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The ZA Today

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Edition 1

Roth's aim: Reproduce rhinos

By Emily Gross
ZA Today Editor

Many a day one might find Dr. Terri Roth over at the Cincinnati Zoo's Wildlife Canyon. Here, she gets her hands dirty while working to preserve the critically endangered species *Dicorhinus sumatrensis*, commonly known as the Sumatran rhino.

Sumatran rhinos are on the brink of extinction due mainly to habitat encroachment. Their natural habitat is in the dense forests of Indonesia and Malaysia. As communities push further into this habitat, Sumatran rhinos are running out of space and time.

Scientists believe there are less than 400 Sumatran rhinos in existence to this day, most of which are living in protected national parks. There are currently 10 rhinos in zoo's.

Fortunately these rhinos have people like Dr. Roth working on a captive breeding program. Success began in this program in 2001 when Emi gave birth to her first calf Andalas. Andalas was the first Sumatran rhino bred in captivity in over 100 years. This was followed with the birth of Suci (2004) and Harapan(2007). Emi passed away in 2009 due to iron storage disease.

Our zoo delivers!

By Thane Maynard
Cincinnati Zoo Director

There is an old saw that goes like this: The only mistake Andrew Erkenbrecher made when he founded the Cincinnati Zoo in 1873 is that he didn't build it in San Diego! After all, they have the weather. They have the tourists. And by association, they have the money.

How so? Well, the San Diego Zoo's annual budget is \$300 million while the Cincinnati Zoo's is \$28 million.

That said, how in the world does a zoo in a non-tourist, bad weather, Midwest river town end up on everybody's list of the top zoos in the world? Think about it for a minute. The Cincinnati Zoo is in the smallest market of any of the top zoos

Zoo Academy: Then and now

By Emily Gross

What used to be known as Natural Resource Management, then Animal Care and Conservation, is now known as the Zoo Academy. This school has been around since 1976.

Although the school has changed a lot, much has stayed the same. Below are statements from former or current Zoo Academy students on their favorite memory from their school years.

Paul Reinhart
Graduation: 1981

Teachers: Dick Mills and Claire Ehrlinger. I started in junior year, which was Dick Mills first year teaching. I remember him as very energetic and interesting. He had been before that, a keeper in the nocturnal house, I believe. Claire



Lissa Browning

Above: The first Sumatran rhino calf born in 112 years was born here at the

Dr. Roth is now working with Suci, and Ipuh who is estimated between 30-35 years old. The Cincinnati Zoo is hoping for another success by getting Suci pregnant. This, of course, comes with a lot of work and testing. Zoo Academy

students can vouch for this, seeing doctors at the canyon multiple times a week ultra-sounding Suci.

See Roth page 3



Greg Hanson

Above: Thane participates in animal encounters sometimes too, as shown with this American bald eagle.

in North America. And on the smallest piece of land. And, we have the smallest budget of any of the top 10 zoos in America.

Yet, we are consistently ranked #3 behind San Diego and the Bronx Zoo by both Zagat Surveys and Frommers. How come?

Well, the answer is easy and apparent all over town. Cincinnatians are a highly community-focused lot. We care deeply about our institutions, be they the Zoo or the Art Museum, the Symphony, Museum Center, or so many others. Cincinnati is the most philanthropic town for its size and capacity, anywhere. See Maynard pg 3.

Ehrlinger taught horticulture. While it was sometimes difficult to stay awake in class, she often got us out in the zoo to learn and that was fun. Thelma Shotten taught English. I didn't get along great with her while in school but after I graduated I realized she was really a good teacher. **Favorite Memory:** One best memory is working most of my senior year in the veldt, often in all day lab. All very good memories of my time in school here at the zoo.

Lissa Browning
Graduation: 1997

Teachers: Mr. Schulte, Mrs. Elfers, Ms. Schottelkotte, Mrs. Florez, and Mr. Blickenstaff
Favorite Memory: I was at the cat house and I was watching Mike Land and Pat Callahan catch the caracal to move down stairs. Mike Land netted it and when he pulled the cat out it

fell out of the net and on to the ground. The cat came running down the hall. Mike netted him again, but at the same time the snow leopards above him started to pee all over Mike.

Rodney Sutton
Graduation: 2012

Teachers: Mr. Schulte, Ms. Schottelkotte, and Mr. Sedgwick, Ms. Kemme, and Mrs. Haworth
Favorite Memory: My junior year I got to swim with the manatees. It was my favorite because the baby manatee, Wooten kept pulling on the zipper of my wetsuit and following me around while the other manatees Illusion and Betsy kept nudging me across the water. I got to hand feed them to lure them into the med pool. It was one of the most amazing experiences of my life.

Roth: Rhino reproduction

Emily Gross
ZA Today editor

Below is an interview with Dr. Roth to help answer some common questions that those of community may have on our rhino breeding program.

Question: Where and when did your work with Sumatran rhinos begin?

Answer: Well, it started when I arrived here in 1996. I had just started working with rhinos at the national zoo, right before coming here, but never expected to work with Sumatran rhinos. But, once I got here, of course the last three in the United States were at this zoo and the zoo director made a point of telling me they were really important, that I needed to work with them. I had a grant to do rhino reproductive research focused on the African species, and we just shifted some of that towards the Sumatran species and the granting agency approved to that.

Q: Why do you need to take ultrasounds so frequently?

A: It depends on what we are doing at the time. We certainly use those to monitor the reproductive cycle of the females. When we are trying to breed naturally, we are looking for the growth of a new follicle. When it becomes a pre-ovulatory follicle that is when you want to introduce the male and female for breeding. With Sumatran rhinos that can happen very quickly, particularly Suci because she can grow a follicle in 48 hours, so we don't want to miss that time. We also might do an ultrasound to determine if she is pregnant.

Q: What are some challenges you have run into when trying to breed Ipuh and Suci?

A: The biggest challenge is that he is really

just an old male rhino. He is somewhere between 30 and 35, most rhinos don't live that long. So, even though behaviorally they are very compatible, so that part seems to be working. He tries to breed her, but he just runs out of energy and she wants to play. She spends just a couple of hours trying to play with him, and I think it just wears him out. Then they just kind of become bored with each other.

Q: Do you think there could be some complications due to Suci and Ipuh being related?

A: You know we do worry about that, but we did some genetic testing back between Suci's mother and Ipuh, and that testing indicated they were very unrelated. So, there is a lot of genetic variety with those two. That's good because that means there are probably not a lot of homozygous recessive genes. Yes, it is very clearly inbreeding with Succi and Ipuh. However, if we can breed her calf with an unrelated male that can very quickly be reversed.

Q: Do you think that will be difficult with the small amount of rhinos in captivity?

A: Yes, very difficult. I think the whole population of Sumatran rhinos will become more inbred. There just aren't enough rhinos in captivity or in the wild.

Q: Why can't Indonesia help us get more captive rhinos?

A: It's all very political. We thought once we were successful they would send us more rhinos because we could have produced more calves by now. But, they refuse to send rhinos out of country. I think it's just a pride thing. Unfortunately it's not what is best for the species. That gets in the way a lot. It really is sad, people putting other priorities before the survival of the species.

“What we tend to do is try to focus on where we can make a difference because otherwise we could spend a lot of time beating our head against the wall.”

Dr. Roth



Greg Hanson

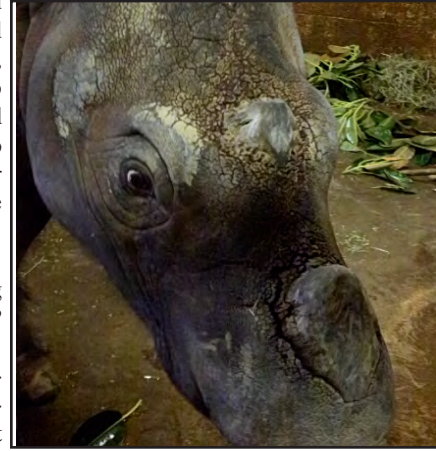
Dr. Terri Roth is not shy about her affection for the zoo's Sumatran rhinos.

Q: Do you feel this program is making good progress at the rate it is going?

A: You always want to make progress at a quicker rate than it is going. But I think what we have done is amazing considering the challenges and limited resources. We started with just three rhinos, and have been able to produce three calves, and send one of those back to Indonesia. I think as far as a zoo can go, we have had an incredible impact.

Q: Is there anything you can do to improve?

A: Right now we are really up against the political challenges. I don't know how to get around those; we have been trying for years. We have been trying to get assistance by being a good partner, helping others, offering resources, and training, but that hasn't panned out. What we tend to do is try to focus on where we can make a difference because otherwise we could spend a lot of time beating our head against the wall with some-



Emily Gross

Succi proving her curiosity by checking out the camera.

Q: What is your main goal right now?

A: Well, two things really. One, we are very focused on trying to produce a pregnancy in Suci. The other real effort is in Indonesia. This zoo is part of that program. Also by making sure they are successful in Indonesia because then they'll have all the tools, the experience, and the knowledge they need to continue that effort. In Cincinnati we cannot, are not, going to save the rhinos. We need Indonesia, we need Malaysia, and we need everybody to be successful, just like we were.

See Roth Page 3.

Academic team brings home the win

By Emily Gross
ZA Today Editor

Stakes were high as Hughes very own academic team competed against Aiken High School for the Academic Team Championship! The score was 25 to 37 as the competition came to an end.

As the announcer read the final question the Academic Team felt a sense of security and honor. They knew they had this competition in the bag.

This final win for Hughes Center came with a lot of work however. The Academic Team met for 3 hours a day two times a week.

Each meet consists of three rounds. The first being the alphabet round in which the answer to every question begins with the same letter.

The second round is the category round which consists of categories such as fine arts, American and British literature, physical and life sciences, and government and economics.

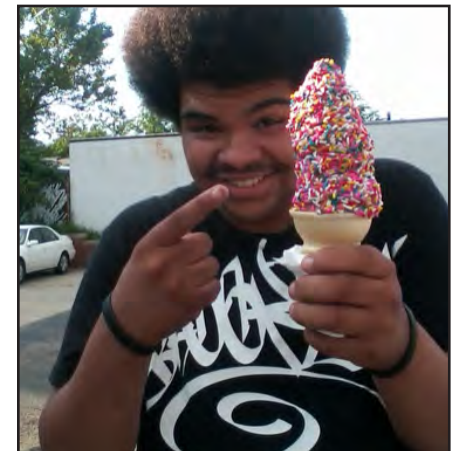
The final round, the lightning round, is when things get intense. Competitors have only 8 seconds to answer a question, ten seconds for math questions. This is when the most pressure is put on the students.

However, this isn't a problem for our Hughes

Center Academicites! They brought in the win with a suave confidence. As Rodney Sutton likes to say, "It's all buzzers, all the time!"

Not only did this after school activity look great to colleges, it also helped build friendships and teamwork among fellow Hughes Center students.

The Zoo Academy would like to extend its congratulations to the Hughes Center High School Academic Team.



Emily Gross

Zoo Academy senior Rodney Sutton also enjoys simpler things.

Teacher: Family is in my heart

By Sara Haworth
Zoo Academy faculty



The Tetens adopted me when I was almost one month old. I cannot remember a time when I did not know I was adopted. I grew up as a Teten and will always be a Teten, with my parents and older brother. In 2001 I found birth-dad Steve, and thus I am a Sauer too. That same year I also found birth-mom Barb and so, I am a Kanter as well. It was not until 2009 that I added Burt and the rest of the Haworths to my family. Violet is the kitty that found me in 2002. I consider her as a part of my family. All of my friends I have met over the 32 years I've been alive are my family. Near or far, living or dead, my family is in my heart. So, when I was asked to write an article about something that people might not know about me, I thought it might be nice to share what I love the most – my unique, ever-growing family.

Meet the aardwolves

Emily Gross



Connie Lemperle

Who: Chippie and Changa

Species: Aardwolf

Scientific Name: *Proteles cristata*

Conservation Status: Least Concern

From: Tanzania (the wild)

Natural Habitat: Open grasslands and scrub regions

Diet in Captivity: ¼ cup of insectivore diet softened in water

Diet in the Wild: Termites

Personality: Changa is the gentler of the two, Chippie is more protective and is prone to nipping. However, aardwolves have very dull teeth because they only eat termites.

Purpose: These two are here for breeding.

Can be seen at: Night Hunters

Fun Fact: There are only three zoos in the country that have aardwolves.

Working to light up the night

Emily Gross
Ricky Gutter

Now that the Festival of Lights is over, the maintenance department is hard at work taking down all of the Christmas lights. With approximately 2 million light bulbs to attend to, just how much work is the Festival of Lights?

Work begins 4 months before the first day of the Festival of Lights. During this time the maintenance department has to put up all of the light fixtures, as well as assemble the 35 ft. Christmas tree.

This is definitely no small job, over 50 people work on these projects to make the Cincinnati Zoo a winter wonderland. This includes the marketing department, which works on advertising, the design of the lights, nightly entertainment, and the budget.

Now, consider the electric bill the zoo must rack up! With 2 million lights lit for around 7 hours a day, the bill would be expected to be astronomical. At first, it was. Originally prices were between \$50,000- \$60,000.

Now, due to our go green initiative, the zoo has switched over to more efficient LED lighting. The current cost is around \$16,000, which is about a 75% decrease from before.



Greg Hanson

Visitors also have access to the zoo's train during The PNC Festival of Lights.

All of this is enough to leave our zoo scurrying around for months in preparation. However, there even more work to be done once the celebration is over. There's the disassembly of the Christmas Trees, the removal of Santa's Huts, and sending all of the reindeer home. Not to mention taking back down the many strands of lights!

This takes around 60 days to fully complete, and still there are those pesky lingering lights on the top of that one certain tree. So, when you visit the zoo this July, don't be surprised to still be able to spot a touch of the Christmas season. Of course, they will need to begin preparing for the next Festival of Lights soon!

Cinci state gets W.I.L.D.

Emily Gross
ZA Today Editor



Students participated in many ways.

Here, water conservation, recycling, and environmentally friendly life styles were encouraged. Primarily, students were taught that small contributions can make a big difference.

For example, if 100 households can switch to only four 100-watt light bulbs to LED bulbs, then they can save approximately \$7,200.

Students went through the day taking a variety of classes on subjects such as the Fernald Preserve, green job opportunities, water cleaning

methods, and invasive species.

"That Feist guy, he just really made me want to get up and do something about it!" said student Jack Cobb.

Mr. Feist emphasized that environmental issues are not a political argument. This is something that affects all of us.

Fuel Cells, wind turbines, and solar panels are not new technologies. Many of these things have been around and patented for over 100 years.

At this point, many other parts of the world are utilizing these technologies and ever advancing. On the other hand America is still fighting over whether we should use them or not.

Some may argue that coal and natural gases provide jobs to America. However, a multitude of jobs would be created by installing and maintaining renewable energy resources such as wind turbines, solar panels, etc...

Many teenagers are pointing out how it is becoming more and more apparent how important it is that people live environmentally friendly life styles.

Maynard: Zoo delivers

Thane Maynard
Cincinnati Zoo Director

Heck, at the Cincinnati Zoo we're in the heart of the city, we work with every school in town, and we even have a full time Cincinnati Public School on grounds called the Zoo Academy. Our goal at the Cincinnati Zoo is "to inspire every visitor with wildlife, every day!" And we work hard every day to earn our stripes, and to deserve the support of Tri-State residents.

In addition to our exceptional commitment to science education, the Cincinnati Zoo is a national leader in research and conservation. Our CREW program, the Center for Conservation and Research of Endangered Wildlife, plays a lead role with such critically endangered species as rhinos, small cats, polar bears, amphibians, and native plants.

Our collection of animals is second to none. For example, thanks to the research of Dr. Terri Roth, the Director of CREW and our VP for Science, the Cincinnati Zoo is the only zoo anywhere to ever successfully breed Sumatran rhinos. The same is true for the Stellar's sea

eagle from Siberia. And the list goes on, from aye-ayes, to sifakas, we continue to update and grow our animal collection each year.

But what I really think stands out about the Cincinnati Zoo is the energy our guests feel when they are here for a visit. Nowhere else are there twice daily "Cheetah Encounters" where you can see the fastest animal on Earth running full blast. And nearly every time you turn a corner you find a keeper walking an aardvark, or with a baby alligator to pet, or a gigantic Eurasian eagle owl on their glove.

A generation ago zoos were more passive places where visitors were pretty much left on their own to explore. Today at the Cincinnati Zoo we are committed to a very active guest engagement program. On a visit any day of the year you are most likely guaranteed to find a volunteer, intern, student, keeper, gardener or other Zoo staffer out on the grounds wildly eager to help you and to share the wonder of wildlife.

That energy makes the difference.

Roth: Rhino reproduction

Emily Gross
ZA Today Editor

Q: Do you see personalities in the rhinos?

A: For me, my favorite will always be Emi. She was really sweet, and was just a wonderful animal. Ipuh, he's got a bit of an attitude, but we actually like that about him. That's how a male rhino should be. He came from the wild, and really shows that. I think he passes some of that on to his calves. I think Suci has a little bit of that in her, but it is neat to see the mix because you see Emi in Suci as well. The curiosity, the playfulness, we really see that in Suci. The way she rolls the matt over her body,

we call her the burrito rhino! Or the way she stands on the stool, that's what Emi used to do.

End Interview

Rhinos need to have their first calf in their mid teens or else they will lose their breeding ability. That is partially why Dr. Roth's work is so important with Suci. The CREW program and keepers are currently planning on moving forward with artificial insemination, and hopefully in the future the Cincinnati Zoo will have their fourth rhino calf. As we push forward in our program, hopefully others will move forward as well.

A special thanks to Dr. Terri Roth, Lissa Browning, Paul Reinhart, and all of Cincinnati Zoo's Wildlife Canyon staff.



Mark Dumont

Visitors encounter animals in a variety of ways at the Cincinnati Zoo, including the twice daily penguin parade in the winter.

First place



Emily Shew

Zoo Academy Senior Emily Shew took this photo of Sedona the Mexican wolf.

Second place



Lissa Browning

Lissa Browning took this photo of a red panda, here at the Cincinnati Zoo

Third place



Melanie Patten

Melanie Patten, Zoo Academy Senior, took this photo of Lana the orangutan.

Notable mention



Aron Thompson

Aron Thompson, Zoo Academy Senior, took this photo of a copper head snake.



Aron Thompson's photo shows the zoo's white lion on a lazy day.