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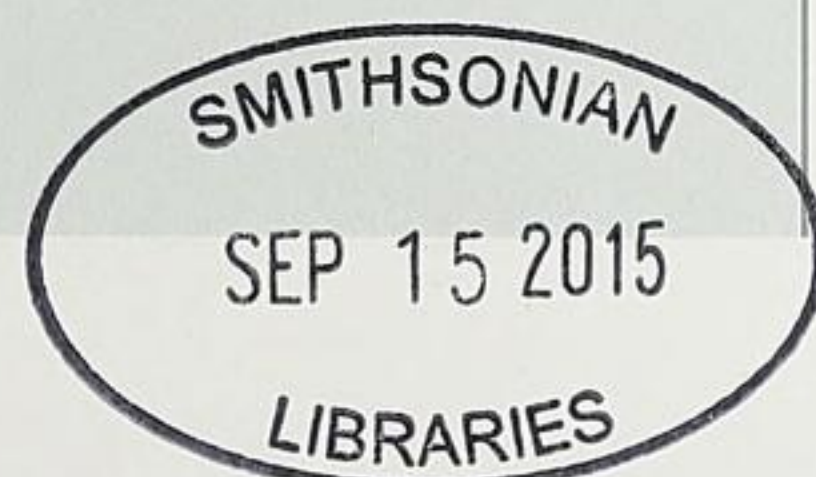
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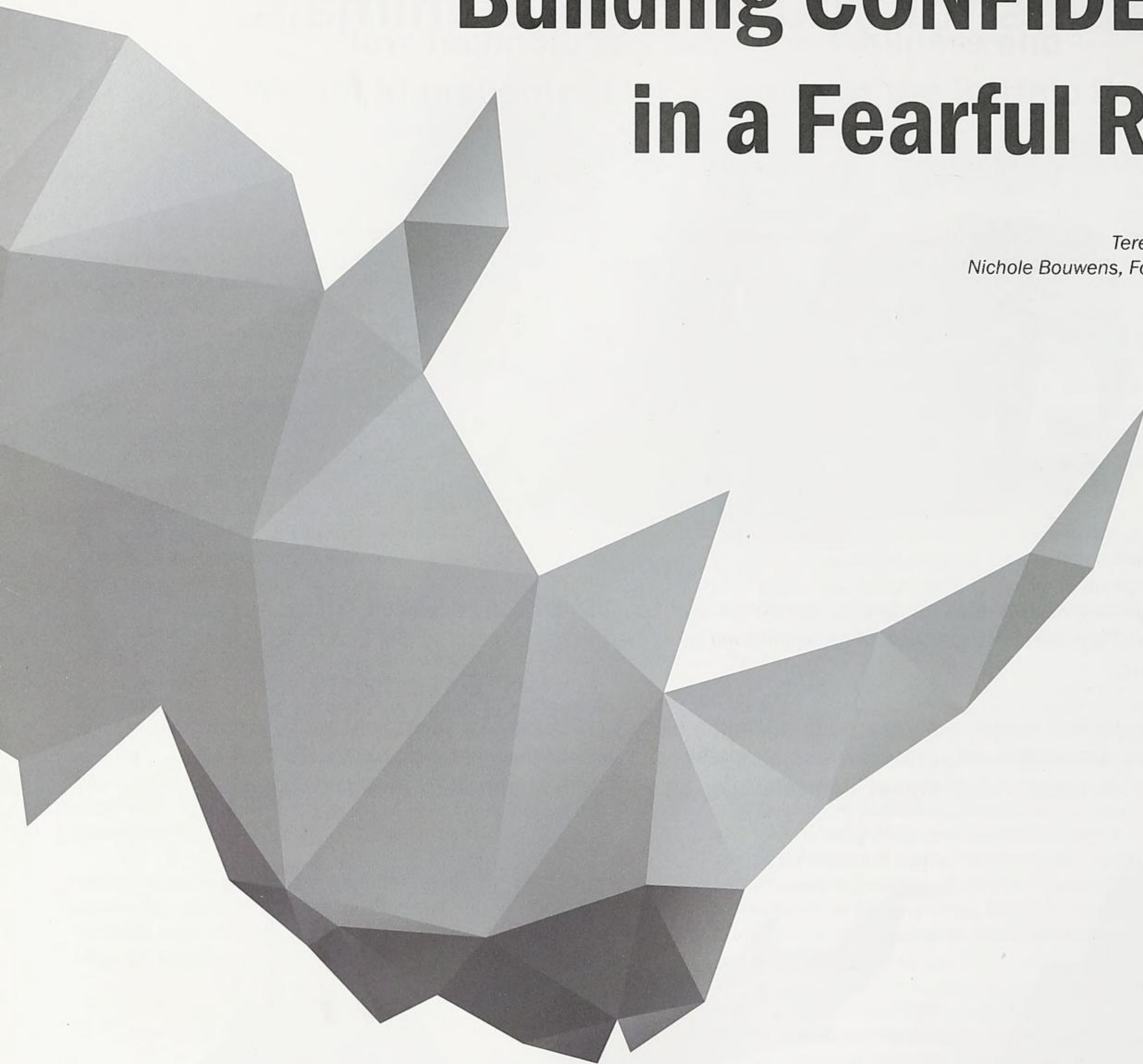
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Building CONFIDENCE in a Fearful Rhino

Teresa Deaton, Keeper I
Nichole Bouwens, Former Senior Keeper
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In April 2011, Zoo Atlanta acquired Utenzi, a seven-year-old male Eastern Black Rhinoceros (*Diceros bicornis michaeli*) with the objective of adding a breeding male to the collection. Utenzi had a history of being consistently nervous and flighty if he was exposed to anything unfamiliar. His anxiousness subsequently led to stereotypic horn rubbing. As a result, Utenzi had worn two large, vertical grooves behind his primary horn.

When Utenzi arrived at Zoo Atlanta, it was expected that transitioning him into a new environment and routine would be challenging, and could potentially exacerbate the horn rubbing. However, while in quarantine, Utenzi seemed to adjust well to his new indoor holding area. He shifted easily between stalls and quickly became accustomed to the daily cleaning routine and the noise of the hydraulic doors. The horn rubbing continued, but became less severe.

Throughout Utenzi's quarantine period, enrichment items (both hanging and objects placed on the ground) were offered with hopes of lessening the horn rubbing. Unfortunately, the introduction of enrichment had an adverse effect, and it quickly became apparent that the enrichment items were causing a fear response. Because of this negative reaction, the keepers felt it was in Utenzi's best interest to offer enrichment when he was out of quarantine and in a more consistent routine.

Towards the end of Utenzi's quarantine, his horn rubbing and gouging increased. Not only were the grooves in his primary horn worsening, he also began vigorously rubbing the base of the primary horn in a horizontal motion, creating a deep groove. Veterinary staff became increasingly concerned that he could possibly damage the horn growth plate.

When Utenzi's quarantine period expired, he was housed in the same barn as the female rhino, Andazi. This allowed both rhinos to have visual contact with one another. It appeared that Andazi's presence reduced Utenzi's anxiety and over time, he was introduced to the outdoor corral and exhibit. He was cautious at first but quickly adjusted to his daily routine. Initially these changes seemed to create a distraction, and again, the horn rubbing decreased.

The damaged areas to the primary horn, including the horizontal gouge at the base, began to grow out. Although this was a huge accomplishment, Utenzi continued to react negatively to anything unfamiliar including browse, enrichment objects and the presence of more than one keeper in the area. These reactions included fleeing and refusing to return, or backing into a corner staring wide-eyed and unmoving. The only enrichment items that could be offered without causing a fear response were scents, nature sounds, or soft music.

Working with an animal as nervous and flighty as Utenzi was extremely challenging for the keepers. Any insignificant change in routine would cause such an adverse reaction that, in addition to the horn rubbing, he eventually began refusing to shift. It quickly became the keeper's mission to strategize a plan that would allow the introduction of new sights, sounds, people and objects in a non-threatening manner. The goal was to desensitize Utenzi to changes in his environment so that he could learn to cope instead of react in such an extreme and negative manner. Although it seemed like a simple task at the time, it became clear that a lot of patience, combined with a flexible strategy was essential to the keeper's and Utenzi's success.

To help Utenzi adjust and cope with change, a combination of training and enrichment strategies were discussed. The first priority was to get Utenzi comfortable in the presence of multiple people. Although he trained readily for one person, he usually refused to participate with two or more people present. So, the first task was to have two keepers randomly visit Utenzi and free-feed him some of his favorite treats. Over time he relaxed enough to be rubbed down and he even tolerated an occasional bath. As Utenzi began to show progress, the keepers invited unfamiliar people to join the training sessions. Eventually, the keepers were able to provide behind-the-scenes tours for special guests, which included hand feeding Utenzi. It took a few months to work up to this, but patience and small progressive steps were key.

Although great strides were made with training, it remained a struggle to offer Utenzi object enrichment. Any type of enrichment objects or large browse would elicit a fear response. When browse was offered, Utenzi would only tolerate small pieces on the floor. The keepers soon decided to introduce items at a distance, either outside of his enclosure, or in an area that provided a visual barrier for Utenzi if needed.

Zoo Atlanta's rhinos are housed separately where one rhino is on exhibit, and the other remains off exhibit in a holding area with access



Photo 1 by Nichole Bouwens



Photo 2 by Nichole Bouwens



Photo 3 by Nichole Bouwens

"It quickly became the keeper's mission to strategize a plan that would allow the introduction of new sights, sounds, people and objects in a non-threatening manner."

to an outdoor corral and an indoor stall. The keepers decided to slowly introduce enrichment items on the days Utenzi was off exhibit so that his response could be monitored. After morning cleaning was complete, an enrichment object was placed either on the floor outside of his stall or on the floor in the far corner of the stall. He would typically stare at the object from a distance, and then run into the corral. Eventually, Utenzi would return and the cycle would start over again. When an object was in the stall, treats were placed nearby to entice him to get closer.

The first major breakthrough was a 55-gallon drum that contained a small amount of grain inside. Once Utenzi approached the barrel and realized there was food inside, he attacked it! He pushed the drum all over the stall and corral, slamming it into walls, lifting it up and dropping it over and over again. When the grain fell out, he didn't even notice. Utenzi played with the drum for about 30 minutes without ever eating a single piece of grain. After the success with the drum, the keepers began to introduce other objects on the ground such as large, hard plastic balls and kegs. Though these were accepted and played with, none were as well received as the drum, which today, still remains Utenzi's favorite enrichment item.

There are many enrichment items earmarked for the rhinos, but many are only approved because they can be hung on a pulley in the stall. These items were not an option for Utenzi because of his fear of suspended objects. Although he was receiving some enrichment at this point, the keepers wanted to provide him with more of a variety. Utenzi's keepers were aware that desensitizing him to hanging enrichment would be a very slow process that would require a flexible strategy, a lot of observation and patience. To start off, one item at a time was hung in the keeper area or in the adjacent stall so that Utenzi could view the object without feeling threatened. Each day, the enrichment items were replaced with a new object in varied locations. Eventually, Utenzi began to tolerate the items hanging closer and closer to his stall until finally, he allowed items to be hung right outside of his stall (Photo 1). This gave Utenzi an opportunity to investigate and touch the object, but he was also free to leave the area if he felt threatened. Once he was comfortable with an item on the outside of the stall, the items were then moved to the corner inside his stall (Photo 2).

Photo 4 by Nichole Bouwens

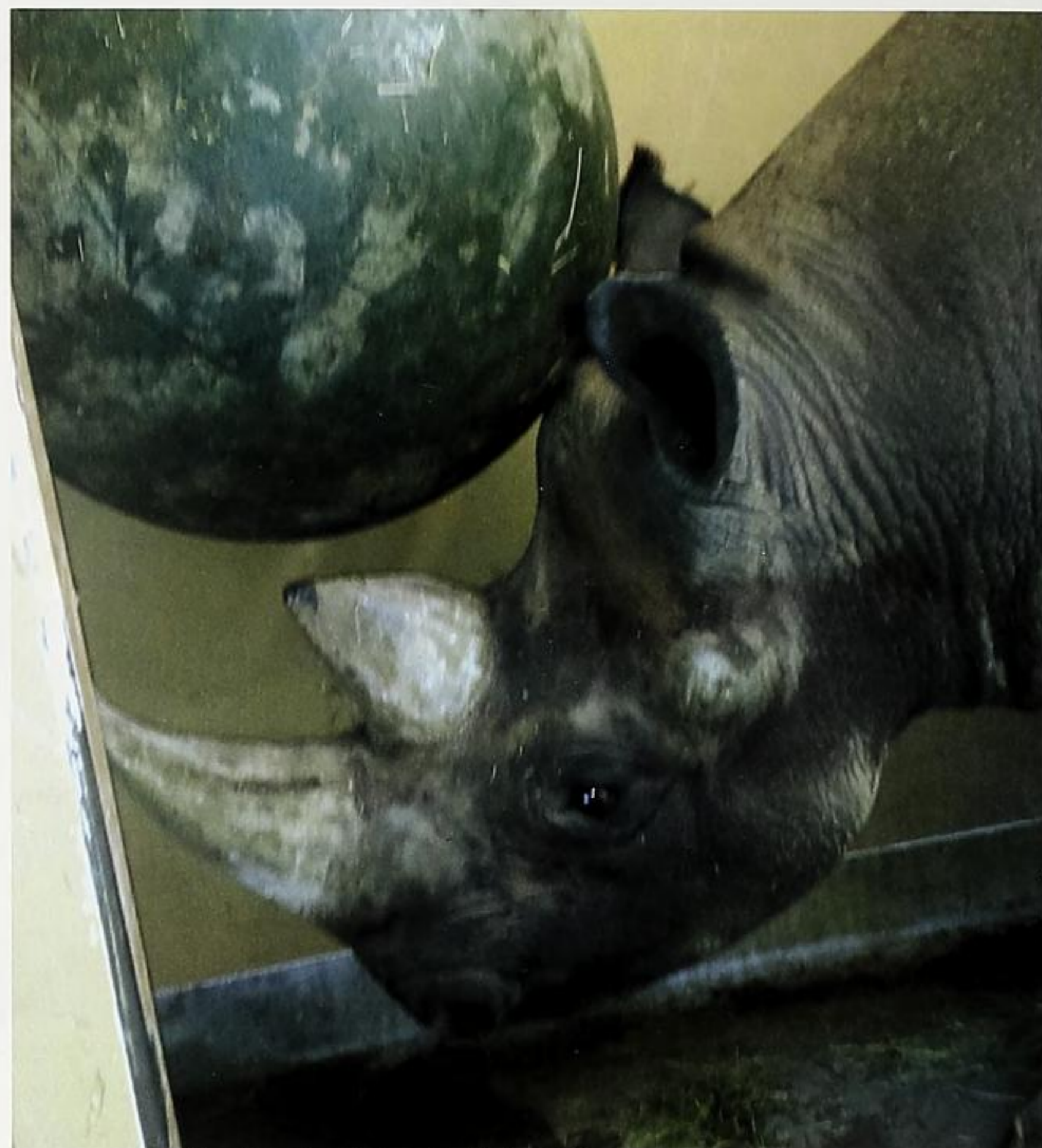
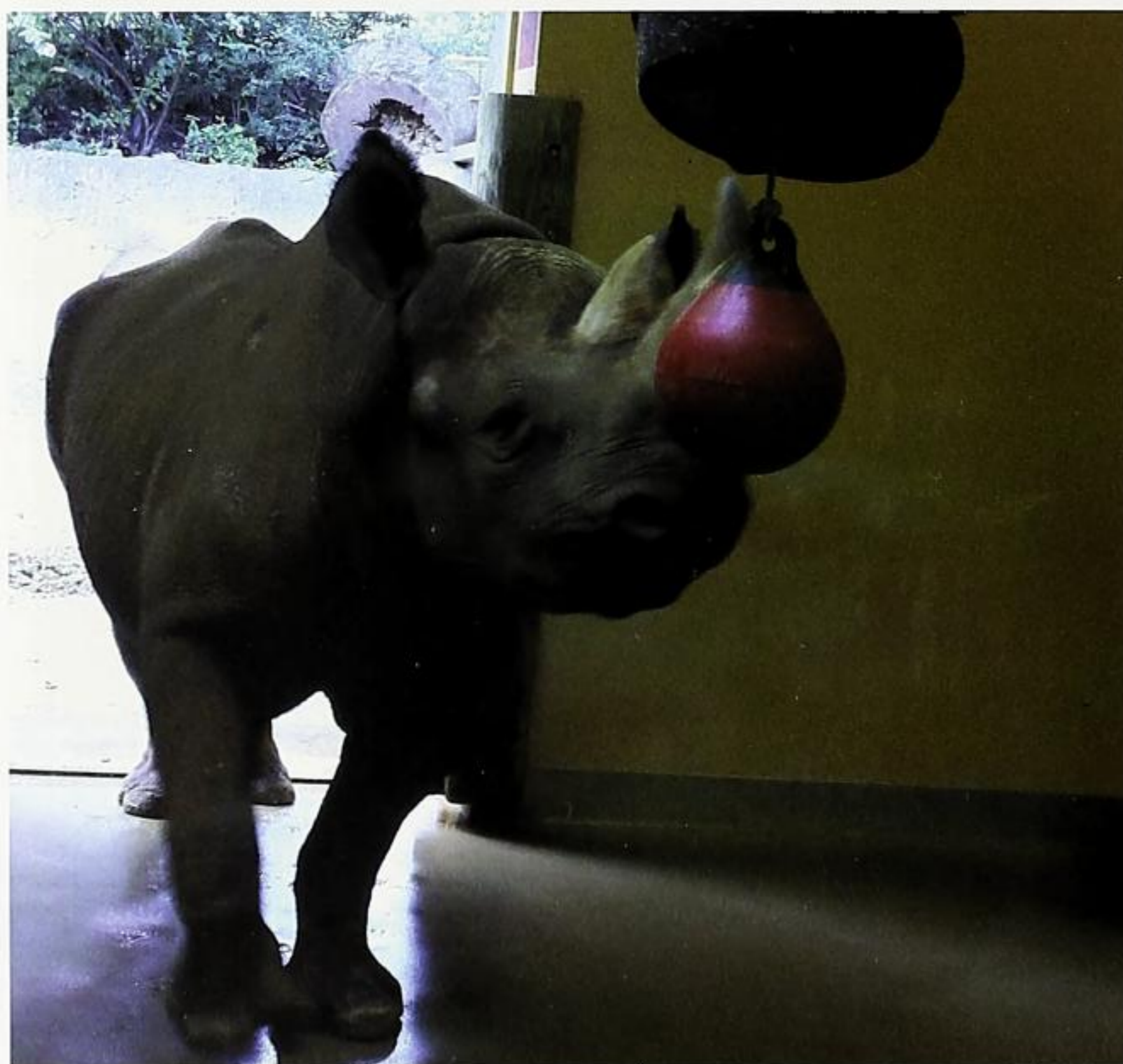


Photo 5 by Teresa Deaton

Surprisingly, the transition from hanging items on the outside of the bars to the inside went very smoothly. Initially the objects were hung in a corner, but moving the items further into the stall took quite a bit more time and desensitization. When objects were hung about 2-3 feet away from the corner, he regressed for a day or two, but he eventually began curiously approaching and touching the items. After a few days of rotating through various items hanging in that spot, the items were moved even further in and the rotation schedule was repeated. His favorite treats were placed under the hanging items at each new location to entice him to come inside and explore. Our final spot was the cable. Again, he regressed and he stayed outside completely ignoring the stall and the treats for a few hours, but by the end of the day, he was in the stall sharing space with the object hanging from the cable (Photo 3). Eventually, all of the hanging enrichment items were rotated through. He now interacts appropriately with a variety of enrichment items, regardless of their location (Photos 4 & 5).

Utenzi has made enormous progress in the relatively short time he has been at Zoo Atlanta. Remaining patient and consistent, and recording his behavioral responses toward enrichment objects played a major role in Utenzi's success. Desensitizing him to various enrichment items has helped him adjust easily to various changes in his environment including new exhibit furniture, large browse piles, equipment in the keeper area, etc. Utenzi's keepers are also regularly hanging limbs and branches for him to browse on and his stereotypic horn rubbing has significantly decreased.

Today, Utenzi no longer exhibits a nervous, rigid posture. He stands tall, appears relaxed and is more interactive with his environment. He easily adjusts to new people, and is now unaffected by the presence of more than one person in the area. He even utilizes more exhibit space, regardless of crowds and noise levels. Quite often guests can observe Utenzi taking an afternoon nap directly under an elevated viewing platform with people standing right above him! 🐘