

## **DENTAL SURGERY FOR A GERIATRIC SOUTHERN WHITE RHINO**

Jade Tuttle, North Carolina Zoological Park, [jade.tuttle@nczoo.org](mailto:jade.tuttle@nczoo.org)

North Carolina Zoo keepers had known for some time that our female southern white rhino, Olivia, she was slow to eat her hay and occasionally choked on grain. One day we noticed a swelling on the right lower jaw and Olivia was unable to eat, the food just tumbled through her lips. While we tried several methods to medicate and find textures that she could ingest, our veterinary staff was making arrangements for a sedation and dental procedure on Olivia. At 48 years old everyone involved knew there were risks, but the alternative was to euthanize or watch her slowly starve. A specialist was called in to help our veterinary team and two weeks after symptoms were recorded Olivia went under sedation. Two points were removed from the left lower arcade that were cutting into her tongue and a lot of plaque was removed. She recovered well and is back to her old self, hopefully for a few years more to come. The presentation will cover this case from symptoms, through planning and implementation of the sedation, to future preventative care. My goal is to dissuade some of the fears often expressed about performing anesthesia on large mammals, especially in this case, due to age. I believe by telling our story we can encourage other facilities to evaluate their dental health and provide some ideas to help prepare for a successful sedation procedure. I am going to talk about the tools needed to perform a dental exam and those we had on hand to increase our chances of success with anesthesia. Dr. Mike Lowder also shared with us some ideas for preventative care that could reduce the need for future treatments. Our attending keepers can take this information home with them to their zoos and rhinos in our care.

## **SAVING SUMATRA'S RHINOS**

Nerida Taylor, Taronga Western Plains Zoo, [ntaylor@zoo.nsw.gov.au](mailto:ntaylor@zoo.nsw.gov.au)

Given the Sumatran rhino's Critically Endangered status, it's important that we learn as much as possible about this species – its basic biology, disease risks, food and habitat requirements – to help it survive. After seeing pictures and reading about Sumatran Rhinos, I had the opportunity to actually see and work with them in May of this year. The Sumatran Rhino Sanctuary (SRS) is home to 7 Sumatran Rhinos that reside in large, open areas where they can experience a natural rainforest habitat while still receiving state-of-the-art veterinary care. During the 2 weeks I was there - I became familiar with each of their individual personalities and worked alongside the rhino keepers each day as they went about their daily routines. The mornings were spent hand feeding, bathing, checking the rhinos bodies for ticks and cleaning their feet, before letting them back out into their forest enclosure for the remainder of the day. I also had the pleasure of following the vet team around, and was able to observe the female rhinos having an ultrasound. Many discussions were had relating to their breeding successes and challenges they face in the future. The dedication and devotion to the care of these animals by all the SRS staff is inspiring. At the SRS everything they do is for the survival of the species and to give it a sustainable future. The rhinos living at the SRS serve as ambassadors for their wild counterparts, and as instruments for education for local communities and the general public. They also comprise an 'insurance' population that can be used to re-establish or revitalize wild populations, once threats have been eliminated in their natural habitat.

## **DEVELOPMENT OF INTRODUCTION PROTOCOL FOR EASTERN BLACK RHINO (*DICEROS BICORNIS MICHAELI*)**

Kim Wood, Chester Zoo, [k.wood@chesterzoo.org](mailto:k.wood@chesterzoo.org)

Since late 2015, the rhino team at Chester Zoo has been working to develop our protocol for mixing the Eastern black rhino, for breeding purposes. Prior to this date, mixing dates were set according to information on hormone levels, and behavioural observations of the individual rhinos. Through faecal sampling, our in-house lab were able to map the oestrus cycles of our cows, and advise on dates during which they would be most receptive to being introduced to a bull for breeding success. This system was successful, with each of our breeding females conceiving during that time. Introductions of the cows to the bulls were not always easy, however, and it was felt more could be done to make introductions smoother and less stressful for the individuals involved. In 2015, after

# Olivia's Dental Procedure



Jade Tuttle  
The North Carolina Zoo  
March 2017

# Olivia

Retired 48 year old SWR

Some stiff joints

Missing teeth

Slow eater

Occasional hay wads

Choking on grain

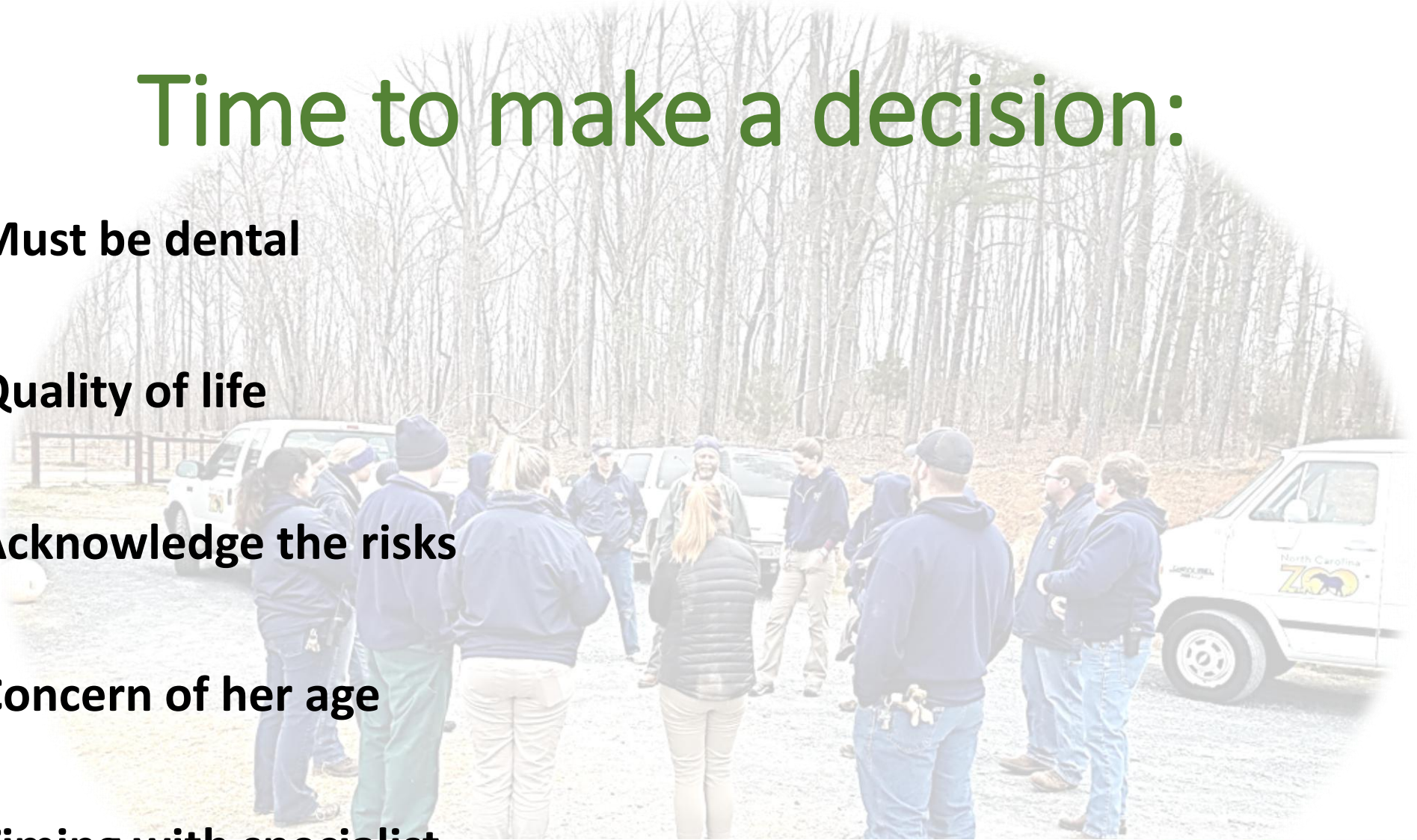


# March 2017

- Depressed and agitated when given hay
- Stopped being able to pick up grain
- Swelling on right lower jaw
- Stopped drinking
- Low fecal output (3 days without)
- Made a grain slurry
- Checked bloodwork/urine
- Given Banamine IV daily
- Given enemas BID

# Time to make a decision:

- **Must be dental**
- **Quality of life**
- **Acknowledge the risks**
- **Concern of her age**
- **Timing with specialist**



# Plan, predict, prepare

The stall we had



The procedure



# Supplies needed

**Straw bales**

**Plywood boards**

**Sling for head**

**Drape for eyes**

**Dental tools**

**Static chute**

**Multiple vet  
teams**

**Muscles**

**Safety officer**



# Emergency supplies



**Tractor**

**Truck**

**Ropes/straps**

**Body sling**

**Custom slim-jim**

**Extra lighting**

**Stock prod**

**Come-along**



# The procedure

**Circle with straw**

**Injection in chute**

**Into stall w/ plywood barrier**

**Lay down**

**Straw out**

**Anesthesia and dental**

**PT every 20 min**

**Points and plaques**

**Roll to side**

**North Carolina**



# Success

**Woke wobbly**

**Rec'd Exceed,  
Banamine, fluids**

**2" point was cutting  
into right side of  
tongue**

**10 days Phenylbutane  
after**

**Slowly increased  
eating/drinking**

**Off veterinary  
rounds & normal in  
10 days**



# Be Proactive:

- Prevention first
- Herbivores will have problems
- Earlier is better
- Plan ahead, ask for help

## Abnormal Eating Habits

- *Not finishing feed*
- *Refusal to eat hay or grain*
- *Slowly eating*
- *Dropping feed*
- *Quidding*
- *Head tilting*
- *Chewing with mouth open*
- *"Squeaky" noises when chewing*

## Clinical Signs

- *Maxillary or mandibular swelling*
- *Malodorous nostrils or mouth*
- *Nasal discharge*
- *Excessive salivation*
- *Drainage*
- *Choke*
- *Colic*
- *Undigested feed in manure*

# Many years to come!

## Questions?



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