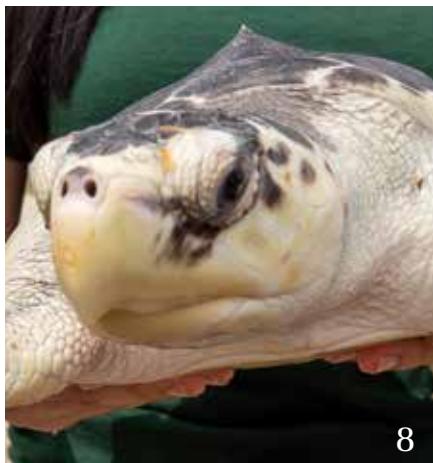


# CONTENTS



## Member View

### 7 Inclusion

Seattle Aquarium certifies as sensory inclusive

### 8 Rescue

Audubon Coastal Wildlife Network return sea turtles back to the wild

### 9 Rescue

The National Aquarium releases nine rescued sea turtles

### 10 Rescue

Record number of sea turtles rescued at Texas State Aquarium

### 11 Rescue

Five manatees released from the Jacksonville Zoo

### 12 Species Survival Plan® Highlight

The Wyoming Toad SSP

### 13 Research

Wildlife tracking system takes flight at the Belle Isle Nature Center

### 14 Animal Management

Managing eastern black rhinos at Blank Park Zoo

### 15 Conservation

Orinoco crocodile conservation at Dallas World Aquarium

### 16 Research Updates

This month's selection of what has been published

### 18 By the Numbers

FIN-TASTIC conservation by AZA members

## Departments

### 48 Faces & Places

### 51 Exhibits

### 52 Announcements

### 52 Advertiser Index

### 64 Births & Hatchings

## About the cover

Kemp's Ridley sea turtle



© David Coffey/National Aquarium

## VISIT US ONLINE

[aza.org](http://aza.org)

 **LIKE US ON FACEBOOK**  
[facebook.com/AssociationOfZoosAndAquariums](http://facebook.com/AssociationOfZoosAndAquariums)

 **FOLLOW US ON TWITTER**  
[twitter.com/zooz\\_aquariums](http://twitter.com/zooz_aquariums)

**E-MAIL THE EDITOR**  
[tlewthwaite@aza.org](mailto:tlewthwaite@aza.org)

## ASSOCIATION OF ZOOS & AQUARIUMS®

**Editorial policy:** Connect is published by the Association of Zoos and Aquariums, a nonprofit, tax-exempt organization dedicated to the advancement of zoological parks and aquariums for conservation, education, scientific studies and recreation. Issued to members as a free service; not available as a subscription. Mailed during the first week of the month. Articles submitted for Connect do not necessarily reflect the opinions and policies of AZA.

**Mission:** Connect is a forum for promoting AZA's mission by highlighting zoo and aquarium trends, industry initiatives, conservation efforts and member achievements.

**Copyright policy:** All items appearing in Connect are copyright of AZA. Permission to reprint items must be obtained by contacting AZA's Publications Department at [tlewthwaite@aza.org](mailto:tlewthwaite@aza.org).

**Advertising policy:** Advertising is available. AZA reserves the right to refuse advertising not consistent with its mission. Ad contracts are issued on an annual basis, and ads are accepted on a one, three, six, nine or 12-time basis. Deadline for insertion orders is the first of the month preceding publication. Deadline for artwork is the 10th of the month preceding publication. Rates and mechanical requirements are available upon request.



## Member View

### Animal Management

# Managing Eastern Black Rhinos at Blank Park Zoo



© Blank Park Zoo

Blank Park Zoo in Des Moines, Iowa, is currently home to one male (Kiano) and three females (Ayana, Tumani, and Kamara) eastern black rhinos. Through the

Species Survival Plan®, Kiano and Ayana were recommended to breed. In fall 2016, Ayana gave birth to Tumani, with Kamara following in spring 2019. Due to limitations

on animal transports impacted by COVID-19, the Blank Park Zoo was unable to transport Tumani to her new home.

Eastern black rhinos are typically solitary animals; females being the exception, with offspring typically staying with their mothers for up to 18 months after birth. Now housing three females, the animal care team began brainstorming indoor housing solutions for the winter months when outdoor space would be limited. After much care and research, the team decided to begin introductions with the three females. Cleveland MetroParks Zoo in Cleveland, Ohio, had done this successfully and the team felt confident that this process would go smoothly at Blank Park Zoo as well.

The Zoo's outdoor exhibits allow for constant visual and tactile access to each other which gave staff an advantage. Prior to the first introduction, staff gave each group of rhinos access to the north and south exhibits so they were familiar with the setup. The first introduction occurred 18 August 2020, between Tumani and Kamara.

After 20 minutes of unremarkable interactions, we shifted Ayana onto exhibit.

An advertisement for COST INC. The top left features the COST INC. logo with the tagline "YOU DREAM". The top right features the text "EXHIBIT FABRICATION". The bottom right features the text "WE DELIVER". The advertisement is divided into four panels: 1. Left panel: Text about COST INC.'s exhibit fabrication services, mentioning locations like Jackson, WI; Orlando, FL; Seattle, WA; and Winnipeg, MB. It highlights their experience and commitment to creating interactive, sensory-stimulating, and authentic exhibits. 2. Middle left panel: A photograph of a river or stream flowing through a naturalistic exhibit enclosure, with birds visible on the bank. 3. Middle right panel: A photograph of a large, ornate stone archway or gate, possibly a lion's den or a similar exhibit feature. 4. Right panel: A photograph of a large, rocky exhibit area where a group of animals, possibly wolves or coyotes, are seen in their naturalistic habitat.

All three rhinos stood in the center of the south exhibit alert for several minutes, before all three began running through both exhibits. The following 20 minutes were spent investigating the exhibits together calmly. The next introduction occurred 24 August for a total of two hours.

The first interactions seen were Kamara bluffing at Tumani when she came too close. During this time, Ayana consumed hay nearby. Ayana is fairly laid back, so she allowed Tumani and Kamara time to figure out their social dynamic without causing any extra aggression. All three rhinos were seen consuming hay in close proximity several times throughout the remainder of the introduction.

On 25 and 26 August, the introductions lasted six hours. From 9:00 am to 12:00 pm, they spent the majority of the time in close proximity consuming hay or standing. There were several bouts of playful sparring between Tumani and Kamara. They rested in close proximity from approximately 12:00 pm to 3:00 pm. After 26 August, all three rhinos were given access to both yards daily during the Zoo's open hours. On 1 September, the team began overnight access allowing the group to be together at all times of the day. On 8 September, staff gave the females access to only the south yard as they spent the majority of their time there. This allowed for Kiano to have access to the north yard. On 17 October, all three females were given indoor access to four stalls for the first time.

Overall, introductions went incredibly well. The only aggression seen was during initial shifting into the stalls over their diet. We began spreading their diet throughout the stalls in feeders to mitigate this. Throughout this process, behavioral observations were completed using Zoomonitor, a web-based app developed through Lincoln Park Zoo in Chicago, Ill. Overall data from observations completed showed that the majority of the time, the three rhinos spent time consuming hay, standing or laying down in touch or close proximity. We hope to share our experiences to better understand the socialization of black rhinos and increase welfare and management practices. The Zoo has successfully managed our crash this way and will continue to do so until they are able to find new homes for the calves.



© Dallas World Aquarium

## Conservation

# Orinoco Crocodile Conservation at the Dallas World Aquarium

By Luis Sigler, M.V.Z.

In 1999, an adult pair of Orinoco crocodiles (*Crocodylus intermedius*) was imported from Venezuela by the Dallas World Aquarium (DWA). There was an agreement with the Ministry of Renewable Natural Resources (MRNR) to support the conservation of the Orinoco crocodile; and also, to repatriate all the hatchlings produced.

The Orinoco crocodiles were hunted almost to extinction in the 1950s, and remaining populations were estimated to sustain no more than 350 adults left in the wild for both countries of origin: Colombia and Venezuela in the 1990s.

Miranda and Juancho became ambassadors for their species in a new Biome called Orinoco: Secrets of the River. There were just six Orinoco crocodiles in the U.S. including them. No other crocodiles from this species were to be found outside of their natural range.

In 2003, the first hatchling was obtained at the DWA. This female was named Jump and was sent to the San Antonio Zoo four years later, where they changed her name to Nicole. She was then transferred to

Saint Augustine Alligator Farm and soon she will be placed in a new exhibit at the Indianapolis Zoo.

In 2004 and 2005, only males were hatched due to incubation temperature. In 2006, 36 hatchlings hatched from 36 eggs. In 2007, we obtained another group of 24 female hatchlings.

With the hatchlings of 2006 and 2007, we applied for the CITES exportation permit, and on 8 December 2008, we sent 54 Orinoco crocodiles by air to Caracas and then moved them to Rancho Grande station in Maracay, where they completed their quarantine process before being released into the wild. At that moment, this was the biggest endeavor of any zoo in the U.S. to repatriate crocodiles to their country of origin.

The crocodiles from Dallas sent to Venezuela were locally called "the cowgirls" and were released in 2009 in three protected river systems: Capanaparo, Cojedes, and Guariquito. We heard nothing from them until 2016 when a group of researchers from the Venezuelan Crocodile Specialist Group (V-CSG) noticed an increase in the number of nesting females at the Capanaparo River and