

Facility Focus: The Phoenix Zoo– The Evolution of a rhino exhibit

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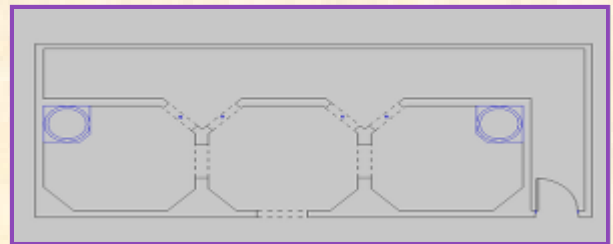


The Phoenix Zoo has exhibited White Rhinos for over 40 years. They have been a premier exhibit animal in our collection for most of the zoo's history. However, as with several zoos that have had large animals for a long time, our exhibit is not perfect and has seen several improvements/upgrades over the years. The first challenge came when our original rhino passed away. The rhino barn is actually under the lion viewing area and the back wall of our barn is the lion moat wall so modifications and expansion in the barn were out of the question. Do to these limitations and the keepers experience with geriatric rhinos, the zoo decided to house geriatric female rhinos. The plan being we were not set up to breed white rhinos, though Phoenix was one of a few zoos to have bred a pair of white rhinos, but we could hold no breeding females and free up room at another facility so they could help the rhino population. We did some upgrades; we added an epoxy coating to the concrete floor and additional drains (the barn only had one drain, we were masters of the squeegee). We also installed a restraint chute, however the rhino access door to exhibit is right next to a block wall, so the chute had to go in at an angle and the wall limits our access to one side of the rhino. To



allow people to operate the chute in protected contact we added vertical poles to the area right outside the barn. Our exhibit allows for the public to have a 320-degree view of the rhinos. This being said the rhino access door and chute are below the public viewing area. Shade was added to help with the heat and provide animals and keepers with some privacy and a little relief from the summer heat. All these improvements have been great, allowing us to train the rhinos for blood draws, vaccinations and basic medical exams. Our current rhinos came from the Wilds and before that King's Island. They had always been in large pasture exhibits without close contact from the public. Their arrival brought us challenges we hadn't foreseen, conditioning rhinos for a traditional zoo environment with public in close proximity and having the ability to be above them. We took things slow allowing the rhinos to have access to the barn where they preferred to stay. The Phoenix zoo was without rhinos for two years while the renovations were completed and new rhinos were acquired. Needless to say the people of Phoenix wanted to see the rhinos on exhibit, due to our mild winters the barn has no public viewing as the rhinos are only inside while keepers clean, or when medically necessary. In the winters they have access to the barn with heaters but are not locked in. We had to speed up the introduction due to crowds. They were serviced before the zoo opened and released before the public was in, all their food was given on exhibit. Notch grew accustomed to the public and the routine within a couple weeks, Half Ear on the other hand follows Notch's lead, even now she still doesn't like large crowds of people but she will tolerate them, shifting and training with them around. The overlook is great for the guests as they can see keepers training and working with the animals. The exhibit allows for the public to see them no matter where they want to be.

Two years ago we were posed with another challenge, to remove three large planters so the rhinos could be more visible as the planters were six feet tall. The planters were 40 years old and beginning to fall apart and the rhino's felt the need to help tear them down. The planters housed several trees providing additional shade. We wanted to keep the trees and the dirt mounds that encased the root balls with out allowing the rhinos access to the trees. After many options were discussed we decided on large boulders set into the ground. The rhinos haven't moved them but do enjoy the boulders as scratching posts. The boulders and the areas they protect provided a place for the first of the animals to join the rhinos in their exhibit, a pair of Egyptian geese. The geese taught us that they will hang out in a barn stall completely occupied by a rhino. Half Ear and Notch are not as tough as a goose and will be displaced by a noisy persistent goose. Geese will try and run out the drive thru gate keepers use to enter the exhibit. Taking care of rhinos is much more entertaining when keepers have to get geese out of the way first.



Barn floor plan

Our latest challenge came when we made a commitment to the Antelope Taxon Advisory Group to help the Speke's Gazelle Species Survival Plan. In doing so we are now a designated facility for the holding of surplus males, to increase holding space in other facilities for breeding. To that end, we were given the challenge by our curator to find a way to retrofit



our Rhino exhibit to become mixed-mammal species and house Speke's Gazelle.



Our first challenge when retrofitting this exhibit for the gazelle was determining the interactions the Rhinos would have with the gazelle. While both animals would be on exhibit together during the day deciding how to house them overnight was an issue. The climate in the Desert southwest is such that we are fortunate enough to be able to leave our Rhinos on exhibit overnight without worrying about them getting too cold most of the year. However, in the winter the overnight lows do dip down enough to warrant giving our Rhinos access to the barn with heat. Up until this point that hasn't been an issue, the geese preferred to keep the rhinos in the barn not join them. Our barn however safe for rhinos and even geese is by no means safe or even useful for small gazelle and allowing them access along with the Rhinos would be a recipe for disaster. Due to these factors it was decided that the gazelle would have to have a separate holding area of their own.

While planning the holding area for the Gazelle we had address two main concerns involving the Rhinos. First of all the proximity of the holding area to the Rhino barn was a concern. We want to discourage the Gazelle from spending time near the rhino barn/chute area as much as possible for their own safety, so it was decided the best thing was to locate the Gazelle holding on the opposite end of the exhibit from the Rhino barn. This should discourage the Speke's from being around the Chute area and also make sure they are not underfoot when the Rhinos are waiting to be shifted. The second issue we had to deal with was a shift door. Due to the fact that this has always been only a rhino exhibit it is surround by a concrete wall and the only gate/door is ~800 lbs and 7 feet wide, not exactly designed for shifting a small, agile, fast animal. Although the cost was a factor it was decided the best thing to do was to cut a hole in the concrete wall big enough for a gazelle that led to a small chute connecting the exhibit to the holding. The hole was then equipped with a sliding door on the side that the rhinos cannot reach. Although the rhinos do still have the ability to get their horns and snouts into the chute the rhinos cannot reach the door to the holding area on the other end of the gazelle chute. Steps have been taken to minimize the Rhinos access to this area (placing large boulders in the way) but curiosity has won out and we have seen both rhino horns in the chute already, in the future if this becomes a problem a more permanent barrier may be incorporated (concrete filled steel posts, ect.



Removal of planter

The other major challenge we had to contend with was Gazelle-proofing the Rhino exhibit. Our rhino exhibit was one of the earliest purpose-built exhibits in the zoo (over 40 years ago) and to that end was made specifically for Rhinos and nothing else. Basically we have a ½ acre yard with solid concrete walls all the way around and two large doors, one leading off exhibit for servicing and one leading into the barn;. Additionally, in 2004 we added the before mentioned training/restraint chute was added extending from the barn door into the exhibit, and a keeper area (originally built for ostrich, a mixed species option we decided against once we met Half Ear and Notch) was added next to it, both of these areas are inside the Rhino exhibit. While it is ok for the gazelle to go in and out of the keeper area (separated from the exhibit by concrete-filled steel posts 2' apart) we obviously do not want the Speke's to have access to the Rhino chute due to the abundance of small openings that could injure the Gazelle. The secondary benefit of blocking the Rhino chute from the gazelle is that it automatically prevents them from having access to the rhino barn. The barn stalls can fit one rhino comfortably, two rhinos tops, two rhinos and two gazelle- not quite.



Chute before modifications

Blocking the Rhino chute was by far our biggest challenge; we felt if the geese found the barn and chute interesting the gazelle would also. The first idea was to build a barrier around the chute with a rhino-proof gate in front of the chute door, however this was not cost effective and logistically very difficult. A second idea surfaced that incorporated the chute itself and saved a lot of money and may be a lot of headaches? A small fence was already in place on one side of the chute from the previously mentioned ostrich holding, this fence, when covered with a solid barrier, would effectively block one side of the chute adjacent to the keeper area. The second and third sides were already in accessible due to the exhibit and barn walls, which left the fourth side of the chute to be dealt with. This was the front of the chute leading onto exhibit. Rather than trying to incorporate a second door in front of the chute door it was decided to use the chute door itself as a barrier. The benefit to this is a significant cost savings and no more exhibit space is lost. The challenge was to design a solid barrier mounted on the chute door that could be removed when training the rhinos in the chute to accommodate their horns, We tried a solid piece and found our rhinos don't fit in the chute if it has a solid front and it would limit access to the front of their horns. Some of the logistics we had to work out included a single keeper being able to open a door that would hold up to a rhino and be safe for a tiny gazelle.

In the end we decided to install 1/8" thick steel sheet on the front of the chute with a hinge on one side and a hinge in the middle, this allowed the sheet to be folded out of the way when working with the rhinos and put back into place when they are on exhibit. Sounds simple but after installation keepers couldn't move the chute door, we had to raise the chute door to allow the chute to be operated by someone other than superman. A small section of this sheet was also installed to fill a 1' gap between the chute and the exhibit wall. The last components installed were two tubular steel frames (similar to that of the pre-existing ostrich fence) that filled the gaps between the chute and the old ostrich fence. All of the tubular steel frames and the old ostrich fence were then covered with rolled bamboo fencing to prevent the gazelle from going through. All of the bamboo fencing is behind the pre-existing pipe barrier that separated the keeper area so the rhinos cannot reach it with their horns to destroy it, all areas they can reach are covered with steel sheet.

We have turned what was once a single-species exhibit with no flexibility, into a multi-species space that can effectively house two very different mammal species and one spunky avian species together with the goal of educating our public about the co-existence of animals within habitats. The limit space and budget gave the keepers plenty of training in creativity and flexibility, the mixed species help provide all the inhabitants a more enriching life, And the public more interesting trips to the rhino exhibit, or is it the goose exhibit or maybe it's the gazelle exhibit. We can still train the rhinos daily, the Speke's will shift off exhibit so we can train them and keep up with the care retired rhino's deserve.



Chute modifications

