



WAZA

World Association
of Zoos and Aquariums

2022

03

NEWS

The 77th WAZA
Annual Conference

EAZA's Collaborative
Banking of Samples

The New WAZA
Carbon Guide

JAZA's Effort on
Ex Situ Conservation
of the Amami Spiny Rat

The Evolution of Immersive Technologies in Zoos and Aquariums



Mountain gorilla (*Gorilla beringei beringei*) © Immotion Group plc

Patricia Jones
Immotion Group

The adoption of new technology into zoos and aquariums has been a widely debated topic for years. Is technology a distraction from the mission of zoos and aquariums, preventing people from having real-life encounters with animals? Or can it be layered onto the visit to enhance and deepen the visitor experience?

Companies like Immotion, a US/UK-based immersive 'edutainment' company, have been leading a paradigm shift, focusing exclusively on virtual reality (VR) experience centres for zoos and aquariums with their own brand of live-action documentary content combined with motion-platform seats. Already installed in over thirty aquariums, 2022 marks Immotion's expansion into zoos as they partner with the Dian Fossey Gorilla Fund to create their latest VR experience, Gorilla Trek.

The Dian Fossey Gorilla Fund (DFGF) has long championed education as the cornerstone of conservation. So when Immotion approached CEO Dr Tara Stoinski to participate in the Gorilla Trek VR project, she jumped at the chance. "It was an amazing opportunity for us to transport people to Rwanda to see the mountain gorillas close up and to understand the delicate balance that exists in the conservation efforts," said Stoinski.

The world-renowned primatologist and the Immotion team trekked from DFGF's new Ellen DeGeneres Campus through Rwanda's Volcanoes National Park, where they embedded themselves with a family of mountain gorillas. "Filming the mountain gorillas in stereoscopic 360° virtual reality was the experience of a lifetime," said director Ken Musen, "Once the animals are used to you and accept your presence, they just go about their business, and we essentially become part of the family. So sometimes, they are just a few feet away from the camera." With Dr Stoinski offering in-the-moment commentary, we gain access into the intense interpersonal dynamics of a unique gorilla family. This family has six silverbacks in the troop, but all deferred to the dominant, or alpha silverback... or they did until recently. The crew were lucky enough to capture a unique moment, where a beta silverback vied for control. A physical encounter ensued, and the conflict led to the departure of the beta silverback, who left with a female to start his own new family apart from the original group.

The narrative of the virtual reality experience not only showcases the behaviour and internal struggles of a large gorilla family, but it also offers a glimpse into the population plight of the endangered mountain gorillas. The hope is that with the ostracized beta silverback and mate, a new family of gorillas will form. With each new family, there is hope for mountain gorillas to repopulate their decimated numbers.

"What is unique about this VR experience is that we're not only seeing the gorillas in the wild, we're transported to their habitat. We are completely immersed in the jungle with them, and the seats move along with the camera motion, adding another level of immersion," said Rod Findley, President (LBE) at Immotion.

Rod Findley, President (LBE) at Immotion.

The first installation of Gorilla Trek opened at Milwaukee County Zoo in July of this year, where the zoo provided 4,000 square feet of exhibit space. For Amos Morris, Zoo Director, incorporating VR into the guest experience was an easy decision. "Using tech to draw our guests in, to get them excited about where they are, I think it's critical to use all the tools in our toolbox to engage and draw our guest into the zoo," he explained.

As the guests wait to enter the 40-seat motion-platform theater, they experience a fully interactive pre-show. Setting the stage for the conservation message, guests learn about Dian Fossey's legacy; about the differences between eastern and western lowland, cross river, and mountain gorillas; and about the environmental challenges facing mountain gorillas which have led them to being on the brink of extinction. One interactive touchscreen experience allows guests to identify different gorilla behaviours, many of which they will witness first-hand in the VR film. Another interactive element offers guests the chance to compare human and gorilla anatomy, highlighting the distinct parallels. Then there is a final more light-hearted feature, dubbed the Gorilla Personality Quiz, where guests answer questions to discover who they're most similar to, temperament-wise, of all the gorillas in the film.

The pre-show interactive experience primes the guests for a unique and entertaining visit to the VR theater. Before even entering the actual theater space, guests already understand the environmental pressures that adversely affect gorillas and empathise with their plight. Once seated in the VR theater, true transformation begins.

“To be able to fly the visitors over the top of the rainforest, set them down right into the middle of a gorilla troop, while learning all about the social hierarchy and what it takes for these animals to survive in the wild, it connects our visitors,” explains Milwaukee’s Curator of Primates, Trish Khan. “It gives them the opportunity to bond with the animals and understand why saving them and their environment is so critically important.”

The reactions from guests, many of whom had never experienced VR before, has been phenomenal. “I’ve been coming to this zoo for 65 years and I’ve never experienced anything like this before,” said one guest. “I felt so close to the animals.” In fact, VR has been called the “empathy engine,” as it has been proven to trigger a stronger empathic reaction than a traditional 2D film projected on a screen. This makes sense, given the technology’s capacity to immerse the user in the world – the viewer literally feels transported from their usual surroundings to the new environment. “It made me feel like I was part of that family. It’s hard not to be moved by what’s going on with them,” said another guest.

Studies have indeed shown that the memories created in a virtual reality experience are stored in a different part of the brain than images simply watched in a 2D non-immersive video. Users experience the emotional resonance of having actually visited the places they explore in their VR experience, rather than merely having viewed them.

This type of guest experience has been integral to the success of the VR experiences in Immotion’s aquarium content deployed over the last three years. The team has worked with marine biologists in Tonga to study the behaviour of humpback whales and their calves. They traveled to The Bahamas, teaming up with Bimini Shark Lab, to swim with tiger sharks in an effort to demystify their role in the ecosystem. Future plans involve traveling to Mozambique to partner with the Marine Megafauna Foundation, and marine biologist Andrea Marshall to study the migratory patterns of manta rays.

Now, the implementation of immersive content and the use of technology throughout zoos and aquariums to enhance education and engagement is no longer a controversial discussion. In addition to its VR offerings, Immotion is currently working on Augmented Reality experiences that tie in, not only to the theme of attractions themselves, but also creating a mesh that can be overlaid across the entire zoo or aquarium.

Education needs to be a two-way street where guests are not just the passive recipients of information, but enjoy a give-and-take where they are actively engaged – where conservation becomes a conversation. The hope is that these new immersive technologies can spark this engagement.

“I’ve been coming to this zoo for 65 years and I’ve never experienced anything like this before,”
Guest



↑ Visitor Experience © Immotion Group plc