to this line of questioning. Dr. Poole was not offered as an expert on elephant training or management or use of free contact methods or use of the bull hook or chains, she was offered as an expert on elephant behavior. I think the voir dire established that she is not an expert on elephant training or sue of the bull hook or chains or free contact methods.

Also, we object to their use of Plaintiff's Will Call Exhibit 132. And we object because, although, we understand this might be used as a demonstrative at this time, it is irrelevant. It concerns none of the elephants at issue in this lawsuit. It is an edited piece, and the raw footage was never produced, therefore, it should be out under Rule 403 because it is unfairly prejudicial, misleading and argumentative.

Also, Your Honor, it lacks authentication, and that does apply to demonstrative evidence. There is no one here to authenticate this video evidence. And we understand that they may try to authenticate it later, but it has not been. And Dr. Poole has no foundation to do so, and no way to lay a

1 foundation for the video itself. 2 THE COURT: What's your response? 3 MS. MEYER: Your Honor, we are going to -- would 4 like to show this video footage at this point in time as a 5 demonstrative so that Dr. Poole can explain to you the basis 6 for --7 THE COURT: She's not offered, though, as an expert 8 on the use of this bull hook. I'm going to ask actually if she also 9 MS. MEYER: 10 observed the reaction of the elephants to the use of the bull 11 hook, Your Honor. 12 THE COURT: It's clear she's not offered as an 13 expert in that area. I'll allow it for whatever weight, if 14 any, it's entitled to, I'll allow it. 15 MS. MEYER: The other thing I wanted to say, Your 16 Honor, even though you've already said you'll allow it. 17 that the videographer who took all of the footage we're going 18 to show to Dr. Poole is coming tomorrow to authenticate the 19 video footage. 20 Your Honor, may I respond? MR. SHEA: 21 THE COURT: All right. 2.2. The fact that they are bringing someone MR. SHEA: 23 to authenticate it does not cure the problem for Dr. Poole's 24 testimony. She has not seen the real event, and she will be 25

opining about something of which she has no firsthand

1 knowledge. There just is no authentication for this highly 2 edited argumentative piece, and we object to her testimony. 3 THE COURT: We can proceed with this film once it's 4 authenticated. Move on to another area. She's not offered as 5 an expert on bull hooks. Move on to another area. 6 MS. MEYER: Well, Your Honor, just to be clear, she 7 is being offered as an expert in terms of how --It has not been authenticated, I'm not 8 THE COURT: 9 going to allow it to be used. Move on to another area. 10 MS. MEYER: Okay, Your Honor. 11 MR. SHEA: For the same reason, we move to strike 12 her testimony just previous about what she observed --13 THE COURT: I'm not going to strike it. Move on to 14 another area, it's there. I'll give it whatever weight it's 15 entitled to, if any. 16 MS. MEYER: Your Honor, can I just say for the 17 record, that Dr. Poole has come here from Norway. It's going 18 to be hard for her to come back to testify after this video 19 footage has been authenticated. 20 THE COURT: Why isn't that person here who can 21 authenticate the film? 2.2. MS. MEYER: He is scheduled to come tomorrow. 23 had scheduling difficulties for a number of reasons --24 THE COURT: You know, because it's nonjury I'll let 25 you do this, but if it's not authenticated at some point I'll

strike all this testimony. Let's move on. 1 2 MS. MEYER: That's fine, Your Honor. 3 THE COURT: Let's get to the point, though, 4 Counsel. BY MS. MEYER: 5 6 I'd like to go to the clip. I'd like to show you the 7 first clip and ask for your observations about the behavior of 8 the elephant. 9 (Video played). 10 Can you describe what you saw when you saw this clip? 11 12 The elephant jerked its head up twice away from a 13 painful object, and then immediately put its -- held its trunk 14 up, and you can see that it's looking back. You can see the 15 whites of its eyes showing, which is typically shown when 16 elephants are alarmed. And it's looking back at the man who 17 is tightening the headdress. 18 And based on your expertise, Dr. Poole, is the kind 19 of --20 THE COURT: Don't lead her. Ask her a question. 21 BY MS. MEYER: 2.2. Do you believe that this -- the action taken here was 23 armful to the elephant? 24 MR. SHEA: Objection, leading. 25

THE COURT: What's your opinion about what you just

1 saw? THE WITNESS: I don't think -- I don't think that 2 3 is proper treatment of an animal. 4 THE COURT: Why not? 5 THE WITNESS: Because I think it's painful. 6 think it's harmful. I think both the use of the bull hook 7 and -- well, we're not seeing the whole sequence here, but the 8 elephants are kept under total control. Whenever they try and 9 investigate anything, then they are reprimanded. 10 normal -- for normal wild elephant behavior, it is completely 11 controlling everything that would be part of the natural 12 behavior -- preventing anything that's part of their natural 13 behavior. 14 MS. MEYER: Let's show the next clip, please. 15 (Video played). 16 THE WITNESS: In this --THE COURT: What's the question. Ask a question. 17 18 Let's move along, Counsel. 19 BY MS. MEYER: 20 Could you tell us what observations you made about this 0. 21 clip?

A. In this clip the elephant was reaching out just a little bit and then was smacked on the trunk for doing that, for exploring, and then was comforted by the elephant on the right who comes in to touch it.

2.2.

23

24

Q. What is your opinion about --

2.2.

A. My opinion is the same as the previous one, that the elephants are being prevented from doing — from just carrying out their normal behavior — what would be their normal behavior.

THE COURT: You said the elephant appears to have been exploring. What is it about what you just saw that would make me agree with what you just said?

THE WITNESS: Well, it reached out with its trunk, it was sniffing toward something. I couldn't see what it was sniffing toward because the tip of its trunk was out of view. So, I don't know whether it was a bit of hay that was there or it was a foreign object.

THE COURT: Is that a fairly -- would you describe it as a fairly typical or atypical activity on the part of the --

THE WITNESS: That they reach out?

THE COURT: Yeah.

THE WITNESS: Oh, they do that all the time. So, that's just -- they would be doing that just all the time with their trunks.

BY MS. MEYER:

- Q. And, in your opinion, is that harmful to the elephant?

 MR. SHEA: Objection, leading.
- 25 THE WITNESS: It's --

1 THE COURT: Overruled.

THE WITNESS: It's harmful for the elephants to be controlled in that way and not be able to carry out their normal behavior.

BY MS. MEYER:

2.2.

- Q. How about the hitting of the elephant on the trunk?
- A. Well, obviously it was painful because the elephant backed -- withdrew it's trunk and backed away.

MS. MEYER: I'd like to show the next clip, which is actually a series of a couple of clips in a row. (Video played).

BY MS. MEYER:

- Q. What are your observations about these clips that you've seen?
- A. That the elephant is clearly interested in something over on the right-hand side there, I'm not sure what it was. But on the first occasion he used a leatherman to pinch the elephant, send it back. And then the second time he dragged the elephant back with the bull hook, with the hook part of it. Again, I just think it's these are young animals. These are just, you know, several years old, and already they are being confined in a small area. They can't exhibit their normal behavior. They're not allowed to explore, which is there very, very natural for them to do. They are curious animals, they are intelligent and social, and they are just

limited to these very few things they're allowed to do. 1 2 THE COURT: What is that first instrument that you --3 4 THE WITNESS: Leatherman. 5 THE COURT: What's that? 6 THE WITNESS: Pliers, yeah. 7 BY MS. MEYER: 8 In your opinion, is this treatment that we've seen 9 harmful --10 THE COURT: Don't lead her, Counsel. You have to 11 ask --12 BY MS. MEYER: 13 What is your opinion as to whether or not --14 It's harmful. It's harmful. It causes harm to the 15 It's harassing the elephants, that's what it elephants. 16 It's harassing the elephants. It's harming them really is. 17 and it's harassing, particularly harassing. I mean, I just, I 18 just -- I don't understand why in this day and age with all we 19 know about these animals that we have to treat them like this. 20 This is the United States of America, we don't have to do this 21 to these animals. 2.2. THE COURT: What would be another way of treating these animals? 23 24 THE WITNESS: Not having them in circuses.

having them perform. Not having -- abusing animals for our

1 entertainment. I think it's wrong.

BY MS. MEYER:

- Q. Dr. Poole, did you have an opportunity to review ways in which the elephants perform in the Ringling Brothers circus?
- A. I did.
- Q. And how did you have that opportunity?
- 8 A. I watched some videotape.
 - Q. Was this videotape of actual performances?
 - A. Yes, it was.

MS. MEYER: I'd like to show a clip from Will Call Exhibit 136, which is a compilation of video footage that was produced by the defendant. That's a compilation of Ringling Brothers circus performances. And just to be clear, we're only asking to move in the portions that were not objected to by the defendant. And to be clear, for the record, the Bates — or sorry, the time stamp for the video that I want to show is from Will Call 136, it's starts at 19:38 to 22:19, and this is Clip Number 1 to Excerpt 5 on the exhibit to which no objection was made.

THE COURT: All right.

22 BY MS. MEYER:

- Q. I'd like to show it and then ask you some questions about it.
- 25 (Video played).

Can you tell your observations based on that video clip?

- A. Well, it's a lot of unnatural behavior. I don't know how they manage to get the elephants to behave like that. I imagine it's through the use of the bull hook.
- Q. Can you explain -- when you say it's unnatural behavior, can you be specific about --
 - A. I have not seen --
 - Q. Dr. Poole --

2.2.

A. — other than the lying down, I have not seen elephants skipping in the wild. I have not seen them doing a long mount in the wild. They don't run around holding onto each other's tails in the wild like that. They don't spin around, around and around. They don't behavior like that in the wild. And a lot — they don't stand on their heads. A lot of those actions require a lot of exertion, and some of these are elderly animals.

They have no choice. They've got no choice.

What are they going to do? If they don't — if they don't
follow instructions, they get beaten. So they wander around
doing this ridiculous stuff.

- Q. Dr. Poole, in the wild do female elephants mount each other?
- A. No, they don't.
- 25 | Q. Is that a natural act?

1 A. No.

2.2.

- Q. You said that you had also observed elephants giving birth in the wild, is that correct?
- A. Yes. Yes, I have.
- Q. Have you had an opportunity to review videotape of any of the Feld Entertainment elephants giving birth?
- A. Yes.
- Q. Do you know which elephants were portrayed in that videotape?
 - A. Shirley and Ricardo.
- MS. MEYER: I'd like to show a clip from Exhibit 141, which is a video that was produced by Feld Entertainment, and it's labeled Baby Ricardo, Raw Birth Footage, and then ask Dr. Poole some questions about it.
- MR. SHEA: Your Honor, we object, it's irrelevant. This elephant is not at issue. Also, there aren't baby elephants at issue or birth is not at issue here. So, we object as irrelevant under 401 and 402.

THE COURT: What's your response?

MS. MEYER: To begin with, Your Honor, you've already denied their Motion in Limine based on which elephants are at issue, so that part of it I think has already been resolved. We're alleging a pattern and practice here and seek to use this video footage to show — for probative value concerning our claims. And as you will see in the video —

1 THE COURT: This is a film footage of Ricardo. 2 Ricardo is not one of the subject elephants. This is one of 3 the 404(b) or --4 MS. MEYER: Right, Your Honor, we've already --5 you've already denied their objection. 6 THE COURT: I'll allowed over objection. 7 move on. 8 MS. MEYER: Excuse me? 9 THE COURT: It's allowed over objection. 10 MS. MEYER: Okay. Thank you, Your Honor. 11 ahead. Just show it. 12 BY MS. MEYER: 13 Actually, I think it would be helpful if you would 14 Judge Sullivan your observations as we're watching the 15 videotape. 16 This is Shirley, she is obviously there chained Okav. 17 on three legs. I watched a longer clip, and hour and 13 18 minutes, and she many, many times tried to pull the chains 19 off. She repeatedly goes through and reaches over trying to 20 get to her companion who is on the other side of --21 THE COURT: Which elephant is this? 2.2. THE WITNESS: Shirley. She tries to reach through 23 I counted the number of times, it was like 19 times 24 where she tries to reach through, and she pulls and pulls on 25 her chains here. And now she's about to give birth. And you

see as the men come up, she sort of starts holding, holding still. So, everything there is — nothing natural about this birth except that it's not a C-section. It's completely controlled by people. She was not able to bend in the way that an elephant in the wild bends when she is giving birth.

2.2.

They take the baby away from her as soon as soon as she gives birth. They're using a bull hook on her as she's giving birth and after she gives birth. She has no possibility of moving. She's on a hard cement floor. Not with her family. It's just so — so completely different from an elephant in the wild who would be with her family, they would all help her, they would help the calf get to her feet. There would be rumbling and trumpeting and sort of celebration with the birth of a baby. And because she'd be able to move, it wouldn't be so problematic.

I mean, one of the problems is that what happens with these elephants is that the calves are just taken away from their mother's. In the wild the calves learn — the females learn from being around a birth, they learn from taking care of small babies. So, by the time they become mother's themselves, they know what to do, they know how to look out. So, there's this kind of cycle of incompetent mothers, and then these mothers when they give birth — you'll see what happens when she gives birth, she kicks the calf. So then everyone has to rush in and take the baby away.

But these are animals that have no experience. Females learn how to take babies through experience. They start taking babies when they're — taking care of babies when they are four years old, even younger sometimes. Practicing suckling the baby. Retrieving the babies and caring for it, comforting it. These animals don't get a chance to do that.

THE COURT: So, in the wild the process would be -- how would you describe the birthing process?

THE WITNESS: Well, you know, they do vary. The one that I saw had the best observations of the — the female was with her family of 30 elephants. They were all around her. Everyone was rumbling and trumpeting and — a huge cacophony of sound. I recorded the whole thing. A lot of temporal gland secretions showing that they were highly excited. They helped the calf to its feet. They are touching it the whole time, taking care of it. And then they just, you know, talking to it, talking to it, over and over and over again for the next few months, it's just touching the baby all the time. So here it's just whipped away from the mother.

BY MS. MEYER:

- Q. And based on what you observed, did that in any way form your opinion about the use of the bull hook and chains?
- A. Well, it's just part of the same thing, that these elephants have no freedom, they live sort of under a command and control lifestyle. They have no choice. There's nothing

that -- there's nothing -- there's nothing here that resembles their life in the wild at all. So, I think it's very harmful to them as individuals. I think it harasses them and it wounds them. We haven't gone into that, but it wounds them.

- Q. Dr. Poole, are you being paid by the plaintiffs for your work in this case?
 - A. I am not.

2.2.

- Q. Do you engage in advocacy work on behalf of elephants?
- A. Yes, I do.
 - Q. What kind of advocacy work do you do?
- A. I have been served in this is the third court case that I've been in. Mostly, I'm writing statements about elephants in circuses or I participated in trying to stop the capture of wild calves in South Africa, in which we were successful. So that is now moved into law, there is not going to be any more capturing of baby elephants in South Africa.

So, I mean, I prefer to do things for wild elephants, because I feel that's the more important. But I engage where I feel I can really make a difference to these animals, because based on all my time with them I feel they are deserving of much better treatment than what we are giving them because they are so social and intelligent.

THE COURT: Is it fair to say that you firmly believe, though, that elephants should not be in captivity?

THE WITNESS: No. But I do believe, and I'm

working even on the zoo front, I am working toward having elephants in much bigger spaces. I do believe they need the space, not just for walking around, but because without that space you can't provide them with the kind of social life they need for social learning, to learn how to take care of calves. All the kind of problems that you see in captivity are in large part caused because they don't have enough space to be elephants.

2.2.

THE COURT: All right. So there's — do you have an opinion as to whether there's a difference with respect to the behavior of Asian elephants in zoos as opposed to defendant's circus?

THE WITNESS: Yes, it's very different. I mean, in zoos they are pretty much allowed to get on and do what they want to do, they just don't have much space to do it in. But the circus is — you know, it's a continuum, basically. And the circus is absolutely at the bottom end in terms of the treatment of elephants.

THE COURT: Okay. So, what else is on the -- on that plane, you said the bottom end -- the bottom end, are there levels above circus?

THE WITNESS: I mean, there are some zoos that are still chaining elephants. There are some zoos that are keeping elephants in — keeping elephants in very small spaces, particularly males. Males are very difficult to keep.

And sometimes they tend to be put in the back somewhere and 1 2 spend a lot of their life in chains. But more and more zoos 3 are chaining less and less. More and more zoos are providing more space for elephants. And more and more zoos are moving 4 5 toward protected contact, where elephants are given a choice 6 in whether they participate or not. 7 THE COURT: Go ahead. 8 MS. MEYER: I have no further questions at this 9 time, Your Honor. I did want to make sure that we did move 10 into evidence Appendix A to her report, which is her CV. 11 THE COURT: Any objection? 12 Is the motion just for Appendix A or the MR. SHEA: 13 entire report? 14 MS. MEYER: Yes. 15 She's offering Appendix A, as I THE COURT: 16 understand it. Is that correct? 17 MR. SHEA: Which is solely her CV? 18 MS. MEYER: Yes. 19 MR. SHEA: No objection. 20 THE COURT: Admitted. Is there an exhibit number 21 for that Appendix? 2.2. It's Appendix A to Dr. Poole's report, MS. MEYER: 23 which is 113-Poole. So, it's in Exhibit 113. 24 THE COURT: We need a number. Just assign it a 25 number so it's a clear record then.

```
1
                MS. MEYER: I'm sorry, it's 113-A.
 2
                THE COURT: 113-A is admitted, that's the Appendix.
 3
     All right.
 4
                MS. MEYER:
                            I also wanted to make sure that we move
 5
     into evidence the video footage from the CEC inspection, which
 6
     is Will Call 142, I'm not sure whether that got moved into
 7
     evidence. Certainly the clip that we showed, which I think I
 8
     read that into record, which was 2:10:22 to 2:11:42.
 9
                THE COURT: I don't think there was an objection to
10
     that, was there?
11
                MR. SHEA: Your Honor, there was not. I think it's
12
     in evidence.
13
                THE COURT: It's already been admitted.
14
                MR. SHEA:
                           Right.
15
                MS. MEYER: Will Call 141, the clip that we showed
16
     of the birth footage, I think you said that could be admitted
17
     into evidence.
18
                THE COURT: That's subject to authentication,
19
     correct?
20
                MS. MEYER: No, that's produced by Feld
21
     Entertainment.
2.2.
                THE COURT: Any objection?
23
                MR. SHEA:
                           Your Honor, I objected to it as
24
     irrelevant.
25
                THE COURT: It comes in. I believe that's an -- is
```

```
that exhibit being offered pursuant to your other evidence
1
 2
    request?
 3
               MS. MEYER: No, Your Honor, that's the one where
 4
    they're claiming it's irrelevant because it deals with
 5
    elephants other than the seven that you ruled Tom Rider has
 6
    standing with respect to. And you've already denied their
 7
    Motion in Limine on that because we argued that it's part of a
8
    pattern and practice --
9
                THE COURT: That's what I just asked you. Listen
10
    to my question. My question was: Are you offering that
11
    pursuant to your other evidence theory?
12
                MS. MEYER: Yes, I'm sorry, I misunderstood you.
13
                THE COURT: It's admitted over objection.
14
               MS. MEYER: Yes.
                                  Thank you, Your Honor. And the
15
    MRI footage, 145-B, I believe that also was admitted.
16
                THE COURT:
                            Yeah.
17
               MS. MEYER: And the last one --
18
                THE COURT: Yes.
19
               MS. MEYER: Also --
20
                            There's no need to go over these again,
                THE COURT:
21
    Counsel.
2.2.
                            I just wanted to make sure -- I'm
               MS. MEYER:
23
    sorry, Your Honor, I'm just trying to --
24
                            That's why I'd just as soon deal with
                THE COURT:
25
    them when you're offering them so we don't have to go over
```

1 them twice. 2 MS. MEYER: Thank you, Your Honor. 3 THE COURT: It's cutting into your time now. 4 MS. MEYER: Okay. I'm done. 5 THE COURT: Now, you are available for 6 cross-examination tomorrow, correct? 7 THE WITNESS: I'm leaving tomorrow. 8 THE COURT: What time are you leaving tomorrow? 9 THE WITNESS: I have to leave for the airport at 10 3:00. 11 THE COURT: Dulles? We'll make sure you get there. 12 How many time do you need for cross? 13 MR. SHEA: Well, depending on the witness, of 14 course, Your Honor, 30 minutes to an hour I would expect. 15 THE COURT: Then, what, you anticipate redirect? 16 MS. MEYER: Some redirect, Your Honor. 17 THE COURT: Well, let's use some of the time this 18 afternoon, it's only 5:00 o'clock. Go ahead. We'll stop at 19 5:30. We can at least start cross-examination. 20 CROSS-EXAMINATION 21 BY MR. SHEA: 2.2. Lanes Shea for FEI. Dr. Poole, in your view, elephants Q. 23 just should be banned from circuses, correct? 24 Α. That is correct. 25 Q. And by that you mean any circuses, correct?

- 1 A. Circuses as I know them. If they're like what I've 2 seen in this case, yes.
 - Q. Let me show you Page 58 to your deposition, starting on Line 2. Do you see that in front of you?
 - A. Yeah.

2.2.

Q. Question? Now, first off, do you maintain a website called Elephant Voices. Answer: That is correct. Question: In this statement that you wrote, do you, viewing Exhibit 6, does that look to you to be a statement that you wrote and presented on Elephant Voices? Answer: I don't — it probably is on Elephant Voices, yes. Question: I would just like to ask you about one sentence in it, the sentence you say, quote, it is my considered opinion that elephants should not be used in circuses, end quote. Did I read that correctly? Answer: Yes. Question: Is that your opinion? Answer: That is my opinion. Question: Is that your opinion as you sit here today? Answer: Yes. Question: And when you say circuses, do you mean any circuses? Answer: I mean any circuses.

Did I read that correctly, Dr. Poole?

- A. Yes, you did.
- Q. Now, you believe that free contact methods, that is, use of the guide and chain should be banned completely, isn't that correct?
- 24 A. Sorry, can you repeat that?
 - Q. I can. You believe that free contact methods should be

1 | banned completely, correct?

2.2.

A. You know, there's free contact using the bull hook.

There's also some free contact without use of the bull hook.

It may not be called free contact, but it is in the same space of the elephant, so —

THE COURT: Tell me what free contact is?

THE WITNESS: Well, free contact typically, I guess this is what you mean. You're working in the same space as the elephant. And typically you are — because of elephant husbandry, working with the feet, getting the elephants to do things, then you use a bull hook. But there are a couple of sanctuaries here that are working in the same space with the elephants, but because they are not asking the elephants to do anything for them, they're not using a bull hook. So, if you mean working with a bull hook in free contact, then yes, I am opposed to free contact use with a bull hook.

BY MR. SHEA:

- Q. And you believe that free contact use with a bull hook and chain should be banned, right?
- A. I believe I have said with if that's need for veterinary treatment, you might have to chain the elephant for a short period of time, but essentially, yes, I am opposed to chaining of elephants.
- Q. Do you believe -- you believe that all circus situations where elephants are expected to perform on demand

- 1 | should be banned, correct?
 - A. Yes.

3

4

5

6

7

8

9

15

16

18

19

20

21

2.2.

23

24

- Q. And you believe that use of elephants for elephant backed safaris should be banned as well, don't you?
 - A. Yes, that's true.
- Q. What date did you begin studying elephants in the wild?
 - A. September 1975.
 - Q. So it's since September 1975 you've held the opinion that elephants should not be exhibited in circuses, correct?
- A. Well, I don't know if I even thought about it much back then, to be honest. So, I don't know when exactly I came to that conclusion, but I would guess if someone had asked me then that I probably would have said that I didn't think it was appropriate.
 - Q. Let me go to Page 303 of your deposition, Line 22. I'd like to show you that.
- 17 | A. Uh-huh.
 - Q. On 303, Line 22, I began a question: Dr. Poole, for how long have you held the opinion that elephants should not be exhibited in circuses? Answer: I am not sure how long I've held that opinion, but I know when the first statement was made, the first statement together with the rest of my team from Amboseli Trust for Elephants, I think, is that 2001, it has been updated since then. Question: So, did you hold that opinion before 2001? Answer: Yes. As long as I have

studied elephants in the wild, I haven't been happy to see elephants in -- well, even in zoos, but particularly in circuses.

Did I read your testimony correctly?

A. Yeah, you have.

2.2.

- Q. And you've held that opinion regarding zoos, is that true?
- A. Well, listen, I grew up in Africa where I have had the opportunity to see animals living in the wild and behaving naturally. So, even when I was a child, I used to be quite disturbed by what I observed in zoos. So, I have been concerned about the welfare of animals in zoos and certainly in circuses for a long time.
- Q. And, Dr. Poole, you're appearing in this case as an advocate, isn't that true?
- A. Well, I'm appearing as an expert in elephant behavior.
- Q. Let's go to Page 215 of your deposition, Dr. Poole, starting on Line 19. Question: Dr. Poole, I will hand you something which I think was taken from your website, saying, legal case against Ringling Brothers circus for mistreatment of elephants, and I have marked it as Exhibit 11. Answer: Okay. Question: Does that appear to be something printed from your website? Answer: Actually, it is on it may appear on the website, but it was originally in something called Wildlife Direct on which we

1 have a blog. Question: I see. It begins, quote, hi, this is 2 Joyce again, end quote. Am I reading that correctly? Answer: 3 Question: So, these are yours words, are they not? 4 Yes. Question: And this was a statement of what, 5 December 10, 2007, is that right? Answer: Yes. Question: 6 note in the third paragraph it says that, quote, one example 7 of the advocacy work I do is in my involvement as an expert 8 witness in a lawsuit brought by the America Society for the Prevention of Cruelty to Animals, the Animal Welfare 9 10 Institute, the Fund for Animals and the Animal Protection 11 Institute, and a former Ringling Brothers employee, Tom Rider, 12 who worked as a barn man with the elephants for two and a half 13 years, against Ringling Brothers and Barnum & Bailey Circus 14 and Feld Entertainment. Ringling Brothers for violation of 15 the U.S. Endangered Species Act. Did I read that correctly? 16 Answer: Yes. Question: Do you see your role in this as an advocate? Answer: Yes, I do. 17

Did I read that correctly, Dr. Poole?

- A. You read that correctly.
- Q. Now, as it mentions here, you're a director of an entity called Elephant Voices, is that right?
 - A. Yes, sir, that's correct.
- Q. And one of the two purposes of Elephant Voices is to act as a voice for elephants, isn't that right?
- A. Correct.

18

19

20

21

2.2.

23

24

- 1 Q. And you've been an advocate many times, isn't that 2 true?
 - A. Quite a few times.
 - Q. In fact, in 2005 you advocated against the importation of elephants from Thailand to Australia, correct?
 - A. I did.

4

5

6

7

8

9

10

11

12

14

15

16

17

20

21

2.2.

23

24

- Q. Ultimately, however, the elephants were moved from Thailand to Australia, weren't they?
- A. That's correct.
- Q. In 2005, you were an advocate in Chicago arguing that the city should ban circuses that exhibited elephants, correct?
- 13 A. That's correct.
 - Q. In 2002 you were an advocate against the Stardust Circus, a case in South Wales, Australia, arguing against the keeping methods of elephant Arna, A-R-N-A, isn't that right?
 - A. I wrote a statement about her behavior.
- Q. And that was for that case in South Wales, Australia, correct?
 - A. I believe it was used in a case, I'm not sure if it was. They asked me for my comments on her behavior.
 - Q. Let's go to deposition page 89. Dr. Poole, I'd like to show you a question beginning on Line 14. Question: In 2002 do you recall serving as an expert witness in a case called Pearson versus Janlin in New South Wales involving the

- 1 Stardust Circus? Answer: Is that Arna? Is that the elephant
- 2 called Arna? Question: Yes. Answer: Did I testify?
- 3 Question: I'm asking what you recall. Answer: I wrote some
- 4 sort of statement about -- I viewed the videotape of the
- 5 elephant. Question: And this was elephant Arna, is that
- 6 right? Answer: Yes, I think so. Did I read your testimony
- 7 | correctly?
- 8 A. You did.
- 9 Q. Now, in 1998 you testified against Riccardo Ghiazza
- 10 regarding the capture of Tuli, T-U-L-I, elephants in Botswana,
- 11 | is that correct?
- 12 A. That's correct.
- 13 Q. And you've appeared before the Massachusetts Senate
- 14 advocating that circuses should be banned from that state,
- 15 true?
- 16 A. That's true.
- 17 Q. Now, Born Free United, a plaintiff in this case, for
- 18 many years has been a strong supporter of Amboseli Trust for
- 19 Elephants, correct?
- 20 A. That is true.
- 21 Q. And Born Free United has donated money over many years
- 22 | to the Amboseli Trust for Elephants, isn't that correct?
- 23 A. That is correct.
- 24 Q. Dr. Poole, now, you did not attend the elephant
- 25 | inspection at Auburn Hills, isn't that right?

- 1 Α. That's correct.
- Thus, you did not personally observed Karen -- the two Q. 3 elephants, Karen and Nicole, correct?
- 4 I did not. Α.

5

6

7

12

- And as far as direct observation, you don't have any opinions regarding Karen or Nicole, correct?
 - Can you repeat that, please? Α.
- As far as direct observation, you did not have any 8 Ο. 9 opinions regarding Karen or Nicole, correct?
- 10 As long as you don't count the video, I guess -- you're 11 not counting the video. Correct.
 - You did not review the videotape of the Auburn Hills inspection, correct?
- 14 No, I did. Α.
- 15 Well, at the time of your deposition I asked you and 0. 16 you said you didn't, do you recall that testimony?
- 17 I don't recall that testimony. Α.
- 18 Could we please go to Page 298 of Dr. Poole's Ο.
- 19 deposition. Beginning on Line 2, I asked a question.
- 20 Question: Well, let me ask it this way, do you know that
- 21 elephants -- well, let me ask it this way. Did you watch the
- 2.2. video of Auburn Hills inspection? Answer: Sorry, no, I did
- 23 not. Did I read that correctly?
- You read it correctly, but there was a lot of video. 24 25 have seen it.

- Q. Well, Dr. Poole, at the time I took your deposition you said you had not reviewed it?
 - A. I can see that.

- 4 Q. Correct? And so you formulated your opinions --
- 5 A. In my report it's listed in my report. So, I mean,
- 6 I may have been confused. I have seen it.
 - Q. Did you see it before or after you wrote your report?
- 8 A. I saw it before.
- 9 Q. Now, Dr. Poole did you attend the --
- THE COURT: You made reference to it in your report
- 11 then, correct?
- 12 THE WITNESS: Yeah, it's listed as the evidence
- 13 that I reviewed.
- 14 THE COURT: All right.
- 15 BY MR. SHEA:
- Q. So, you're certain that the Auburn Hills inspection is
- 17 listed as evidence in your report?
- 18 A. Yes.
- 19 Q. Did you make the list of evidence that was listed as
- 20 an -- did you make the list of evidence appended to your
- 21 report? Did you write that list?
- 22 A. No, I didn't write that list.
- 23 Q. Who wrote that list?
- 24 A. I participated in it because I had -- but it was made
- 25 by -- it was made by the -- I'm not sure who made it, but --

- Q. Dr. Poole, you did attend the inspection at the Center for Elephant Conservation as we have seen today, correct?
 - A. Yes.

2.2.

- Q. You've not observed a normal day for those elephants and handlers, though, have you?
- A. No, I have read about a normal day, but I have not seen a normal day.
- Q. And at the inspection you did not observe the normal behavior between any of the handlers and the five elephants that were inspected, correct?
- A. I wouldn't be able to say that. But as I said in my deposition, I would have expected if they were trying to put on a show for us, then they would have been very cozy, nice interactions between the men and the elephants. They were trying to impress us, and that's not what I observed.
- Q. First off, let's go to Page 213 of your deposition to address the question I just asked.
 - A. Okay.
- Q. And on Line 11. I asked, Question: My question was, you have not observed the normal behavior between any of these handlers and the five elephants, correct? Answer: I have not observed on a normal day. Did I read that correctly?
- A. You read that correctly.
 - Q. Dr. Poole, you say that at the inspection you saw that the elephants were tense, do I understand that correctly?

1 A. Yes, you do.

2

3

6

7

8

9

10

11

14

15

16

17

18

19

20

21

2.2.

24

25

Q. Are you aware that the conduct of that inspection, what was to be done, was dictated by plaintiff's counsel?

MS. MEYER: Objection, Your Honor. Objection, that's a misstatement.

THE COURT: She can answer the question if she wants. Do you understand the question?

THE WITNESS: If he can repeat it, please.

BY MR. SHEA:

- Q. Do you understand that the conduct of that inspection was chosen by plaintiff's counsel?
- A. Well, not entirely, because I don't think the bathing of the elephants was in the original plan for the day.
 - Q. What else can you but at this point you don't understand that plaintiff's counsel dictated the conduct of the inspection?
 - A. Well, in the details of when we were finished looking at one elephant and the next elephant. But, for instance, I did ask to see the elephants be allowed to be loose and see how they interacted, and that was not permitted. So, I'm not really sure how to answer that.
 - Q. So, of whom did you ask that?
- 23 A. I asked it of one of your lawyers.
 - Q. And you were directed to plaintiff's counsel with that question, were you not?

- 1 A. No, I was not, I was ignored.
- Q. Dr. Poole, the elephants were lined up for inspection, were they not?
 - A. Yes, that's correct.
- Q. You were there at that time when they were first lined up, is that true?
 - A. Well, the bath was first -- you mean before the bath?
 - Q. I'm asking when they were lined up for inspection?
 - A. Yes.

7

8

- 10 Q. Following the bath, were you there?
- 11 A. Yes.
- Q. After the bath when they were lined up for inspection, were you present?
- 14 A. Yes, I was.
- Q. And you needed to stand and wait and so did the elephants for 20 minutes, lined up, while counsel for plaintiffs and Carol Buckley were late, isn't that correct?
- 18 A. That is correct.
- Q. And these wide-ranging inquisitive creatures as you've described them, don't you think they would become a little antsy in that situation?
- 22 A. Yes, probably.
- 23 Q. And that's what you saw, isn't it?
- A. Yeah, but then if it were me, I would have let them wander around until such time as it was time for the

1 inspection.

2

3

4

5

6

7

10

11

- Dr. Poole, you have no evidence of knew ankus wounds on any of the elephants at issue in this lawsuit, correct?
- I did not see any.
- And the scars or marks you believe were caused from use of the ankus. You did not see the actual cause of those scars or marks, correct?
- 8 No, but the marks were consistent with bull hook 9 wounds.
 - THE COURT: I'm sorry, your voice kind of trailed off --
- 12 THE WITNESS: I'm sorry. The marks were consistent 13 with abscesses that would be caused by bull hook wounds.
- 14 MR. SHEA: Object, nonresponsive.
- 15 THE COURT: She responded to your question.
- 16 BY MR. SHEA:
- 17 You have no direct evidence of new injury or wounds from the chains on any of the elephants at issue in this 19 lawsuit, correct?
- 20 Not new wounds, no.
- 21 The scars or marks that you believe were caused from Q. 2.2. chaining, you did not see the actual cause of those scars or 23 marks, correct?
- 24 Α. No, I did not.
- 25 Dr. Poole, in your opinion, using the ankus with Q.

elephants for negative reinforcement is a taking, correct? 1 2 Α. Yes. 3 THE COURT: What's a taking in your opinion? 4 THE WITNESS: In my opinion it's harming, wounding 5 or harassing the elephants. BY MR. SHEA: 6 7 In your opinion, Dr. Poole, any restriction of an Q. 8 elephant's movement is harassment, correct? 9 Within context, yes. Within the context of how it's 10 being done at Ringling Brothers Circus, yes. 11 Let me show you Page 294 of your deposition, Line 18. 12 I'm interested in last sentence of that paragraph, 13 the opinion there where it says, quote, in my opinion all of 14 these instances constitute harassment of the elephants because 15 the handlers are interrupting through their use of the bull 16 hook the very essence of normal elephant behavior, end quote. 17 Did I read that correctly? Answer: You did. Question: 18 is it the fact that the elephant's movements are controlled 19 that constitute harassment? Answer: Yes. I mean, anything 20 that the elephants want to do is stopped, basically. 21 Did I read that correctly? 2.2. You did. Α. 23 Dr. Poole, such restrictions of an elephant's movement Q. 24 are common to all captive environments, aren't they? 25 Α. To the extent that they are at Ringling Brothers, no.

- Q. That's not my question, Dr. Poole. It's your opinion
 that any restriction of an elephant's movement is harassment,
 we just established that. And my question is: That any
 restriction of an elephant's movement is common to all captive
 environments. All captive environments restrict elephant
 movement, don't they?
 - A. Yes, they do, but we're talking about a continuum.
 - Q. We'll talk about that continuum in a moment. Dr. Poole, in your opinion, requiring an elephant to stay in a barn overnight is harm to that elephant, correct?
 - A. When it's chained like that and in the context of how it's being done.
 - Q. Let's go to Page 295 of your deposition, Line 16 in your deposition, I asked you Question: And I am trying to understand what your view is and is not harassment. Putting elephants in a barn overnight and having them be indoors overnight at a zoo, for instance, is that harassment, because it certainly is controlling? Answer: That I would have listed under harm. That would be harm, but not harassment. Question: That would be harm but not harassment? Answer: Yes.

Now, Dr. Poole, having an elephant perform a movement on demand such as those necessary for foot care is a taking, is that correct?

A. Sorry.

2.2.

- Q. Having an elephant -- do I need to repeat the question?
- A. Yes.

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2.

23

24

25

- Q. Having an elephant perform a movement on demand such as those necessary for foot care is a taking, correct?
- A. Not when it's done in free contact. Sorry. Not when it's done in protected contact.
- Let me show you Page 134 of your deposition starting on Ο. Line 10. Question: And on the last page of Exhibit 8, we just talked about this, and I want to try to understand your opinion. Point 6, you say, you argue that elephants should be removed from all free contact situations where they are expected to perform on demand. Let me stop there because the rest concerns circuses or elephant backed safaris. you understand that in free contact situations elephants are expected to perform certain activities or certain movements on demand, such as those necessary for foot care for maybe some limited performance and the like? Answer: Well, this is why -- this is specifically the expectation of performing on demand, especially things that the elephant would choose not to do, I think that is where it is. It is kind of a gray area, but it is this expectation that the elephant has to perform on demand when people want it to. And the ankus in that context, which is why everybody one argues against and some people argue against free contact specifically. Question: Is that why you argue against it? Answer:

- Question: Is that why you think it is a taking in that situation? Answer: Well it takes away the autonomy of the elephant and gives it no choice. Did I read that correctly?
 - A. You did.

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2.

24

2.5

- Q. Now, Dr. Poole, you have never worked or consulted for the USDA, correct?
 - A. I have not.
- Q. And there have been no studies comparing the behaviors of wild Asian and wild African elephants, correct?
- A. No studies started out with that in mind without specifically in mind, is that what you're saying?
- Q. My question is: There have been no studies comparing behaviors of wild Asian and wild African elephants, correct?
- A. There have been papers that have compared them, but there have been no studies that have started out, as far as I'm aware, with the specific purpose to make specific comparisons there.
- Q. Dr. Poole, there are no studies on the rate of arthritis in wild Asian or African elephants, correct?
 - A. Not that I'm aware of.
- Q. And you don't know the rate of serious foot problems in wild Asian elephants, correct?
- 23 A. I don't happen to know the rate.
 - Q. You're not aware of any studies that report the rate of serious foot problems in wild Asian elephants, correct?

- A. No, but my colleague works with vets all the time, so she is very knowledgable on the kinds of problems that Asian elephants face with their feet in the wild, and I consulted her specifically on this. So, she said the kind of foot problems they have there are caused by buckshot wounds, wounds inflicted by people, but not as far as she was aware, not arthritis.
 - Q. Dr. Poole, my question wasn't about cause, it was about if you were aware of any studies. You're not aware of any studies that report the rate of serious foot problem in wild Asian elephants, correct?
 - A. That is correct.

2.2.

- Q. There are no studies that report the rate of stereotypic behavior in wild Asian elephants, correct?
- A. Well, it has not been seen. I have never seen any stereotypic behavior in the wild.
- Q. Let me show you Page 285 of your deposition, beginning on Line 22. Question: Do you know of a study that reports the rate of stereotypic behavior in wild Asian elephants?

 Answer: No, I do not. The same question the same question for Africans, do you know of a study that reports the rate of osteomyelitis in wild African elephants? Question: No.

 (sic) Do you know of a study that reports the rate of stereotypic behavior in wild African elephants? Answer: No.

Did I read that correctly?

A. You read that correctly.

2.2.

Q. Now, Dr. Poole, you have no studies to support your opinion that elephants can get a syndrome like people who have been battered spouses, abused children, prisoners of war, or concentration camp survivors, correct?

MS. MEYER: Objection, Your Honor. I didn't hear her offer an opinion on this.

THE COURT: Rephrase that question, Counsel.

MR. SHEA: Your Honor, I'll withdraw that question at this time.

THE COURT: I'm not trying to curtail your examination, I'm just asking because it's 5:30. How much more time do you need?

MR. SHEA: I'm about halfway through.

THE COURT: That's fine. We'll end. It's been a long day, we'll end for the day. We'll start promptly at 10:00. We'll make sure you get to the airport. At least you'll leave the courthouse, you have to get a cab to get you there, but we'll get you out here. We'll start promptly at 10:00 o'clock. I have to ask you not to discuss your testimony with anyone.

THE WITNESS: Okay.

THE COURT: Enjoy your evening. Thank you,

Counsel. We'll start promptly at 10:00 o'clock. I don't have

any other jury matters tomorrow or any other matters. Thank

1 you. 2 MR. SIMPSON: Your Honor, you indicated you were 3 going to take under advisement the exclusion of the witness 4 rule. 5 THE COURT: The what? 6 MR. SIMPSON: Whether witnesses were going to be 7 excluded and whether Dr. Ensley was going to be able to sit 8 in, and I forgot to bring that up. 9 THE COURT: I indicated that I would allow that one 10 expert to sit it. And I also extended the invitation to you. 11 If you have an expert that you'd like to sit in, that's fine 12 with me. 13 MR. SIMPSON: We would like do have Dr. Dennis 14 Schmitt. 15 THE COURT: Court is still in session, Counsel. 16 You'd like to have Dr. --17 MR. SIMPSON: Dr. Dennis Schmitt, and Dr. Schmitt 18 has got some travel issues, so we would also like permission 19 if he can't be here personally to read the trial transcript. 20 THE COURT: That's fine. I don't have any problems 21 with that, That's fine. All right. Thank you. Have a nice 2.2. evening. No need to stand. Thank you. 23 END OF PROCEEDINGS AT 5:30 P.M.

24

25

C E R T I F I C A T E

I, Lisa M. Hand, RPR, certify that the foregoing is a correct transcript from the record of proceedings in the above-titled matter.

Lisa M. Hand, RPR

,	215 [1] 97/17	ability [2] 66/18 68/5
'94 [1] 25/7	22 [5] 68/20 71/1 96/15 96/18 111/18 22:19 [1] 82/18	able [29] 16/1 16/2 31/25 32/9 32/10 32/11 32/13 32/16 33/15 44/6 44/7 45/8 46/21
0	23 [1] 56/23	46/23 46/24 47/12 48/13 49/4 68/2 68/3
03-2006 [1] 1/4	24:14 [1] 37/4 25,000 [1] 11/22	68/10 68/12 68/13 69/13 80/3 86/4 86/14 103/11 113/7
1	27:3 [1] 37/4	abnormal [4] 62/16 62/18 63/4 64/9
1 770 741 0/22	285 [1] 111/17	abnormality [1] 64/23
1,550 [1] 8/22 10 [3] 13/8 66/25 109/8	29 [1] 3/4 294 [1] 107/11	about [60] 12/10 13/19 13/25 17/4 17/12 22/8 26/24 27/1 30/7 32/2 32/25 37/1 39/8
10,000 [2] 8/25 53/23	294 [1] 107/11 295 [1] 108/13	39/10 40/14 40/15 41/20 45/24 48/7 50/25
102 [1] 27/2	298 [1] 101/18	51/3 52/11 54/14 56/4 58/14 60/25 61/2
10:00 [1] 112/17 10:00 o'clock [2] 112/20 112/24	2:01:41 [1] 65/23 2:02:55 [1] 65/23	62/17 65/14 66/11 66/20 75/25 76/12 77/7 77/25 78/20 79/1 79/7 80/6 80/13 81/19
11 [2] 97/21 103/19	2:10 [1] 1/5	82/24 83/7 84/14 85/25 86/2 87/22 88/12
11,000 [1] 17/15	2:10:22 [1] 91/8	94/12 96/10 97/12 99/17 100/4 103/6 108/7
113 [9] 36/12 36/19 51/18 55/20 55/23 56/2 56/20 58/16 90/23	2:11:42 [1] 91/8	108/8 109/9 111/8 111/8 112/14 above [4] 33/2 33/13 89/21 114/5
113-A [2] 91/1 91/2	3	above-titled [1] 114/5
113-Poole [1] 90/23	30 [2] 87/11 93/14	abscesses [1] 106/13
118 [18] 56/4 56/8 56/10 56/11 56/23 56/24 57/5 57/6 58/17 60/7 68/19 69/14 69/19	303 [2] 96/15 96/18 308 [1] 57/16	absolutely [3] 20/25 67/13 89/17 Abu [1] 25/3
69/24 70/8 70/12 70/24 71/1	3269 [1] 2/4	Abu's [1] 25/9
12 [1] 10/8	33 [1] 41/25	abused [1] 112/4
13 [4] 22/2 66/24 67/2 85/17 132 [2] 71/20 74/14	333 [1] 2/3 354-3269 [1] 2/4	abusing [1] 81/25 accurate [1] 19/10
134 [1] 109/7	3:00 [1] 93/10	accurate [1] 19/10 acoustic [3] 7/19 16/9 29/21
136 [2] 82/12 82/18	3:10 [1] 49/6	acoustics [1] 53/2
14 [1] 99/23 14.3 [1] 34/5	4	across [2] 20/24 73/15
141 [2] 84/12 91/15	4/29 [1] 3/4	act [3] 83/25 98/15 98/24 acting [2] 42/6 42/7
142 [2] 51/19 91/6	40 [2] 15/19 32/25	action [2] 72/11 77/22
145-B [2] 65/22 92/15 15 [3] 17/9 41/5 46/9	401 [1] 84/18 402 [1] 84/18	actions [1] 83/16
16 [1] 108/13	402 [1] 84/18 403 [2] 66/4 74/18	active [1] 34/8 activities [1] 109/15
1601 [1] 1/16	404 [1] 85/3	activity [2] 49/20 79/15
177 [1] 17/12 18 [2] 22/2 107/11	45 [2] 31/17 32/23	actual [3] 82/9 106/6 106/22
18:25 [1] 49/7	4:00 o'clock [1] 49/24	actually [28] 7/5 7/12 7/21 14/20 15/22 17/18 20/3 20/21 20/23 21/16 21/18 22/20 32/5
19 [6] 6/24 12/21 27/4 56/23 85/23 97/18	5	35/7 37/24 44/11 49/25 50/3 51/13 52/10
1972 [1] 7/6 1974 [1] 5/22	5,000 [1] 39/23 50 [1] 17/14	56/21 65/19 68/17 72/23 75/9 80/10 85/13
1974 [1] 3/22 1975 [3] 7/14 96/7 96/8	50 [1] 1//14 500 [1] 1/23	97/23 add [1] 8/15
1982 [1] 5/8	5206 [1] 1/18	added [1] 19/13
1989 [1] 8/16 1990 [1] 11/17	54 [10] 55/21 56/6 56/13 57/7 57/12 57/13 57/14 57/17 57/20 57/23	addition [2] 18/1 32/13
1990 [1] 11/1/ 1993 [2] 12/21 12/22	3//14 3//17 3//20 3//23 56 [1] 39/5	additional [1] 56/6 address [3] 10/22 71/23 103/17
1994 [3] 11/17 25/7 25/7	58 [1] 94/3	admissibility [1] 51/20
1995 [1] 12/21 1996 [3] 25/18 25/19 25/19	588 [1] 1/18	admission [1] 28/25
1998 [2] 23/2 100/9	5:30 [3] 93/19 112/12 113/23	admit [4] 51/24 52/6 57/1 57/10 admitted [12] 36/20 56/11 57/6 57/17 57/20
19:38 [1] 82/18	6	68/19 90/20 91/2 91/13 91/16 92/13 92/15
2	6522 [1] 1/24	admitting [1] 57/11
20 [15] 47/9 68/20 69/21 69/21 69/22 69/25	6706 [1] 2/3	adult [2] 34/7 36/6 adults [1] 14/1
70/1 70/2 70/3 70/10 70/12 70/13 70/17	7	advisement [1] 113/3
70/24 105/16 20,000 [2] 8/25 53/23	7,000 [1] 17/14	advocacy [4] 6/18 88/8 88/10 98/7
200 [2] 32/12 33/21	70 [1] 39/2	advocate [5] 97/15 98/17 99/1 99/10 99/14 advocated [1] 99/4
20001 [1] 2/4	700 [1] 1/17	advocating [1] 100/14
20004 [1] 1/23	724-6522 [1] 1/24	affect [1] 24/12
20009 [1] 1/17 2001 [2] 96/23 96/25	8	affected [2] 23/14 41/21 affirmatively [1] 21/24
2002 [2] 99/14 99/23	801 [1] 1/22	Africa [5] 4/25 23/1 88/14 88/16 97/8
2003 [4] 9/15 12/22 13/20 25/24 2004 [1] 65/22	85 [1] 16/21 86 [1] 16/21	African [29] 5/12 7/4 7/17 7/18 9/3 12/3
2004 [1] 65/22 2005 [2] 99/4 99/10	89 [1] 99/22	12/12 14/8 14/8 14/12 14/13 14/15 14/19 16/22 17/12 17/15 18/18 18/19 18/20 22/7
2006 [3] 1/4 12/23 25/12	9	26/19 26/21 32/22 44/14 110/9 110/13
2007 [3] 22/9 22/10 98/5 2008 [7] 12/22 13/17 19/24 21/23 22/6 22/10	93 [1] 3/4	110/19 111/22 111/24
22/11	A	Africans [2] 38/2 111/21 after [11] 30/17 34/5 34/16 36/2 44/22 52/2
2009 [2] 1/5 19/19		62/7 76/18 86/8 102/7 105/12
202 [3] 1/18 1/24 2/4	A-R-N-A [1] 99/16 abilities [1] 22/24	afternoon [7] 4/11 4/12 24/21 24/22 34/19
213 [1] 103/16		

ankus [5] 25/2 106/2 106/6 106/25 109/22 110/19 110/22 110/25 111/2 111/11 111/14 A another [20] 6/12 16/4 16/10 18/11 22/23 111/19 afternoon... [2] 49/23 93/18 33/16 40/17 49/24 55/14 60/4 61/22 61/25 Asians [1] 38/2 afterwards [2] 37/17 37/21 68/3 68/4 68/13 76/4 76/5 76/9 76/14 81/22 ask [31] 19/10 20/5 21/10 36/25 37/6 38/10 again [18] 12/22 16/9 16/11 30/2 31/25 32/6 answer [37] 27/8 27/11 38/18 42/8 46/3 94/7 46/4 47/11 47/14 55/18 60/1 60/2 61/24 62/3 43/4 45/17 46/4 52/25 63/9 63/14 64/7 73/5 94/10 94/14 94/15 94/17 94/18 96/20 96/25 68/20 69/1 69/4 72/1 75/9 77/7 77/20 78/17 80/20 87/18 92/20 98/2 97/21 97/23 98/2 98/4 98/5 98/16 98/17 81/11 82/23 84/13 94/12 101/20 101/21 against [10] 31/22 97/20 98/13 99/4 99/14 100/1 100/2 100/3 100/6 101/22 103/21 104/19 104/22 112/20 99/15 100/9 109/23 109/24 109/25 104/6 104/21 107/17 107/19 108/18 108/20 asked [15] 27/7 28/21 41/23 42/23 63/14 age [4] 7/22 34/5 63/6 81/18 109/17 109/25 110/2 111/20 111/24 63/14 92/9 96/12 99/21 101/15 101/19 ages [1] 44/20 103/17 103/19 104/23 108/14 **anticipate** [1] 93/15 ago [1] 58/10 asking [7] 45/24 70/16 82/15 95/13 100/3 anticipating [1] 19/6 agree [2] 70/18 79/8 antsy [1] 105/21 105/8 112/12 agreement [1] 30/18 assign [3] 45/4 45/6 90/24 anus [1] 73/13 **ahead** [12] 29/9 36/14 45/22 46/6 47/22 any [63] 5/9 5/13 5/25 6/15 7/5 9/7 10/11 associated [1] 8/7 58/24 60/2 60/6 62/8 85/11 90/7 93/18 11/11 15/5 22/13 24/18 27/7 28/21 29/4 associates [1] 46/25 aided [1] 2/25 29/18 33/9 35/2 36/19 37/23 38/5 41/6 42/5 Association [3] 28/10 28/16 28/18 air [1] 36/7 43/21 46/11 47/19 48/3 48/24 50/22 51/20 assume [2] 42/11 46/1 airport [2] 93/9 112/17 52/1 52/4 54/7 56/17 60/16 70/21 72/1 75/14 assumes [3] 41/8 45/23 47/20 attend [3] 100/24 102/9 103/1 al [3] 1/3 21/21 22/7 76/15 84/5 87/21 88/16 90/11 91/22 93/25 **alarmed** [2] 55/6 77/16 94/18 94/18 101/5 101/8 103/9 103/20 106/3 attended [2] 12/14 58/2 alert [1] 55/9 106/4 106/18 107/7 108/2 108/3 110/24 attention [2] 55/9 64/14 all [72] 7/7 7/10 8/11 8/15 9/21 9/25 12/6 111/9 111/9 111/15 112/25 112/25 113/20 attorney [1] 69/3 15/6 16/7 16/20 18/2 18/3 18/24 18/25 18/25 **anyone [2]** 10/22 112/21 attracted [1] 31/18 21/19 21/20 26/10 27/8 29/4 31/14 36/7 anything [7] 19/13 67/23 73/22 78/9 78/12 atypical [1] 79/15 36/14 42/12 44/9 49/11 49/13 49/16 49/25 95/14 107/19 Auburn [4] 100/25 101/12 101/22 102/16 50/6 53/22 54/23 55/15 56/24 56/24 57/17 **anyway [3]** 14/13 39/17 61/13 August [3] 13/16 13/17 26/4 anywhere [3] 17/8 51/11 66/18 57/23 60/8 61/12 61/16 61/21 62/15 68/6 Australia [4] 99/5 99/8 99/15 99/18 70/6 71/2 71/6 73/20 73/21 75/17 75/21 77/1 Apparently [1] 57/16 authenticate [5] 74/23 74/24 75/18 75/23 79/19 79/20 81/18 82/21 86/12 87/11 87/18 appear [4] 35/15 97/22 97/24 97/24 88/2 88/20 89/6 89/9 91/3 95/24 102/14 APPEARANCES [1] 1/13 authenticated [5] 65/25 76/4 76/8 76/19 107/13 107/24 108/4 108/5 109/11 111/1 appeared [2] 63/17 100/13 76/25 113/21 appearing [2] 97/14 97/16 authentication [3] 74/21 76/1 91/18 alleged [1] 41/14 appears [1] 79/6 authenticity [1] 66/7 alleging [1] 84/23 appended [1] 102/20 author [4] 10/8 19/19 21/11 21/15 allow [15] 15/6 23/17 24/6 34/2 35/6 41/23 **Appendix [8]** 19/9 71/23 90/10 90/12 90/15 authored [1] 21/14 46/3 47/22 64/17 66/5 75/13 75/14 75/16 90/21 90/22 91/2 autonomy [1] 110/2 available [1] 93/5 apply [1] 74/22 allowed [6] 80/23 81/1 85/6 85/9 89/14 approach [1] 19/3 **Avenue [3]** 1/16 1/22 2/3 104/19 appropriate [3] 47/12 69/2 96/14 average [3] 17/9 17/11 34/5 **almost [5]** 17/14 35/20 39/2 49/22 52/20 **Aquarium [1]** 28/15 avoid [2] 21/6 21/7 aloft [1] 43/23 **Aquariums** [1] 28/19 aware [9] 17/3 72/24 104/2 110/16 110/20 **along [3]** 33/6 73/25 78/18 110/24 111/6 111/9 111/9 Archie [1] 8/10 already [10] 68/19 70/4 75/16 80/21 84/21 are [223] away [13] 31/8 33/18 39/2 44/24 51/5 73/2 84/22 85/4 85/5 91/13 92/6 77/12 80/8 86/6 86/17 86/25 87/19 110/2 area [9] 5/9 61/22 75/13 76/4 76/5 76/9 also [30] 5/16 13/11 14/18 15/25 16/22 22/25 76/14 80/22 109/21 28/21 44/25 45/18 48/10 53/25 55/20 55/20 areas [1] 7/22 aren't [2] 84/16 107/24 babies [6] 18/10 86/20 87/2 87/3 87/3 87/5 61/19 63/4 64/3 66/6 71/4 73/12 74/13 74/21 75/9 84/2 84/16 91/4 92/15 92/19 95/3 argue [3] 109/10 109/24 109/25 baby [14] 31/12 31/16 31/20 31/23 37/24 113/10 113/18 40/21 84/13 84/16 86/6 86/14 86/25 87/5 argued [1] 92/7 alternate [1] 53/9 argues [1] 109/23 87/18 88/16 **although [3]** 14/16 49/2 74/14 back [28] 16/8 23/1 25/9 26/3 30/15 34/8 **arguing** [**2**] 99/10 99/15 34/22 38/13 42/18 45/17 49/12 50/8 53/11 **Altmann [1]** 5/22 argumentative [4] 43/7 59/11 74/20 76/2 am [18] 9/16 12/2 13/1 27/17 28/11 28/14 55/15 58/6 62/1 63/18 66/15 67/2 72/25 armful [1] 77/23 28/17 36/18 36/24 48/6 50/12 88/7 89/1 73/23 76/18 77/14 77/16 80/18 80/19 90/1 **arms** [1] 67/13 95/15 95/22 96/20 98/2 108/14 Arna [4] 99/16 100/1 100/2 100/5 96/10 amazing [1] 31/12 around [24] 25/9 30/3 31/4 33/11 34/11 35/3 backed [4] 80/8 80/8 96/4 109/13 Amboseli [22] 6/12 6/25 7/1 7/2 7/13 7/21 backs [1] 14/9 35/19 35/21 35/22 36/4 36/9 65/17 73/8 backward [3] 50/11 52/21 59/17 7/21 7/25 8/4 8/22 9/2 9/4 9/9 32/5 32/23 73/10 73/10 83/12 83/13 83/13 83/14 83/20 35/24 36/5 39/1 39/11 96/23 100/18 100/22 86/19 87/11 89/3 105/25 Bailey [1] 98/13 America [2] 81/20 98/8 ban [1] 99/11 arrow [1] 64/2 **AMERICAN [2]** 1/3 28/15 arthritis [3] 64/20 110/19 111/7 banned [7] 93/23 94/22 95/1 95/19 96/1 96/4 among [1] 71/4 100/14 article [1] 20/1 amount [1] 47/25 articles [1] 26/16 barking [1] 54/25 Andrea [1] 10/18 as [120] barn [16] 49/1 49/5 49/9 51/15 54/13 55/3 55/18 59/7 59/21 60/14 67/15 67/16 68/10 animal [18] 5/4 5/15 17/5 39/1 42/4 43/17 **Asia [3]** 32/23 40/21 64/19 46/19 46/19 46/20 46/23 48/9 51/5 51/7 Asian [58] 9/5 9/7 9/13 9/22 10/2 12/1 12/6 98/12 108/10 108/16 67/18 67/23 78/3 98/9 98/10 12/11 12/15 12/17 12/24 13/8 13/23 14/1 barns [1] 48/22 Barnum [1] 98/13 animals [21] 1/3 15/17 16/24 16/25 33/17 14/7 14/9 14/10 14/16 14/18 17/10 17/11 36/8 40/6 80/20 80/25 81/19 81/21 81/23 17/13 18/18 18/19 18/20 23/14 24/4 24/11 **barren [1]** 49/11 81/25 83/17 87/1 87/6 88/20 97/9 97/12 98/9 26/5 26/7 26/16 26/21 26/22 26/24 27/7 27/8 bars [1] 85/23 based [14] 5/17 10/21 39/12 42/15 60/17 98/10 28/6 29/1 32/21 39/23 41/3 45/15 46/8 64/13

64/14 64/24 67/12 67/13 89/11 110/9 110/13

64/12 66/20 68/1 72/18 77/18 83/1 84/21

ankle [1] 64/11

В	46/21 63/13 72/10 72/20 76/7 79/3 80/22	CA [1] 1/4
	86/19 88/5 92/1 107/10 108/12	cab [1] 112/18
based [2] 87/21 88/20 basement [1] 67/17	Belgium [1] 28/7	cacophony [1] 87/13
basic [3] 18/25 20/10 32/19	believe [27] 19/15 19/16 23/12 23/22 24/2 24/9 25/7 26/4 27/11 53/12 70/4 77/22 88/24	cage [1] 50/8 calf [5] 33/24 34/3 86/12 86/24 87/15
basically [6] 20/12 51/9 53/1 65/12 89/16	88/25 89/2 91/25 92/15 94/21 94/25 95/18	call [25] 4/4 14/18 16/5 21/2 29/23 30/14
107/20	95/20 95/24 95/24 96/3 99/20 106/5 106/21	32/7 33/3 33/14 40/16 43/17 55/21 56/4 56/6
basis [8] 18/22 29/14 30/21 32/1 41/19 41/24	below [1] 16/3	57/13 61/13 62/1 64/2 64/3 65/8 74/14 82/11
4 2/8 75/5 Bates [6] 8/10 21/17 21/21 21/25 22/7 82/17	BENCH [1] 1/10 bend [1] 86/4	82/18 91/6 91/15 called [8] 50/4 68/15 94/7 95/4 97/25 98/21
bath [4] 105/7 105/7 105/10 105/12	bends [1] 86/5	99/24 100/2
bathing [2] 37/9 104/12	best [4] 37/23 38/4 38/5 87/10	calling [1] 30/1
battered [1] 112/4	Beth [1] 8/10	callous [1] 61/13
be [93] 9/10 10/7 17/10 17/13 19/13 19/19 19/20 19/25 20/19 21/19 21/20 26/20 31/13	better [4] 17/2 22/11 32/16 88/21 between [13] 8/24 11/17 12/12 14/4 15/4	calls [5] 30/1 30/2 32/6 32/10 33/10 calves [4] 86/17 86/18 88/14 89/5
32/24 38/21 40/23 41/20 42/17 45/8 46/14	15/13 17/14 18/5 33/15 40/8 103/9 103/14	Cambridge [2] 5/6 5/14
46/15 46/21 46/25 47/12 50/4 52/5 52/12	103/20	came [10] 13/20 30/18 31/21 34/20 35/16
56/19 56/25 62/3 62/17 63/17 63/25 66/4	beyond [1] 67/23	54/13 55/3 55/4 73/15 96/11
66/25 67/20 69/13 70/22 72/10 73/15 74/15 74/18 75/24 76/6 76/9 76/18 78/11 79/4	big [3] 44/15 44/23 61/15 bigger [3] 17/13 18/3 89/2	camp [2] 42/22 112/5 can [68] 6/22 8/6 9/7 10/14 13/2 13/5 15/25
79/20 80/2 80/3 81/22 82/14 82/16 83/7	biologist [1] 47/23	17/17 17/24 18/7 18/15 19/1 20/3 20/5 28/23
85/13 86/11 86/13 86/14 86/15 87/7 88/16	biologists [3] 10/1 10/16 10/17	29/12 32/9 37/6 37/22 38/9 39/18 42/5 42/5
88/24 89/7 90/1 91/16 93/23 94/9 94/13	biology [2] 10/21 22/1	42/6 45/3 45/14 46/17 48/7 52/4 53/2 53/6
94/22 94/25 95/4 95/19 96/1 96/4 96/9 96/11 96/20 97/10 97/22 100/14 103/11 104/3	birth [18] 31/12 31/13 31/13 84/3 84/6 84/13 84/17 85/25 86/3 86/5 86/7 86/8 86/8 86/14	55/20 57/21 58/25 59/3 61/7 62/2 62/17 64/8 66/13 67/23 68/4 68/6 68/7 70/16 70/18
104/19 104/19 106/13 108/16 108/19 108/20	86/19 86/23 86/24 91/16	71/11 72/18 75/5 76/3 76/16 76/20 77/10
109/10 113/6 113/7 113/19	birthing [1] 87/8	77/14 77/14 83/1 83/6 83/7 88/19 93/19
be 2009 [1] 19/19	bit [13] 4/15 8/18 17/10 17/13 29/12 33/5	94/24 94/25 101/7 102/3 104/6 104/8 104/14
beaten [1] 83/20 became [1] 33/5	49/14 59/3 62/19 65/17 66/23 78/23 79/12 blog [1] 98/1	112/3 can't [11] 34/17 40/16 51/9 51/10 53/18
because [58] 12/9 15/24 17/19 17/23 20/18	Blue [1] 66/1	59/15 59/16 59/16 80/22 89/4 113/19
23/19 26/19 29/1 31/7 31/8 31/12 31/13	bobbing [1] 50/4	cannot [2] 41/2 68/7
34/21 39/14 40/13 40/17 40/19 40/20 42/3 43/3 43/12 44/15 44/20 45/1 45/18 51/15	bodies [2] 37/20 48/8 body [7] 31/22 34/25 38/10 72/9 73/7 73/12	capable [5] 16/25 16/25 17/2 22/23 38/1 captive [14] 22/14 22/20 23/2 23/3 23/19
52/22 53/11 53/18 55/5 55/6 59/25 61/5 61/6	73/14	25/11 25/17 39/20 39/21 39/21 54/17 107/24
67/16 68/25 74/14 74/19 76/24 78/5 79/11	bond [3] 33/3 33/8 33/13	108/4 108/5
80/7 86/14 88/18 88/20 88/22 89/3 89/7 92/4 92/7 95/9 95/13 102/24 104/12 107/14	bones [5] 35/12 35/13 35/14 35/16 63/1	captivity [9] 6/19 22/24 22/25 29/3 39/9
108/17 109/12 112/12	book [9] 9/14 9/17 9/20 9/21 9/23 10/4 10/9 26/18 26/21	40/20 40/24 88/24 89/6 capture [2] 88/14 100/10
become [3] 41/2 86/20 105/20	born [6] 4/22 4/23 31/16 34/3 100/17 100/21	captured [2] 39/24 40/22
becomes [2] 51/6 51/11	both [19] 14/1 14/15 16/1 16/1 16/13 16/15	capturing [1] 88/16
Bedi [1] 36/11 been [59] 4/7 6/25 9/4 9/8 10/18 11/11 12/10	16/16 17/6 18/18 18/20 26/19 26/21 32/21 38/2 39/17 53/10 63/4 63/17 78/6	car [3] 43/25 44/1 44/2 care [9] 18/10 39/17 86/20 87/3 87/16 89/5
15/22 19/1 21/11 22/19 26/20 28/21 30/6	Botswana [3] 23/19 25/3 100/10	108/23 109/4 109/16
30/7 30/23 31/2 32/5 32/10 32/13 33/4 33/9	bottom [4] 61/15 89/17 89/20 89/20	caring [1] 87/5
34/23 34/25 35/1 35/8 35/9 36/12 39/3 39/22 39/23 39/25 42/13 47/3 65/25 68/19 71/19	Brains [1] 20/15	carnivores [1] 50/7
74/24 76/8 76/19 79/7 84/22 88/11 88/12	branch [1] 18/8 break [2] 18/7 18/8	Carol [1] 105/17 carried [2] 30/14 61/10
91/13 96/24 97/1 97/11 99/1 100/18 102/6	bred [1] 40/23	carry [2] 14/15 80/3
103/13 110/8 110/12 110/14 110/15 111/15	breed [3] 40/8 40/17 40/20	carrying [1] 79/3
112/4 112/15 before [19] 1/10 4/15 29/18 31/12 33/4 36/16	breeding [1] 40/7 BRIEF [1] 62/6	cars [1] 47/8
58/11 60/1 61/22 65/11 71/25 72/18 72/22	briefly [2] 7/15 37/11	case [25] 22/17 23/1 23/13 24/3 26/3 26/13 26/23 40/13 41/14 56/15 57/9 59/22 61/25
72/24 96/25 100/13 102/7 102/8 105/7	bring [1] 113/8	70/19 70/19 88/6 88/11 94/2 97/14 97/20
before 2001 [1] 96/25	bringing [2] 40/5 75/22	99/15 99/18 99/20 99/24 100/17
began [1] 96/18 begin [3] 13/15 84/20 96/6	British [1] 28/18 broken [1] 64/11	cases [4] 21/1 50/5 50/5 61/14 catalog [1] 45/10
beginning [7] 20/4 27/4 40/10 44/18 99/23	Brothers [10] 65/4 71/16 82/4 82/14 97/20	cause [3] 106/6 106/22 111/8
101/19 111/17	98/11 98/13 98/14 107/10 107/25	caused [6] 60/24 89/7 106/5 106/13 106/21
begins [2] 61/1 98/1 behalf [3] 6/18 24/23 88/8	brought [4] 40/22 40/23 67/2 98/8	111/5 causes [2] 17/20 81/14
behave [5] 35/3 35/18 35/22 37/8 83/4	Buckley [1] 105/17 buckshot [2] 64/22 111/5	causing [1] 63/25
behaves [1] 42/3	buffaloes [1] 35/13	CEC [16] 23/9 48/25 51/14 51/16 54/6 56/5
behaving [1] 97/9	bull [45] 23/7 23/9 23/15 24/3 25/2 25/4 25/8	58/2 59/7 59/24 60/14 63/3 68/10 68/18 69/9
behavior [37] 5/4 13/11 13/21 24/17 34/11 40/14 40/15 42/4 53/13 53/14 53/17 53/18	68/15 68/21 69/8 71/4 71/5 71/8 71/13 71/17 72/5 72/6 72/8 72/20 72/22 72/23 73/1 73/16	71/5 91/5 ceiling [1] 65/15
53/24 72/17 74/10 77/7 78/10 78/12 78/13	73/23 74/3 74/9 74/12 75/8 75/10 76/5 78/6	celebration [2] 33/12 86/13
79/4 79/5 80/4 80/23 83/3 83/7 83/14 89/11	80/19 83/5 86/7 87/22 95/2 95/3 95/11 95/14	cells [1] 15/25
97/16 99/17 99/21 103/9 103/20 107/16 111/14 111/16 111/19 111/24	95/15 95/16 95/18 106/8 106/13 107/15 busy [1] 18/2	cement [4] 42/14 49/11 65/16 86/9 center [9] 41/3 45/25 46/8 62/5 62/10 65/9
behavioral [3] 6/1 11/2 11/5	Byrne's [1] 22/3	65/21 67/8 103/1
behaviors [5] 29/13 41/20 44/5 110/8 110/13	C	centuries [2] 12/11 15/22
being [17] 22/21 41/21 42/14 42/14 42/14	C-section [1] 86/3	ceremony [3] 31/17 33/8 33/12
	Section [1] Solls	

coming [3] 31/23 51/25 75/18 convex [1] 14/10 C command [4] 55/1 55/2 55/3 87/24 copy [1] 9/17 certain [4] 43/21 102/16 109/15 109/15 commanding [1] 74/5 cord [1] 63/1 **commands** [2] 54/20 54/25 **comment** [1] 58/5 **certainly [4]** 71/13 91/7 97/12 108/18 correct [97] 8/5 9/18 12/4 21/23 23/10 24/25 certify [1] 114/3 25/10 25/13 25/18 25/22 25/24 25/25 26/6 chain [6] 58/23 59/3 59/12 94/22 95/19 95/21 comments [1] 99/21 26/11 26/12 26/17 27/13 27/14 27/18 27/19 chained [21] 41/4 46/9 47/4 47/8 47/18 48/1 common [2] 107/24 108/4 27/20 27/21 27/22 27/23 27/25 28/2 28/3 49/12 52/18 53/4 53/7 53/8 53/10 53/19 59/1 communicate [1] 16/4 28/4 28/5 28/13 28/16 28/19 32/3 32/4 57/18 59/6 59/13 65/15 65/16 66/17 85/16 108/11 communication [9] 7/20 7/20 16/9 16/10 57/19 68/15 68/16 69/14 84/3 90/16 91/19 chaining [4] 89/23 90/3 95/23 106/22 17/20 29/21 29/21 43/2 48/11 93/6 93/23 93/24 93/25 94/7 94/23 95/1 96/1 chains [18] 24/11 41/21 42/14 51/5 53/10 communicative [1] 46/24 96/9 98/22 98/25 99/5 99/9 99/12 99/13 55/19 58/7 65/16 66/17 66/18 73/18 74/9 community [2] 9/24 35/3 99/19 100/11 100/12 100/19 100/22 100/23 74/12 85/18 85/25 87/22 90/2 106/18 companion [1] 85/20 101/1 101/3 101/6 101/9 101/11 101/13 chair [1] 50/12 companions [1] 51/6 102/4 102/11 103/2 103/10 103/21 105/4 challenge [1] 4/14 comparable [2] 17/10 39/16 105/17 105/18 106/3 106/7 106/19 106/23 chance [1] 87/6 **compare [5]** 39/6 40/15 53/14 63/3 66/22 107/1 107/8 108/10 108/24 109/4 110/6 characteristics [1] 45/15 compared [1] 110/14 110/9 110/13 110/19 110/22 110/25 111/11 charter [2] 10/17 10/20 comparing [2] 110/8 110/12 111/12 111/14 112/5 114/4 comparison [1] 12/12 correctly [22] 20/7 25/12 27/12 70/11 94/14 chase [1] 31/8 **comparisons** [1] 110/17 check [1] 73/21 94/19 97/4 98/2 98/15 98/18 98/19 100/7 Chicago [1] 99/10 **competition [3]** 5/11 12/10 33/5 101/23 101/24 103/22 103/23 103/25 107/17 child [1] 97/10 compilation [4] 71/22 72/2 82/12 82/13 107/21 110/3 111/25 112/1 children [1] 112/4 completely [7] 36/6 66/14 78/10 86/3 86/10 **could [21]** 7/2 14/6 16/14 19/8 29/19 32/19 chimpanzees [1] 6/6 94/22 95/1 35/22 37/11 44/23 44/24 46/5 49/8 52/10 chin [1] 73/10 complex [4] 17/5 17/5 30/22 33/22 61/1 65/12 65/14 66/10 69/10 78/20 91/16 choice [5] 83/18 83/18 87/25 90/5 110/3 complexity [2] 20/1 30/20 101/18 **choose** [1] 109/19 composite [2] 55/23 69/25 couldn't [1] 79/10 chosen [1] 104/11 counsel [23] 14/23 29/4 41/11 47/11 51/21 **computer** [1] 2/25 chronic [1] 64/23 computer-aided [1] 2/25 57/4 57/18 62/2 62/4 68/24 70/22 77/4 78/18 chronically [1] 64/9 concave [1] 14/9 81/10 92/21 104/3 104/11 104/15 104/24 circus [21] 23/6 28/4 40/16 40/17 47/8 59/23 concentration [1] 112/5 105/16 112/8 112/24 113/15 61/10 65/4 74/5 82/5 82/14 89/12 89/16 concerned [1] 97/12 counsel's [1] 47/13 89/17 89/21 95/24 97/20 98/13 99/15 100/1 **concerning [2]** 35/3 84/25 count [1] 101/10 concerns [2] 74/16 109/13 counted [2] 16/21 85/23 circuses [16] 81/24 88/13 93/23 93/25 94/1 conclude [2] 61/25 70/19 counting [1] 101/11 94/14 94/17 94/18 94/18 96/9 96/20 97/3 conclusion [2] 20/19 96/12 countries [1] 39/16 97/13 99/11 100/14 109/13 concrete [11] 41/4 46/9 59/2 59/18 60/14 country [3] 11/21 23/6 39/15 60/15 60/23 61/5 61/16 65/16 66/17 cite [1] 9/18 country's [1] 11/22 cited [2] 10/3 10/8 condition [1] 48/4 couple [6] 21/9 21/13 34/17 45/20 80/10 city [2] 48/18 99/11 conditions [2] 48/21 49/8 95/11 claiming [1] 92/4 **conduct** [3] 104/2 104/10 104/15 course [14] 10/1 10/15 10/24 11/9 18/9 18/12 claims [1] 84/25 **conducted** [1] 23/10 18/14 23/5 33/20 44/18 44/19 49/23 73/19 clan [1] 33/14 93/14 conferences [1] 12/14 clank [1] 33/11 confined [1] 80/22 court [10] 1/1 2/2 2/2 24/23 48/17 54/6 70/20 clear [10] 51/24 56/19 57/22 70/22 72/23 confused [1] 102/6 70/21 88/11 113/15 75/12 76/6 82/14 82/16 90/25 confusing [1] 56/22 court-ordered [1] 48/17 clearly [1] 80/15 Connecticut [1] 1/16 courthouse [2] 2/3 112/18 clip [20] 51/14 51/22 65/11 65/19 65/23 67/7 connection [2] 8/14 12/7 cover [3] 35/10 35/10 50/4 77/6 77/7 77/11 78/14 78/21 78/22 80/9 covered [1] 37/19 consciousness [2] 21/23 22/5 82/11 82/19 83/2 84/11 85/17 91/7 91/15 covers [3] 26/22 29/1 73/13 consecutive [1] 47/9 clips [2] 80/10 80/13 cozy [2] 54/22 103/13 consensus [1] 35/2 close [5] 8/21 19/6 33/4 33/7 46/25 consequences [1] 44/4 cramped [3] 48/12 65/15 67/16 closed [1] 48/2 conservation [10] 11/22 13/9 13/10 13/13 creatures [1] 105/19 closest [3] 52/14 68/8 68/12 41/4 42/2 45/25 46/9 62/11 103/2 credit [4] 47/11 47/12 69/1 69/2 coauthor [1] 21/12 cross [5] 3/2 93/6 93/12 93/19 93/20 conservationist [2] 11/25 13/4 code [2] 45/14 45/20 **considered** [1] 94/13 cross-examination [3] 93/6 93/19 93/20 cognition [4] 7/25 16/23 21/14 22/1 consistent [2] 106/8 106/12 CRUELTY [2] 1/3 98/9 cognitive [1] 22/24 constant [1] 48/12 CRYSTAL [2] 1/15 1/16 cold [1] 54/19 constitute [2] 107/14 107/19 cumulative [1] 66/3 collaborate [1] 10/24 Constitution [1] 2/3 cure [1] 75/23 collaborated [1] 10/11 consult [1] 28/21 curious [1] 80/24 collaborating [1] 13/11 consulted [2] 110/5 111/3 current [3] 6/20 22/1 26/10 currently [6] 4/21 6/10 6/11 6/15 8/22 12/24 **collaboration [2]** 13/19 64/12 contact [18] 74/8 74/12 90/5 94/21 94/25 colleague [2] 64/19 111/1 95/2 95/3 95/4 95/6 95/7 95/15 95/16 95/18 curriculum [1] 19/8 colleagues [1] 7/24 109/5 109/6 109/11 109/14 109/24 curtail [1] 112/11 COLUMBIA [1] 1/1 context [4] 107/9 107/9 108/11 109/23 curved [1] 14/9 come [19] 13/19 16/8 20/24 30/25 31/2 31/5 continue [1] 44/20 cushion [1] 60/20 31/8 33/9 35/25 42/18 55/2 57/23 64/13 73/2 **CONTINUED** [1] 29/10 **cutting [1]** 93/3 continuous [1] 52/24 74/1 76/17 76/18 76/22 86/1 CV [5] 19/10 19/17 21/20 90/10 90/17 continuum [3] 89/16 108/7 108/8 comes [7] 34/8 45/21 57/23 64/4 64/7 78/25 cycle [1] 86/22 91/25 control [4] 15/22 74/5 78/8 87/25 Cynthia [5] 7/6 8/7 8/9 10/18 37/24 comforted [1] 78/24 **controlled [3]** 80/3 86/4 107/18 D comforting [1] 87/6 controlling [2] 78/11 108/18 daily [3] 30/21 32/1 33/21

D	100/2 100/6 100/8 100/24 101/2 101/4 101/8 101/12 101/14 101/21 101/22 101/23 102/7
damage [1] 47/4	102/9 102/19 102/20 102/21 103/1 103/8
damaged [1] 35/9	103/22 104/19 104/22 105/15 106/4 106/6
dark [1] 67/21	106/22 106/24 107/17 107/17 107/21 107/22
darted [1] 31/2	110/3 110/4 111/25
darting [1] 31/6	didn't [9] 21/5 23/18 35/7 58/6 59/25 96/13
Darwinian [4] 40/4 40/5 40/12 41/2	101/16 102/22 112/6
data [1] 43/19	die [1] 34/15
database [1] 45/13 databases [1] 7/7	died [5] 34/12 34/16 34/20 35/10 39/3
databases [1] /// date [4] 19/14 22/4 25/13 96/6	difference [5] 15/4 18/5 40/8 88/19 89/10 differences [2] 14/4 14/7
Daubert [2] 4/14 29/8	different [22] 7/16 7/25 8/23 12/3 12/5 14/25
day [24] 17/9 17/9 18/3 29/15 30/8 34/22	16/20 18/5 18/6 33/14 33/20 40/11 44/19
35/20 36/1 41/5 42/19 42/24 42/25 43/3 43/9	44/20 45/15 50/24 53/17 54/17 62/19 63/6
43/16 46/10 81/18 103/4 103/6 103/7 103/22	86/10 89/13
104/13 112/16 112/16	difficult [2] 39/14 89/25
days [5] 8/17 16/8 25/14 25/20 43/8	difficulties [2] 63/7 76/23
DC [4] 1/4 1/17 1/23 2/4	difficulty [2] 63/5 63/17
dead [3] 31/4 31/5 35/11 deal [1] 92/24	dire [4] 24/18 24/19 29/5 74/10 direct [8] 3/2 4/9 29/10 47/14 97/25 101/5
dealing [1] 61/8	101/8 106/17
deals [1] 92/4	directed [1] 104/24
death [2] 17/4 35/15	direction [5] 29/24 30/7 30/11 30/13 49/13
deceased [1] 35/3	directly [1] 28/7
December [1] 98/5	director [1] 98/20
December 10, 2007 [1] 98/5	dirt [1] 18/7
decided [1] 30/10	disagreement [2] 30/7 30/17
decision [1] 30/21	discovered [2] 7/18 12/11
decision-making [1] 30/21 deep [3] 36/3 36/4 36/6	discriminations [1] 32/16 discuss [1] 112/20
defecate [3] 38/15 38/21 38/24	discussion [2] 30/14 30/16
defecates [1] 38/11	disease [2] 21/2 64/4
defecating [1] 61/6	displays [2] 16/19 16/20
defendant [4] 1/7 66/6 82/13 82/16	dissipates [1] 64/7
defendant's [1] 89/12	distances [1] 51/8
Defendants [1] 1/20	distinguishing [1] 45/19
defendants' [3] 4/13 41/3 46/8	DISTRICT [3] 1/1 1/1 1/11
degree [3] 5/1 5/7 5/10 demand [7] 95/25 108/23 109/3 109/12	disturbed [1] 97/11 do [135]
109/16 109/19 109/22	doctor [5] 27/16 27/17 58/13 58/18 61/24
demography [1] 8/1	doctorate [4] 5/1 5/5 5/7 5/10
demonstrative [4] 15/3 74/15 74/22 75/5	doctors [1] 8/11
denied [3] 84/21 85/5 92/6	document [1] 10/1
Dennis [2] 113/13 113/17	documents [1] 57/1
depending [2] 73/14 93/13	does [17] 7/15 14/1 14/3 30/6 33/24 35/15
depends [2] 39/15 43/1 deposition [18] 26/3 26/14 26/23 27/2 94/3	47/2 52/22 53/13 59/11 60/8 62/23 66/21 74/22 75/23 94/9 97/22
96/15 97/17 99/22 101/15 101/19 102/1	14/22 13/23 94/9 97/22
103/12 103/16 107/11 108/13 108/14 109/7	dog [2] 40/8 40/8
111/17	doing [19] 10/25 11/3 11/9 12/12 13/2 43/2
describe [16] 7/18 9/20 14/6 17/17 29/12	43/2 43/8 43/13 45/11 67/5 67/23 72/11 73/4
29/19 32/19 35/22 37/11 38/9 49/8 52/10	78/23 79/3 79/20 83/11 83/21
53/6 77/10 79/14 87/8	domes [1] 14/10
described [5] 6/7 15/11 18/17 48/5 105/20	domesticated [8] 39/20 39/21 39/22 40/1
describing [1] 15/10 deserving [1] 88/21	40/1 40/4 40/12 41/2
desk [1] 20/25	don't [56] 20/23 22/4 27/1 27/11 36/19 40/20 41/10 47/14 51/13 52/5 53/20 54/12 57/14
detail [1] 29/13	57/22 58/5 61/12 63/7 67/17 67/22 68/24
detailed [2] 9/21 12/8	68/25 77/20 78/2 78/2 79/12 81/10 81/18
details [1] 104/17	81/20 83/3 83/12 83/13 83/14 83/15 83/19
detect [1] 16/1	83/19 83/24 87/6 89/7 89/15 91/9 92/25
determined [1] 26/20	94/10 96/4 96/10 96/11 101/5 101/10 101/17
detrimental [1] 46/14	104/12 104/14 105/20 108/6 110/21 110/23
dictated [2] 104/3 104/15	112/24 113/20
did [93] 4/24 5/5 5/7 5/9 5/13 6/20 12/6 12/8	donated [1] 100/21
13/15 13/19 27/11 46/1 48/16 48/20 48/23 49/23 49/24 52/19 52/20 54/6 54/9 54/10	done [20] 7/16 7/19 7/20 8/4 9/4 9/8 13/9 13/11 20/21 52/3 58/4 61/11 61/11 61/14
54/14 58/3 58/5 58/18 62/11 62/13 62/14	93/4 104/3 107/10 108/12 109/5 109/6
63/2 63/11 63/15 65/2 65/6 65/7 66/6 70/21	door [1] 55/4
71/8 71/10 71/15 71/18 71/19 71/21 72/13	down [28] 14/9 31/23 36/7 37/18 42/5 43/19
82/3 82/6 82/7 87/21 90/9 90/9 94/14 94/19	43/21 43/22 44/4 55/2 61/9 61/13 61/24 63/5
94/20 96/6 96/24 97/4 98/15 98/18 99/6	63/7 63/8 63/12 63/14 63/16 63/17 64/2

94/20 96/6 96/24 97/4 98/15 98/18 99/6

4 101/2 101/4 101/8 71/13 72/4 72/5 72/9 72/16 74/1 83/10 01/22 101/23 102/7 dozing [1] 50/22 **Dr** [90] 4/4 4/11 4/14 4/17 4/19 8/9 8/9 8/10 2/21 103/1 103/8 05/15 106/4 106/6 8/10 8/10 9/25 10/3 10/8 10/16 11/19 11/23 07/17 107/21 107/22 14/21 15/9 15/13 19/9 22/13 23/7 24/16 24/21 24/24 25/11 26/23 27/5 27/14 28/1 /7 58/6 59/25 96/13 28/9 28/25 29/12 36/10 36/16 41/3 41/19 52/11 58/3 62/9 65/2 66/10 68/1 68/14 68/17 71/15 74/7 74/25 75/5 75/18 75/23 76/17 77/18 82/3 83/9 83/22 84/14 88/5 90/22 40/8 88/19 89/10 93/22 94/19 96/18 97/14 97/17 97/18 98/18 99/22 100/24 101/18 102/1 102/9 103/1 8/23 12/3 12/5 14/25 103/24 105/2 106/2 106/25 107/7 107/23 3/20 40/11 44/19 108/1 108/8 108/22 110/5 110/18 111/8 54/17 62/19 63/6 112/2 113/7 113/13 113/16 113/17 113/17 drag [1] 73/25 dragged [1] 80/18 drink [1] 36/2 **Dulles** [1] 93/11 duly [1] 4/7 47/14 97/25 101/5 during [10] 21/3 31/18 36/1 42/19 42/24 50/1 53/13 54/6 55/11 63/10 dust [2] 37/20 37/20 30/11 30/13 49/13 \mathbf{E} each [16] 37/13 40/22 41/5 45/11 46/10 52/16 54/25 59/17 62/19 62/21 63/13 68/2 68/6 68/11 83/12 83/22 ear [1] 44/3 earlier [4] 16/18 35/1 49/15 68/14 early [2] 7/17 51/5 earn [1] 5/5 ears [6] 14/8 14/8 44/16 44/16 45/16 73/8 ease [1] 62/21 easier [1] 44/14 easy [3] 44/11 44/12 56/25 echoey [1] 49/10 Echos [1] 45/3 economic [1] 40/2 edited [2] 74/17 76/2 58/13 58/18 61/24 **education** [1] 19/10 effects [1] 7/22 eight [2] 8/16 17/8 either [6] 14/17 21/11 31/9 31/22 50/9 62/25 elderly [1] 83/17 30/6 33/24 35/15 electric [4] 19/3 56/14 57/8 57/18 60/8 62/23 66/21 elephant [142] **elephant's [7]** 17/24 32/2 107/8 107/18 107/23 108/2 108/4 elephants [317] 1/9 12/12 13/2 43/2 elephants' [5] 14/9 14/10 17/12 34/11 54/13 7/5 67/23 72/11 73/4 elevated [1] 43/23 else [4] 42/11 57/13 89/19 104/14 elsewhere [1] 59/25 39/21 39/22 40/1 **EMMET [1]** 1/10 empathizing [1] 19/5 7/1 27/11 36/19 40/20 **empathy [3]** 17/2 21/22 30/23 **emphasis** [1] 9/22 53/20 54/12 57/14 7/17 67/22 68/24 employ [1] 72/13 9/12 81/10 81/18 employed [2] 11/11 72/1 33/14 83/15 83/19 employee [1] 98/11 employees [2] 54/8 71/17 101/5 101/10 101/17 encased [1] 60/20 end [14] 8/16 14/11 37/16 40/7 61/17 89/17 08/6 110/21 110/23 89/20 89/20 94/14 98/2 107/16 112/15 112/16 113/23 8/4 9/4 9/8 13/9 **Endangered** [1] 98/15 1/11 61/11 61/14 **endeavors** [1] 6/20 engage [3] 53/18 88/8 88/19 Enjoy [1] 112/23 enough [3] 36/3 73/24 89/7 6/7 37/18 42/5 43/19 Ensley [1] 113/7 entail [1] 7/15

63/7 63/8 63/12 63/14 63/16 63/17 64/2

expertise [5] 23/12 24/2 24/9 29/8 77/18 firmly [1] 88/23 \mathbf{E} first [18] 4/7 19/18 19/20 21/21 36/1 52/14 **expertises [1]** 16/18 experts [5] 9/7 9/7 10/19 10/19 12/15 entertainment [9] 1/6 24/24 47/7 54/7 82/1 54/18 61/16 67/2 77/7 80/17 81/2 94/6 96/21 84/6 84/12 91/21 98/14 explain [7] 10/14 13/2 46/17 61/1 61/19 75/5 96/22 103/16 105/5 105/7 Entertainment's [1] 48/17 firsthand [1] 75/25 entire [1] 90/13 explained [1] 12/9 fish [1] 20/22 entirely [1] 104/12 fission [1] 16/5 **explaining [1]** 49/15 fission-fusion [1] 16/5 entities [2] 11/12 28/22 exploratory [1] 73/20 entitled [6] 9/15 21/21 21/25 36/11 75/14 **explore [2]** 73/22 80/23 fissures [1] 61/7 76/15 **exploring [2]** 78/24 79/7 five [9] 43/20 58/10 62/15 65/8 65/14 66/20 entity [1] 98/21 **extended** [1] 113/10 66/22 103/9 103/21 **extent [3]** 29/1 68/4 107/25 environments [3] 107/24 108/5 108/5 floor [5] 49/11 59/18 65/16 65/16 86/9 **especially [3]** 18/15 52/6 109/19 extraordinary [1] 16/11 flopping [1] 45/16 ESQUIRE [7] 1/14 1/15 1/15 1/20 1/20 1/21 **extremely [4]** 15/17 46/24 63/16 71/12 Florida [1] 48/18 eyes [1] 77/15 focal [3] 5/15 43/17 44/23 essence [1] 107/16 focused [2] 13/10 17/24 essentially [1] 95/22 fold [2] 44/3 45/16 established [5] 5/21 18/23 19/1 74/11 108/3 face [3] 34/25 73/9 111/3 follow [2] 60/2 83/20 estrus [1] 31/19 faced [1] 30/11 **follow-up** [1] 60/2 facility [1] 48/17 et [3] 1/3 21/21 22/7 following [2] 43/14 105/10 even [14] 18/14 23/18 33/16 35/9 36/8 40/23 facing [1] 49/13 **follows** [1] 4/8 60/24 67/15 75/16 87/4 89/1 96/10 97/2 fact [11] 10/6 12/5 16/2 18/23 31/6 34/24 **food** [2] 35/10 52/18 45/12 67/19 75/22 99/4 107/18 foot [25] 30/1 52/17 52/22 54/3 54/3 55/2 evening [3] 43/5 112/23 113/22 facts [5] 41/8 41/13 45/24 46/2 47/20 58/23 59/1 59/2 60/21 60/22 60/25 61/1 61/4 evenly [1] 60/22 fair [1] 88/23 61/7 61/9 61/11 61/15 108/23 109/4 109/16 fairly [4] 59/10 59/19 79/14 79/15 event [1] 75/24 110/21 110/25 111/4 111/10 eventually [3] 30/17 34/6 51/11 fallen [1] 30/25 **footage [17]** 65/3 65/20 65/20 66/21 67/8 ever [5] 11/11 38/14 44/3 63/19 64/13 **falling [1]** 31/10 74/17 75/4 75/17 75/19 76/19 82/12 84/13 every [8] 35/20 43/20 44/2 44/3 45/5 52/20 familiar [5] 9/14 12/1 36/16 36/23 68/14 84/24 85/1 91/5 91/16 92/15 foregoing [1] 114/4 72/4 73/22 families [8] 7/9 15/18 16/7 32/14 32/16 33/3 everybody [1] 109/23 34/6 45/1 foreign [3] 31/1 31/3 79/13 family [29] 15/18 15/18 16/7 18/13 18/14 foreleg [1] 53/8 everyone [3] 6/2 86/25 87/12 everything [4] 44/4 57/13 78/11 86/2 19/3 22/8 29/24 30/3 30/5 30/5 30/15 30/17 forest [1] 26/20 evidence [23] 41/8 45/24 46/2 47/21 56/24 31/8 32/9 32/21 32/22 32/25 33/2 33/4 33/5 forethought [1] 31/24 58/22 68/19 70/4 74/22 74/23 90/10 91/5 33/7 34/3 34/5 45/3 46/25 86/10 86/11 87/11 forgot [1] 113/8 91/7 91/12 91/17 92/1 92/11 102/12 102/17 fantastic [1] 45/12 **form [4]** 7/9 7/9 10/21 87/22 far [6] 59/24 64/8 101/5 101/8 110/15 111/6 102/19 102/20 106/2 106/17 formal [1] 52/6 evolved [3] 18/24 51/7 51/8 fast [2] 52/19 73/24 formed [1] 26/13 exactly [5] 40/18 50/14 72/15 72/16 96/11 fast-forwarded [1] 52/19 former [1] 98/11 exaggerated [1] 52/23 faster [1] 74/1 formulated [1] 102/4 **examination [7]** 4/9 24/19 29/10 93/6 93/19 **February [1]** 1/5 **forth [3]** 30/15 50/8 66/15 93/20 112/12 feed [2] 35/8 49/16 forward [4] 45/16 50/11 52/21 59/17 examined [1] 4/7 feeders [1] 49/15 forwarded [1] 52/19 example [4] 22/23 29/15 59/14 98/6 feeding [2] 18/4 18/11 found [3] 34/16 34/23 71/11 feel [12] 19/1 19/5 19/7 20/6 20/20 20/22 examples [1] 29/18 **foundation [8]** 28/12 41/9 41/10 41/15 46/1 20/22 20/22 47/25 88/18 88/19 88/20 except [2] 64/10 86/3 65/25 74/25 75/1 feet [16] 15/24 36/7 47/3 47/5 48/7 54/1 59/4 exception [2] 57/18 57/24 four [2] 36/7 87/4 Excerpt [1] 82/19 60/19 61/21 62/25 65/17 73/10 86/12 87/15 four feet [1] 36/7 excited [2] 31/15 87/15 95/10 111/3 free [18] 74/8 74/12 94/21 94/25 95/2 95/3 exclude [1] 39/2 FEI [1] 93/22 95/4 95/6 95/7 95/15 95/16 95/18 100/17 excluded [1] 113/7 FELD [9] 1/6 24/24 47/7 48/17 54/7 84/6 100/21 109/5 109/11 109/14 109/24 **exclusion** [1] 113/3 84/12 91/20 98/14 freedom [2] 55/16 87/24 female [10] 19/2 19/4 31/19 33/19 34/4 34/9 Excuse [1] 85/8 freely [1] 47/1 34/15 64/10 83/22 87/10 freeze [2] 55/5 55/7 **exertion** [1] 83/16 exhibit [31] 36/12 55/20 55/23 55/23 56/1 females [12] 8/1 14/15 14/16 14/17 18/14 frequency [2] 16/2 48/11 56/4 56/12 56/13 56/23 57/20 60/6 65/22 32/11 34/9 39/4 40/24 43/14 86/19 87/2 front [8] 27/4 49/12 53/10 59/1 62/20 73/9 68/19 69/12 69/22 70/10 70/12 70/24 71/1 89/1 94/4 71/20 74/14 80/22 82/12 82/19 84/11 90/20 few [8] 16/24 45/13 61/25 62/1 64/7 81/1 froze [1] 55/5 90/23 92/1 94/8 97/21 109/8 87/18 99/3 **Fulbright** [1] 1/22 exhibited [4] 63/19 96/9 96/20 99/11 field [9] 6/8 6/11 6/11 6/16 6/21 6/23 8/13 full [1] 4/17 exhibits [1] 52/3 20/24 35/20 Fund [1] 98/10 exist [1] 74/4 Figure [1] 14/21 funny [1] 21/4 further [2] 29/5 90/8 expect [2] 45/2 93/14 figures [1] 15/7 **film [9]** 16/17 36/10 36/17 36/23 37/24 51/22 expectation [2] 109/18 109/21 **fusion** [1] 16/5 expectations [1] 22/8 76/3 76/21 85/1 expected [4] 95/25 103/12 109/12 109/15 Films [1] 36/11 experience [10] 18/20 19/11 22/13 22/16 **find** [3] 10/7 43/19 45/2 G-U-N-A-W-A-R-D-E-N-A [1] 13/6 gait [11] 62/11 62/16 62/18 62/22 63/2 63/4 22/19 32/15 32/15 72/21 87/1 87/2 fine [6] 62/3 77/2 112/15 113/11 113/20 experiments [3] 32/7 32/11 72/15 63/7 64/5 64/10 64/23 64/24 113/21 **expert [25]** 4/15 23/13 24/10 24/17 28/25 finger [1] 14/11 Gary [3] 54/11 54/24 55/11 41/13 44/13 47/14 51/2 51/3 51/4 65/2 71/15 finger-like [1] 14/11 gather [1] 30/3

fingerprint [1] 44/17

finished [1] 104/17

74/7 74/10 74/11 75/7 75/13 76/5 76/7 97/16

98/7 99/24 113/10 113/11

gave [3] 26/23 55/1 55/2

general [1] 35/2

58/21 66/22 67/6 67/12 68/1 70/22 74/22 hair [2] 45/18 45/19 generalist [1] 49/15 76/17 76/20 77/22 78/7 84/17 84/23 85/25 hairy [1] 58/25 generation [1] 40/22 half [5] 54/2 65/8 66/21 66/22 98/12 87/19 88/1 94/16 95/12 98/20 112/19 113/19 halfway [1] 112/14 genetic [1] 41/2 herein [1] 4/7 genetically [1] 40/18 Hamisi [1] 8/10 **hi** [1] 98/1 gentle [1] 37/14 hamstring [1] 70/21 **highly [3]** 9/25 76/1 87/14 genus [1] 12/5 hand [7] 2/2 71/13 71/14 80/16 97/18 114/3 Hills [4] 100/25 101/12 101/22 102/16 Germany [1] 4/23 114/10 him [1] 25/9 get [42] 5/7 17/21 17/25 19/14 21/3 34/21 handler [2] 54/12 55/11 hind [2] 38/14 53/8 36/9 37/18 37/19 37/19 37/24 43/16 55/15 handlers [4] 103/5 103/9 103/21 107/15 Hinde [2] 5/23 6/1 57/21 61/6 61/7 61/11 61/14 61/20 61/22 handlers' [1] 54/15 hippos [1] 35/13 63/14 64/3 64/3 64/5 72/25 73/16 73/23 74/1 hands [1] 34/21 hips [1] 62/25 74/3 77/3 83/4 83/20 85/20 86/12 87/6 89/14 happen [1] 110/23 hired [1] 11/19 happened [3] 31/13 40/9 40/19 93/11 112/3 112/17 112/18 112/18 112/19 his [3] 10/9 34/4 54/12 gets [1] 61/13 happening [2] 72/17 73/22 histories [1] 7/8 getting [9] 31/15 63/5 63/7 63/9 63/12 63/17 happens [7] 43/22 48/7 48/8 51/1 60/18 history [1] 39/12 63/17 73/25 95/10 **hit [4]** 72/8 72/10 73/4 73/8 86/16 86/24 Ghiazza [1] 100/9 happy [1] 97/1 hitting [1] 80/6 give [6] 8/6 33/10 35/9 76/14 85/25 86/23 harasses [1] 88/3 hold [1] 96/24 given [4] 42/13 49/14 49/16 90/5 harassing [5] 81/15 81/16 81/17 81/17 107/5 holding [5] 46/21 66/13 83/12 86/1 86/1 gives [4] 86/7 86/8 86/24 110/3 harassment [8] 107/8 107/14 107/19 108/2 home [4] 6/14 17/9 23/4 51/8 giving [7] 30/12 54/4 84/2 84/6 86/5 86/8 honest [1] 96/11 108/15 108/17 108/19 108/20 88/21 hard [4] 8/15 61/17 76/18 86/9 Honor [56] 4/3 4/13 14/20 14/22 15/9 24/16 **harm [8]** 41/6 46/11 47/19 81/14 108/10 gland [2] 73/8 87/14 28/24 29/6 29/20 36/13 41/12 45/23 46/5 glasses [1] 19/15 108/19 108/19 108/20 52/2 55/22 56/18 57/19 60/7 62/9 65/22 Glitzenstein [1] 1/16 **harmful** [11] 46/15 46/18 46/22 47/2 78/6 65/24 69/5 69/10 69/24 70/5 70/8 70/16 go [43] 16/14 18/15 19/17 20/3 29/9 29/23 79/23 80/2 81/9 81/14 81/14 88/2 70/25 72/21 74/6 74/21 75/3 75/11 75/16 29/23 29/25 30/8 30/10 30/12 30/13 34/6 harming [2] 81/16 107/4 75/20 76/6 76/10 76/16 77/2 84/15 84/20 35/24 36/2 36/6 36/14 42/21 43/1 43/4 43/16 harms [2] 47/5 67/12 85/4 85/10 90/9 91/11 91/23 92/3 92/14 43/19 45/22 46/6 47/22 51/10 58/24 60/2 Harned [2] 54/13 55/3 92/23 93/2 93/14 93/16 104/4 112/6 112/9 60/6 62/8 72/16 77/6 85/10 90/7 92/20 92/25 has [57] 7/7 9/4 9/6 9/8 13/8 13/10 15/21 113/2 93/18 96/15 97/17 99/22 101/18 103/16 15/22 19/1 22/19 29/2 30/7 30/24 31/2 32/14 **HONORABLE [1]** 1/10 32/15 34/12 35/10 39/22 40/9 40/19 41/24 hook [42] 23/7 23/15 24/4 25/2 25/4 25/8 goes [2] 52/17 85/19 45/5 45/25 47/3 47/24 51/7 51/8 52/22 54/1 68/15 71/13 72/5 72/6 72/7 72/8 72/20 72/22 going [28] 8/17 16/23 17/25 31/13 32/6 43/13 61/12 61/23 62/20 64/10 64/10 64/13 65/25 72/23 73/1 73/3 73/16 73/23 73/24 73/25 47/11 52/2 52/3 56/25 61/23 61/25 65/11 74/3 74/9 74/12 75/8 75/11 78/6 80/19 80/19 68/19 70/8 71/19 74/24 74/25 75/24 75/25 65/23 69/1 70/21 73/17 75/3 75/9 75/17 76/9 76/8 76/17 76/19 84/22 86/8 86/25 92/5 83/5 86/7 87/22 95/2 95/3 95/11 95/14 95/15 76/13 76/17 83/19 88/15 113/3 113/6 113/7 96/24 100/18 100/21 109/21 111/15 113/18 95/16 95/18 106/8 106/13 107/16 Gombe [1] 6/6 Hathaway [1] 4/19 hooked [2] 72/10 73/8 gone [1] 88/4 have [225] hooks [8] 23/9 68/21 69/8 71/4 71/5 71/9 good [6] 4/11 4/12 24/21 24/22 37/19 53/3 haven't [2] 88/4 97/1 71/17 76/5 Goodall [3] 6/3 6/4 6/5 having [10] 4/7 63/17 81/24 81/25 81/25 89/1 hope [1] 25/13 gosh [2] 13/8 49/6 108/16 108/22 109/1 109/3 horrified [1] 47/25 got [12] 30/15 44/15 44/16 44/17 44/23 45/12 **hour [3]** 54/2 85/17 93/14 hay [7] 49/14 49/17 53/3 59/4 59/18 65/17 53/3 58/12 63/16 83/18 91/6 113/18 hours [15] 8/13 30/17 34/18 41/5 42/13 43/4 79/12 he [14] 9/12 9/13 21/4 21/4 34/6 34/8 55/1 43/6 43/9 46/10 47/9 49/7 61/17 65/8 66/21 Government [1] 62/4 governmental [1] 11/11 55/1 55/4 76/22 80/17 80/18 104/8 113/19 grab [1] 49/18 how [67] 7/9 7/12 8/13 8/19 9/20 9/23 13/19 he's [3] 11/24 34/7 34/8 Granli [1] 19/21 head [4] 11/19 20/23 50/4 77/12 13/23 17/17 23/14 24/10 24/11 25/4 30/25 grass [1] 18/5 headdress [1] 77/17 32/2 33/24 34/17 35/18 35/22 37/12 38/25 gray [1] 109/20 39/6 41/20 42/3 42/15 42/15 42/16 42/17 headdresses [1] 67/1 great [1] 36/8 heads [2] 14/11 83/15 42/17 42/19 42/24 42/24 43/15 44/10 44/12 **greeting** [1] 33/8 hear [4] 23/18 53/2 58/6 112/6 44/22 45/16 49/4 53/6 53/13 54/2 57/14 grew [2] 4/25 97/8 57/15 59/6 63/2 63/22 65/3 66/21 69/18 heard [2] 32/2 55/8 ground [3] 31/14 43/24 54/3 hearing [1] 16/3 72/11 72/23 76/7 80/6 82/7 83/4 86/21 87/2 group [9] 32/25 33/2 33/3 33/8 33/13 43/13 Hearsay [1] 14/22 87/8 89/5 93/12 96/19 96/20 104/20 104/21 107/9 108/11 112/12 43/13 43/18 45/2 heart [1] 18/7 groups [6] 7/9 15/18 16/7 32/21 32/22 34/9 held [8] 25/4 46/15 71/14 77/13 96/8 96/19 HOWARD [1] 1/15 grow [2] 4/24 44/20 96/21 97/6 however [1] 99/7 guess [9] 17/1 49/14 53/10 54/24 59/2 72/24 helicopter [1] 31/7 hug [1] 54/21 95/7 96/12 101/10 **help [5]** 30/24 31/1 51/15 86/12 86/12 huge [2] 51/8 87/12 huh [2] 27/10 96/17 guide [1] 94/22 helped [1] 87/15 human [2] 16/3 44/17 guiding [1] 10/21 helpful [2] 52/12 85/13 Gunawardena [3] 13/4 13/6 13/7 her [64] 4/15 4/15 6/5 13/9 19/3 30/1 30/3 humans [3] 16/6 20/8 39/7 31/10 31/10 31/20 31/20 31/22 31/22 33/21 hundred [2] 17/15 33/20 H hundreds [3] 43/12 43/12 70/9 34/4 34/16 34/18 34/18 34/18 34/20 34/22 had [35] 8/13 8/16 12/10 12/11 12/17 13/24 34/24 34/24 34/25 35/1 41/15 47/14 52/3 husband [1] 13/3 21/1 22/13 26/5 33/4 34/19 34/20 34/23 52/4 52/16 52/22 52/23 53/12 54/1 54/3 54/3 husbandry [2] 61/9 95/10 34/25 35/1 35/8 35/18 49/24 52/4 53/11 54/4 59/1 59/2 59/4 64/11 76/2 76/12 76/18 54/18 55/13 55/15 62/16 63/5 64/9 72/21 77/20 77/20 81/10 85/20 85/25 86/6 86/7 76/23 84/2 84/5 87/10 96/12 97/8 102/2 **I'd [21]** 14/20 19/8 19/9 24/16 27/2 36/10 86/10 86/11 86/12 86/12 87/11 87/12 90/10

90/10 90/17 99/17 99/21 111/4 112/7

hadn't [2] 26/14 26/20

G

102/24

here [27] 9/17 15/20 24/23 43/7 52/25 55/2

46/4 62/3 65/19 68/17 70/25 71/25 77/6 77/6

101/22 102/16 103/1 103/8 103/24 104/2 37/12 37/25 38/12 38/23 42/3 42/4 44/2 **I'd...** [7] 80/9 82/11 82/23 84/11 92/24 96/15 104/10 104/16 105/2 105/8 105/12 106/1 44/17 44/22 44/24 48/4 48/8 48/12 48/13 instance [4] 18/4 19/2 104/18 108/17 49/16 49/18 50/10 50/22 51/11 51/24 53/3 **I'll [24]** 15/6 23/17 23/22 24/6 29/7 29/7 30/9 instances [1] 107/14 53/16 54/19 54/19 54/24 55/10 55/13 55/18 34/2 35/6 41/23 46/3 47/22 50/15 61/24 instead [1] 30/19 57/15 57/22 59/3 59/14 60/13 62/3 62/4 64/17 66/5 69/4 75/13 75/14 76/14 76/24 **Institute** [2] 98/10 98/11 65/18 66/16 66/17 67/6 67/7 67/17 67/21 76/25 85/6 112/9 instructions [1] 83/20 67/22 68/7 68/12 69/6 74/3 76/1 76/6 76/12 I'm [59] 8/11 13/3 17/20 22/16 24/23 27/15 instrument [2] 68/15 81/2 76/16 77/25 78/22 79/3 79/7 79/8 79/20 28/20 35/20 43/2 43/2 43/3 43/18 43/20 79/20 80/20 80/21 80/25 81/17 81/18 82/14 intellectually [1] 49/19 intelligence [2] 29/18 32/1 43/21 43/22 43/25 44/15 44/25 47/24 48/6 85/11 86/10 86/17 87/16 87/18 87/19 87/23 50/12 56/3 56/22 58/6 60/1 60/25 61/23 intelligent [8] 16/15 16/16 16/24 29/14 48/9 89/3 89/15 90/12 90/24 92/9 92/22 92/23 62/20 62/20 65/11 69/20 72/14 75/9 76/8 67/18 80/25 88/22 92/24 93/23 94/11 103/17 108/3 109/9 76/13 80/16 88/12 88/25 91/1 91/6 92/12 intend [2] 4/14 41/13 112/12 92/22 92/23 93/4 93/7 97/16 99/20 100/3 intention [1] 29/25 K 102/25 104/20 105/8 106/10 106/12 107/12 interact [5] 37/12 54/8 68/6 68/7 68/11 Kadzo [1] 8/11 110/16 110/20 112/11 112/12 112/14 **interacted** [1] 104/20 I've [24] 6/24 7/16 7/19 7/20 7/24 10/15 **Kangwana** [1] 8/11 interaction [2] 43/21 54/15 15/20 21/1 22/25 23/2 23/3 30/6 36/5 36/6 KARA [1] 1/21 interactions [2] 54/17 103/14 Karen [5] 8/10 101/2 101/3 101/6 101/9 39/12 47/25 50/5 53/22 53/23 54/16 54/20 interest [2] 35/12 35/14 88/12 94/1 96/21 interested [4] 17/20 35/13 80/15 107/12 **KATHERINE** [2] 1/14 10/19 **Kaudulla [2]** 6/13 13/13 ID [1] 45/13 interesting [1] 29/22 idea [2] 8/6 17/25 **keep [5]** 16/10 33/15 45/9 68/25 89/25 interests [1] 10/22 identify [2] 44/23 45/9 intermittently [1] 49/25 **keeping [7]** 18/12 24/11 46/19 51/9 89/24 ignored [1] 105/1 International [1] 28/12 89/24 99/16 imagine [2] 67/23 83/5 interrupting [1] 107/15 Keith [1] 8/9 **imitation** [1] 22/23 Kenya [6] 6/12 7/1 8/24 8/24 11/15 11/20 investigate [1] 78/9 immaterial [1] 56/15 kept [10] 22/21 41/4 46/9 47/4 47/8 47/17 **invitation [1]** 113/10 immediately [3] 31/21 49/22 77/13 involved [3] 6/25 12/24 30/16 48/22 54/3 55/11 78/8 immobilized [1] 31/6 involvement [1] 98/7 key [4] 10/1 10/17 10/19 17/22 kicks [1] 86/24 **impact** [2] 48/3 60/15 involving [1] 99/25 **imperative** [1] 70/19 killed [1] 39/3 Irish [1] 28/18 important [7] 16/12 17/18 40/13 42/16 42/17 irrelevant [7] 56/14 66/1 74/16 84/15 84/18 kilometers [7] 17/9 17/12 17/14 17/15 33/16 70/22 88/18 91/24 92/4 33/17 44/24 importation [1] 99/4 is [324] kind [26] 8/15 15/5 21/2 30/20 30/21 31/24 impress [1] 103/15 isn't [15] 25/3 25/15 26/1 28/1 53/2 76/20 33/11 37/14 43/2 50/9 51/11 54/22 60/21 In 2002 [2] 99/14 99/23 61/20 67/11 72/22 72/24 74/4 77/18 86/22 94/22 97/15 98/24 99/1 99/16 100/22 100/25 in 2003 [3] 9/15 13/20 25/24 88/10 89/4 89/6 106/10 109/20 111/4 105/17 105/23 in 2006 [1] 25/12 isolate [2] 40/6 51/6 kinds [2] 18/5 111/2 in 2007 [1] 22/9 knew [3] 16/21 31/13 106/2 isolated [1] 41/1 in 2008 [1] 21/23 issue [13] 29/8 29/8 56/15 57/8 66/2 66/3 know [48] 5/25 8/16 9/23 18/4 18/24 20/24 21/1 21/5 22/11 23/7 30/12 39/22 42/23 inactive [1] 34/8 74/16 84/16 84/17 84/17 84/22 106/3 106/18 INC [1] 1/6 44/10 44/13 44/15 45/1 47/3 51/10 54/12 issues [1] 113/18 59/25 61/12 63/24 65/12 67/22 70/17 76/24 include [1] 14/1 it [240] includes [2] 26/18 26/19 79/12 80/21 81/19 83/3 84/8 86/21 86/21 it's [145] its [14] 17/17 38/14 46/20 46/25 51/5 51/9 including [1] 7/21 87/9 87/17 89/16 94/1 95/2 96/10 96/11 incompetent [1] 86/22 96/21 101/20 110/21 110/23 111/18 111/21 51/20 77/12 77/13 77/13 77/15 79/9 79/11 **incredible** [1] 31/11 87/15 111/23 India [3] 12/21 23/4 25/17 itself [2] 58/23 75/1 knowledgable [1] 111/2 indicated [2] 113/2 113/9 knowledge [2] 42/15 76/1 indicating [6] 30/12 50/9 50/10 50/10 50/24 known [6] 5/22 6/5 11/24 12/10 39/13 44/9 64/6 Jacobson [3] 54/11 54/25 55/11 knows [1] 6/2 indication [1] 55/8 **Jacobson's** [1] 54/14 indicative [2] 50/17 50/19 Jane [3] 6/2 6/4 6/5 labeled [1] 84/13 individual [3] 7/8 43/18 44/7 Janlin [1] 99/25 individually [1] 44/9 Jaworski [1] 1/22 lacks [2] 41/9 74/21 lame [2] 63/24 64/22 individuals [10] 15/19 32/8 32/8 32/12 32/23 Jeanne [1] 5/22 32/25 33/20 33/22 39/13 88/3 lameness [3] 63/20 63/25 64/14 jerked [1] 77/12 **Jewell [5]** 49/1 49/22 52/15 52/16 52/17 LANCE [2] 1/21 24/23 indoor [1] 65/5 land [3] 37/23 38/5 38/6 indoors [1] 108/16 JOHN [1] 1/20 infections [2] 61/7 61/21 join [1] 34/6 landing [1] 31/23 inflicted [4] 39/4 64/1 64/22 111/6 JOINER [1] 1/20 Lanes [1] 93/22 inform [1] 34/19 Lanka [8] 6/13 12/22 12/22 13/20 23/4 25/23 joins [1] 34/9 information [2] 11/8 43/21 Journal [2] 21/22 22/9 26/11 45/12 injured [2] 30/24 35/8 joy [1] 42/18 **Lankan** [1] 13/3 **large** [7] 14/8 33/5 33/22 36/6 49/10 69/12 injury [1] 106/17 **JOYCE [5]** 3/4 4/4 4/6 4/19 98/2 inquisitive [1] 105/19 joyful [1] 33/11 last [5] 10/15 13/16 92/17 107/12 109/8 inside [1] 73/13 JUDGE [14] 1/11 7/2 8/3 29/12 29/19 37/6 inspect [1] 71/8 lasts [1] 64/7 38/9 51/13 52/10 53/6 65/12 66/11 71/11 **inspected [3]** 63/2 68/10 103/10 85/14 late [1] 105/17 later [2] 67/3 74/24 **inspecting [2]** 48/25 62/15 Jungle [3] 16/17 36/11 55/24 inspection [30] 23/9 48/17 48/20 49/2 51/15 jury [3] 52/5 61/23 112/25 law [1] 88/15 lawsuit [4] 74/17 98/8 106/3 106/19 51/17 51/22 53/14 54/6 56/5 58/2 62/10 just [99] 12/11 14/24 15/6 15/8 15/9 16/19

63/10 63/11 68/18 91/5 100/25 101/13

18/4 18/4 20/3 21/10 29/15 31/12 33/19 37/7

little [8] 4/14 32/24 62/3 62/17 62/19 65/17 Massachusetts [1] 100/13 78/23 105/20 mate [1] 40/25 lawyers [1] 104/23 live [9] 4/20 4/21 15/17 16/5 16/6 32/21 material [1] 42/12 lay [3] 41/10 41/15 74/25 32/22 38/25 87/24 materials [2] 62/2 62/5 lead [5] 21/15 61/21 68/24 77/20 81/10 lived [2] 39/17 39/18 matriarch [6] 30/4 30/10 31/21 32/14 32/17 leader [1] 30/4 living [4] 8/17 9/15 40/3 97/9 32/18 leadership [1] 8/1 LLP[1] 1/22 matriarchal [1] 15/18 leading [15] 23/16 23/24 24/13 34/1 35/5 locate [2] 44/6 44/7 matrilineal [1] 33/6 38/18 41/22 47/10 47/13 59/8 59/10 64/16 locations [1] 22/8 matter [1] 114/5 long [24] 7/12 7/19 18/3 32/3 32/4 32/15 69/6 77/24 79/24 matters [2] 112/25 112/25 Leakey [2] 11/19 11/23 33/24 34/17 38/25 39/17 39/18 39/24 41/1 may [20] 17/13 18/3 18/6 19/6 34/6 40/23 learn [5] 86/18 86/19 86/19 87/2 89/5 42/24 47/18 49/4 51/8 83/11 96/19 96/20 50/21 55/21 56/6 57/13 61/19 67/20 70/19 learning [2] 8/1 89/5 96/25 97/13 101/10 112/16 73/4 74/24 75/20 95/4 97/23 97/24 102/6 least [6] 13/25 17/4 35/24 64/20 93/19 long-lived [2] 39/17 39/18 maybe [6] 16/8 33/21 60/24 63/1 63/23 long-term [3] 7/19 32/3 32/4 112/17 109/16 leatherman [2] 80/17 81/4 longer [1] 85/17 McComb [1] 8/10 leave [6] 34/4 42/22 43/1 62/2 93/9 112/18 longest [1] 7/4 MCI [3] 65/9 65/21 67/8 leaving [2] 93/7 93/8 look [8] 14/25 15/9 44/19 52/8 63/25 71/1 me [34] 5/23 8/15 13/20 13/21 13/22 18/16 **led** [3] 32/14 32/17 47/15 44/12 44/14 47/11 48/6 48/8 48/14 48/14 86/22 94/9 Lee [1] 8/10 looked [1] 16/19 57/15 58/5 60/11 67/22 69/1 74/2 79/8 85/8 **left [3]** 59/2 61/12 62/20 looking [11] 14/13 20/3 21/9 39/15 43/14 94/3 95/6 96/12 96/15 99/21 101/20 101/21 leg [7] 49/12 52/18 53/8 62/20 62/25 73/11 43/19 58/21 70/23 77/14 77/16 104/17 105/24 107/11 109/7 109/12 111/17 113/12 looks [4] 33/1 42/3 66/23 67/16 mean [28] 6/16 18/23 19/2 29/15 37/14 37/18 loose [2] 40/24 104/19 legal [1] 97/20 41/25 42/14 48/13 50/2 50/7 50/16 53/16 legs [9] 38/13 38/14 49/12 51/10 53/9 53/12 Lord [2] 16/17 36/11 62/17 70/19 81/17 86/16 88/17 89/13 89/22 58/25 73/11 85/17 93/25 94/18 94/18 95/8 95/15 102/5 105/7 lost [1] 15/20 length [1] 33/9 **lot [14]** 6/18 13/9 26/22 32/15 48/7 54/16 107/19 less [4] 10/8 52/23 90/3 90/3 54/24 83/3 83/15 83/15 83/16 87/13 90/2 means [3] 16/6 29/23 62/24 let [13] 29/7 34/21 40/24 76/24 94/3 96/15 101/24 mechanical [1] 2/25 median [1] 39/4 101/20 101/21 105/24 107/11 109/7 109/12 lots [1] 47/5 111/17 low [3] 16/2 48/11 65/15 medical [3] 27/16 27/17 39/16 let's [17] 12/21 13/25 29/23 30/12 57/1 63/8 Lucy [2] 8/10 21/17 meet [1] 33/20 64/22 77/1 77/3 78/14 78/18 85/6 93/17 lumped [1] 50/5 meeting [1] 18/12 97/17 99/22 103/16 108/13 lumpy [1] 61/15 member [7] 19/3 28/9 28/12 28/15 28/18 **level [3]** 16/3 33/2 33/13 Lutzi [2] 49/1 62/20 29/24 30/5 levels [1] 89/21 lying [2] 63/8 83/10 members [8] 18/13 18/13 22/9 30/15 31/8 lie [2] 55/2 63/14 33/7 33/7 46/25 M life [13] 7/8 16/12 34/4 39/4 39/6 39/7 39/12 memories [2] 32/3 32/4 M-A-N-O-R-I [1] 13/6 42/1 44/21 48/10 88/2 89/4 90/2 memory [1] 32/2 lifestyle [3] 74/4 74/5 87/25 made [9] 16/20 26/5 78/20 82/20 96/22 men [2] 86/1 103/14 102/10 102/24 102/25 102/25 lifetime [1] 8/20 mentioned [6] 8/3 8/7 29/17 29/17 29/20 lift [4] 30/25 31/5 34/18 38/13 mahouts [1] 15/22 32/18 **lifting [2]** 54/1 54/3 mainly [1] 13/9 mentions [1] 98/20 **light [2]** 4/13 67/22 maintain [1] 94/6 metal [1] 49/10 like [66] 4/3 14/11 14/20 14/25 15/9 19/8 maintained [1] 65/5 method [1] 5/20 19/9 24/16 27/2 36/10 37/17 37/17 37/25 make [15] 32/16 43/15 57/14 62/3 69/10 79/8 methodologies [3] 5/13 5/17 6/7 40/8 40/8 42/3 42/4 43/9 43/16 44/17 45/1 88/19 90/9 91/4 92/22 93/11 102/19 102/20 methodology [3] 5/21 72/2 72/13 45/16 46/4 46/21 49/7 50/9 50/12 50/22 110/16 112/17 methods [5] 74/8 74/12 94/21 94/25 99/16 50/23 50/23 55/2 59/15 61/17 64/6 65/19 makeup [2] 18/25 20/13 MEYER [3] 1/14 1/16 45/24 middle [4] 19/22 30/18 43/3 66/13 66/23 67/17 67/23 68/17 69/12 71/1 71/25 making [2] 30/21 50/18 74/2 75/4 77/6 77/6 80/9 81/19 82/11 82/23 male [12] 5/11 5/11 8/1 12/10 12/10 21/1 might [7] 29/16 50/4 50/23 56/23 63/25 83/4 83/13 83/14 84/11 85/23 94/1 94/11 31/18 31/23 33/21 34/4 35/1 36/6 74/15 95/21 96/16 99/22 108/11 109/17 112/3 113/11 male-male [2] 5/11 12/10 mind [4] 17/23 19/22 110/10 110/11 113/13 113/16 113/18 males [14] 14/15 14/19 18/14 34/7 34/16 minds [1] 17/22 34/23 34/24 40/25 43/14 44/23 44/24 64/3 likely [2] 41/6 46/11 Minneriya [2] 6/13 13/13 Limine [2] 84/21 92/7 89/25 89/25 minute [2] 30/2 43/20 mammal [4] 37/23 38/4 38/5 38/6 limited [3] 29/2 81/1 109/17 minutes [10] 31/17 43/20 58/10 61/25 62/1 mammals [3] 18/25 20/22 39/18 limp [1] 64/11 66/24 67/2 85/18 93/14 105/16 Lindsay [1] 8/9 man [2] 77/16 98/12 misleading [1] 74/19 line [17] 27/4 55/13 55/14 55/15 73/17 74/6 manage [1] 83/4 missing [1] 21/13 misspoke [1] 56/3 94/4 96/15 96/18 97/18 99/23 101/19 103/19 managed [1] 37/24 107/11 108/13 109/8 111/18 management [3] 11/21 11/22 74/8 misstatement [1] 104/5 lined [6] 55/13 105/2 105/5 105/8 105/12 **Managers** [1] 28/9 mistreatment [1] 97/20 105/16 **Manori [5]** 13/4 13/7 13/8 13/20 64/18 misunderstood [1] 92/12 lines [1] 33/6 manufacture [1] 17/1 mobile [2] 17/6 17/8 LISA [4] 1/20 2/2 114/3 114/10 many [19] 7/7 7/7 8/13 8/19 8/23 13/23 modification [2] 17/1 17/1 14/18 54/2 54/17 55/24 57/14 57/15 69/18 **list** [7] 20/4 21/10 102/19 102/20 102/21 moment [3] 32/6 52/25 108/8 85/18 85/18 93/12 99/1 100/18 100/21 102/22 102/23 money [1] 100/21 listed [6] 19/20 102/5 102/12 102/17 102/19 March [1] 65/22 monitored [1] 54/2 marked [2] 71/20 97/21 108/19 month [1] 63/23 listen [3] 55/7 92/9 97/8 markers [1] 45/20 months [1] 87/18 marks [6] 106/5 106/7 106/8 106/12 106/21 literally [1] 43/12 more [19] 8/12 14/18 18/14 29/13 41/5 41/10 literature [2] 12/8 39/25 106/23 46/10 59/16 62/17 88/16 88/18 90/2 90/2

		abianta [1] 21/1
\mathbf{M}	never [12] 24/24 25/1 28/1 28/4 28/21 40/9 50/21 53/22 53/23 74/18 110/5 111/15	objects [1] 31/1
more [6] 90/3 90/3 90/4 90/4 90/4 112/12		observable [1] 30/20
	new [3] 99/25 106/17 106/20	observation [2] 101/5 101/8
morning [2] 43/4 43/6 Moss [4] 7/6 8/7 8/9 10/18	newborn [1] 37/24	observational [1] 11/5
	next [8] 17/25 21/9 34/22 60/1 78/14 80/9	observations [17] 5/18 7/8 8/21 11/2 11/6
most [7] 6/23 6/24 6/24 9/10 9/22 63/25 73/7	87/18 104/18	21/1 26/5 42/9 42/10 43/15 50/18 77/7 78/20
Mostly [1] 88/12	nice [2] 103/13 113/21	80/13 83/1 85/14 87/10
mother [3] 33/25 34/4 87/19	Nicole [3] 101/3 101/6 101/9	observe [14] 12/17 13/24 29/16 48/21 49/4
mother's [2] 86/18 86/21	night [2] 35/25 40/24	53/20 54/7 54/10 54/14 58/3 62/11 62/14
mothers [2] 86/23 86/23	no [76] 1/4 10/8 27/1 27/15 28/8 29/6 36/12	63/15 103/8
motion [4] 46/20 84/21 90/12 92/7	38/19 39/16 39/21 40/11 43/25 45/25 49/18	observed [35] 8/19 8/23 22/25 23/2 23/3
mount [3] 31/20 83/11 83/22	51/16 51/23 52/6 54/20 55/16 56/10 56/25	25/11 25/17 25/23 26/7 28/6 34/11 34/14
mouth [3] 49/18 73/10 73/13	57/3 61/12 61/12 64/19 65/24 66/2 66/18	34/15 34/15 37/7 49/8 53/13 53/15 53/23
move [29] 17/6 18/11 18/12 18/14 46/22	67/22 68/7 68/12 70/15 74/22 74/25 74/25	54/11 54/11 54/12 59/7 65/13 69/9 75/10
48/13 51/9 52/3 56/24 59/16 59/16 62/4	75/25 76/1 82/19 83/18 83/18 83/24 84/1	76/12 84/2 87/21 97/11 101/2 103/4 103/15
66/18 66/18 72/25 73/20 76/4 76/5 76/9	86/8 87/1 87/24 87/25 88/25 90/8 90/19	103/20 103/22
76/11 76/13 77/1 78/18 82/15 85/7 85/9	91/20 92/3 92/20 101/14 101/22 102/22	observing [8] 22/13 22/16 29/3 42/20 43/10
86/14 90/9 91/4	103/6 105/1 106/2 106/8 106/17 106/20	43/11 50/25 67/6
moved [4] 55/14 88/15 91/6 99/7	106/24 107/25 110/3 110/8 110/10 110/12	obtain [1] 11/8
movement [12] 19/22 44/3 48/10 50/6 55/16	110/15 110/18 111/1 111/13 111/20 111/22	obtained [1] 65/21
107/8 107/23 108/2 108/4 108/6 108/23	111/24 112/2 113/22	obtaining [1] 12/7
109/3	Nodded [1] 21/24	obvious [2] 14/7 72/24
movements [5] 18/3 29/25 65/17 107/18	nodes [1] 15/21	obviously [5] 30/16 41/13 54/4 80/7 85/16
109/15	noise [1] 48/12	occasion [2] 35/18 80/17
moving [2] 86/9 90/4	non [1] 6/16	Occasionally [1] 63/21
Mr. [1] 54/14	non-field [1] 6/16	occur [1] 50/20
Mr. Jacobson's [1] 54/14	none [3] 46/1 61/16 74/16	of 2004 [1] 65/22
MRI [1] 92/15	nonhuman [1] 16/25	of 2008 [1] 13/17
Ms [1] 45/24	nonjury [1] 76/24	off [10] 18/6 18/8 34/7 54/3 58/12 73/18
much [13] 32/16 39/15 42/16 42/17 48/10	nonresponsive [1] 106/14	85/19 94/6 103/16 106/11
52/23 61/11 88/21 89/2 89/14 89/15 96/10	normal [22] 29/13 37/7 38/10 41/20 53/17	offer [1] 112/7
112/12	53/18 61/15 62/22 63/7 78/10 78/10 79/4	offered [7] 74/7 74/9 75/7 75/12 76/4 76/7
mud [6] 36/4 37/16 37/18 37/19 37/20 63/9	79/4 80/4 80/23 103/4 103/6 103/7 103/8	92/1
muddy [1] 37/18	103/20 103/22 107/16	offering [6] 15/5 52/1 56/8 90/15 92/10 92/25
multi [1] 33/14	normally [3] 35/22 38/12 38/23	office [1] 6/14
multi-tiers [1] 33/14	Norway [4] 4/21 6/14 23/6 76/17	Official [1] 2/2
must [1] 20/19	not [180]	offspring [1] 42/17
musth [9] 5/11 7/17 7/18 12/9 12/10 18/15 33/21 43/13 43/14	notable [1] 9/10	often [7] 31/7 42/19 42/24 55/6 63/22 64/1 73/7
Mutinda [1] 8/11	notches [2] 44/16 45/18	
my [54] 5/11 5/15 5/16 6/11 6/13 6/24 7/16	note [4] 16/20 44/2 61/23 98/6	Oh [3] 42/21 61/3 79/19 okay [15] 8/13 22/4 27/3 37/2 41/17 43/20
7/24 12/9 13/3 15/20 16/18 17/19 19/15	noted [1] 29/9 nothing [12] 49/13 49/17 49/20 53/1 66/16	67/7 76/10 85/10 85/16 89/19 93/4 97/22
20/23 20/24 20/24 20/25 26/22 28/24 42/1	66/19 66/19 67/21 86/2 87/25 88/1 88/1	103/18 112/22
42/2 42/10 42/12 42/15 44/23 44/23 50/12	notice [1] 52/15	old [5] 34/5 39/5 43/8 80/21 87/4
50/25 51/4 61/23 64/18 71/13 71/14 79/2	notice [1] 52/13 noticed [3] 63/4 63/16 72/22	older [2] 32/14 36/8
88/20 92/10 92/10 94/13 94/15 96/22 98/7		oldest [1] 39/1
99/21 102/5 102/5 103/11 103/19 107/4	32/25 45/12 45/13 56/20 56/21 68/24 70/25	once [3] 19/2 63/23 76/3
107/13 108/1 108/3 110/12 111/1 111/8	85/25 88/15 93/3 93/5 94/6 94/21 98/20	one [65] 6/2 6/12 11/14 14/11 16/4 16/10
Mysore [2] 49/3 53/10	100/9 100/17 100/24 102/9 108/22 110/5	16/18 16/24 18/11 19/3 19/19 19/20 19/24
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	112/2	22/4 25/2 29/15 29/20 29/22 29/24 30/9 32/5
N	number [27] 7/16 7/24 22/2 42/13 60/6 68/20	32/14 33/16 34/23 36/5 47/24 48/22 49/13
name [5] 4/17 9/7 45/5 54/12 55/1	69/11 69/16 69/18 69/21 69/21 69/22 69/25	52/17 53/8 53/8 53/9 53/12 53/25 54/1 55/14
named [2] 25/3 34/15	70/1 70/2 70/3 70/10 70/12 70/17 70/24 71/1	60/10 60/25 61/4 62/3 62/19 62/19 62/21
names [3] 45/4 45/6 48/24	76/23 82/19 85/23 90/20 90/24 90/25	63/13 64/10 66/24 68/3 68/4 68/13 70/9
natal [1] 34/5	numbered [1] 69/23	74/22 79/2 85/2 85/2 86/16 87/10 92/3 92/17
national [5] 6/6 6/12 6/13 7/1 8/23	numbers [4] 8/22 56/23 57/21 70/23	94/12 98/6 98/23 104/18 104/23 109/23
natural [11] 38/21 38/23 40/14 40/15 46/20	NW [3] 1/16 1/22 2/3	113/9
67/22 78/11 78/12 80/24 83/25 86/2		ones [3] 19/18 40/23 68/12
naturally [1] 97/10	O	online [2] 45/12 45/13

naturally [1] 97/10 Nature [1] 22/22 near [1] 55/4 necessary [3] 108/23 109/4 109/16 need [14] 40/15 44/13 51/24 57/15 57/22 89/2 89/5 90/24 92/20 93/12 95/20 109/1 112/13 113/22 needed [2] 74/3 105/15 needs [1] 19/13 negative [1] 107/1 **negotiation** [1] 30/21 **neighbor** [1] 68/8 neighbors [1] 68/12 neurological [1] 20/17 neurologist [1] 27/18

o'clock [4] 49/24 93/18 112/20 112/24 **object** [**15**] 28/25 31/3 55/22 56/13 65/24 66/7 74/6 74/13 74/14 76/2 77/13 79/13 84/15 84/18 106/14

objected [3] 55/21 82/15 91/23

objecting [2] 57/5 57/7 **objection [42]** 14/22 15/1 23/16 24/5 24/13 29/9 34/1 35/5 36/12 36/20 38/17 41/8 41/22 45/23 46/13 47/20 51/16 51/20 52/6 56/10 58/9 59/8 64/16 66/5 70/3 70/6 70/14 70/15 77/24 79/24 82/20 85/5 85/6 85/9 90/11 90/19 91/9 91/22 92/13 104/4 104/4 112/6

objections [5] 41/22 52/1 55/25 57/1 57/3 **objective** [1] 72/11

12 online [2] 45/12 45/13

only [15] 12/11 19/5 25/2 25/14 27/9 28/6 45/13 56/13 56/21 56/23 57/7 61/4 70/1 82/15 93/18

open [1] 18/7

opining [1] 75/25

opinion [42] 23/13 24/3 24/11 41/5 41/16 41/19 46/10 47/19 50/18 50/25 51/2 51/3 51/4 67/11 77/25 79/1 79/2 79/23 81/8 81/13 87/22 89/10 94/13 94/15 94/16 94/16 96/8 96/19 96/21 96/25 97/6 106/25 107/3 107/4 107/7 107/13 107/13 108/1 108/9 109/10 112/3 112/7

opinions [4] 26/13 101/6 101/9 102/4 opportunity [16] 12/17 13/24 48/16 48/20

0	Pat [2] 54/13 55/3	poked [3] 72/10 73/8 73/23
	pathologist [1] 27/20	policy [1] 11/21
opportunity [12] 54/7 58/3 62/11 63/11 65/3 71/8 71/16 71/19 82/3 82/7 84/5 97/9	pattern [5] 51/12 52/16 72/23 84/23 92/8 patterns [4] 7/23 8/2 13/10 44/17	Polk [1] 48/18 Polly [1] 34/15
opposed [4] 69/3 89/11 95/16 95/22	paying [1] 55/9	POOLE [73] 3/4 4/4 4/6 4/11 4/14 4/17 4/19
opposite [2] 30/10 30/13	Payne [1] 10/19	15/9 15/13 19/21 21/25 22/13 23/7 24/17
or 2008 [1] 22/10	Pearson [1] 99/25	24/21 24/24 25/11 26/23 27/5 27/14 28/1
ordered [2] 48/17 54/6	Pennsylvania [1] 1/22	28/9 29/12 36/10 36/16 41/3 41/19 52/11
original [1] 104/13 originally [1] 97/25	people [15] 7/10 10/18 39/3 39/4 40/3 40/3 40/11 54/16 54/21 64/23 86/4 109/22 109/24	58/3 62/9 65/2 66/10 68/1 68/14 68/17 71/15 74/7 74/25 75/5 75/18 76/17 77/18 82/3 83/9
orphans [1] 22/21	111/6 112/3	83/22 84/14 88/5 90/23 93/22 94/19 96/18
osteomyelitis [1] 111/22	perception [1] 20/20	97/14 97/17 97/18 98/18 99/22 100/24 102/1
other [49] 5/25 6/15 7/22 8/6 10/16 10/18	perceptions [1] 20/11	102/9 103/1 103/24 105/2 106/2 106/25
10/24 11/2 11/9 12/14 22/16 25/8 29/18 30/11 30/15 31/4 32/8 33/17 34/6 34/7 35/12	perform [8] 81/25 82/4 95/25 108/22 109/3	107/7 107/23 108/1 108/9 108/22 110/5
37/13 43/9 46/25 46/25 49/20 50/5 54/14	109/12 109/15 109/22 performance [3] 67/1 73/18 109/17	110/18 111/8 112/2 Poole's [6]
55/10 55/25 56/2 56/11 61/14 64/22 67/4	performances [2] 82/9 82/14	101/18
68/2 68/6 68/11 70/15 70/21 75/15 83/10	performing [1] 109/18	population [7] 8/21 13/14 32/24 39/1 39/11
83/23 85/20 92/1 92/5 92/11 112/25 112/25	perhaps [2] 33/20 66/10	40/7 41/1
other's [1] 83/12 others [5] 8/4 8/8 19/6 19/6 21/14	period [7] 25/14 25/16 25/20 26/1 66/24 67/4	populations [2] 7/23 40/11
our [2] 81/25 84/25	95/22 periods [1] 47/18	portion [4] 36/10 36/25 37/3 37/3 portions [4] 55/23 55/25 56/2 82/15
out [34] 6/18 8/17 10/7 22/8 35/24 37/25	permission [1] 113/18	portrayed [1] 84/8
42/21 43/1 43/4 43/9 43/16 49/7 55/14 55/16	permitted [1] 104/20	possibility [1] 86/9
61/10 63/8 66/4 66/25 67/1 67/2 68/3 73/21	perpetual [1] 46/20	possible [1] 53/19
73/25 74/18 78/22 79/4 79/9 79/11 79/17	person [5] 42/6 72/11 72/25 73/1 76/20	posture [2] 38/10 44/3
80/3 86/22 110/10 110/15 112/19 out-of-sight [1] 22/8	personal [1] 50/25 personally [2] 101/2 113/19	practice [4] 41/6 46/11 84/23 92/8 Practicing [1] 87/4
outside [2] 8/24 55/12	PETTEWAY [1] 1/21	preeminent [1] 9/13
over [24] 7/7 7/10 8/19 10/15 33/16 34/11	PH.D [3] 3/4 4/6 12/7	prefer [1] 88/17
34/24 34/24 40/19 49/7 49/23 60/23 66/5	photo [3] 58/14 59/11 59/12	prejudicial [1] 74/19
80/16 85/6 85/9 85/19 87/17 87/17 87/17	photograph [4] 14/21 60/4 68/20 70/17	preparation [1] 49/19
92/13 92/20 92/25 100/21 overnight [3] 108/10 108/16 108/17	photographs [9] 14/24 55/17 56/4 56/5 56/7 56/14 68/18 68/21 69/23	preparing [2] 65/2 71/15 present [1] 105/13
Overruled [2] 24/14 80/1	photos [4] 56/16 57/14 57/17 69/18	present [1] 103/13 presented [1] 94/10
own [2] 20/25 52/16	Phyllis [1] 8/9	press [1] 19/18
P	physical [2] 14/4 20/13	pressed [1] 31/22
p.m [2] 1/5 113/23	physiologically [1] 20/18	pressure [2] 60/25 61/20
pace [1] 50/8	picks [1] 43/3 picture [4] 60/8 70/1 70/9 70/24	presumably [1] 67/1 pretty [2] 73/13 89/14
pad [1] 61/12	pictures [6] 45/11 57/7 57/23 68/22 69/25	prevent [2] 31/10 31/22
padded [1] 60/19	70/9	prevented [1] 79/3
page [19] 19/17 19/22 20/4 21/9 27/2 69/16	piece [3] 19/23 74/17 76/2	preventing [1] 78/12
69/18 70/13 94/3 96/15 97/17 99/22 101/18 103/16 107/11 108/13 109/7 109/8 111/17	pile [1] 59/18 pinch [1] 80/17	PREVENTION [2] 1/3 98/9 previous [2] 76/12 79/2
pages [1] 21/9	place [2] 23/1 61/4	principal [2] 10/8 21/11
paid [1] 88/5	placed [1] 41/21	principles [1] 10/21
pain [12] 18/20 19/1 19/5 19/7 20/6 20/20	places [2] 6/19 54/18	print [1] 19/16
20/22 20/22 20/23 21/6 21/7 54/4	plaintiff [2] 3/3 100/17	printed [1] 97/22
painful [5] 61/18 71/14 77/13 78/5 80/7 paleontologist [1] 11/24	plaintiff's [7] 36/12 71/20 74/13 104/3 104/11 104/15 104/24	Prior [1] 6/20 prisoners [1] 112/4
palm [1] 18/7	plaintiffs [4] 1/4 1/14 88/5 105/17	probably [5] 6/2 22/11 94/10 96/13 105/22
paper [3] 5/22 22/22 30/23	plan [1] 104/13	probative [1] 84/24
papers [4] 19/16 20/24 21/14 110/14	plane [1] 89/20	problem [5] 54/1 62/24 64/14 75/23 111/10
paragraph [2] 98/6 107/12 parallel [1] 55/14	planning [1] 31/24	problematic [1] 86/15
pare [1] 61/8	play [1] 32/7 playback [1] 72/15	problems [10] 53/11 61/21 64/24 86/16 89/6 110/21 110/25 111/2 111/5 113/20
pared [1] 61/13	playbacks [1] 32/7	proceed [3] 4/2 62/8 76/3
park [6] 6/6 6/12 6/13 7/1 35/25 35/25	played [7] 37/5 52/13 66/8 77/9 78/15 80/11	proceedings [3] 2/25 113/23 114/5
parks [1] 8/24 part [24] 11/3 23/1 23/2 36/5 40/2 48/10	82/25	process [2] 87/7 87/8
48/20 49/2 51/16 57/24 58/2 60/25 61/9	playing [1] 66/10 please [6] 4/17 24/23 78/14 101/7 101/18	prods [4] 56/14 57/8 57/18 57/24 produce [1] 16/2
69/14 73/3 73/6 78/11 78/12 79/15 80/19	104/8	produce [1] 10/2
84/22 87/23 89/7 92/7	Pliers [1] 81/6	production [1] 69/11
participate [2] 48/16 90/6	PM [1] 1/6	professional [1] 19/11
participated [3] 62/10 88/13 102/24 particular [16] 5/9 5/13 8/21 29/15 29/21	poachers [1] 34/21	professor [6] 5/23 5/23 6/1 9/10 9/15 10/11
30/9 32/8 33/10 35/11 35/14 43/18 43/18	poaching [1] 7/22 point [14] 28/25 44/23 47/11 63/10 68/25	program [2] 11/20 23/3 project [9] 6/25 7/3 7/6 7/13 8/7 8/14 9/2
55/23 59/22 72/1 72/13	69/1 72/6 72/17 73/1 75/4 76/25 77/3 104/14	13/13 13/15
particularly [12] 13/12 27/1 46/19 48/1 53/3	109/10	projects [3] 6/15 6/16 10/12
64/3 66/15 73/11 73/17 81/17 89/25 97/2	pointed [1] 73/6	promptly [3] 112/16 112/19 112/24
parts [3] 55/24 73/7 73/14 past [1] 64/11	pointing [2] 17/23 29/24	prop [1] 31/10
Past [1] \(\frac{1}{2}\) 11	poke [1] 73/5	proper [1] 78/3
1		

P	67/21 81/16 88/19 104/21	retain [1] 33/6
	rear [1] 59/2	Retrieving [1] 87/5
properly [3] 46/22 57/8 61/14 protected [2] 90/5 109/6	reason [1] 76/11 reasons [1] 76/23	review [8] 65/3 65/7 71/16 71/19 72/19 82/3 84/5 101/12
Protection [1] 98/10	recall [8] 25/6 27/1 28/23 48/24 99/24 100/3	reviewed [5] 65/8 65/13 67/9 102/2 102/13
prove [1] 41/13	101/16 101/17	reviewing [2] 70/21 72/2
provide [2] 10/20 89/4	receptive [1] 34/9	Ricardo [4] 84/10 84/13 85/1 85/2
providing [1] 90/3 psychiatrist [1] 27/22	RECESS [2] 62/6 62/7 recitation [1] 19/10	Riccardo [1] 100/9 Richard [3] 11/19 11/23 22/3
psychologist [1] 27/24	recognize [3] 32/9 32/11 33/17	Rider [2] 92/5 98/11
publications [2] 21/11 21/20	record [18] 4/18 21/19 37/3 51/25 56/19	ridiculous [1] 83/21
published [6] 9/14 19/18 21/22 22/1 22/9	56/22 57/23 57/24 65/20 66/6 69/11 70/16	right [39] 9/17 15/6 20/14 21/19 21/21 22/2
22/22 pull [4] 72/7 73/3 74/1 85/18	70/20 76/17 82/16 90/25 91/8 114/4 recorded [2] 2/25 87/13	25/9 25/15 26/1 26/10 29/4 36/14 45/13 56/21 57/2 59/1 60/8 66/15 70/6 70/25 71/2
pulled [1] 71/13	RECROSS [1] 3/2	71/6 75/21 78/25 80/16 82/21 85/4 89/9 91/3
pulling [1] 34/18	Red [1] 66/1	91/14 95/19 98/5 98/21 98/24 99/16 100/6
pulls [2] 85/24 85/24	redirect [3] 3/2 93/15 93/16	100/25 102/14 113/21
purpose [1] 110/16 purposes [2] 45/8 98/23	reference [2] 10/6 102/10 referred [1] 39/25	right-hand [1] 80/16 Ringling [10] 65/4 71/16 82/4 82/13 97/20
pursuant [2] 92/1 92/11	referring [1] 20/7	98/11 98/13 98/14 107/10 107/25
push [3] 45/20 73/1 73/5	refrain [3] 23/24 47/10 69/6	road [3] 21/4 30/18 47/8
pushed [1] 73/23	regarded [3] 9/23 9/25 10/1	Robert [1] 5/23
pushing [1] 37/15 put [6] 19/15 48/11 67/1 77/13 90/1 103/12	regarding [9] 23/13 23/14 24/3 24/10 24/10 97/6 100/10 101/6 101/9	rock [1] 52/21 rocking [4] 50/12 52/23 61/19 66/15
putting [2] 60/24 108/15	regards [1] 70/23	role [1] 98/16
Q	reinforcement [1] 107/1	roll [1] 36/4
qualifying [1] 4/15	reintroduction [1] 23/3	romp [1] 36/8
quarters [1] 65/15	relationship [4] 33/4 33/7 54/19 54/22 relationships [1] 33/15	room [4] 2/3 6/2 53/2 62/3 roughhousing [1] 37/15
question [66] 20/5 20/6 23/22 27/11 38/10	relative [1] 43/7	routine [2] 73/16 74/2
39/14 42/24 46/1 46/4 47/14 58/9 58/10 60/1	relatively [1] 59/3	routinely [2] 41/4 46/9
60/2 77/20 78/17 78/17 92/10 92/10 94/6 94/7 94/11 94/15 94/16 94/17 96/18 96/24	relied [4] 6/8 7/10 9/4 9/8	row [1] 80/10
97/18 97/22 98/1 98/3 98/4 98/5 98/16 99/23	relieve [1] 61/19 rely [2] 8/4 11/8	Royal [2] 5/23 22/9 RPR [3] 2/2 114/3 114/10
99/23 100/2 100/3 100/5 101/19 101/20	remember [3] 26/24 34/17 64/8	rudimentary [1] 17/3
103/17 103/19 103/19 104/6 104/7 104/25	remembering [1] 23/19	rule [2] 74/18 113/4
106/15 107/12 107/17 108/1 108/3 108/14 108/20 109/1 109/8 109/25 110/1 110/12	remove [2] 31/1 31/2 removed [3] 34/20 34/25 109/11	ruled [1] 92/5 ruling [1] 29/8
111/8 111/18 111/20 111/20 111/22 112/8	removing [1] 21/4	rumbles [1] 30/12
111/8 111/18 111/20 111/20 111/22 112/8 112/9	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12
111/8 111/18 111/20 111/20 111/22 112/8 112/9	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16 R railroad [1] 47/8	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10 102/17 102/21 110/24 111/10 111/13	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7 20/11 23/18 38/4 55/1 66/20 68/14 69/20
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16 R	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10 102/17 102/21 110/24 111/10 111/13 Reporter [2] 2/2 2/2	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16 R railroad [1] 47/8 rainy [1] 64/5 raised [2] 29/9 54/2 Raman [1] 9/10	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10 102/17 102/21 110/24 111/10 111/13 Reporter [2] 2/2 2/2 reports [3] 111/18 111/21 111/23 represent [1] 59/11	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7 20/11 23/18 38/4 55/1 66/20 68/14 69/20 69/20 75/16 79/6 79/8 84/2 89/20 91/16 95/20 96/13 101/16 102/2 103/11 111/4 same [23] 18/24 20/12 35/1 40/18 41/22
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16 R railroad [1] 47/8 rainy [1] 64/5 raised [2] 29/9 54/2 Raman [1] 9/10 range [7] 15/18 17/9 17/11 17/13 32/22 43/6	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10 102/17 102/21 110/24 111/10 111/13 Reporter [2] 2/2 2/2 reports [3] 111/18 111/21 111/23 represent [1] 59/11 representative [1] 67/8	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7 20/11 23/18 38/4 55/1 66/20 68/14 69/20 69/20 75/16 79/6 79/8 84/2 89/20 91/16 95/20 96/13 101/16 102/2 103/11 111/4 same [23] 18/24 20/12 35/1 40/18 41/22 45/11 46/13 51/6 53/11 60/13 66/23 67/6
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16 R railroad [1] 47/8 rainy [1] 64/5 raised [2] 29/9 54/2 Raman [1] 9/10 range [7] 15/18 17/9 17/11 17/13 32/22 43/6 51/8	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10 102/17 102/21 110/24 111/10 111/13 Reporter [2] 2/2 2/2 reports [3] 111/18 111/21 111/23 represent [1] 59/11 representative [1] 67/8 reprimanded [1] 78/9	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7 20/11 23/18 38/4 55/1 66/20 68/14 69/20 69/20 75/16 79/6 79/8 84/2 89/20 91/16 95/20 96/13 101/16 102/2 103/11 111/4 same [23] 18/24 20/12 35/1 40/18 41/22 45/11 46/13 51/6 53/11 60/13 66/23 67/6 67/14 71/22 72/14 76/11 79/2 87/23 95/4
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16 R railroad [1] 47/8 rainy [1] 64/5 raised [2] 29/9 54/2 Raman [1] 9/10 range [7] 15/18 17/9 17/11 17/13 32/22 43/6 51/8 rangers [1] 34/19 ranging [3] 8/2 13/10 105/19	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10 102/17 102/21 110/24 111/10 111/13 Reporter [2] 2/2 2/2 reports [3] 111/18 111/21 111/23 represent [1] 59/11 representative [1] 67/8 reprimanded [1] 78/9 reproductive [1] 7/23 request [1] 92/2	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7 20/11 23/18 38/4 55/1 66/20 68/14 69/20 69/20 75/16 79/6 79/8 84/2 89/20 91/16 95/20 96/13 101/16 102/2 103/11 111/4 same [23] 18/24 20/12 35/1 40/18 41/22 45/11 46/13 51/6 53/11 60/13 66/23 67/6 67/14 71/22 72/14 76/11 79/2 87/23 95/4 95/8 95/12 111/20 111/20 sample [2] 71/25 72/18
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16 R railroad [1] 47/8 rainy [1] 64/5 raised [2] 29/9 54/2 Raman [1] 9/10 range [7] 15/18 17/9 17/11 17/13 32/22 43/6 51/8 rangers [1] 34/19 ranging [3] 8/2 13/10 105/19 rate [9] 110/18 110/21 110/23 110/24 111/10	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10 102/17 102/21 110/24 111/10 111/13 Reporter [2] 2/2 2/2 reports [3] 111/18 111/21 111/23 represent [1] 59/11 representative [1] 67/8 reprimanded [1] 78/9 reproductive [1] 7/23 request [1] 92/2 require [1] 83/16	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7 20/11 23/18 38/4 55/1 66/20 68/14 69/20 69/20 75/16 79/6 79/8 84/2 89/20 91/16 95/20 96/13 101/16 102/2 103/11 111/4 same [23] 18/24 20/12 35/1 40/18 41/22 45/11 46/13 51/6 53/11 60/13 66/23 67/6 67/14 71/22 72/14 76/11 79/2 87/23 95/4 95/8 95/12 111/20 111/20 sample [2] 71/25 72/18 sampling [2] 5/15 5/16
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16 R railroad [1] 47/8 rainy [1] 64/5 raised [2] 29/9 54/2 Raman [1] 9/10 range [7] 15/18 17/9 17/11 17/13 32/22 43/6 51/8 rangers [1] 34/19 ranging [3] 8/2 13/10 105/19 rate [9] 110/18 110/21 110/23 110/24 111/10 111/13 111/19 111/21 111/23	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10 102/17 102/21 110/24 111/10 111/13 Reporter [2] 2/2 2/2 reports [3] 111/18 111/21 111/23 represent [1] 59/11 representative [1] 67/8 reprimanded [1] 78/9 reproductive [1] 7/23 request [1] 92/2 require [1] 83/16 requiring [1] 108/9	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7 20/11 23/18 38/4 55/1 66/20 68/14 69/20 69/20 75/16 79/6 79/8 84/2 89/20 91/16 95/20 96/13 101/16 102/2 103/11 111/4 same [23] 18/24 20/12 35/1 40/18 41/22 45/11 46/13 51/6 53/11 60/13 66/23 67/6 67/14 71/22 72/14 76/11 79/2 87/23 95/4 95/8 95/12 111/20 111/20 sample [2] 71/25 72/18 sampling [2] 5/15 5/16 sanctuaries [2] 23/5 95/12
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16 R railroad [1] 47/8 rainy [1] 64/5 raised [2] 29/9 54/2 Raman [1] 9/10 range [7] 15/18 17/9 17/11 17/13 32/22 43/6 51/8 rangers [1] 34/19 ranging [3] 8/2 13/10 105/19 rate [9] 110/18 110/21 110/23 110/24 111/10	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10 102/17 102/21 110/24 111/10 111/13 Reporter [2] 2/2 2/2 reports [3] 111/18 111/21 111/23 represent [1] 59/11 representative [1] 67/8 reprimanded [1] 78/9 reproductive [1] 7/23 request [1] 92/2 require [1] 83/16	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7 20/11 23/18 38/4 55/1 66/20 68/14 69/20 69/20 75/16 79/6 79/8 84/2 89/20 91/16 95/20 96/13 101/16 102/2 103/11 111/4 same [23] 18/24 20/12 35/1 40/18 41/22 45/11 46/13 51/6 53/11 60/13 66/23 67/6 67/14 71/22 72/14 76/11 79/2 87/23 95/4 95/8 95/12 111/20 111/20 sample [2] 71/25 72/18 sampling [2] 5/15 5/16
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16 R railroad [1] 47/8 rainy [1] 64/5 raised [2] 29/9 54/2 Raman [1] 9/10 range [7] 15/18 17/9 17/11 17/13 32/22 43/6 51/8 rangers [1] 34/19 ranging [3] 8/2 13/10 105/19 rate [9] 110/18 110/21 110/23 110/24 111/10 111/13 111/19 111/21 111/23 raw [2] 74/17 84/13 reach [5] 68/3 68/4 79/17 85/22 85/24 reached [2] 19/4 79/9	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10 102/17 102/21 110/24 111/10 111/13 Reporter [2] 2/2 2/2 reports [3] 111/18 111/21 111/23 represent [1] 59/11 representative [1] 67/8 reprimanded [1] 78/9 reproductive [1] 7/23 request [1] 92/2 require [1] 83/16 requiring [1] 108/9 research [14] 5/13 5/20 6/1 6/7 6/25 7/3 7/13 9/2 10/3 10/25 11/3 11/9 12/9 26/10 resembles [1] 88/1	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7 20/11 23/18 38/4 55/1 66/20 68/14 69/20 69/20 75/16 79/6 79/8 84/2 89/20 91/16 95/20 96/13 101/16 102/2 103/11 111/4 same [23] 18/24 20/12 35/1 40/18 41/22 45/11 46/13 51/6 53/11 60/13 66/23 67/6 67/14 71/22 72/14 76/11 79/2 87/23 95/4 95/8 95/12 111/20 111/20 sample [2] 71/25 72/18 sampling [2] 5/15 5/16 sanctuaries [2] 23/5 95/12 SANERIB [1] 1/15 sat [1] 54/2 savanna [1] 9/3
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16 R railroad [1] 47/8 rainy [1] 64/5 raised [2] 29/9 54/2 Raman [1] 9/10 range [7] 15/18 17/9 17/11 17/13 32/22 43/6 51/8 rangers [1] 34/19 ranging [3] 8/2 13/10 105/19 rate [9] 110/18 110/21 110/23 110/24 111/10 111/13 111/19 111/21 111/23 raw [2] 74/17 84/13 reach [5] 68/3 68/4 79/17 85/22 85/24 reached [2] 19/4 79/9 reaches [1] 85/19	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10 102/17 102/21 110/24 111/10 111/13 Reporter [2] 2/2 2/2 reports [3] 111/18 111/21 111/23 represent [1] 59/11 representative [1] 67/8 reprimanded [1] 78/9 reproductive [1] 7/23 request [1] 92/2 require [1] 83/16 requiring [1] 108/9 research [14] 5/13 5/20 6/1 6/7 6/25 7/3 7/13 9/2 10/3 10/25 11/3 11/9 12/9 26/10 resembles [1] 88/1 reserve [1] 29/8	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7 20/11 23/18 38/4 55/1 66/20 68/14 69/20 69/20 75/16 79/6 79/8 84/2 89/20 91/16 95/20 96/13 101/16 102/2 103/11 111/4 same [23] 18/24 20/12 35/1 40/18 41/22 45/11 46/13 51/6 53/11 60/13 66/23 67/6 67/14 71/22 72/14 76/11 79/2 87/23 95/4 95/8 95/12 111/20 111/20 sample [2] 71/25 72/18 sampling [2] 5/15 5/16 sanctuaries [2] 23/5 95/12 SANERIB [1] 1/15 sat [1] 54/2 savanna [1] 9/3 saw [15] 16/21 59/11 68/9 71/5 72/19 73/12
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16 R railroad [1] 47/8 rainy [1] 64/5 raised [2] 29/9 54/2 Raman [1] 9/10 range [7] 15/18 17/9 17/11 17/13 32/22 43/6 51/8 rangers [1] 34/19 ranging [3] 8/2 13/10 105/19 rate [9] 110/18 110/21 110/23 110/24 111/10 111/13 111/19 111/21 111/23 raw [2] 74/17 84/13 reach [5] 68/3 68/4 79/17 85/22 85/24 reached [2] 19/4 79/9	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10 102/17 102/21 110/24 111/10 111/13 Reporter [2] 2/2 2/2 reports [3] 111/18 111/21 111/23 represent [1] 59/11 representative [1] 67/8 reprimanded [1] 78/9 reproductive [1] 7/23 request [1] 92/2 require [1] 83/16 requiring [1] 108/9 research [14] 5/13 5/20 6/1 6/7 6/25 7/3 7/13 9/2 10/3 10/25 11/3 11/9 12/9 26/10 resembles [1] 88/1 reserve [1] 29/8 resolved [1] 84/23	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7 20/11 23/18 38/4 55/1 66/20 68/14 69/20 69/20 75/16 79/6 79/8 84/2 89/20 91/16 95/20 96/13 101/16 102/2 103/11 111/4 same [23] 18/24 20/12 35/1 40/18 41/22 45/11 46/13 51/6 53/11 60/13 66/23 67/6 67/14 71/22 72/14 76/11 79/2 87/23 95/4 95/8 95/12 111/20 111/20 sample [2] 71/25 72/18 sampling [2] 5/15 5/16 sanctuaries [2] 23/5 95/12 SANERIB [1] 1/15 sat [1] 54/2 savanna [1] 9/3
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16 R railroad [1] 47/8 rainy [1] 64/5 raised [2] 29/9 54/2 Raman [1] 9/10 range [7] 15/18 17/9 17/11 17/13 32/22 43/6 51/8 rangers [1] 34/19 ranging [3] 8/2 13/10 105/19 rate [9] 110/18 110/21 110/23 110/24 111/10 111/13 111/19 111/21 111/23 raw [2] 74/17 84/13 reach [5] 68/3 68/4 79/17 85/22 85/24 reached [2] 19/4 79/9 reaches [1] 85/19 reaching [1] 78/22 reaction [2] 54/13 75/10 read [27] 19/24 21/18 27/12 48/7 60/17 61/3	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10 102/17 102/21 110/24 111/10 111/13 Reporter [2] 2/2 2/2 reports [3] 111/18 111/21 111/23 represent [1] 59/11 representative [1] 67/8 reprimanded [1] 78/9 reproductive [1] 7/23 request [1] 92/2 require [1] 83/16 requiring [1] 108/9 research [14] 5/13 5/20 6/1 6/7 6/25 7/3 7/13 9/2 10/3 10/25 11/3 11/9 12/9 26/10 resembles [1] 88/1 reserve [1] 29/8 resolved [1] 84/23 respect [4] 57/11 68/9 89/10 92/6 respond [2] 15/2 75/20	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7 20/11 23/18 38/4 55/1 66/20 68/14 69/20 69/20 75/16 79/6 79/8 84/2 89/20 91/16 95/20 96/13 101/16 102/2 103/11 111/4 same [23] 18/24 20/12 35/1 40/18 41/22 45/11 46/13 51/6 53/11 60/13 66/23 67/6 67/14 71/22 72/14 76/11 79/2 87/23 95/4 95/8 95/12 111/20 111/20 sample [2] 71/25 72/18 sampling [2] 5/15 5/16 sanctuaries [2] 23/5 95/12 SANERIB [1] 1/15 sat [1] 54/2 savanna [1] 9/3 saw [15] 16/21 59/11 68/9 71/5 72/19 73/12 73/12 77/10 77/10 78/1 79/7 87/10 102/8 103/24 105/23 say [29] 8/24 12/21 13/23 16/16 20/22 33/19
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16 R railroad [1] 47/8 rainy [1] 64/5 raised [2] 29/9 54/2 Raman [1] 9/10 range [7] 15/18 17/9 17/11 17/13 32/22 43/6 51/8 rangers [1] 34/19 ranging [3] 8/2 13/10 105/19 rate [9] 110/18 110/21 110/23 110/24 111/10 111/13 111/19 111/21 111/23 raw [2] 74/17 84/13 reached [2] 19/4 79/9 reaches [1] 85/19 reaching [1] 78/22 reaction [2] 54/13 75/10 read [27] 19/24 21/18 27/12 48/7 60/17 61/3 61/3 61/4 91/8 94/14 94/19 97/4 98/15 98/18	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10 102/17 102/21 110/24 111/10 111/13 Reporter [2] 2/2 2/2 reports [3] 111/18 111/21 111/23 represent [1] 59/11 representative [1] 67/8 reprimanded [1] 78/9 reproductive [1] 7/23 request [1] 92/2 require [1] 83/16 requiring [1] 108/9 research [14] 5/13 5/20 6/1 6/7 6/25 7/3 7/13 9/2 10/3 10/25 11/3 11/9 12/9 26/10 resembles [1] 88/1 reserve [1] 29/8 resolved [1] 84/23 respect [4] 57/11 68/9 89/10 92/6 respond [2] 15/2 75/20 responded [2] 72/12 106/15	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7 20/11 23/18 38/4 55/1 66/20 68/14 69/20 69/20 75/16 79/6 79/8 84/2 89/20 91/16 95/20 96/13 101/16 102/2 103/11 111/4 same [23] 18/24 20/12 35/1 40/18 41/22 45/11 46/13 51/6 53/11 60/13 66/23 67/6 67/14 71/22 72/14 76/11 79/2 87/23 95/4 95/8 95/12 111/20 111/20 sample [2] 71/25 72/18 sampling [2] 5/15 5/16 sanctuaries [2] 23/5 95/12 SANERIB [1] 1/15 sat [1] 54/2 savanna [1] 9/3 saw [15] 16/21 59/11 68/9 71/5 72/19 73/12 73/12 77/10 77/10 78/1 79/7 87/10 102/8 103/24 105/23 say [29] 8/24 12/21 13/23 16/16 20/22 33/19 35/7 35/13 39/18 40/6 43/20 44/25 45/3
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16 R railroad [1] 47/8 rainy [1] 64/5 raised [2] 29/9 54/2 Raman [1] 9/10 range [7] 15/18 17/9 17/11 17/13 32/22 43/6 51/8 rangers [1] 34/19 ranging [3] 8/2 13/10 105/19 rate [9] 110/18 110/21 110/23 110/24 111/10 111/13 111/19 111/21 111/23 raw [2] 74/17 84/13 reach [5] 68/3 68/4 79/17 85/22 85/24 reached [2] 19/4 79/9 reaches [1] 85/19 reaching [1] 78/22 reaction [2] 54/13 75/10 read [27] 19/24 21/18 27/12 48/7 60/17 61/3	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10 102/17 102/21 110/24 111/10 111/13 Reporter [2] 2/2 2/2 reports [3] 111/18 111/21 111/23 represent [1] 59/11 representative [1] 67/8 reprimanded [1] 78/9 reproductive [1] 7/23 request [1] 92/2 require [1] 83/16 requiring [1] 108/9 research [14] 5/13 5/20 6/1 6/7 6/25 7/3 7/13 9/2 10/3 10/25 11/3 11/9 12/9 26/10 resembles [1] 88/1 reserve [1] 29/8 resolved [1] 84/23 respect [4] 57/11 68/9 89/10 92/6 respond [2] 15/2 75/20 responded [2] 72/12 106/15 response [3] 20/6 75/2 84/19	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7 20/11 23/18 38/4 55/1 66/20 68/14 69/20 69/20 75/16 79/6 79/8 84/2 89/20 91/16 95/20 96/13 101/16 102/2 103/11 111/4 same [23] 18/24 20/12 35/1 40/18 41/22 45/11 46/13 51/6 53/11 60/13 66/23 67/6 67/14 71/22 72/14 76/11 79/2 87/23 95/4 95/8 95/12 111/20 111/20 sample [2] 71/25 72/18 sampling [2] 5/15 5/16 sanctuaries [2] 23/5 95/12 SANERIB [1] 1/15 sat [1] 54/2 savanna [1] 9/3 saw [15] 16/21 59/11 68/9 71/5 72/19 73/12 73/12 77/10 77/10 78/1 79/7 87/10 102/8 103/24 105/23 say [29] 8/24 12/21 13/23 16/16 20/22 33/19 35/7 35/13 39/18 40/6 43/20 44/25 45/3 46/17 47/24 50/7 53/25 63/8 64/22 73/17
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16 R railroad [1] 47/8 rainy [1] 64/5 raised [2] 29/9 54/2 Raman [1] 9/10 range [7] 15/18 17/9 17/11 17/13 32/22 43/6 51/8 rangers [1] 34/19 ranging [3] 8/2 13/10 105/19 rate [9] 110/18 110/21 110/23 110/24 111/10 111/13 111/19 111/21 111/23 raw [2] 74/17 84/13 reach [5] 68/3 68/4 79/17 85/22 85/24 reached [2] 19/4 79/9 reaches [1] 85/19 reaching [1] 78/22 reaction [2] 54/13 75/10 read [27] 19/24 21/18 27/12 48/7 60/17 61/3 61/3 61/4 91/8 94/14 94/19 97/4 98/15 98/18 98/19 100/6 101/23 101/24 103/6 103/22 103/23 107/17 107/21 110/3 111/25 112/1 113/19	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10 102/17 102/21 110/24 111/10 111/13 Reporter [2] 2/2 2/2 reports [3] 111/18 111/21 111/23 represent [1] 59/11 representative [1] 67/8 reprimanded [1] 78/9 reproductive [1] 7/23 request [1] 92/2 require [1] 83/16 requiring [1] 108/9 research [14] 5/13 5/20 6/1 6/7 6/25 7/3 7/13 9/2 10/3 10/25 11/3 11/9 12/9 26/10 resembles [1] 88/1 reserve [1] 29/8 resolved [1] 84/23 respect [4] 57/11 68/9 89/10 92/6 responde [2] 72/12 106/15 response [3] 20/6 75/2 84/19 responsible [1] 11/20 rest [3] 67/8 96/22 109/13	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7 20/11 23/18 38/4 55/1 66/20 68/14 69/20 69/20 75/16 79/6 79/8 84/2 89/20 91/16 95/20 96/13 101/16 102/2 103/11 111/4 same [23] 18/24 20/12 35/1 40/18 41/22 45/11 46/13 51/6 53/11 60/13 66/23 67/6 67/14 71/22 72/14 76/11 79/2 87/23 95/4 95/8 95/12 111/20 111/20 sample [2] 71/25 72/18 sampling [2] 5/15 5/16 sanctuaries [2] 23/5 95/12 SANERIB [1] 1/15 sat [1] 54/2 savanna [1] 9/3 saw [15] 16/21 59/11 68/9 71/5 72/19 73/12 73/12 77/10 77/10 78/1 79/7 87/10 102/8 103/24 105/23 say [29] 8/24 12/21 13/23 16/16 20/22 33/19 35/7 35/13 39/18 40/6 43/20 44/25 45/3 46/17 47/24 50/7 53/25 63/8 64/22 73/17 75/15 76/16 83/6 88/23 94/12 94/17 103/11 103/24 109/10
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16 R railroad [1] 47/8 rainy [1] 64/5 raised [2] 29/9 54/2 Raman [1] 9/10 range [7] 15/18 17/9 17/11 17/13 32/22 43/6 51/8 rangers [1] 34/19 ranging [3] 8/2 13/10 105/19 rate [9] 110/18 110/21 110/23 110/24 111/10 111/13 111/19 111/21 111/23 raw [2] 74/17 84/13 reach [5] 68/3 68/4 79/17 85/22 85/24 reached [2] 19/4 79/9 reaches [1] 85/19 reaching [1] 78/22 reaction [2] 54/13 75/10 read [27] 19/24 21/18 27/12 48/7 60/17 61/3 61/3 61/4 91/8 94/14 94/19 97/4 98/15 98/18 98/19 100/6 101/23 101/24 103/6 103/22 103/23 107/17 107/21 110/3 111/25 112/1 113/19 read 2008 [1] 19/24	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10 102/17 102/21 110/24 111/10 111/13 Reporter [2] 2/2 2/2 reports [3] 111/18 111/21 111/23 represent [1] 59/11 representative [1] 67/8 reprimanded [1] 78/9 reproductive [1] 7/23 request [1] 92/2 require [1] 83/16 requiring [1] 108/9 research [14] 5/13 5/20 6/1 6/7 6/25 7/3 7/13 9/2 10/3 10/25 11/3 11/9 12/9 26/10 resembles [1] 88/1 reserve [1] 29/8 resolved [1] 84/23 respect [4] 57/11 68/9 89/10 92/6 respond [2] 15/2 75/20 responded [2] 72/12 106/15 response [3] 20/6 75/2 84/19 responsible [1] 11/20 rest [3] 67/8 96/22 109/13 restrict [1] 108/5	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7 20/11 23/18 38/4 55/1 66/20 68/14 69/20 69/20 75/16 79/6 79/8 84/2 89/20 91/16 95/20 96/13 101/16 102/2 103/11 111/4 same [23] 18/24 20/12 35/1 40/18 41/22 45/11 46/13 51/6 53/11 60/13 66/23 67/6 67/14 71/22 72/14 76/11 79/2 87/23 95/4 95/8 95/12 111/20 111/20 sample [2] 71/25 72/18 sampling [2] 5/15 5/16 sanctuaries [2] 23/5 95/12 SANERIB [1] 1/15 sat [1] 54/2 savanna [1] 9/3 saw [15] 16/21 59/11 68/9 71/5 72/19 73/12 73/12 77/10 77/10 78/1 79/7 87/10 102/8 103/24 105/23 say [29] 8/24 12/21 13/23 16/16 20/22 33/19 35/7 35/13 39/18 40/6 43/20 44/25 45/3 46/17 47/24 50/7 53/25 63/8 64/22 73/17 75/15 76/16 83/6 88/23 94/12 94/17 103/11 103/24 109/10 saying [5] 18/22 29/14 68/25 97/19 110/11
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16 R railroad [1] 47/8 rainy [1] 64/5 raised [2] 29/9 54/2 Raman [1] 9/10 range [7] 15/18 17/9 17/11 17/13 32/22 43/6 51/8 rangers [1] 34/19 rate [9] 110/18 110/21 110/23 110/24 111/10 111/13 111/19 111/21 111/23 raw [2] 74/17 84/13 reach [5] 68/3 68/4 79/17 85/22 85/24 reached [2] 19/4 79/9 reaches [1] 85/19 reaction [2] 54/13 75/10 read [27] 19/24 21/18 27/12 48/7 60/17 61/3 61/3 61/4 91/8 94/14 94/19 97/4 98/15 98/18 98/19 100/6 101/23 101/24 103/6 103/22 103/23 107/17 107/21 110/3 111/25 112/1 113/19 read 2008 [1] 19/24 reading [1] 98/2	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10 102/17 102/21 110/24 111/10 111/13 Reporter [2] 2/2 2/2 reports [3] 111/18 111/21 111/23 represent [1] 59/11 representative [1] 67/8 reprimanded [1] 78/9 reproductive [1] 7/23 request [1] 92/2 require [1] 83/16 requiring [1] 108/9 research [14] 5/13 5/20 6/1 6/7 6/25 7/3 7/13 9/2 10/3 10/25 11/3 11/9 12/9 26/10 resembles [1] 88/1 reserve [1] 29/8 resolved [1] 84/23 respect [4] 57/11 68/9 89/10 92/6 respond [2] 15/2 75/20 responded [2] 72/12 106/15 response [3] 20/6 75/2 84/19 responsible [1] 11/20 rest [3] 67/8 96/22 109/13 restrict [1] 108/5 restriction [3] 107/7 108/2 108/4	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7 20/11 23/18 38/4 55/1 66/20 68/14 69/20 69/20 75/16 79/6 79/8 84/2 89/20 91/16 95/20 96/13 101/16 102/2 103/11 111/4 same [23] 18/24 20/12 35/1 40/18 41/22 45/11 46/13 51/6 53/11 60/13 66/23 67/6 67/14 71/22 72/14 76/11 79/2 87/23 95/4 95/8 95/12 111/20 111/20 sample [2] 71/25 72/18 sampling [2] 5/15 5/16 sanctuaries [2] 23/5 95/12 SANERIB [1] 1/15 sat [1] 54/2 savanna [1] 9/3 saw [15] 16/21 59/11 68/9 71/5 72/19 73/12 73/12 77/10 77/10 78/1 79/7 87/10 102/8 103/24 105/23 say [29] 8/24 12/21 13/23 16/16 20/22 33/19 35/7 35/13 39/18 40/6 43/20 44/25 45/3 46/17 47/24 50/7 53/25 63/8 64/22 73/17 75/15 76/16 83/6 88/23 94/12 94/17 103/11 103/24 109/10 saying [5] 18/22 29/14 68/25 97/19 110/11 says [3] 64/19 98/6 107/13
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16 R railroad [1] 47/8 rainy [1] 64/5 raised [2] 29/9 54/2 Raman [1] 9/10 range [7] 15/18 17/9 17/11 17/13 32/22 43/6 51/8 rangers [1] 34/19 ranging [3] 8/2 13/10 105/19 rate [9] 110/18 110/21 110/23 110/24 111/10 111/13 111/19 111/21 111/23 raw [2] 74/17 84/13 reach [5] 68/3 68/4 79/17 85/22 85/24 reached [2] 19/4 79/9 reaches [1] 85/19 reaching [1] 78/22 reaction [2] 54/13 75/10 read [27] 19/24 21/18 27/12 48/7 60/17 61/3 61/3 61/4 91/8 94/14 94/19 97/4 98/15 98/18 98/19 100/6 101/23 101/24 103/6 103/22 103/23 107/17 107/21 110/3 111/25 112/1 113/19 read 2008 [1] 19/24	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10 102/17 102/21 110/24 111/10 111/13 Reporter [2] 2/2 2/2 reports [3] 111/18 111/21 111/23 represent [1] 59/11 representative [1] 67/8 reprimanded [1] 78/9 reproductive [1] 7/23 request [1] 92/2 require [1] 83/16 requiring [1] 108/9 research [14] 5/13 5/20 6/1 6/7 6/25 7/3 7/13 9/2 10/3 10/25 11/3 11/9 12/9 26/10 resembles [1] 88/1 reserve [1] 29/8 resolved [1] 84/23 respect [4] 57/11 68/9 89/10 92/6 respond [2] 15/2 75/20 responded [2] 72/12 106/15 response [3] 20/6 75/2 84/19 responsible [1] 11/20 rest [3] 67/8 96/22 109/13 restrict [1] 108/5	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7 20/11 23/18 38/4 55/1 66/20 68/14 69/20 69/20 75/16 79/6 79/8 84/2 89/20 91/16 95/20 96/13 101/16 102/2 103/11 111/4 same [23] 18/24 20/12 35/1 40/18 41/22 45/11 46/13 51/6 53/11 60/13 66/23 67/6 67/14 71/22 72/14 76/11 79/2 87/23 95/4 95/8 95/12 111/20 111/20 sample [2] 71/25 72/18 sampling [2] 5/15 5/16 sanctuaries [2] 23/5 95/12 SANERIB [1] 1/15 sat [1] 54/2 savanna [1] 9/3 saw [15] 16/21 59/11 68/9 71/5 72/19 73/12 73/12 77/10 77/10 78/1 79/7 87/10 102/8 103/24 105/23 say [29] 8/24 12/21 13/23 16/16 20/22 33/19 35/7 35/13 39/18 40/6 43/20 44/25 45/3 46/17 47/24 50/7 53/25 63/8 64/22 73/17 75/15 76/16 83/6 88/23 94/12 94/17 103/11 103/24 109/10 saying [5] 18/22 29/14 68/25 97/19 110/11
111/8 111/18 111/20 111/20 111/22 112/8 112/9 questioning [1] 74/7 questions [6] 28/24 37/1 47/13 82/23 84/14 90/8 quite [4] 8/18 63/5 97/10 99/3 quote [7] 94/12 94/14 98/1 98/2 98/6 107/13 107/16 R railroad [1] 47/8 rainy [1] 64/5 raised [2] 29/9 54/2 Raman [1] 9/10 range [7] 15/18 17/9 17/11 17/13 32/22 43/6 51/8 rangers [1] 34/19 rate [9] 110/18 110/21 110/23 110/24 111/10 111/13 111/19 111/21 111/23 raw [2] 74/17 84/13 reach [5] 68/3 68/4 79/17 85/22 85/24 reached [2] 19/4 79/9 reaches [1] 85/19 reaction [2] 54/13 75/10 read [27] 19/24 21/18 27/12 48/7 60/17 61/3 61/3 61/4 91/8 94/14 94/19 97/4 98/15 98/18 98/19 100/6 101/23 101/24 103/6 103/22 103/23 107/17 107/21 110/3 111/25 112/1 113/19 read 2008 [1] 19/24 reading [1] 75/24	removing [1] 21/4 render [4] 23/13 24/3 24/10 41/15 rendering [1] 41/19 repeat [6] 6/22 23/22 94/24 101/7 104/8 109/1 repeatedly [1] 85/19 repetitive [2] 50/6 65/17 Rephrase [1] 112/8 report [18] 9/18 14/21 19/9 65/2 71/15 71/23 90/10 90/13 90/22 102/5 102/5 102/7 102/10 102/17 102/21 110/24 111/10 111/13 Reporter [2] 2/2 2/2 reports [3] 111/18 111/21 111/23 represent [1] 59/11 representative [1] 67/8 reprimanded [1] 78/9 reproductive [1] 7/23 request [1] 92/2 require [1] 83/16 requiring [1] 108/9 research [14] 5/13 5/20 6/1 6/7 6/25 7/3 7/13 9/2 10/3 10/25 11/3 11/9 12/9 26/10 resembles [1] 88/1 reserve [1] 29/8 resolved [1] 84/23 respect [4] 57/11 68/9 89/10 92/6 respond [2] 15/2 75/20 responded [2] 72/12 106/15 response [3] 20/6 75/2 84/19 responsible [1] 11/20 rest [3] 67/8 96/22 109/13 restrict [1] 108/5 restriction [3] 107/7 108/2 108/4 restrictions [1] 107/23	rumbles [1] 30/12 rumbling [4] 31/15 31/16 86/13 87/12 run [1] 83/12 running [1] 7/6 rupture [1] 71/13 rush [1] 86/25 S safaris [2] 96/4 109/13 said [26] 13/21 16/17 16/23 17/19 20/5 20/7 20/11 23/18 38/4 55/1 66/20 68/14 69/20 69/20 75/16 79/6 79/8 84/2 89/20 91/16 95/20 96/13 101/16 102/2 103/11 111/4 same [23] 18/24 20/12 35/1 40/18 41/22 45/11 46/13 51/6 53/11 60/13 66/23 67/6 67/14 71/22 72/14 76/11 79/2 87/23 95/4 95/8 95/12 111/20 111/20 sample [2] 71/25 72/18 sampling [2] 5/15 5/16 sanctuaries [2] 23/5 95/12 SANERIB [1] 1/15 sat [1] 54/2 savanna [1] 9/3 saw [15] 16/21 59/11 68/9 71/5 72/19 73/12 73/12 77/10 77/10 78/1 79/7 87/10 102/8 103/24 105/23 say [29] 8/24 12/21 13/23 16/16 20/22 33/19 35/7 35/13 39/18 40/6 43/20 44/25 45/3 46/17 47/24 50/7 53/25 63/8 64/22 73/17 75/15 76/16 83/6 88/23 94/12 94/17 103/11 103/24 109/10 saying [5] 18/22 29/14 68/25 97/19 110/11 says [3] 64/19 98/6 107/13 scan [1] 5/16

64/19 70/8 74/9 74/11 75/9 75/24 75/24 46/24 48/9 67/18 80/25 88/22 89/4 89/5 75/25 76/6 76/12 85/16 85/18 85/19 85/22 Sociality [1] 19/25 scene [3] 31/11 37/9 37/9 85/24 85/24 86/1 86/4 86/5 86/7 86/8 86/8 socialize [2] 68/2 68/5 scheduled [1] 76/22 86/24 86/24 104/6 104/6 106/15 111/2 111/4 socially [1] 68/11 society [6] 1/3 5/24 16/6 22/9 33/23 98/8 scheduling [1] 76/23 111/6 Schmitt [3] 113/14 113/17 113/17 socioeconomic [1] 40/2 she'd [1] 86/14 scientific [2] 9/24 35/2 she's [13] 7/6 29/2 47/14 59/1 59/2 70/9 75/7 sole [4] 19/18 60/21 61/8 69/22 scientists [10] 5/25 6/8 8/3 8/6 9/5 10/24 11/3 75/12 76/4 85/25 86/7 86/9 90/15 solely [1] 90/17 11/9 12/15 64/12 SHEA [3] 1/21 24/23 93/22 some [41] 8/6 13/11 14/7 14/16 22/20 23/9 29/13 37/1 37/16 37/19 45/1 45/2 47/11 scrape [2] 18/6 18/8 sheet [1] 43/20 screaming [1] 31/16 **Shirley [3]** 84/10 85/16 85/22 48/21 50/4 50/16 53/11 54/4 55/17 56/6 screen [1] 56/20 short [6] 25/16 59/3 65/16 66/17 66/17 95/22 62/24 64/1 64/21 68/25 69/1 69/11 71/12 search [1] 45/21 **should [18]** 19/19 19/24 66/4 70/8 74/18 76/25 82/8 82/23 83/16 84/14 89/22 89/23 searchable [1] 45/13 88/24 93/23 94/13 94/22 94/25 95/19 96/1 93/16 93/17 95/3 100/3 109/16 109/24 searches [1] 34/9 96/4 96/9 96/19 99/11 100/14 109/10 113/18 season [1] 64/5 shouting [1] 54/20 somehow [1] 40/17 second [3] 19/24 21/25 80/18 shove [1] 49/18 someone [2] 75/22 96/12 secretions [1] 87/14 something [19] 9/18 17/18 33/13 49/7 53/20 shoving [1] 37/15 section [2] 10/6 86/3 **show [46]** 14/20 14/25 15/4 15/8 19/8 21/22 55/6 55/8 55/9 58/14 64/3 64/20 69/12 73/4 security [2] 65/9 65/9 27/2 32/10 32/13 35/11 35/11 35/14 36/10 75/25 79/10 80/15 97/19 97/22 97/25 sedentary [1] 47/4 36/16 36/25 42/18 51/13 55/17 55/19 60/5 sometimes [6] 11/8 31/9 52/24 52/24 87/4 see [42] 13/25 19/1 25/6 34/22 35/18 35/20 60/9 60/10 65/11 65/19 65/23 68/17 71/25 90/1 42/5 42/5 42/6 43/11 44/24 52/21 57/15 72/18 75/4 75/18 77/6 78/14 80/9 82/11 somewhere [2] 17/14 90/1 58/25 59/3 59/25 63/3 63/11 63/22 63/25 82/18 82/23 84/11 84/24 85/11 94/3 96/16 soon [4] 34/16 86/6 86/6 92/24 65/14 66/13 68/1 77/14 77/14 79/10 84/25 99/23 103/13 107/11 109/7 111/17 sorry [19] 6/22 12/22 15/20 56/3 56/22 58/6 86/1 86/24 89/6 94/4 97/1 97/9 98/1 98/16 showed [3] 65/3 91/7 91/15 60/2 64/10 69/20 82/17 91/1 92/12 92/23 102/3 102/7 104/19 104/19 106/4 106/6 94/24 101/22 106/10 106/12 108/25 109/5 showing [8] 37/4 56/17 56/22 56/23 63/24 106/22 70/9 77/15 87/14 sort [26] 10/21 15/21 17/8 17/9 31/17 32/1 seeing [3] 66/21 67/12 78/7 **shown [5]** 23/9 25/4 46/1 47/3 77/15 45/2 45/3 46/20 50/5 52/16 52/21 52/24 seek [1] 84/23 shows [2] 31/25 60/13 55/15 60/20 60/20 61/15 64/1 65/15 65/18 seeking [1] 57/10 shrimp [1] 20/22 69/11 74/4 86/1 86/13 87/24 100/4 seemed [3] 72/10 73/15 74/2 sorts [3] 18/2 49/16 61/21 sic [1] 111/23 seen [30] 16/22 21/1 32/25 35/8 35/9 36/6 side [11] 31/9 31/22 52/17 53/11 59/17 62/4 sound [1] 87/13 37/12 38/14 38/16 47/25 50/21 53/22 54/16 73/9 73/11 73/12 80/16 85/20 sounds [4] 16/2 16/2 16/3 32/8 54/16 54/18 54/21 63/19 75/24 80/14 81/8 sideways [1] 52/18 South [6] 23/1 88/14 88/16 99/15 99/18 83/8 83/10 83/11 94/2 101/25 102/6 103/2 sight [1] 22/8 99/25 103/6 111/15 111/15 signals [1] 16/20 southeast [1] 30/19 seismic [2] 16/1 16/10 significance [3] 59/12 62/23 67/19 space [12] 48/2 48/12 49/10 59/15 89/3 89/4 selective [1] 40/7 signs [2] 63/20 63/24 89/7 89/15 90/4 95/4 95/8 95/12 self [1] 17/3 similar [4] 16/6 16/22 17/16 33/1 spaces [2] 89/2 89/25 self-aware [1] 17/3 span [1] 39/4 similarities [1] 15/13 semicaptive [1] 22/21 similarity [1] 20/19 spans [2] 39/6 39/7 Senate [1] 100/13 simple [1] 16/25 speaking [1] 6/18 send [1] 80/18 simply [1] 15/3 speaks [1] 58/22 sense [12] 12/8 15/25 16/11 40/2 40/4 40/5 SIMPSON [1] 1/20 spear [1] 64/1 40/13 41/2 42/2 46/18 46/22 47/2 since [6] 6/24 7/14 15/9 26/7 96/8 96/24 special [1] 33/8 sensitive [2] 15/19 15/24 sing [1] 54/22 specialist [1] 9/13 sensors [1] 20/11 sir [1] 98/22 species [16] 9/1 9/22 10/20 12/3 12/13 14/4 sensory [5] 15/21 15/21 18/25 18/25 20/10 14/25 15/4 15/9 15/14 16/15 17/6 26/19 sister [1] 31/21 sentence [3] 94/12 94/12 107/12 sit [6] 25/8 43/19 94/16 113/7 113/10 113/11 26/21 39/17 98/15 separate [1] 26/20 site [1] 18/11 **specific [4]** 62/17 83/7 110/16 110/16 **separated** [1] 33/9 **specifically [7]** 26/16 27/8 29/1 109/18 sites [1] 6/12 September [2] 96/7 96/8 situation [2] 105/21 110/2 109/24 110/11 111/4 September 1975 [2] 96/7 96/8 situations [3] 95/25 109/11 109/14 spell [1] 13/5 sequence [1] 78/7 six [2] 8/17 43/9 spend [6] 4/14 34/7 42/16 42/20 59/21 90/2 size [5] 15/18 17/10 17/11 45/2 46/19 series [1] 80/10 spending [1] 43/4 **spent** [5] 6/23 8/16 29/2 34/17 41/25 **spin** [2] 33/10 83/13 serious [3] 110/21 110/25 111/10 sizes [1] 44/20 served [2] 65/21 88/11 skin [6] 14/13 14/14 15/19 15/21 15/21 60/21 Service [2] 11/15 11/20 skipping [1] 83/11 spinal [1] 63/1 serving [1] 99/24 sloppy [1] 70/20 splash [1] 36/9 session [2] 1/6 113/15 slowly [1] 63/16 split [3] 7/10 16/8 33/6 setting [1] 11/21 smacked [1] 78/23 spoken [1] 64/18 small [4] 14/8 80/22 86/20 89/24 seven [1] 92/5 spouses [1] 112/4 several [5] 10/16 30/6 32/18 33/16 80/21 smaller [3] 17/10 18/3 32/24 spread [1] 38/12 sexually [2] 34/7 34/8 smell [2] 16/11 55/7 square [3] 17/12 17/14 17/14 shape [1] 45/19 smelled [1] 31/19 squat [1] 38/14 share [2] 11/2 11/5 smelling [2] 18/1 31/14 Sri [9] 6/13 12/21 12/22 13/3 13/20 23/4 **sharp [2]** 71/12 71/14 smooth [1] 61/11 25/23 26/11 45/12 she [64] 13/10 13/21 13/22 15/11 29/2 29/25 sniffing [2] 79/10 79/11 Sri Lanka [5] 12/22 13/20 23/4 25/23 26/11 29/25 30/1 30/1 30/2 30/10 30/11 30/11 snorkel [1] 37/25 **Sri Lankan [1]** 13/3 30/13 31/19 34/16 41/23 41/23 49/2 52/17 so [150] stage [1] 40/10 52/17 52/18 52/18 52/19 52/20 52/22 52/25 so-and-so [1] 44/25 stamp [2] 37/4 82/17 52/25 53/11 53/25 54/1 54/2 54/3 64/11 social [13] 8/1 13/11 13/21 15/17 16/12 32/19 stamped [1] 65/23

Thank [13] 4/3 29/4 36/21 62/9 68/23 69/5 support [1] 112/2 85/10 92/14 93/2 112/23 112/25 113/21 supporter [1] 100/18 stand [12] 4/4 29/24 31/9 50/8 50/21 50/23 suppose [2] 9/10 39/16 113/22 50/23 61/17 73/19 83/15 105/15 113/22 supposed [1] 73/19 that [530] standing [16] 34/23 34/24 38/12 38/12 38/23 that **2001** [1] 96/23 sure [14] 8/11 60/25 61/2 80/16 90/9 91/4 38/23 55/13 59/2 60/14 60/23 61/5 61/16 91/6 92/22 93/11 96/20 99/20 102/25 104/21 that 2007 [1] 22/10 65/18 67/14 67/14 92/6 112/17 that's [71] 8/5 10/18 12/23 16/11 18/19 18/23 Stardust [2] 99/14 100/1 20/25 22/5 22/5 22/6 25/10 25/13 25/22 surface [1] 61/17 start [6] 40/5 87/3 93/19 112/16 112/19 surprised [1] 10/7 25/25 26/6 26/9 26/12 27/13 28/3 33/3 37/7 112/24 survey [1] 7/21 39/14 42/4 42/21 42/23 43/7 44/19 44/25 started [8] 7/5 30/12 30/14 49/22 49/24 survivors [1] 112/5 45/3 50/24 53/20 55/7 57/19 58/8 59/18 61/9 **Susan [3]** 49/3 52/22 53/25 58/11 110/10 110/15 68/4 68/16 70/20 70/25 72/15 77/2 78/12 starting [6] 29/14 41/12 61/7 94/3 97/18 swamp [4] 35/25 36/5 63/8 63/8 79/20 81/15 82/13 88/18 91/2 91/18 91/20 109/7 sway [1] 49/24 91/25 92/3 92/9 92/24 95/20 96/5 98/22 99/9 starts [5] 51/10 52/25 61/4 82/18 86/1 swayed [1] 49/25 99/13 100/12 100/16 101/1 103/15 104/5 swaying [9] 49/22 50/3 50/4 50/10 50/13 state [3] 4/17 46/21 100/14 105/4 105/23 108/1 112/15 113/11 113/20 statement [8] 15/5 94/8 94/9 96/21 96/22 51/3 51/12 52/24 60/24 113/21 98/4 99/17 100/4 that's 2008 [1] 22/6 swim [3] 36/3 37/17 37/22 statements [2] 69/3 88/12 their [55] 7/8 11/5 14/11 14/12 16/12 17/21 swimmers [2] 37/23 38/1 STATES [3] 1/1 1/11 81/20 swimming [2] 38/4 38/5 17/23 18/1 18/13 18/14 22/24 31/25 33/11 stay [4] 33/24 55/13 73/17 108/9 swing [1] 52/17 35/9 37/20 38/13 38/13 42/1 42/17 47/3 47/4 staying [1] 18/13 swinging [1] 30/1 48/7 48/8 48/10 52/16 52/24 54/17 60/19 stays [1] 34/4 60/19 62/24 62/25 62/25 62/25 62/25 63/6 swings [1] 52/18 steer [1] 25/9 sworn [1] 4/7 65/17 68/4 73/17 73/21 74/13 78/12 79/4 stenography [1] 2/25 syndrome [1] 112/3 79/4 79/21 80/3 80/22 83/15 84/21 85/5 system [4] 20/17 32/19 36/1 40/3 step [5] 21/5 59/16 59/17 61/24 73/23 86/18 88/2 90/2 92/6 107/15 111/3 steps [1] 51/10 them [56] 15/6 15/10 15/11 16/21 21/5 24/12 stereotypic [4] 111/14 111/16 111/19 111/24 27/1 29/2 29/3 34/21 35/20 40/6 42/16 43/19 **T-U-L-I [1]** 100/10 stick [1] 51/4 44/15 45/2 45/4 45/9 47/19 48/11 49/20 50/5 sticking [1] 36/7 table [1] 62/4 53/19 56/24 57/15 57/22 66/16 67/2 67/2 69/10 71/12 73/25 74/1 74/1 80/24 81/16 tactile [4] 7/20 16/18 18/9 46/23 stiff [1] 62/20 still [13] 7/6 8/12 34/23 40/10 40/18 45/23 tail [3] 38/13 45/18 45/19 81/19 81/24 81/25 83/11 88/3 88/3 88/4 88/4 46/21 60/7 66/14 73/19 86/2 89/23 113/15 tails [2] 45/18 83/13 88/20 88/22 89/4 92/25 92/25 93/1 94/1 **stimulating** [1] 49/19 take [11] 31/25 39/2 51/5 52/8 61/23 73/22 95/14 105/20 105/24 108/16 110/14 stones [1] 21/4 86/6 86/25 87/2 89/5 113/3 themselves [2] 37/19 86/21 stood [1] 31/21 taken [10] 51/14 55/18 56/5 56/6 56/14 66/25 then [68] 12/10 16/23 20/19 20/20 25/8 25/17 **stop [6]** 18/16 50/15 73/4 88/13 93/18 109/12 68/18 77/22 86/17 97/19 26/19 29/25 30/1 31/19 32/9 33/6 34/8 34/25 stopped [1] 107/20 takes [1] 110/2 36/2 36/4 36/25 37/16 37/17 37/20 39/4 40/6 stops [1] 52/25 story [1] 30/9 taking [12] 18/10 48/9 51/10 86/20 87/3 87/3 40/15 40/23 43/4 43/11 49/2 50/23 52/15 87/16 107/1 107/3 108/24 109/4 110/1 52/25 55/2 55/15 60/22 61/1 61/14 61/20 strange [1] 64/5 talk [2] 54/21 108/8 63/25 64/2 64/5 64/7 67/2 70/6 70/7 70/20 strangely [2] 42/6 42/7 talked [1] 109/9 72/9 72/25 73/18 73/24 77/13 78/9 78/23 Stream [1] 6/6 talking [14] 17/4 22/16 26/24 27/1 39/8 39/9 78/24 80/18 82/23 84/13 86/23 86/25 87/16 40/14 40/14 52/11 56/3 66/11 87/17 87/17 street [1] 42/5 90/25 93/15 95/11 95/15 96/11 96/13 96/24 strike [3] 76/11 76/13 77/1 108/7 102/11 103/13 105/24 strong [1] 100/18 tamed [1] 39/24 theory [1] 92/11 **structure** [2] 7/23 49/10 TANYA [1] 1/15 there [98] 8/8 8/12 14/4 14/5 14/16 15/1 **Tanzania** [1] 6/6 studied [7] 7/19 13/8 22/20 22/20 29/20 15/13 15/15 19/13 19/15 19/16 19/19 20/18 47/24 97/1 taught [2] 5/20 5/22 20/19 21/13 22/3 29/18 30/7 31/13 32/5 33/5 studies [20] 6/5 7/16 7/25 20/21 21/23 32/5 33/14 34/23 34/24 35/2 36/9 37/12 37/16 team [1] 96/23 42/11 42/12 43/9 43/13 110/8 110/10 110/12 tears [2] 44/16 45/18 45/10 45/14 48/22 49/1 49/3 49/6 49/14 110/15 110/18 110/24 111/9 111/10 111/13 tell [16] 7/2 30/9 37/6 44/12 57/15 58/13 49/20 50/1 52/1 53/1 53/9 54/20 54/24 55/16 112/2 58/18 58/21 65/12 66/10 69/6 71/11 72/18 56/19 56/25 57/3 57/15 58/9 58/10 58/14 study [24] 5/9 5/13 6/21 7/4 7/17 7/19 7/21 78/20 83/1 95/6 59/1 60/4 60/20 62/2 62/5 64/21 65/18 66/14 66/15 66/16 66/24 69/19 70/3 72/22 74/22 8/13 9/5 10/2 12/6 12/9 12/24 13/12 13/12 temporal [2] 73/8 87/14 13/22 17/19 22/24 42/4 42/4 64/12 111/18 tend [6] 32/23 37/17 38/12 50/7 50/8 90/1 76/1 76/14 79/12 80/16 80/24 84/16 85/16 111/21 111/23 tender [2] 4/15 24/16 86/2 86/13 88/15 89/21 89/22 89/23 90/20 studying [3] 9/1 42/1 96/6 tends [3] 17/10 52/17 52/21 91/9 91/10 91/11 93/11 95/11 101/24 105/5 stuff [1] 83/21 tense [1] 103/25 105/10 107/13 109/12 110/8 110/12 110/14 subject [2] 85/2 91/18 tent [1] 8/17 110/15 110/17 110/18 111/5 111/13 112/19 subpoena [1] 65/21 term [5] 7/19 32/3 32/4 50/2 50/3 there's [30] 5/21 19/16 20/19 30/23 32/5 successful [1] 88/15 terms [6] 20/25 37/12 59/15 72/19 76/7 36/12 36/19 39/16 45/13 47/5 49/17 49/18 such [6] 54/18 105/25 107/23 108/23 109/3 89/17 51/16 52/6 53/16 59/3 64/10 64/14 65/24 109/16 test [1] 32/9 66/16 70/20 86/22 87/25 88/1 88/1 89/9 89/10 92/20 95/2 95/3 suckling [2] 37/25 87/5 testified [2] 4/8 100/9 sue [1] 74/12 testify [3] 29/7 76/18 100/2 thereabouts [1] 17/12 sufficient [4] 23/12 23/23 24/2 24/9 testimony [16] 27/12 47/12 47/13 52/3 52/4 **therefore [3]** 66/2 66/3 74/18 Suite [2] 1/17 1/23 69/1 69/2 75/24 76/2 76/12 77/1 97/4 100/6 Thereupon [1] 4/5 **Sukumar [7]** 9/11 9/15 9/25 10/3 10/9 10/11 101/16 101/17 112/21 these [45] 6/7 7/7 8/11 14/24 15/3 16/7 21/19 **Thailand [5]** 12/23 23/2 25/12 99/5 99/8 32/11 32/16 33/14 39/13 39/25 43/14 45/17 SULLIVAN [12] 1/10 7/2 8/3 29/12 37/6 than [15] 10/8 12/3 14/19 18/14 22/11 22/16 45/20 52/23 53/1 53/14 55/20 61/15 66/1 38/9 51/14 52/10 53/6 66/11 71/11 85/14 25/8 32/16 49/20 59/16 67/15 70/15 83/10 68/1 68/18 68/20 71/4 71/8 80/13 80/20 sum [1] 26/4 88/21 92/5 80/21 81/1 81/19 81/21 81/23 83/16 86/17

T)	too [5] 23/24 33/5 58/12 61/11 61/13	Ultimately [1] 99/7
T	took [5] 23/1 30/18 67/2 75/17 102/1	uncomfortable [1] 61/18
these [10] 86/23 87/1 87/6 87/23 88/19 92/20 98/3 103/20 105/19 107/14	tool [1] 16/25 tools [3] 15/3 17/2 29/17	under [11] 37/25 50/21 66/4 73/9 73/10
thesis [4] 5/11 5/15 5/16 26/22	top [2] 19/19 61/20	74/18 78/8 84/18 87/24 108/19 113/3 underground [3] 67/16 67/17 67/20
they [273]	tops [1] 14/11	underneath [1] 31/20
they're [14] 36/2 45/16 49/12 53/16 56/14	total [4] 13/23 25/20 26/4 78/8	understand [14] 25/12 35/16 70/11 74/15
66/17 73/19 80/23 81/1 86/7 87/3 92/4 94/1 95/14	totally [2] 53/16 70/18 touch [6] 16/10 18/13 33/16 68/3 68/13 78/25	74/23 81/18 90/16 103/25 104/7 104/10 104/15 108/15 109/9 109/14
they've [7] 32/10 32/13 35/9 44/15 44/16	touching [3] 34/25 87/15 87/18	understanding [3] 17/3 17/4 35/15
55/8 83/18	touchstone [1] 10/22	understood [1] 20/7
thicker [1] 14/13 thing [9] 36/1 45/11 50/24 52/19 55/10 60/13	Tova [1] 49/2 toward [7] 19/4 73/2 73/3 79/10 79/11 89/1	underway [1] 6/15 unevenly [2] 61/1 61/5
75/15 87/13 87/23	90/5	unfairly [1] 74/19
things [8] 18/2 29/22 45/24 49/16 81/1 88/17	track [4] 18/12 45/9 58/12 70/16	unfortunately [1] 38/9
95/11 109/19 think [55] 8/19 12/23 18/23 19/17 22/5 22/10	traditionally [1] 40/21 trailed [1] 106/10	Unit [2] 66/1 66/1 UNITED [5] 1/1 1/11 81/20 100/17 100/21
25/7 25/13 25/19 30/22 36/19 39/14 39/17	train [7] 15/20 42/14 48/2 48/11 67/14 67/15	University [1] 5/6
45/3 46/12 46/14 46/18 46/22 47/2 49/6	73/25	unnatural [2] 83/3 83/6
49/23 51/1 51/15 52/12 55/20 61/18 62/20 64/4 67/13 67/17 73/13 74/10 78/2 78/2 78/5	trained [4] 6/1 24/24 25/1 29/2 training [2] 74/8 74/11	until [1] 105/25 up [41] 4/24 4/25 7/10 8/15 13/20 16/8 18/12
78/6 78/6 80/20 82/1 84/22 85/13 88/2 88/3	trains [1] 47/18	19/4 19/14 31/10 31/22 32/12 33/17 33/21
91/7 91/9 91/11 91/16 96/13 96/23 97/19	transcript [4] 1/10 2/25 113/19 114/4	36/7 40/7 43/3 43/16 45/21 47/9 52/25 54/1
100/6 104/12 105/20 109/20 110/1 thinner [1] 14/13	transcription [1] 2/25 transit [1] 23/4	55/13 57/14 60/2 63/5 63/7 63/9 63/12 63/14 63/18 77/12 77/14 86/1 97/8 105/2 105/6
thinner-looking [1] 14/13	travel [4] 17/8 47/7 65/4 113/18	105/8 105/12 105/16 113/8
third [3] 22/7 88/11 98/6	treat [2] 67/18 81/19	updated [1] 96/24
thirsty [1] 36/2 this [160]	treated [1] 64/20	upper [1] 73/11
this [100] thorns [1] 18/8	treating [1] 81/22 treatment [6] 67/12 78/3 81/8 88/21 89/18	upsets [2] 48/14 48/14 upside [1] 36/7
those [26] 5/17 8/15 16/3 16/21 20/23 21/18	95/21	urinating [1] 61/6
28/22 28/24 32/10 35/16 44/5 44/17 55/22	tree [1] 50/22	us [13] 8/6 26/24 42/5 50/22 58/13 58/19
56/17 57/3 57/10 57/21 68/22 69/8 83/15 103/4 106/6 106/22 108/23 109/4 109/16	trial [2] 1/10 113/19 tried [2] 31/20 85/18	58/21 61/17 69/6 72/18 78/20 103/13 103/15 USDA [1] 110/6
though [7] 41/16 48/3 75/7 75/16 77/3 88/24	tries [2] 85/22 85/24	use [38] 16/3 16/9 16/25 18/2 18/5 18/6 18/7
103/5	true [19] 18/17 18/19 20/25 25/3 26/5 26/8	18/8 18/9 18/17 23/14 24/3 25/4 29/17 31/7
thought [4] 15/20 31/19 69/20 96/10 thousand [2] 13/25 13/25	26/9 27/16 27/24 28/7 38/2 96/5 97/7 97/15 99/2 100/15 100/16 100/20 105/6	50/3 73/1 73/16 73/21 74/2 74/8 74/9 74/13 75/8 75/10 78/6 83/5 84/24 87/22 93/17
thousands [1] 7/7	trumpeting [3] 31/15 86/13 87/12	94/22 95/3 95/11 95/16 95/18 96/3 106/5
three [11] 9/22 10/20 21/13 21/14 21/19	trunk [22] 14/12 15/25 17/17 17/22 17/24	107/15
25/14 25/20 34/16 34/24 49/7 85/17 through [13] 16/17 16/19 32/10 52/19 72/4	18/1 18/2 18/8 18/9 18/17 34/18 35/9 37/25 44/3 73/9 73/10 77/13 78/23 79/9 79/11 80/6	used [23] 5/15 15/22 25/2 25/8 40/10 44/15 51/7 52/4 55/19 72/5 72/6 72/7 72/8 72/20
72/16 83/5 85/19 85/22 85/24 87/2 107/15	80/8	72/23 73/24 73/25 74/15 76/9 80/17 94/13
112/14	trunks [3] 18/6 73/21 79/21	97/10 99/20
throughout [1] 44/21 throw [1] 37/20	Trust [3] 96/23 100/18 100/22 try [10] 30/25 30/25 31/5 31/9 35/8 35/9	uses [3] 17/17 29/25 73/3 using [6] 32/6 71/17 86/7 95/2 95/14 106/25
Thus [1] 101/2	73/22 74/24 78/8 109/9	usually [13] 30/4 30/5 33/4 35/24 35/24
tiers [1] 33/14	trying [9] 17/21 34/18 85/19 88/13 92/23	37/18 37/20 43/4 50/6 53/9 63/23 64/1 64/4
tightening [1] 77/17 time [60] 4/15 6/23 6/24 8/18 16/8 16/8 21/3	103/12 103/15 108/14 112/11 Tsavo [1] 22/21	$ \mathbf{V} $
25/2 26/3 26/8 26/14 29/3 33/9 34/7 36/9	Tuli [1] 100/10	value [1] 84/24
37/4 39/24 40/19 42/16 42/20 47/18 47/25	Turkalo [1] 10/19	various [2] 6/19 23/5
50/1 51/6 52/20 54/18 55/12 59/21 65/23 66/3 67/4 72/5 73/20 73/21 73/22 74/15 75/4	turn [2] 10/6 11/5 turned [2] 30/11 66/25	vary [1] 87/9 venation [1] 44/17
79/19 79/20 80/18 82/17 86/20 87/16 87/19	tushes [2] 14/18 45/17	venue [1] 65/5
88/20 90/9 93/3 93/8 93/12 93/17 95/22	tuskless [3] 14/16 14/17 14/19	verdict [2] 61/23 61/24
97/13 101/15 102/1 105/5 105/25 105/25 111/1 112/10 112/13	tusks [6] 14/16 33/11 34/19 34/20 34/25 44/18	versus [1] 99/25 vertebrates [1] 18/25
time-stamp [1] 37/4	twice [2] 77/12 93/1	very [79] 5/21 6/5 7/19 9/21 9/25 11/24 12/8
times [9] 10/8 30/6 32/18 54/2 85/18 85/23	twisting [2] 21/2 64/4	14/8 15/19 15/24 16/2 16/6 16/11 16/16
85/23 99/1 99/3 tiny [2] 31/20 48/12	two [30] 6/11 12/13 14/4 14/10 14/12 14/24 14/25 15/4 15/9 15/13 15/19 19/16 25/14	16/22 16/24 17/4 17/5 17/8 17/16 17/18 17/20 17/22 17/22 21/3 25/16 29/2 29/2
tip [4] 14/11 17/22 17/23 79/11	25/20 26/1 26/2 30/17 32/23 33/3 33/17	30/22 31/7 31/15 31/15 33/3 33/7 33/11
title [1] 11/18	44/24 49/12 49/24 52/23 55/4 57/3 68/17	33/22 36/3 36/6 37/9 37/14 37/18 38/1 39/15
titled [1] 114/5	98/12 98/23 101/2	39/17 39/23 39/24 40/10 44/18 45/19 46/14
today [2] 94/17 103/2 toes [2] 60/19 60/19	typical [10] 37/9 42/25 55/7 59/6 59/9 59/19 59/20 59/21 64/24 79/15	46/15 48/2 48/13 49/11 49/19 50/24 54/19 54/22 55/7 59/20 60/19 61/11 64/5 65/15
together [9] 13/3 16/7 16/9 29/23 33/9 33/11	typically [3] 77/15 95/7 95/9	66/17 70/22 71/14 73/20 74/2 80/24 80/24
42/18 50/6 96/22	U	81/1 88/2 89/13 89/24 89/25 103/13 107/16
told [2] 13/21 55/15 Tom [2] 92/5 98/11	U.S [2] 2/3 98/15	111/2 vestigial [1] 14/17
tomorrow [6] 75/18 76/22 93/6 93/7 93/8	Uh [2] 27/10 96/17	vet [2] 48/6 48/7
112/25	Uh-huh [2] 27/10 96/17	veterinarian [2] 27/14 27/15

 \mathbf{V} veterinary [1] 95/21 vets [2] 64/2 111/1 via [1] 65/21 vibrations [2] 15/25 16/1 video [35] 37/5 51/14 52/8 52/13 65/3 65/9 65/13 65/19 65/20 66/8 66/12 66/21 66/23 67/5 67/8 74/23 75/1 75/4 75/19 76/18 77/9 78/15 80/11 82/12 82/17 82/25 83/1 84/12 84/24 84/25 91/5 101/10 101/11 101/22 101/24 videographer [1] 75/17 videotape [16] 66/7 71/16 71/22 71/25 72/3 72/4 72/15 72/16 72/19 82/8 82/9 84/5 84/9 85/15 100/4 101/12 view [5] 52/20 65/14 79/11 93/22 108/15 viewed [1] 100/4 viewing [1] 94/8 violation [1] 98/14 virus [2] 21/2 64/4 visual [2] 7/20 16/18 visual-tactile [1] 7/20 vitae [1] 19/8 vocal [1] 22/23 vocalize [1] 17/21 voice [2] 98/24 106/10 voices [7] 32/12 33/17 94/7 94/10 94/11 98/21 98/23

voir [4] 24/18 24/19 29/5 74/10

Volume [1] 22/2

W wait [1] 105/15 waits [3] 30/2 30/2 30/2 Wales [3] 99/15 99/18 99/25 walk [8] 21/3 44/22 51/7 51/8 60/19 60/23 64/6 64/6 walking [8] 42/5 42/16 44/25 60/22 62/21 62/22 73/24 89/3 walks [1] 64/11 wallowing [2] 37/16 63/9 wander [2] 83/20 105/25 wanderings [1] 33/21 want [25] 15/1 29/23 36/25 47/10 47/12 47/14 53/25 56/19 57/22 58/5 58/18 65/12 68/24 68/25 69/2 69/2 72/1 73/19 73/20 82/17 89/15 90/9 107/20 109/9 109/22 wanted [17] 13/21 13/22 16/16 21/10 21/18 30/10 30/13 33/19 37/6 55/17 58/13 60/4 60/5 60/10 75/15 91/4 92/22 wants [5] 29/25 72/25 73/2 73/4 104/7 war [1] 112/4 was [179] washed [1] 63/13 washing [1] 58/3 **Washington [5]** 1/4 1/17 1/23 2/4 65/10 wasn't [4] 37/18 49/2 72/24 111/8 waste [1] 66/3 watch [3] 17/24 66/11 101/21 watched [12] 19/2 31/4 31/11 31/11 36/5 66/20 66/22 66/24 67/4 67/7 82/8 85/17 watching [3] 19/4 52/11 85/14 water [6] 35/19 35/21 35/23 36/3 37/15 37/25 way [27] 21/4 29/23 30/11 30/23 35/3 37/7 38/21 38/23 41/7 44/24 46/11 46/15 47/19 52/4 55/10 61/8 67/14 67/18 72/20 73/18 74/25 80/3 81/22 86/4 87/21 101/20 101/21 ways [3] 18/6 47/5 82/3 we [86] 12/11 16/5 18/24 18/24 18/24 19/8 19/17 20/3 20/7 20/12 21/2 28/25 31/13 32/7 32/25 33/13 36/16 37/3 37/23 39/1 39/9

39/18 41/13 49/6 49/6 51/13 51/24 55/12 55/19 55/22 55/24 55/25 56/13 56/23 57/21 60/4 62/15 63/25 64/2 64/3 64/4 64/8 64/8 65/24 67/7 69/10 69/12 70/16 70/17 70/21 71/5 72/18 74/6 74/13 74/14 74/14 74/23 75/3 76/2 76/3 76/11 76/22 81/18 81/19 81/20 84/15 84/17 88/4 88/14 88/21 90/9 90/24 91/4 91/7 91/15 92/7 92/25 93/19 97/25 101/18 103/2 104/17 108/3 109/8 113/13 113/18 We'd [1] 4/3 we'll [12] 52/8 62/1 93/11 93/18 108/8 112/15 112/16 112/16 112/17 112/19 112/19 112/24 we're [28] 13/11 15/4 17/4 32/24 40/13 40/14 41/12 45/11 50/25 52/11 56/17 57/5 57/7 57/10 58/6 58/21 60/7 65/22 66/21 67/6 67/12 70/23 75/17 78/7 82/14 84/23 85/14 108/7 we've [8] 32/2 37/7 37/11 37/11 41/14 45/12 81/8 85/4 wear [2] 61/1 61/5 wears [1] 60/22 weaving [2] 50/5 50/9 website [5] 94/6 97/19 97/23 97/24 97/24 week [1] 8/17 weeks [3] 26/1 26/2 64/7 weight [2] 75/13 76/14 welfare [4] 23/1 42/2 97/12 98/9 well [77] 5/15 5/21 5/22 6/5 6/11 7/16 8/15 8/21 9/21 9/21 11/24 14/7 15/17 17/18 18/23 20/12 20/21 22/3 23/5 23/19 26/19 29/20 40/20 41/25 44/7 45/20 47/23 48/6 50/20 53/16 54/11 54/19 56/5 56/6 56/24 57/20 58/8 59/14 60/13 62/19 63/4 63/16 64/19 66/13 66/16 66/23 67/13 67/21 68/3 72/14 72/21 73/13 76/6 78/7 79/9 80/7 83/3 87/9 87/23 93/13 93/17 95/7 96/4 96/10 97/2 97/8 97/16 101/15 101/20 101/21 102/1 104/12 104/17 105/7 109/17 110/2 111/15 well-known [3] 5/22 6/5 11/24 went [9] 7/18 16/16 16/19 30/15 30/19 31/17 34/22 49/6 72/4 were [78] 4/22 5/25 19/15 21/20 22/21 23/9 31/14 31/14 34/24 36/7 40/21 40/23 40/24 40/24 43/14 47/17 48/21 48/25 49/4 49/6 49/14 49/16 55/4 55/11 55/12 55/12 55/13 55/15 55/17 55/19 56/5 59/6 62/15 63/13 65/14 66/11 66/25 67/5 68/10 68/12 68/12 68/13 71/12 72/2 73/7 73/17 82/15 84/8 87/11 87/14 88/14 99/7 99/10 99/14 103/10 103/12 103/14 103/25 104/17 104/24 104/25

105/2 105/3 105/5 105/5 105/8 105/10 105/12 105/13 105/17 105/24 106/5 106/8 106/12 106/21 111/9 113/2 113/6

weren't [1] 99/8 what [149]

what's [11] 67/19 70/6 70/14 71/3 73/21 75/2 77/25 78/17 81/5 84/19 107/3

whatever [3] 55/3 75/13 76/14

when [53] 5/7 11/16 12/20 13/15 13/20 18/15 26/23 30/6 31/6 33/8 34/7 34/8 38/11 42/18 43/2 43/8 43/12 50/22 54/13 55/3 55/5 60/22 60/23 62/9 63/13 64/6 65/5 65/13 66/11 68/9 72/2 72/14 77/10 77/15 83/6 86/5 86/23 86/24 87/3 87/3 92/25 94/17 96/11 96/21 97/10 104/17 105/5 105/8 105/12 108/11 109/5 109/5 109/22

Whenever [1] 78/8

where [39] 4/20 4/22 4/24 5/5 6/10 6/20 6/23 10/7 17/23 17/23 21/1 30/14 32/7 34/25 39/12 39/16 40/10 44/23 45/1 47/3 47/4 48/2 48/2 48/10 48/10 48/11 55/4 60/24 66/24

72/9 85/24 88/19 90/5 92/3 95/25 97/8 107/13 109/11 109/20 whereas [2] 14/16 52/20 whether [21] 32/9 37/7 41/6 41/23 45/16 45/17 46/10 47/19 51/25 52/1 67/11 72/6 72/7 72/8 79/12 81/13 89/10 90/6 91/6 113/6 113/7

which [43] 8/22 11/14 19/9 30/7 30/16 30/21 39/15 40/13 47/3 47/5 48/21 49/17 55/10 56/4 56/6 56/16 61/19 61/21 64/4 66/2 66/25 68/19 75/25 77/15 80/9 80/23 82/4 82/12 82/19 84/8 84/12 84/21 85/21 88/14 90/10 90/17 90/23 91/5 91/7 91/8 97/19 97/25 109/23

while [5] 34/6 44/22 50/23 50/24 105/16 whipped [1] 87/19 whites [1] 77/15

who [49] 5/20 5/25 6/4 8/6 9/5 9/7 9/8 9/12 11/23 12/15 13/7 21/1 31/18 32/14 32/14 32/17 34/23 35/1 35/10 39/2 40/23 40/24 43/14 47/17 47/24 49/24 53/9 53/10 54/10 54/25 63/6 63/19 64/10 64/10 64/12 64/18 65/4 68/12 72/11 75/17 76/20 77/16 78/25 85/20 86/11 98/12 102/23 102/25 112/3

who's [1] 5/23

whole [8] 20/17 30/23 42/2 52/19 55/12 78/7 87/13 87/16

whom [1] 104/22

why [15] 41/10 42/23 46/17 51/13 61/1 61/19 72/13 76/20 78/4 81/18 92/24 109/18 109/23 109/25 110/1

wide [1] 105/19

wide-ranging [1] 105/19

wild [68] 6/19 12/18 13/24 17/6 17/7 25/23 26/5 26/7 27/7 29/3 33/24 38/22 38/25 39/9 40/6 40/6 40/11 40/16 40/19 40/22 40/25 42/1 42/15 47/24 50/20 50/21 53/14 55/8 60/18 60/22 63/3 63/6 63/19 64/13 64/15 64/21 64/24 78/10 83/11 83/12 83/13 83/14 83/22 84/3 86/5 86/11 86/18 87/7 88/2 88/14 88/17 96/6 97/1 97/9 110/9 110/9 110/13 110/13 110/19 110/22 110/25 111/3 111/10 111/14 111/16 111/19 111/22 111/24 Wildlife [3] 11/15 11/20 97/25

will [25] 29/24 30/24 30/25 31/1 31/2 31/5 31/8 33/19 34/4 35/10 36/2 36/3 36/4 36/8 56/4 62/3 73/1 74/13 75/24 82/11 82/18 84/25 91/6 91/15 97/18

winced [1] 19/4 wind [1] 43/3 wiser [1] 32/15 wishing [1] 10/22 withdraw [1] 112/9 withdrew [1] 80/8

within [3] 69/24 107/9 107/9

without [4] 46/21 89/3 95/3 110/10 witness [10] 3/2 4/7 29/7 41/13 45/25 69/3

93/13 98/8 99/24 113/3 witness's [1] 47/13

witnesses [1] 113/6 wolf [1] 40/9 wonderful [1] 36/9

word [1] 17/2 words [1] 98/3

work [23] 6/10 6/11 6/18 7/15 7/17 8/4 9/4 9/8 10/3 10/7 13/9 13/9 13/11 13/22 17/19 19/11 26/10 43/2 43/3 88/6 88/8 88/10 98/7 worked [8] 7/12 7/24 10/15 28/1 28/4 39/12

98/12 110/5

working [13] 13/3 32/24 40/3 42/1 42/19 42/24 45/14 89/1 89/1 95/8 95/10 95/12 95/15

works [2] 20/23 111/1

W world [2] 7/5 7/11 worse [1] 67/15 would [56] 4/17 8/24 9/10 9/20 10/6 10/10 13/23 19/20 19/25 21/19 21/20 24/11 30/8 38/21 40/25 41/20 43/11 46/14 47/17 47/19 50/22 51/15 52/12 69/12 71/12 75/3 78/11 79/4 79/7 79/14 79/20 81/22 85/13 85/13 86/11 86/12 86/12 86/13 87/7 87/8 93/14 94/11 96/12 96/13 103/12 103/13 105/20 105/24 106/13 108/18 108/19 108/20 109/19 113/9 113/13 113/18 wouldn't [2] 86/15 103/11 wound [2] 52/22 64/1 wounding [1] 107/4 wounds [11] 39/3 64/22 88/4 88/4 106/2 106/9 106/13 106/17 106/20 111/5 111/5 wrinkle [1] 60/21 wrinkled [1] 60/21 write [3] 72/16 102/21 102/22 writing [4] 10/17 43/21 43/22 88/12 writings [2] 26/24 27/7 written [4] 26/16 26/18 26/21 44/4 wrong [2] 62/21 82/1 wrote [10] 22/22 72/4 72/5 72/9 94/8 94/9

\mathbf{V}

99/17 100/3 102/7 102/23

yeah [17] 15/20 21/7 22/5 22/12 25/7 32/21 37/14 44/2 60/17 63/23 79/18 81/6 92/16 94/5 97/5 102/12 105/24 year [3] 10/15 13/16 25/6 years [13] 7/7 8/16 13/8 34/5 39/5 39/23 41/25 53/22 80/21 87/4 98/13 100/18 100/21 yes [126] you [463] you'd [3] 26/13 113/11 113/16 you'll [3] 75/16 86/23 112/18 you're [21] 27/14 27/16 27/18 28/9 44/6 44/12 47/11 51/9 51/25 52/11 61/2 69/1 92/25 95/8 97/14 98/20 101/10 102/16 110/11 110/24 111/9 you've [25] 6/7 9/4 13/23 25/2 25/8 25/17 25/23 26/16 28/1 28/4 28/21 32/18 48/4 53/15 75/16 80/14 84/20 85/5 92/6 96/8 97/6 99/1 100/13 103/4 105/19 young [6] 14/1 31/18 32/17 34/16 64/3 80/20 younger [2] 30/5 87/4 your [165] yours [1] 98/3

7

ZEILER [1] 1/20

Zina [6] 49/1 49/23 52/15 52/21 59/1 59/12 **zoo** [6] 28/1 28/6 28/7 28/15 89/1 108/17 **zoos** [15] 23/5 28/19 61/10 89/11 89/14 89/22 89/23 90/2 90/3 90/4 97/2 97/6 97/11 97/12 109/13

UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

AMERICAN SOCIETY FOR THE PREVENTION OF CRUELTY TO ANIMALS,

CA No. 03-2006

Plaintiff,

Washington, D.C.

Thursday, February 5, 2009

FELD ENTERTAINMENT, INC., 10:15 a.m.

Defendant.

TRANSCRIPT OF BENCH TRIAL - MORNING SESSION - DAY 2 BEFORE THE HONORABLE EMMET G. SULLIVAN UNITED STATES DISTRICT JUDGE

APPEARANCES:

v.

For the Plaintiff:

KATHERINE A. MEYER, ESQ.

TANYA SANERIB, ESQ. ERIC GLITZENSTEIN, ESQ. HOWARD CRYSTAL, ESQ. DELCIANA WINDERS, ESQ.

Meyer, Glitzenstein & Crystal 1601 Connecticut Avenue, N.W.

Suite 700

Washington, D.C. 20009

202-364-4092

For the Defendant:

LISA JOINER, ESQ. KARA PETTEWAY, ESQ. JOHN SIMPSON, ESQ. MICHELLE PARDO, ESQ.

LANCE SHEA, ESQ.

Fulbright & Jaworski, LLP 801 Pennsylvania Avenue, N.W.

Washington, D.C. 20004

202-662-4504

Court Reporter:

JACQUELINE M. SULLIVAN, RPR Official Court Reporter U.S. Courthouse, Room 6820 333 Constitution Avenue, NW Washington, D.C. 20001 202-354-3187

Proceedings reported by machine shorthand, transcript produced by computer-aided transcription.

1 PROCEEDINGS 2 COURTROOM DEPUTY: Civil action 03-2006, American 3 Society For the Prevention of Cruelty to Animals, et al versus 4 Feld Entertainment, Inc. 5 Would counsel please identify yourselves for the record? 6 7 MS. MEYER: Catherine Meyer for the plaintiffs, your 8 Honor. 9 THE COURT: Good morning, counsel. MS. SANERIB: Good morning. Tanya Sanerib for the 10 plaintiff. 11 MR. CRYSTAL: Howard Crystal for the plaintiff. 12 MR. GLITZENSTEIN: Eric Glitzenstein for the 1.3 14 plaintiffs. MS. WINDERS: Delciana Winders for the plaintiff. 15 MS. SINNOTT: Michelle Sinnott, tech. 16 17 THE COURT: For the plaintiff? MS. SINNOTT: For the plaintiffs. 18 THE COURT: Good morning, your Honor. John Simpson 19 for the defendant. 20 MR. SHEA: Good morning, your Honor. Lance Shea for 21 22 the defendant. MS. JOINER: Good morning, your Honor. Lisa Joiner 23 for the defendant. 24 MS. PETTEWAY: Kara Petteway for the defendant. 25

MS. PARDO: Good morning, your Honor. Michelle Pardo for the defendant.

1.4

2.4

MS. STRAUSS: Good morning, your Honor. Julie Strauss for the defendant.

MR. PALISOUL: Derek Palisoul for the defendant.

THE COURT: Let's proceed with the cross-examination.

I'm mindful that the doctor has a plane to catch.

MR. SIMPSON: Your Honor, if I could just bring up two preliminary matters with the Court's indulgence, and I think it's important to get matters like this straightened out when we are just getting the trial started.

Would you switch the Elmo on for me, please?

Your Honor, it's come to our attention that one of the corporate representatives for the plaintiff, Animal Protection Institute, is blogging the details of this trial on the Internet. Ms. Nicole Piquette, their senior vice president and general counsel, was excused from the Rule of Exclusion of witnesses yesterday by your Honor and chose apparently to broadcast the details of the testimony in this case on the Internet, and I'm concerned that this is an abuse of the privilege that you granted her yesterday, and I am concerned that this kind of thing becomes a bulletin board for fact witnesses in the case to check out what's going on in the trial. You know, she's entitled to her opinion about what's going on, but what I don't want to see is fact witnesses using this as a

We've already given that instruction to our witnesses, not just don't read the transcript, not just don't talk to lawyers and other witnesses, but don't go out there on the Internet and read news accounts of what's going on so that you get the same information indirectly, so we think as a prophylactic matter, that that ought to be addressed up front, and I think your Honor ought to seize this blogging, and I think your Honor ought to order to seize this blogging, and I think your Honor ought to order to sinclude instructions that instruction to only not read Internet blogs and similar sources of information where the trial transcript or details of the testimony are being posted. We've already given that instruction to our witnesses, not just don't read the transcript, not just don't talk to lawyers and other witnesses, but don't go out there on the Internet and read news accounts of what's going on so that you get the same information indirectly, so we think as a prophylactic matter, that that ought to be addressed up front, and I think you have the power and discretion to do so under Rule 615.

THE COURT: Well, we certainly tell fact witnesses, we tell all witnesses not to discuss their testimony with anyone, but what you're asking me to do is essentially tell them in advance of their testimony not to discuss anyone else's testimony essentially and that doctor -- she's not a doctor -- Attorney Piquette, she's in the courtroom today? Is she?

MR. SIMPSON: Well, she was entitled to be. It was packed yesterday. I don't know whether she was here or not. I don't know what she looks like. I've never seen her.

THE COURT: This blogging issue is an issue that's

coming up quite frequently in cases.

2.1

Let me hear from plaintiff's counsel.

Thank you for bringing it to my attention.

MS. MEYER: Your Honor, I didn't know about this. If Mr. Simpson had told me about it when he discovered it I certainly would have been in agreement that Ms. Piquette --

THE COURT: He probably didn't know about it until today perhaps.

MR. SIMPSON: Ten minutes ago.

MS. MEYER: I didn't know about it, your Honor. We certainly have instructed our witnesses to abide by all of your instructions, and we have no problem telling Ms. Piquette that she should not be blogging about what goes on in the trial.

THE COURT: I think also I need to ask both sides to ask their witnesses, to direct their witnesses, not to search for other bloggers' opinions. This case is going to be tried and decided based on the evidence in the courtroom. I recognize that the public has an interest in what's going on and that there are people who are not participants or connected with any of the organizations wish to blog to their hearts' content about anything they want to blog about, you know, I guess that's their prerogative, but at least insofar as the participants in this trial are concerned and the officers of the various corporations, I have some control and I'm going to direct them not to do any blogging. I think that's only fair.

Yes?

2.4

MR. SIMPSON: Just one other matter briefly, your Honor, and this concerns the sort of orderly designation of witnesses. If your Honor remembers, yesterday, and I want to direct your attention to page 76 of the trial transcript, there was a colloquy between your Honor and counsel for the plaintiffs.

THE COURT: I recall that.

MR. SIMPSON: Concerning the foundation for Plaintiff's Exhibit 122.

THE COURT: Right, the person who is going to authenticate the film.

MR. SIMPSON: I was again aware of the full picture here, but apparently your Honor asked the question of Ms. Meyer, why isn't that person here who can authenticate the film, and the answer was: He is scheduled to come tomorrow. We had scheduling difficulties for a number of reasons and it was my assumption that he wasn't here, but it turns out he was here. He's appeared the entire day, so this witness could have been called out of order at Ms. Poole's direct, as your Honor stated you had flexibility to do, and that film could be authenticated or not. Instead, your Honor took it under advisement and then the film was exhibited to the finder of fact, and I think that's prejudicial to us.

THE COURT: Well, there's a lot of authority -- I

can't put my hands on a case right now from our Circuit -there's a lot of authority from probably all Circuits, that basically holds that the fact-finder in a nonjury case, indeed the judge, is going to make decisions based upon competent evidence and admissible evidence, and during the course of a nonjury trial judges are going to hear all kinds of evidence: incompetent evidence, hearsay, evidence that's ultimately stricken, and whatever I do, whatever decision I reach, I'm going to reach it based upon what I think is the competent evidence in this case, it's been admitted into the trial record pursuant to recognized Rules of Evidence, and I'm going to let the parties know what I've relied on, so the content, if the film footage is never authenticate, believe me, I'm not going to credit it, but if he was here, though, I'm interested if he was Why was I told he wasn't here? I'm more concerned about here. that.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

MS. MEYER: Your Honor, the reason is that we needed to do Dr. Poole, because of the scheduling, we needed to do Dr. Poole when we did Dr. Poole, so our intention was to have Dr. Poole do --

THE COURT: But I was told he wasn't here. Yes. I think that's what I was told.

MS. MEYER: I think what I meant to say --

THE COURT: Had I been told he was sitting out there, I would have said bring him on in.

MS. MEYER: Your Honor, what I meant to say, he wasn't scheduled to testify yesterday.

THE COURT: How long would it take you to lay the foundation for the authentication of this film?

1.8

MS. MEYER: It would take a while, your Honor, because we're showing much more of that compilation video that he did, so that was the problem.

THE COURT: He's going to have to testify at some point today because I don't want to go too far. It's nonjury, but I just don't want to continue to stretch the rules. I've looked at the film. It's not been admitted into evidence. I can put it out of my mind, but I'd like to abide by the rules that we all are directed to abide by, but, you know, if it never comes in, I'm certainly not going to credit anything I've seen, but if he's here, as soon as we finish with the doctor, then you're going to have to call him to authenticate that film. I assume you want to use that film footage for other witness, I assume; is that right?

MS. MEYER: Yes, but we're not using it today. And this raises another problem, your Honor. Because we did not finish with Dr. Poole yesterday, we have other scheduling problems. We have two witnesses who need to go on today because they have to get back to their jobs.

THE COURT: Let me just say this then: We'll finish with Dr. Poole, and I'm not going to allow any more references

to the film absent an appropriate authentication.

MS. MEYER: That's fine, your Honor.

THE COURT: All right. Okay. Let's finish with -- strike that. Let's proceed with cross-examination of Dr. Poole.

Sorry for the delay, but we have some technological issues up here with the laptop, and if I don't look at the experts all the time, it's not that I'm ignoring them. I have realtime as well. I like to follow the testimony, so if I don't look you in the eye while you're testifying, I'm listening to you.

THE WITNESS: Thank you, your Honor.

THE COURT: Tell the other experts too. I know counsel have been attempting to get their witnesses to look at me and focus on me as they would a jury, and that's fine. I'm not ignoring them if I don't look at them, so tell them that. I will look at the experts on occasion, as it's nonjury, but I do have the benefit of realtime as well, so I can hear them and read them. Go ahead.

MR. SHEA: May it please the Court, Lance Shea for the defendant, your Honor.

THE COURT: Good morning.

JOYCE POOLE, Ph.D, WITNESS FOR THE PLAINTIFF, PREVIOUSLY SWORN

CROSS-EXAMINATION

BY MR. SHEA (continuing):

O. Good morning, Dr. Poole.

1 Α. Good morning. Dr. Poole, you have no studies that set forth the criteria 2 Ο. 3 for identifying learned helplessness in elephants, is that true? MS. MEYER: Objection, your Honor; outside the scope 4 5 of the direct. MR. SHEA: Your Honor, she covered these issues in --6 THE COURT: I'll allow that. Overruled. 7 MR. SHEA: I apologize. 8 9 BY MR. SHEA: Dr. Poole, you have no studies that set forth the criteria 10 0. that identify learned helplessness in elephants, correct? 11 12 Α. Me personally? I'm asking if you know of any studies that set forth the 13 0. criteria for identifying learned helplessness in elephants? 14 No, I do not. 15 Α. Dr. Poole, you cannot cite to me any studies reporting that 16 the Stockholm Syndrome or similar syndromes have been diagnosed 17 18 in elephants, correct? 19 I cannot. Regarding learned helplessness, though, it is a term that has been used by people working with elephants. 20 And Dr. Poole, I was just asking about Stockholm Syndrome. 21 Q. THE COURT: I think she wanted to go back to the 22 23 former question. Is that correct? THE WITNESS: Yes. 24

THE COURT: That's fine.

25

BY MR. SHEA:

Q. Dr. Poole, there exists no articles that detail how one would diagnose Stockholm Syndrome in elephants, correct?

A. That's correct. But I believe in my deposition I did say to you that it was closer to learned helplessness.

THE COURT: Stockholm Syndrome?

THE WITNESS: In my original report I mentioned several possibilities that this, when elephants or the Ringling Brothers' elephants are very often in kind of a stupor where they are just not doing anything, even when there is a lot of activity around them when a normal elephant would be inquisitive, and I put this down, I let -- I wrote a number of different possibilities that could cause that kind of behavior.

THE COURT: That's based upon your background as a behaviorist?

THE WITNESS: Based upon my background as a behaviorist. And I mentioned the Stockholm Syndrome and I mentioned learned helplessness, and when we discussed it then in my deposition, I had realized that it was closer to learned helplessness.

THE COURT: You singled out Ringling Brothers Circus' elephants. Is that you're distinguishing the Ringling Brothers' elephants from other elephants in captivity?

THE WITNESS: No. No. I mean, I saw this sort of elephants in a kind of -- well, what I would call "nobody's

Official Court Reporter

home" kind of behavior. I have seen it in other elephants.

I've seen it in the elephants that have been very traumatized.

BY MR. SHEA:

Q. Dr. Poole, you have no -- I'm sorry.

THE COURT: Stockholm Syndrome has not been identified scientifically in elephants, has it?

THE WITNESS: It has not.

THE COURT: What is that syndrome?

THE WITNESS: That's when captives have been -- when people have been held captive and they begin to identify with the captors.

BY MR. SHEA:

- Q. Dr. Poole, you have no studies to sort your opinions that elephants can get a syndrome like people who have been battered spouses, abused children, prisoners of war, and concentration camp survivors, correct?
- A. Well, it is -- it is basically beginning to be accepted that elephants can suffer from posttraumatic stress disorder.

 That's a little bit different from what you've said, but I would like to qualify it by saying that --
- Q. Dr. Poole, I'm sorry, I didn't hear an answer. You have no studies to support your opinion that elephants can get a syndrome like people who have been battered spouses, abused children, prisoners of war, and concentration camp survivors, correct?

MS. MEYER: Again, I've got to object. This is outside the scope of direct examination.

THE COURT: I'll allow it.

THE WITNESS: Again, I've got to come back to that elephants suffering posttraumatic stress disorder, so in the sense that people who have been -- women and children who have been battered and the kind of trauma that they go through, yes, elephants do suffer from that sort of posttraumatic stress syndrome.

BY MR. SHEA:

- Q. I'd like to show you page 110 of your deposition.
- A. Okay.
- Q. If you could bring it up at line eight, please.

Dr. Poole, I asked you a question beginning on line eight. I just want to ask you about four lines down in that paragraph, there is a sentence beginning near the right margin which states, quote: Small acts of kindness by the captor are exaggerated since finding perspective in a hostage situation is, by definition, "impossible," quote. And then it goes on to say, quote: These symptoms occur under tremendous emotional and often physical duress and represent a common survival strategy for victims of interpersonal abuse, including battered spouse, abused children, prisoners of war, and concentration camp survivors. I put to you that the elephant response is no different. End quote. Did I read that correctly?

1 Answer: Yes.

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

25

Question: Are there any scientific studies demonstrating that the elephant response is no different than the response you have listed in what I just read, those responses I understand to be from humans?

Answer: There are no studies.

Did I read your testimony correctly?

A. You read that correctly. But it is -- may I?

THE COURT: Finish your answer. Yes

THE WITNESS: It is fair to say that in that discussion that we had then, I went on to say that it was closer to learned helplessness. At the same time I would like to say and I would like to have on record that elephants suffer from posttraumatic stress disorder.

BY MR. SHEA:

- Q. Dr. Poole, can you not identify any studies that demonstrate that an elephant suffers from stress when managed by use of the guides, correct?
- A. Not off the top of my head right now.
- Q. And assessing such studies is outside your area of expertise, correct?
- A. No, I don't think so. I mean, when it comes to details of stress, but when it comes to how elephants are behaving, I think that's well within my expertise.
 - Q. Dr. Poole, I'd like to show you page 291 of your

deposition, beginning on line ten. It begins, Question: Now, is there any study that demonstrates that an elephant suffers from stress when managed by use of the ankus?

Answer: You are talking about like cortisol levels, or something like that?

Question: Yes, exactly.

1

2

3

4

5

6

7

8

9

10

11

12

1.3

14

15

16

17

18

19

20

21

2.2

23

24

25

Answer: I think there have been studies. I am not sure what they have shown, but what I am saying here in this part is that harassment of the elephants has caused such changes in their basic behavior patterns to make them sort of unrecognizable as elephants in terms of their behavior.

Question: Two questions about that. One, can you identify any studies that you think might exist?

Answer. I can't. I can't recall the studies on that. That is not my expertise.

Did I read that correctly?

- A. You did. I think that's just what I said before you read that.
- Q. Now, Dr. Poole, you do not have any particular knowledge about FEI's chaining policies, correct?
- A. I have that I gained through all the reading that I did of the depositions and the reports from the defense.
- Q. And that is the extent of your knowledge?
- A. That I can think of at this moment.
- Q. Now, Dr. Poole, you're not aware of any money for

conservation efforts that FEI is giving to any entity other than the International Elephant Foundation, correct?

MS. MEYER: I'm going to object to that, your Honor. It's our position that whether or not Feld Entertainment is giving conservation money to anyone is completely irrelevant.

THE COURT: It may be. It may be, but I'll let her answer the question.

THE WITNESS: I know that there is some money that is going to some work in Asia. I'm not sure exactly specifically what those studies are, and I'm not sure whether they are all coming under the International Elephant Foundation or not.

BY MR. SHEA:

Q. Now let's go to page 267 of your deposition, beginning on line eight. Dr. Poole, I asked the question: Do you know whether FEI is giving money for any other conservation efforts than those funded by FEI?

Answer: Say that one more time.

Question: Do you know any other conservation efforts methods that FEI is supporting?

Answer: Oh, FEI. FEI and IEF. Sorry. No, I am not.

Question: Are you -- well, did I read that part of

your testimony correctly?

A. You did.

Q. Dr. Poole, you're not aware of any insitu, conservation effort that FEI is supporting directly, correct?

A. No. I'm not specifically aware of the specific programs. I know that there are some. I'm not sure whether they are conservation projects or whether they are AI projects, which I wouldn't call conservation projects, so I can't say specifically.

Q. Dr. Poole, let me show you on the same page of your deposition, 267, beginning on line 12, or I'm sorry, on line 16. On line 16, Question: Are you aware of any insitu, conservation efforts that FEI is supporting directly?

Answer: No, I am not.

Did I read your testimony correctly?

- A. You did, but there have been some months in between, so I have heard about some things. That's why I'm answering slightly differently.
- Q. I see. So the new information you have has come since your deposition; is that correct?
- A. Yes, but it's not very specific.
- Q. Dr. Poole, you don't know the details about the extent to which FEI elephants are exercised on a daily basis, correct?
- A. Just on the basis of what came out in the depositions, which suggested they have very little exercise, that they're only off chains a very small percentage of the day.
- Q. Dr. Poole, let me show you page 300 of your deposition, beginning on line three. Question: Do you know any details about the extent to which the elephants are exercised on a daily

basis for the pure purpose of exercise?

Answer: There was very little said about that in the documents.

Did I read that correctly?

A. You did.

1

2

3

4

5

6

7

8

9

16

17

18

19

- Q. Dr. Poole, you don't know what enrichment items are given to FEI elephants, correct?
- A. Sorry. That's you're asking me that now?
 - O. Yes.
- 10 A. I have seen a tire in the pens.
- 11 \ Q. Is that your complete answer?
- A. I haven't seen much in all the evidence that I reviewed. I

 did not see much in the way of enrichment items, and not

 enrichment items that would be in any way part of an elephant's

 natural environment.
 - Q. Dr. Poole, scientifically speaking now, your work with elephants is almost entirely observational in design; is that true?
 - A. No, not entirely observational, no.
 - Q. I said "almost entirely observational."
- A. It's almost entirely observational, but I have done
 experimental work, and quite a number of my papers are based on
 experimental work.
- Q. Dr. Poole, your experimental studies are limited to about three elephant sound playback studies, two studies on elephants'

scents, s-c-e-n-t-s, and one study on musth at Krueger pools at the Pilanesberg National Park, correct?

A. I'm sorry. There are four papers on elephant cognition, three papers that are experimental on elephant cognition.

That's two of which have come out since the deposition.

THE COURT: On African elephants or Asian?

THE WITNESS: These are on African elephants.

And then there are the other ones that you cited, but I don't think that represents a small number.

BY MR. SHEA:

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

1.7

18

19

20

21

22

23

2.4

25

Q. Dr. Poole, let me take you to 103 of your deposition, please. Beginning on line 17. Question: Your work is almost, entirely speaking, scientifically observational in nature, isn't that right?

Answer: Almost entirely, but I've done experimental work as well.

Did I read that correctly?

- A. You did.
- Q. And you've mentioned today in court the experimental studies that you've done, is that true?
- A. I have not mentioned them all, no.
- Q. Well, other than three elephant sound playback studies, two studies on elephant scents, one study on must at the Pilanesberg National Park, and three studies on elephant cognition in African elephants you just mentioned, are there any others?

- A. No. But those are all in very prestigious journals.
- 2 | Q. Dr. Poole, in your opinion chaining elephants is
- appropriate for veterinary procedures but inappropriate for any other reason; is that correct?
 - A. That is correct.

5

- 6 Q. Now, Dr. Poole, yesterday you mentioned elephant
- sanctuaries. Do you recall mentioning that during your direct examination?
 - A. I did. I can't remember in what context.
- 10 Q. Do you know that there is an elephant sanctuary at
- 11 Hohenwald, Tennessee?
- 12 A. I do, I do.
- 13 \ Q. Who operates that sanctuary?
- 14 A. Carol Buckley.
- 15 Q. The elephants at the elephant sanctuary are not allowed to
- 16 breed; is that correct?
- 17 A. That's correct.
- Q. Dr. Poole, the oldest elephant in Amboseli is 67 years old, isn't that right?
- 20 A. I believe there have been elephants as old as 69.
- Q. Let me take your to your deposition, page 258, beginning at line seven. I asked you, question: What is the oldest elephant that you know of in Amboseli?
- 24 Answer: Sixty-seven.
- 25 Did I read that correctly?

- A. You read that correctly. The reason I changed that is based on the recent paper that came out. I believe that they had said that the oldest elephant was 70, so I'm correcting that. I moved it down to 69 because I can't quite recall, but yeah, so anyway, in that range.
- Q. Your testimony was accurate as of the date of your deposition, is that true?
- A. Yes, yes.

- Q. Dr. Poole --
- A. As far as I knew. As far as I knew.
- 11 Q. Dr. Poole, exhibiting stereotypic behavior is not 12 necessarily an accurate indicator of current welfare in 13 elephants, correct?
 - A. Not necessarily, not necessarily.
 - Q. Dr. Poole, in your opinion, captive breeding is acceptable if done to enrich the welfare of existing elephants, correct?
 - A. Within specific contexts. I would not say that captive breeding in an area that is too small for the elephants is necessarily in their best welfare, but as a general statement, yes. It's very complicated. It raises issues.

THE COURT: Go ahead and explain your answer.

THE WITNESS: Oh, well, it's rather complicated, but elephants are actually very good breeders if they're given the space to the elephants. They breed very well and very easily, and in Africa in many places in Africa there are too many

elephants because they breed so successfully and then you get into a situation where there's the moral issue of whether to cull or not, so if you have elephants, let's say, I mean, I've been arguing to have captive elephants in North America in very large sanctuaries where they could live basically a pretty normal life and have families and so on, and allow breeding, but then would come eventually a situation where you may have too many elephants, and so I have some minor doubts about how such a situation would be dealt with.

BY MR. SHEA:

2.3

- Q. Dr. Poole, you just mentioned space that elephants need.

 Do you believe that captive elephants would each need at least two square kilometers of space?
- A. I know that you're referring to the "Mind and Movement" paper where I have mentioned that figure, and yes, if -- what I'm talking about there is if we were to do what I believe would be the right thing for elephants, which is to provide them with a space they need to the elephants to allow them to forage naturally without just providing hay, then you do need enough space so that they don't damage the habitat, so that's what I'm saying there, and just a ballpark figure that is thrown around for elephants in the wild is two kilometers per elephant.

 Square kilometers. Sorry.
- Q. Dr. Poole, do you know how big two square kilometers is in terms of miles?

- A. Well, you could use a square mile. I mean, it's not exactly equivalent, but let's say a square mile.
 - Q. So that I understand it, elephants, captive elephants then in your opinion would need one square mile of space?
 - A. I honestly believe that that's where we should be headed, that's correct, if we want to keep captive elephants in North America, to give them the life that they deserve, that we should set aside some big space, perhaps five different places in North America, and allow elephants to be elephants. That's my personal feeling. I think that would be the right thing to do.
 - Q. Dr. Poole, there are currently approximately 500 captive elephants in the United States, is that true?
- A. To be honest, I can't remember.
- Q. Okay. Dr. Poole, in your opinion, elephants should not be captured from the wild in order to be held in captivity; is that correct?
- 17 A. That's correct.
 - Q. And you opposed the importation of elephants Swazi land to the San Diego zoo that was done in recent years, correct?
 - A. I did.

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

18

19

- Q. Despite efforts to stop the importation, those elephants were imported to the San Diego zoo, correct?
- 23 A. That's correct.
- Q. Dr. Poole, in your opinion, the continuum of care in zoos and circuses is not so good to really bad, correct?

- A. Sorry. The continuum of -- read that again.
- Q. In your opinion -- let me repeat my question so it's clear.
- 3 A. Um-hmm.

4

5

6

10

13

14

15

16

17

18

19

20

21

22

23

24

25

- Q. In your opinion, the continuum of care in zoos and circuses is not so good to really bad, correct?
- A. I think that would be fair, yes.
- 7 \| Q. In your opinion, zoos and circuses --
- A. Sorry. May I just go back a second? I'm talking about space. I'm talking about space here, not about other care.
 - Q. And you're not talking about chaining there?
- 11 A. Well, I would like to stay off chaining in this, in this -12 that's sort of another subject.
 - Q. Let me show you page 296 of your deposition, beginning on line 20. Question: In putting elephants in a barn overnight, chained or not, but in a stall, would that be harm as well?

Answer: Again, it is a continuum. In the case of Ringling, they are chained for extremely long hours. In some zoos they are chained also for long hours but not as long as. In other zoos they are not chained but they are left out, but they don't get the kind of exercise that they do in the wild, so it is a continuum, not so good to really bad.

Did I read your answer, or did I read your testimony correctly?

A. Yes. May I just say that I do think -- I think elephants should be provided with a space where they can shelter to get,

especially because it's cold in North America, that they could have a place where they can get out of the rain, where there's perhaps some heat provided, but they could come and go as they wished?

- Q. Dr. Poole, in your opinion, zoos and circuses do not meet the needs of elephants, correct?
- A. Well, circuses certainly do not meet the needs of elephants.
- Q. You hold that same opinion as to zoos, do you not?
- A. It is a continuum, and I feel that you are really trying to make me out to be an extremist.
- Q. Dr. Poole, let's go to page 122 of your deposition.
- A. And I would like to have an opportunity to comment, if I may.

THE COURT: Sure. Go ahead and comment.

THE WITNESS: May I?

THE COURT: Yes.

1.3

making me into an extremist, that I'm really far out there, and I just wanted to say that as a member of the Amboseli research project, I have signed back in 2001 and we have rewritten it more recently, I guess it was earlier in 2008, all of us on this project that represents over -- well, close do 400 years of experience, have signed this letter saying that we do not believe that elephants belong in circuses, that elephants are

being shipped around, chained in trains and on cars like so much cargo, but they're being trained with bullhooks to do unnatural acts and that we believe this is a travesty.

Now, to try and paint me as if somehow I'm extreme when these are the preeminent elephant experts saying this, I think that is -- I just want you to be aware of that. And I also want you to be aware that Jane Goodal, for instance, who is the preeminent authority on chimpanzees, spends 300 days a year of her life now going around the world talking to kids, talking to people, and advocating for chimpanzees. I don't have that kind of fortitude, but I can't sleep at night if I don't speak out on behalf of these animals. They deserve more than they're getting, especially in the circus.

THE COURT: I think you probably minimized your fortitude.

MR. SHEA: May I proceed, your Honor?

THE COURT: Yes, sir. Go ahead.

BY MR. SHEA:

1.4

Q. Dr. Poole, I'd like to show you page 11226 of your deposition, line 19. The question on page -- I just wanted to ask you about some of those specifics, and I believe you list them succinctly in your conclusion beginning on page 13. At the bottom of the page in the conclusion section you say, quote:

Based on decades of research, it is our considered opinion that today's zoos and circuses do not come close to meeting the

interests of either male or female elephants, nor do we believe 1 that the slightly expanded exhibits that many zoos are currently 2 3 contemplating at vast expense will make a significant difference. Am I reading that correctly so far? 4 5 Answer: Yes. Question: What date was this published, do you know? 6 7 Answer: As far as I know, it actually hasn't been 8 published yet. But is this current? 9 Ouestion: Answer: This is current. 10 Question: These are your current opinions? 11 Answer: Yes. 12 13 Did I read your testimony correctly? 14 Α. Yes, you did. Dr. Poole, in your opinion, keeping captive elephants in 15 pens is a little bit better than chaining them but not much, 16 17 correct? 18 Α. Correct. Dr. Poole, elephants are kept in chains in home range 19 20 countries, aren't they? 21 You mean captive elephants? Α. So let me try a better question this time, okay? 22 Q. Captive elephants are kept in chains in home range countries, 23 24 correct? There are places where elephants are kept in chains, that's 25

1 correct.

2

3

4

5

6

15

16

17

18

21

22

23

24

- Q. And they are kept in chains in many home range countries, aren't they, captive elephants?
- A. Not in Africa. In Asia.
- Q. So there are many elephants, Asian elephants, who are kept in chains in home range countries in Asia, correct?
- A. This is a very, very long tradition, but just as in other traditions that are very long, it's not necessarily correct, and based on what we know about elephants now, their capacity for empathy, their other cognitive abilities, their body size, we know that this is not the way they should be cared for.
- 12 Q. But they are so kept in Asia countries?
- 13 A. They are so kept, but that doesn't make it right here in this country.
 - Q. Okay. Dr. Poole, now Abood I asked you about yesterday.

 That was the name of the elephant that you rode in Vaswani,

 correct?
 - A. That is correct.
- Q. Abood was killed by a musthed male in Butza while Abood was on chains, correct?
 - A. I believe he was on chains. I wasn't there so I don't know the details.
 - Q. Let's go to page 69 of your deposition. Beginning on line five, question: Do you know how old Abood was at the time?

 Answer: I think he was in his 30s.

1 Question: Is he still alive, do you know?

Answer: No. He was killed. He was killed because he was the elephants there are let out on chains and he was killed by a must male. It was an elephant and elephant fight.

And the must male won? was my question.

Answer: He won because Abood was on chains.

Did I read your testimony correctly?

- A. It was many years ago, but that's what I recall Randall Moore telling me.
- Q. Dr. Poole, and that gentleman was the elephant's owners?
- A. He owned the elephants, yes.
- Q. Dr. Poole, you obviously spent many years watching African elephants at Amboseli Park in Kenya, correct?
 - A. In Amboseli National Park?
- 15 Q. Yes.

2

3

4

5

6

7

8

9

10

11

14

16

17

18

19

20

2.4

- A. Yes.
- Q. And there has been mass tourism in the Amboseli park for the -- strike that. Let me start again.
 - Dr. Poole, there's been mass tourism in Amboseli park since the late 1960s, correct?
- A. Sorry. Mass tourism you're saying as in many, many bus tourism?
- 23 \ Q. Yes, that's what I'm asking.
 - A. Yes. I would guess about the late 1960s, yes.
- Q. And in peak years, as many as 200,000 visited the park,

1 correct?

2

5

- A. That's the figure I recall.
- Q. The visitors go out in mini-busses, Jeeps, or Land Cruisers to see the elephants, correct?
 - A. Correct.
- 6 Q. And they get as close as one meter away, isn't that true?
- 7 A. That's true.
- Q. Elephant poaching for ivory is on the rise in Africa, isn't it?
- 10 A. That is true.
- Q. And elephant poaching for ivory is continuing in India; is that right?
 - A. That's true.
- Q. And human-elephant conflict is escalating in Africa and in Asia, isn't it?
- 16 A. That's correct.
- Q. Dr. Poole, in your opinion, if you project forward in
 Africa or in Asia, the long-term future for wild elephant
 habitats looks pretty bleak, correct?
- A. What I would say is that elephant populations, many
 elephant populations are going to go extinct or be wiped out,
 that individuals, families, entire populations, are going to be
 wiped out, but that does not mean that the elephant in the wild
 will go extinct. I believe that there will be many places,
 especially the larger national parks where elephants will

survive, but if you project forward with the increasing human population, growth and increasing demand for the resources, elephants are, yes, it is true they are under increasing pressure.

- Q. Dr. Poole, the practice of culling in the wild continues today, correct?
- A. Well, it is just about to be started again, but this is restricted to a couple of countries in southern Africa.
- Q. Dr. Poole --

A. Sorry. May I just --

THE COURT: Go ahead.

THE WITNESS: It's areas where elephants are fenced. It's not really been a problem in national parks that are not fenced, and most populations are not fenced at this stage, so ones you put elephants behind fences, some people at least feel that it affects the equilibrium of the habitat, the eco system. BY MR. SHEA:

- Q. Dr. Poole, in your opinion, capturing wild baby elephants is no less abhorrent than killing them, correct?
- A. I have said that.
- Q. So in your opinion, it's better off, isn't it, Dr. Poole, in your opinion, that an entire elephant family be killed than any young elephant in that family end up in a circus, is that true?
- A. That is correct.

- Q. Now, Dr. Poole, you believe that captive breeding should not be done in North America, correct?
- A. That's not correct actually. I think it depends on the situation. As it is now, we have elephants being shipped around, mothers and daughters or mothers and offspring being separated, elephants being bought and sold, being shipped from one zoo to another, families being broken up, being kept in areas that are too small. I could go on. Then I don't think that the breeding the way it's being done in most places, I'm not very happy about it, but I think there could certainly be a situation where you could have captive breeding.
 - Q. But as it stands, you're not happy with any existing captive breeding operation in North America, correct?
 - A. I don't think I can say that. Of the ones I know about.

 Of the ones that I know about.
 - Q. So the ones you know about, you're not happy about any, correct?
 - A. No, because most are done with AI and yeah.
- Q. Now, Dr. Poole, it is your view that zoos do not have a moral right to keep elephants because they do not provide a full social experience for elephants, correct?
 - A. That is a strong statement and I read it the other day.

 Repeat that to me again.
- Q. Was it your statement?
- 25 A. I think I recognize it.

- Q. Well, my question is: Was it your statement?
- A. I think it's my statement. Read it again.
 - Q. Well, I'm asking you a question.
- A. Yes, I know.

- Q. And it is: Is it your view that zoos do not have a moral right to keep elephants because they do not provide a full social experience for elephants?
- A. It is my statement, but I think it is -- I think the terminology is a bit strong.
- Q. Well, Dr. Poole, let me ask you -- well, let me just take you to your deposition, page 226, line 18. Question: How did you come to have that document that is -- are we on 226?

Line 18, Question: I hand you Exhibit 14 to your deposition, and it looks to be a copy of a keynote address made by you to the 22nd Annual Elephant Manager's Workshop, November 9 through 12, 2001. Do you remember giving such an address?

Answer: Actually I gave it, believe it or not, in Lamo, Kenya.

Question: You did it by video conference?

Answer: I sent a tape or something because that was right after 9/11.

Question: I was going to ask because all of us here were having a hard time traveling. You sent a tape of this address, but you did give the address; is that right?

Answer: Yes.

Question: On the fourth page down near the bottom of the page, it would be the last full paragraph, which is a short one, that begins quote: Now to the tricky question, end quote. In that paragraph three lines down you say, quote: On the basis of all that I have learned about elephants, my personal feeling is that those zoos that cannot provide a full social experience for elephants do not have the moral right to keep them. I don't feel that any of the zoos I have visited meet the standards that we should aspire to. End quote. Did I read that correctly?

Answer: You did.

Question: As to the first sentence regarding the zoos not having the moral right to keep elephants where they cannot provide a full social experience for them, is that your opinion today?

Answer: Yes, basically. I mean, I guess I feel very strongly, having spent so many years with elephants, that they deserve — they deserve better, but then again, let me say that I am talking on behalf of the elephants that is not taking into consideration all the needs we have as people to see them or whatever. This is from the elephant's perspective.

Question: And you don't know of any zoos that give the full social experience for its elephants; am I right?

Answer: Correct. Having said that, it is of course a continuum.

Did I read your testimony correctly?

A. You did.

- Q. Dr. Poole, also you believe that the sanctuaries, specifically those run by PAWS in northern California and Carol Buckley in Tennessee, do not provide a full social experience for elephants, correct?
 - A. That is correct. May I add to that, please?

 THE COURT: Sure, you may.

THE WITNESS: Remember that those sanctuaries have been set up to provide as sort of a Hospice for abused elephants, or elephants who have suffered very much where they are so -- they're in a little bit of a different category.

- 12 BY MR. SHEA:
- Q. Dr. Poole, do you recall being asked yesterday during your direct examination about the life-span of elephants, how old they become in the wild?
- A. I believe so. I believe so. About the median life-span.

 Yes, I do.
 - Q. Do you recall saying that the median life-span for females is 56 years old?
 - A. That's correct.
 - Q. And you qualified that, did you not, by saying that is the median life-span for females if you exclude elephants who have been killed by people or have died as a result of wounds inflicted by people, correct?
 - A. Correct.

- Q. Dr. Poole, what is the life span of elephants, female elephants, what is their life expectancy if you do not exclude mortality caused by humans?
 - A. You want the life expectancy or the median life-span? I think I can give them both to you, and I may be a little bit off on the figures. The life expectancy was 34, and I believe the life-span, median life-span that was recently quoted in the paper that came out was 335.7 or something like that.
- 9 | Q. I see.

5

6

7

8

10

16

17

18

19

22

- A. So pretty similar.
- Q. And for males in the wild, what is their life expectancy if you do not exclude mortality caused by humans?
- A. If you do not. I think it was in my deposition, wasn't it?

 I'm not sure I can remember. Was it as low as 24? Did I tell

 you?
 - Q. Dr. Poole, would you disagree that you wrote in your report that the life expectancy for males was 24 years, but in the absence of human-induced mortality it increases to 39?
 - A. Yeah. That sounds correct.
- Q. Dr. Poole, the Maasai, M-a-a-s-a-i, people live near
 Amboseli Park, Kenya, correct?
 - A. That's correct.
- Q. And in your view, there is a cycle of violence between the elephants at Amboseli Park and the Maasai people, right?
 - A. It has developed over some years.

Perhaps I should explain?

THE COURT: Sure, go ahead.

THE WITNESS: Yeah. When Amboseli was made a national park in 1974, the Maasai were excluded from a small area, 394 square kilometers, and as a way of a political protest they began spearing elephants and rhinos and some of the other large animals because elephants are so intelligent they have in a way retaliated. They started to kill Maasai, and particularly live stock, not so much people, but live stock, and the Maasai have again responded by spearing elephants, so it has developed into what I would like to call a cycle of violence and retaliation between the two species.

THE COURT: That is fairly atypical, for elephants to attack other animals?

THE WITNESS: It is, it is. And even in the Mara where Maasai and elephants live side by side, they don't have this same kind of relationship, so it really does seem to have developed from the spearing that was started by the Maasai feeling that they had been cheated of their land.

THE COURT: So this started, but then it stopped years ago?

THE WITNESS: Well, no. It's kind of kept up because the elephants kill livestock, so what we know is we now compensate the Maasai if any of the animals that are killed by elephant and that we can verify have been killed by elephants as

long as they agree not to cull any elephants in, you know, as a result, so we're hoping that way that they will be able to stop this cycle.

BY MR. SHEA:

4

5

6

7

8

9

10

16

- Q. And Dr. Poole, then clearly you believe that the elephants were killing live stock in retribution for the spearing, do I understand that correctly?
- A. Yes, I do.
 - Q. Thus you believe that the elephants belonging to the Maasai and then kill the live stock for revenge?
- 11 A. Yes.
- Q. Dr. Poole, you misinform -- well, let me just ask, was one of these elephants that was speared in the named Odelai?
- 14 A. Odil.
- 15 Q. Odil, O-d-i-1?
 - A. Yes, um-hmm. She is still alive.
- Q. Could you please show me 302A, 1 of 31, defense exhibit?

 Is this a picture of Odil that is posted on your

 website, Dr. Poole, with the spear?
 - A. That's correct, that's correct.
- 21 Q. Dr. Poole, during your direct examination you testified 22 about a portion of the movie Elephant, Lord of the Jungle?
- 23 | A. Um-hmm.
- Q. And I have a question I'd like to show you out of that, or a clip I'd like to show you and then ask a question. If you

could play plaintiffs we'll call it Exhibit 113, 19:24 to 20:32. 1 (Video played.) 2 Dr. Poole, I'll ask you, are there biting flies such 3 as those in Amboseli? 4 5 No, we don't have the -- we don't have Tetsi flies. 6 occasionally have horse flies, but no, it's not like these, no. 7 Seeing on this film and these flies, I'll ask you is what Q. 8 you see in this clip and on the screen now at the end of the 9 clip a wound? 10 You know, those biting flies have an anti-coagulant in them, so I don't know whether I'd call that a wound. I don't 11 think I'd call that a wound. 12 Is it an injury? 13 0. I don't think I would call that an injury. It's a bite 14 Α. 15 from a fly. Has the elephant been harmed? 16 Q. 17 It's been harassed, that's for sure. Α. But not harmed, is that your testimony? 18 0. I don't know. Personally I don't call when I'm bitten by a 19 mosquito being harmed, so I guess I would call it the same 20 21 thing. Dr. Poole, I'd like to show you a clip, the Plaintiff's 22

Now, Dr. Poole, has this elephant been injured?

exhibit, we'll call 113, starting at 44:35 and ending 44:59.

(Video played.)

23

24

A. Absolutely.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

25

- Q. And that's a wound; is that correct?
- A. That's a wound.
 - Q. Dr. Poole, I have a question about the following clip.

This is again Plaintiff's we'll call it Exhibit 113, 45:20 through 45:37.

(Video played.)

So Dr. Poole, has this elephant been wounded?

- A. I can't actually see it because the -- but I assume if it's been shot by a bullet it's been wounded.
- Q. I'd like to show you another clip, Plaintiff's we'll call Exhibit 113, starting at 45 minutes 46 seconds through 47 minutes 8 seconds.

(Video played.)

Dr. Poole, you've seen that that elephant in the Endangered Species Act applied to the people who were poaching that, that elephant was taken, wasn't it?

- A. I'm sorry?
- Q. That elephant would have been "taken," in your opinion, correct?
- A. That elephant was wounded and that elephant was killed.
- Q. And have you seen similar poaching in Amboseli? You have, haven't you?
- 24 A. I have.
 - Q. And you have various photographs of similar wounding on

your website, do you not?

A. I do.

1

2

3

4

5

6

7

8

9

1.0

11

12

13

14

15

16

17

18

19

2.0

21

22

2.3

24

25

- Q. I'd like to show you a photograph in Defense Exhibit 332A, photograph 8 of 31. This is a photograph on your website, correct?
 - A. Yes. I took that photograph in 1981, I believe.
 - Q. And this elephant had been poached, do I understand that correctly from the caption?
 - A. That elephant had been poached.
 - Q. And definitely wounded and killed, correct?
 - A. Correct.
 - Q. Dr. Poole, I have a question about the following clip, Plaintiff's we'll call it Exhibit 113, starting at 49 minutes and 12 seconds. And going through I believe 51 minutes and 3 seconds?

(Video played.)

- Dr. Poole, do you have any reason to disagree that that took that elephant a further four months to die?
- A. Well, actually there were a lot of inaccuracies on this film in the narrative, but it could happen, that's correct.
- Q. Dr. Poole, let me show you photograph 5 of 31, Defendant's Exhibit 302A. Dr. Poole, this is a picture of a dead elephant calf on your website, is that true?
- A. It's not a calf, I don't think. It does say it's a calf. Okay.

- Q. On the caption it does say "elephant calf"?
- 2 A. It does say it's a calf. Okay.
- 3 Q. Had that elephant been poached?
 - A. I don't recall.

- Q. Or was the elephant, did it die as part of a human-elephant conflict?
- 7 A. I can't recall on that one. I don't remember which.
- Q. Dr. Poole, let me show you photograph 25 of 31, Defendant's Exhibit 302A.
- 10 A. Actually, it says human conflict in Amboseli eco system, so
 11 I assume that was from some kind of spearing incident.
- 12 Q. And Dr. Poole, this is photograph 25 to 31, Defense Exhibit
- 13 302A. This says it's a picture of Dyanisis being treated for
- spear wounds. The 63-year-old died a few weeks later in October
- 15 2003. Did I read that correctly?
- 16 A. Yes. He was one of my focal males so I know him very well.
- Q. Is this the disappearing attacks that you were referring to earlier, did the Maasai spear this elephant?
- 19 A. Yeah. He was speared by Maasai, yes.
- Q. And he ultimately died from those spear wounds; is that correct?
- 22 A. That's correct.
- Q. Dr. Poole, let me show you a film clip from Plaintiff's
 we'll call Exhibit 142. It's from the inspection at the Center
 For Elephant Conservation in Polk City, Florida, beginning at 1

hour 25 minutes and 15 seconds and going to one hour 25 minutes and 39 seconds.

(Video playing.)

Dr. Poole, do you recognize this as a film clip from the inspection?

A. I do.

1.1

2.2

- Q. And you were present at the inspection, correct?
- A. I was.
 - Q. And in your opinion, that inspection was a "taking" because the elephants were required to perform certain activities with an ankus, such as Zina being asked to raise her foot, correct?
 - A. It was a taking because the elephants were not permitted freedom of movement. I mean, it's within the context of how these elephants are kept. They were not allowed to move forward or backward. They were told to go back in line. They had no, no sense of autonomy in their lives.

And I would like to say that, yes, all those pictures you've shown help show a tragic end to what was otherwise a glorious life in the wild where elephants are free to move. Their days are filled with joy and with things to do, so I find that, I mean, you have to remember that in the range states, elephants are living with very, very poor people, people who can barely find enough food to eat and they are competing with elephants, and yes, there is human-elephant conflict. That's just what they have in this world of ours today, but that

doesn't mean that we should then haul elephants into captivity and abuse them. I think we're talking about, it's, you know, it's apples and oranges here. I think the comparison -- I'm sorry. I think it's ridiculous.

- Q. Dr. Poole, that was a long answer to my question.
- A. I'm sorry.

2.0

- Q. I wanted to confirm that you found in your opinion that an inspection was a "taking," correct?
- A. Correct.

MR. SHEA: I have no further questions at this time, your Honor.

THE COURT: All right. I have one question before any redirect.

You mentioned yesterday, there was a film shown yesterday, a portion of a film, that appeared to be an elephant -- I'm just trying to think of another word other than "dancing," but it appeared to be an elephant dancing on what appeared to be a --

THE WITNESS: A piano.

THE COURT: A piano, that's right. And you said it was totally abnormal and you drew a conclusion that in order to teach an elephant to do that -- you had an opinion about how this elephant what taught to do that. What was that opinion?

THE WITNESS: One of the things when I first saw that was very early on I remember reading about elephants because

they have these so-called pillar-like legs, the way that the legs are built. There's not much spring in them. And one of the things I always say is elephants cannot jump, so here is this elephant hopping and skipping on the piano there. I just can't imagine. I mean, based on what I have read, I can't imagine how it's done, but I think I have to leave that to people who have trained elephants to tell you.

THE COURT: So you don't have an opinion about the

THE COURT: So you don't have an opinion about the manner in which the elephant was trained to do that?

THE WITNESS: I have one, but since I don't have the expertise, I don't know if I should share it with you.

THE COURT: I'm sorry. You don't have the expertise to?

THE WITNESS: I have never watched and elephant being trained, I have only read about how it's done. I can tell you how I believe that it's done.

THE COURT: What you believe. And you believe what, that the hook was used?

THE WITNESS: Yes. That it's forced to do it.

THE COURT: I just wanted to be clear. I'm sorry. I should have asked that question when I heard the question on direct.

Any redirect?

2.3

MR. SHEA: I have nothing in response to that, your Honor.

THE COURT: Any redirect?

MS. MEYER: Yes, your Honor.

REDIRECT EXAMINATION

BY MS. MEYER:

1

2

3

4

5

6

7

8

9

10

11

12

13

15

16

17

18

19

20

21

22

- Q. Dr. Poole, do you remember yesterday when Mr. Shea asked you whether you had watched the videotape of the Auburn Hills inspection of Nicole and Karen at the time that you wrote your expert report?
- A. Yes.
- Q. Would you please take a look at page 30 of your expert report, and if you would look at paragraph 4 on page 30, and 6 lines down with the sentence that begins, The photographs and video footage? Do you see that sentence?
- 14 A. Yeah, I do.
 - Q. Could you read that sentence, please?
 - A. The photographs and video footage from the inspection of the Blue Unit shows that the pens are quite small and that some of the elephants are even chained while in the pens.
 - Q. And does reading that sentence in your expert report refresh your memory on this subject?
 - A. Yes, it does.
 - Q. What are you referring to in that sentence?
- A. Well, I'm referring to the pens that we observed in the videotape.
 - Q. And which video footage are you referring to?

- A. The Auburn Hills video footage.
- Q. Which inspection was that?
- A. Well, that was the inspection that I did not attend.
 - Q. Which elephants were inspected in that inspection?
 - A. Oh. Sorry. Karen and Nicole.
 - Q. Dr. Poole, during the time that you were involved in the CEC inspection that you went to, did you see any enrichment items given to the Feld Entertainment elephants?
 - A. I did not.

2

3

4

5

6

7

8

9

10

15

17

18

19

20

21

22

- Q. How long were you involved in that inspection?
- A. I think it was -- I think it was about, I don't remember
 when we got there actually, maybe around noon, but we were
 outside. Maybe at one o'clock. We went into the barn I
 remember at three.
 - Q. When did you leave the barn?
- 16 A. At 6:30.
 - THE COURT: Enrichment items would consist of what? I think you mentioned --
 - THE WITNESS: In captivity there have been, you know, like a tire or something to pick up and play with. I don't often see elephants playing with any of their enrichment items.
 - THE COURT: Either in circuses or in zoos?
- 23 THE WITNESS: Yes.
- 24 BY MS. MEYER:
 - Q. But as I understand your answer, you did not see any

enrichment items?

- A. I did not see any.
- Q. You mentioned in response to Mr. Shea's questioning that your experimental studies that you've done were all published in prestigious journals. Could you tell us what journal you're referring to?

MR. SHEA: Objection; argumentative and leading.

THE COURT: I'll allow the answer.

THE WITNESS: Nature, Current Biology, Biology

Letters. Where was the other? Animal Behavior, I believe.

BY MS. MEYER:

- Q. And why do you say those are prestigious journals?
- A. Well, especially the Nature is -- they're all very difficult to get published in, so to get a paper in Nature is -- yeah, it feels right.
 - Q. And Dr. Poole, why do you believe that baby elephants should not end up in a circus?
 - A. Why do I feel a baby elephant should not end up in the circus?
 - Q. Yes.
 - A. Well, for lots of reasons. Because it's separated from its mother, because it's forced to do -- it's not allowed to have a social life, a normal social life, it doesn't get a chance for social learning from its mothers or members of its family, it's forced to do tricks, unnatural tricks, and it's forced to a life

Jacqueline M. Sullivan, RPR Official Court Reporter

of living on chains and being transported around on trains or, in some other circuses, in trucks.

- Q. And why do you say that the sanctuaries, PAWS, and the elephant sanctuary in Tennessee to not provide full social experience for elephants?
- A. Well, if you look at the full social experience, it would be living with adult males, living with having calfs, and both the sanctuary and -- both sanctuaries -- well, one sanctuary is now having males but they won't be integrated with the females. The other sanctuary doesn't have males, and neither of them are breeding their elephants.
- Q. Is there any other reason that you stated that they don't provide the full social experience for the elephants?
- A. No. That's really the reason.

2.1

MS. MEYER: That's all I have, your Honor.

THE COURT: Any other questions?

MR. SHEA: No, your Honor.

THE COURT: I have to ask you this, it probably has nothing to do with this case. Some years ago there was a tsunami and I heard some elephants played a role in the recovery. Did you study that?

THE WITNESS: Yeah, yeah, yeah. In fact, we started to write a paper on it, because the elephants, they're able to pick up seismic vibrations through their feet. I've seen elephants responding to zebras stampeding like two kilometers

away, so they pick up the movement, so they picked up the 1 2 movement of the tsunami coming and ran -- they were captive 3 elephants and they were carrying some tourists as I remember the story, and they ran away from the beach and so saved those 4 5 particular people. And in recovery, do they also not --6 7 THE WITNESS: I think, I think you're right there. 8 THE COURT: Did they roam? 9 THE WITNESS: I think they did go in, but they were probably under someone's control going in. Probably people who 10 were trapped, but I don't remember the specifics of that. 11 12 THE COURT: You said there are sensitivities in their 13 feet that enable them to --THE WITNESS: Yes. 14 THE COURT: What's the impact of the chaining on that 15 ability that they possess in their feet, if any? 16 17 THE WITNESS: Well, I don't know. I mean, it's more -- it's the pad of the foot. I would think it's more what 1.8 would disturb them would be in being in these very loud 19 20 environments. Wherever the circus goes, there's no frequency. 21 Noise --22 THE COURT: But the pads are shaped in captivity, 23 though; is that right?

THE COURT: Does that impact the --

THE WITNESS: The pads are shaped in captivity.

24

1	THE WITNESS: I don't know. I don't know the answer
2	to that.
3	THE COURT: Any other questions?
4	MR. SHEA: No, your Honor.
5	THE COURT: Anything?
6	MS. MEYER: No, your Honor.
7	THE COURT: Have a safe trip home.
8	THE WITNESS: Thank you, your Honor.
9	THE COURT: Call your next witness.
10	THE WITNESS: Actually, may I just clarify?
11	THE COURT: Sure, absolutely.
12	THE WITNESS: Am I not allowed to discuss this now?
13	Am I I heard about the blogging, no blogging.
14	THE COURT: We ask that witnesses not discuss their
15	testimony with anyone during the course of the trial.
16	THE WITNESS: Okay.
17	THE COURT: We ask that.
18	THE WITNESS: With family members?
19	THE COURT: Let me hear from counsel. She's
20	testified, she's excused, she's going back home.
21	You're going back to Norway, correct?
22	THE WITNESS: Yes.
23	THE COURT: We certainly ask you that you not speak to
24	any other participants.
25	MR. SIMPSON: I think that's an appropriate direction.

THE COURT: No other participants. 1 2 THE WITNESS: So if I'm off in Norway and I'm talking 3 to my friends, that's fine? THE COURT: That's fine. It's an issue that haunts us 4 5 sometimes. Thank you. Have a safe trip home. THE WITNESS: Thank you very much, your Honor. 6 7 MS. MEYER: Your Honor, can I take a short break? THE COURT: Absolutely. We'll take a ten-minute 8 9 Thank you. No need to stand. COURTROOM DEPUTY: This Honorable Court now stands in 10 a ten-minute recess. 11 (Recess taken at about 11:34 a.m.) 12 COURTROOM DEPUTY: Please remain seated and come to 13 order. 14 (Back on the record at about 11:57 a.m.) 15 THE COURT: All right. Counsel, I just had one 16 17 question to ask the doctor. (Dr. Joyce Poole recalled at about 11:57 a.m.) 18 THE COURT: I'm sorry, I just have one question, maybe 1.9 two, depending on your answer, but I think you answered this 2.0 yesterday. I just want to be clear about it. 21 The chaining in the boxcars or the treatment -- you 22 can have a seat -- the chaining, the ankle chaining in the 23 trains, is that in your view a taking? 24 THE WITNESS: Yes. 25

THE COURT: That's what I thought you said. And it's a taking because?

2.0

2.2

THE WITNESS: Well, because they have -- they can't do anything.

THE COURT: And it's totally unnatural?

THE WITNESS: It's totally unnatural. I mean, it's just -- it's the most -- for me, it's the most extreme of this whole lifestyle that they live. If you compare how they live in the wild in a family group, on the move continually, their ability to explore, interact with one another, find their own food, search for mates, that sort of picture of elephant life, in this vision fusion society where they're coming together and splitting apart and in communication with one another, to this extreme existence chained in a train.

THE COURT: All right. Forgive me because I'm a layperson so the choice of words may not be precise, but from a behavioralist point of view, is there any emotional sequela or emotional trauma associated with any of these takings?

THE WITNESS: I believe so, absolutely.

THE COURT: What's the basis for your belief?

THE WITNESS: Okay. There was a paper that I wrote, and also that came out in Nature in 2000, about some young elephants who had been -- they were orphans from a could you be so in southern Africa in Krueger. They used to cull the elephants and then they would keep the babies who were under

sort of between two and four years old and those elephants would 1 2 be shipped off to zoos and some of them were used to sort of 3 start founder populations, and one of them was in Pilanesberg National Park, so they dumped I can't remember how many, I think 4 5 it was 830 baby elephants on their own in the park, and 6 everything seemed to be okay for quite a while until some of the 7 young males starting coming into musth, which is this period of heightened sexual and aggressive activity that male elephants go 8 9 into. They usually go into it when they're in there mid-20s or These guys were coming in as teenagers, and the first thing 10 11 they did was to mount and kill rhinos, so it became, since rhinos are an endangered species, it became a huge issue because 12 they were losing rhinos, so they called me down to see what they 13 might do with it, and it's since been -- it's since been decided 14 15 that what these elephants have gone through basically were suffering from posttraumatic stress disorder. There's that. 16 And there's also the lack of any role model, so definitely --17 THE COURT: There is an emotional aspect to it? 18 Absolutely. And I've written several 19 THE WITNESS: papers on emotions in elephants as well. 20 The expression "memory like an elephant," 21 any basis for that? 22 Yes, there is. 23 THE WITNESS:

24

25

THE COURT: What is that? What's the origin of that?

THE WITNESS: Well, for instance, we know from play-

back experiment in Amboseli that elephants are able to remember the voices of up to 200 different individuals. They, we know also from experiments, recent experiment, that through the sense of smell, they have an extraordinary sense of smell, they're able to keep track of where everyone is in the family. That's not the same as the long-term memory, but they're also using long-term memory to remember trails they used to take to old water holes during periods of drought and so on. We also have actually a couple of examples from captivity where elephants have remembered one another after 23 years they had been separated, and I had a case with a male who remembered me after 12 years.

THE COURT: How does that impact the issue of taking, the fact that an elephant has a significant long-term memory ability and you telling me that elephants experience some emotion?

THE WITNESS: Well, I think, for instance, experiences they've had when they were babies, being separated from their mothers, being beaten as babies, being poked with the ankus and stuff, those are things that they're going to carry with them for their life.

THE COURT: That is a taking?

THE WITNESS: Yes, that's a taking.

THE COURT: So the memory aspect is a taking then?

THE WITNESS: Yes, yes.

2.4

THE COURT: That they recall the chainings and the 1 2 beatings? 3 THE WITNESS: Yes. And they are living with that for their entire lives. And not only that, because they have the 4 5 capacity for empathy, you know, empathy has been thought until 6 recently to be a cognitive ability that only humans have, and 7 now we're finding some animals are capable. Elephants are one. THE COURT: 8 That supports your theory that there is 9 posttraumatic stress, though? 10 THE WITNESS: Yes. And, you know, in the case where, 11 and I'm sure you'll hear about it, where Benjamin was being 12 beaten and Karen started rattling her chains, she was responding to that, that calf being beaten. She was upset about it, so 13 it's not only what the animal has experienced itself, but the 14 feelings that it has for others and how they're being treated. 15 THE COURT: All right. It's only fair to ask counsel 16 17 if you have any questions, any follow-up questions. Not at this time, your Honor. 18 MR. SHEA: 19 THE COURT: Well, you better ask them now of this 20 She's about to get on a plane. No other questions? witness. 21 Any questions? 22 No, your Honor. MS. MEYER:

much. Have a safe trip home.

THE COURT:

23

2.4

25

THE WITNESS: Thank you very much, your Honor.

All right. Thank you.

Thank you very