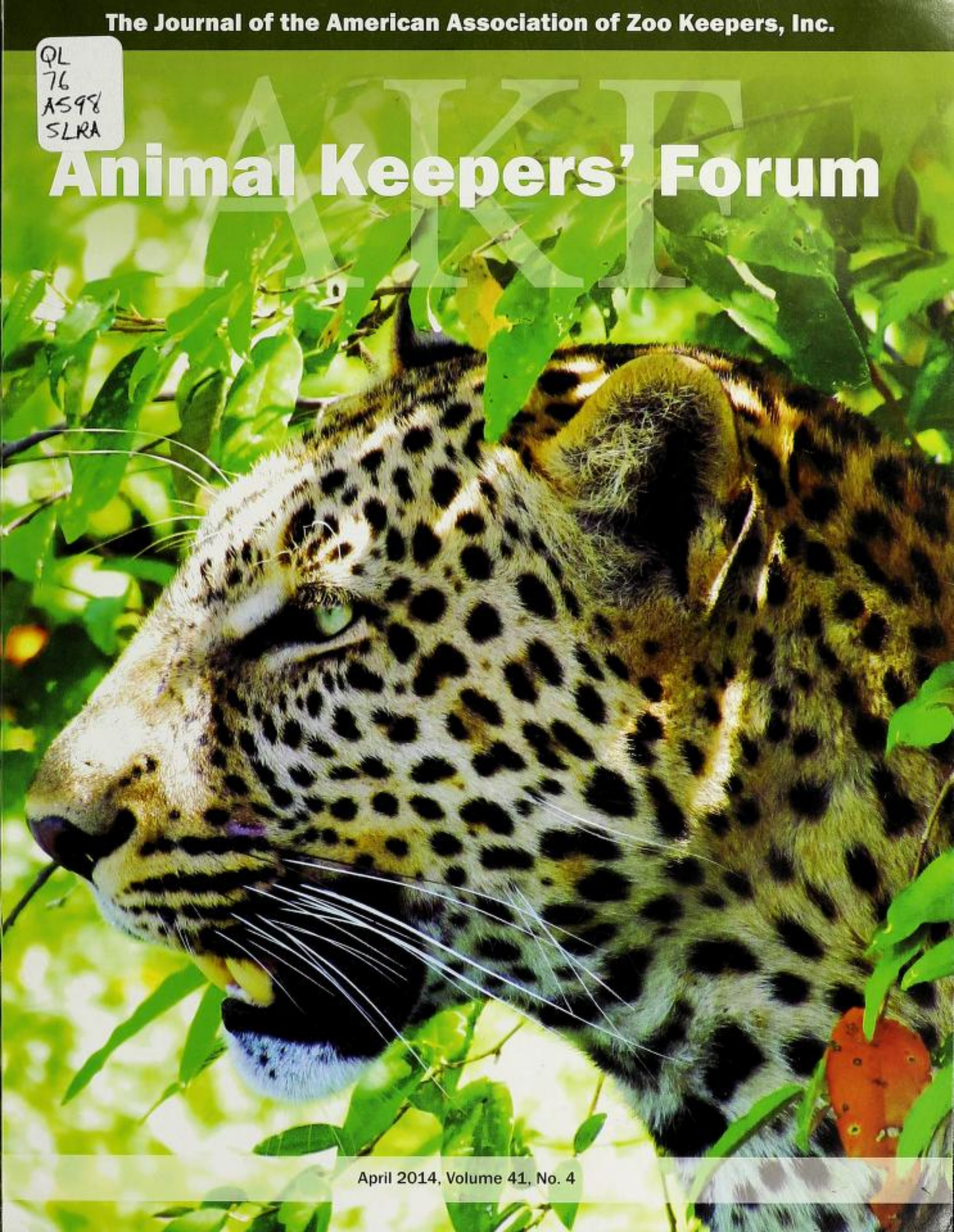


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THE END OF THE GAME, OR IS IT?

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Tour Consultant, Premier Tours
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This article is based on impressions and insights gained on numerous trips to wildlife areas worldwide, including 27 trips to Africa along with 24+ years of zoo keeping experience.

"The End of the Game, the Last Word from Paradise" by Peter H. Beard is one of the more influential books written about African wildlife. Originally published in 1965, the book deals primarily with the destruction of Africa's great herds of elephants. However, it also covers the end of the African wild as it was back when Africa's sub-Sahara human population was one-third the size it is now. This human population growth has caused wildlife areas on much of the Continent to become small islands of natural habitat surrounded by farms or grazing lands devoid of large mammals and larger birds. Many African wildlife conservation organizations report declining numbers of big cats, elephants, rhinos, zebras, giraffes and once-common antelope species. Now larger birds such as raptors and even numbers of once common vulture species are declining. This human population increase is affecting all of West Africa's conservation areas, Kenya's parks and reserves and Tanzania's northern reserves such as the Serengeti, Ngorongoro, Manyara & Tarangire. This pressure on wildlife and wild areas is not Continent-wide, however. Southern Tanzania still has vast little-known areas packed with wildlife such as the Selous and Ruaha/Rungwa. Zambia has large areas set aside for reserves, however, effective protection for most of these areas has been lacking until recently. Zimbabwe (Zim), until its recent political issues involving land ownership, had expanding wildlife areas and game populations. A few days in Zim on my most recent trip to Africa in October showed me that for wildlife and ecotourism the country is on the rebound. Both Botswana and Namibia, both under-populated countries, have had large increases in protected areas for wildlife. Botswana's elephant population, now the largest in Africa, finally appears to be stabilizing at over 100,000 and Namibia's black rhino population is the fastest growing in Africa. Another country that has seen an increase in both large mammal numbers and habitat is South Africa. When I mention this many people, including expat-South Africans now living in the USA, express surprise. South Africa is the most modern and developed nation in sub-Sahara Africa and their method of expanding areas for wildlife is a good model not only for Africa but, in my opinion, the rest of world as well.

Madikwe & Pilanesberg Game Reserves

In August of 2012, I spent two nights each in Madikwe and Pilanesberg Game Reserves. Although Pilanesberg was once a South Africa National Park, both areas are now Northwest Province Reserves. Both Madikwe (749 square kilometers) & Pilanesberg (552 kilometers) have electric fenced boundaries. Since both were previously agricultural areas, both had to be completely restocked with wildlife, Pilanesberg in 1979 and Madikwe in 1991.

Madikwe is a four-hour drive from Johannesburg, the last two hours on gravel roads traversing through local Tshwane communities, very reminiscent for me of road travel I have done in rural areas of Kenya. I spent two nights at the incredible Mateya Safari Lodge, a very high-end accommodation limited to ten guests with an amazing collection of African art. As for wildlife, I saw several lone bulls and two nursery herds of elephants, zebras, greater kudu, blue wildebeest, impala, red hartebeest, tsessebe, steenbok, common duikers, waterbuck, warthogs, giraffe, African buffalo, six white rhino including a large male that blocked our vehicle from getting close to two females and a calf (*very interesting behavior that I had not seen*

before), 12 + lions, black-backed jackal, and a couple of slender mongoose. The highlight for me was my only life mammal on this trip, two six-month-old brown hyena cubs in a cave den waiting for their mother's return. An exciting bird for me was the first Cape vulture I have seen in the wild. Compared to other South Africa wildlife areas that I have visited, Madikwe struck me as an area with a good variety and numbers of plains game. On my initial drive into the reserve I saw more plains game within one half hour than I had seen in five full days in the better known Timbavati and Sabi Sand Private Reserves located adjacent to Kruger National Park. On my way out of Madikwe I rode past



Photo by Carol Welsh

a waterhole where a pride of lions had made a kill and were keeping over a hundred thirsty impala, wildebeest, zebra and red hartebeest from drinking. That sighting was the largest concentration of plains game that I have seen anywhere in South Africa. Although I did not see them, Madikwe is also one of the best places on the continent to see African wild dogs. Six De Wildt's Cheetah Center rescued wild dogs were translocated to Madikwe in 1994 after a rabies outbreak killed the previous pack. Eighteen years later their population continues in leaps and bounds with more than 27 at the last count with 13 pups born in 2012.

From Madikwe it was a two-hour drive to Pilanesberg. Unlike Madikwe, Pilanesberg allows self-drives within the Reserve. Those along with the Reserve lodge's vehicles, combined with game vehicles of Sun City resorts located outside the Reserve, can result in Pilanesberg being as crowded as Kruger National Park during South Africa holidays. On my first night I stayed at Ivory Tree Lodge which was a more traditional South Africa lodge based on accommodation, food service and overall style. The next night I spent at Shepherd's Tree Lodge, very different in style and service and looking more like an exclusive high-end property. At both, the rangers were young but very good. Both lodges have 4 x 4 open vehicles that have a max capacity of nine guests and both allow night drives. The adjacent Sun City Resorts also have night drives with the difference being that the accommodations outside the Reserve use 4 x 4 tractors pulling trailers carrying over 20 passengers. If you can afford the cost, the accommodations within the Reserve offer the better game viewing option.

Pilanesberg is a scenically stunning and ecologically diverse

area, enclosed within the remnants of an ancient collapsed volcano with several dammed lakes and waterholes. I was also very impressed by the numbers and variety of wildlife found there. I have not seen anything in all of South Africa and Zimbabwe National Parks to compare with the numbers of large game I saw in Pilanesberg. Reminiscent of many East African reserves I have visited there was game in view nearly all the time – mostly small herds of blue wildebeest, zebra, impala and springbok. What I saw along with the aforementioned species – small groups of hippo in each lake, six white rhino, a large herd of 100+ African buffalo, three mountain reedbuck, a small group of tsessebe, common duiker and steenbok, scattered giraffe, waterbuck, greater kudu and warthog, lone males and one breeding herd of elephants, a troop of chacma baboons on the Reserve boundary and a troop of vervet monkeys that stole the sugar for our morning tea/coffee break and three male cheetah. Night drives unexpectedly turned up a caracal, two African wild cats, brown hyena and a honey badger (now my wife's favorite African animal thanks to YouTube) as well as scrub hare, red vlei rat and yellow house bat. A total of 26 different species of mammals were seen on my four game drives. On my last game drive I just missed seeing lion and black rhino. Like Madikwe, Pilanesberg also has a small pack of reintroduced wild dogs. There are serious plans to join up the Pilanesberg and Madikwe game reserves via a 2,750 square kilometer corridor. This is a great undertaking and may take 20 years to reach fruition. Once the corridor is established the boundary fences will encompass over 4,000 sq. kilometers allowing wildlife free movement over the area for the first time in over 150 years.

Some people may have reservations about considering fenced reserves as being true natural areas and may regard them as large zoos. I am not among them. In my opinion, if the reserve's predators are killing their own prey without supplemental feeding these areas are not zoos but true natural areas. Since they are smaller areas they do have some aspects of wildlife management, some of which would be very familiar to zoo professionals. As zoos move animals from one facility to another to avoid inbreeding and to diversify species gene pools (SSP Plans), these small South African Reserves have the same goals but use different methods. For example, South Africa's private game reserves now have more than 700 of the country's free-roaming lions. On some reserves lion numbers have grown to such an extent that reserve wildlife managers have had to intervene to keep the large cats' populations down. Madikwe recently had to lower its lion population from 120 to 60 since the Reserve's ungulate population and cheetahs had experienced excessive predation from the large cats. The lion population was lowered by sending most to other Southern African reserves, including two to Malawi, as well as selling legal hunting licenses to high-end hunters. The hunters targeted the dominant male lions on Madikwe who had been monopolizing breeding on the Reserve. All funds from both options were put back into Madikwe's operating budget that includes payment of staff, maintenance of roads and anti-poaching patrols. During my stay I saw the restocking of dozens of zebras and antelopes, and several thousand more along with cheetahs and some new male lions are on the way.

Unfortunately, both Pilanesberg and Madikwe have experienced some of the rhino poaching that has reached disturbing numbers in South Africa with Madikwe, losing over a dozen rhinos in the past two years, including a white rhino male that was killed the week before my arrival. The poacher scaled the reserve fence, killed a lion he encountered and got away with the rhino's

horns. I saw the dead rhino which was being fed on by a lioness and two male lions that were once a coalition trio with the male lion killed by the poacher. Rhinos are better protected at Madikwe versus some of the other small South Africa private reserves due to a protected perimeter fence along the Botswana border patrolled by the Botswana Defense Force, as well as good local intelligence. As a precaution, all staff at Madikwe, including the lodge owners, undergo periodic polygraph testing. That an area so well protected can still have rhino poaching on its property shows how sophisticated and deadly to rhinos this recent unprecedented wave of poaching has become.

Dubai Desert Conservation Reserve

Can the South African concept of small managed reserves be exported to other areas of the world? In October I had the opportunity to return to Africa for my 27th visit. This trip was business related; a travel industry educational tour to see new lodges and newly established air routes into South Central Africa via Dubai. Dubai is located in the Arab Emirates on the Persian Gulf in the Middle East. I decided to arrive in Dubai the day before the rest of my group of fellow travel professionals specifically to spend an afternoon, evening and the next morning at the Al Maha Resort located within the Dubai Desert Conservation Reserve. The Reserve was created in 1999 and is currently 225 sq. km. but started as the 27 sq. km. Al Maha Reserve. This part of the reserve is now managed by the Al Maha Resort. Al Maha was developed by the same South African team that created the Shamwari and several other private game reserves in South Africa, all of which are managed with sound wildlife management policies. What attracted me to Al Maha was the chance to see free-ranging Arabian oryx. Al Maha was originally a camel farm and in 1999 domestic animals were removed and 117 captive born Arabian oryx, some Arabian gazelles (*Gazella gazelle cora*) and sand gazelles (*Gazella subgutturosa marica*) were introduced and 6,000 indigenous trees and shrubs were planted. Initially, supplemental feed was provided for the oryx and the gazelles to allow the reserve's natural vegetation to recover from years of livestock grazing. By 2008 there were 270 free-ranging oryx along with numerous Arabian and fewer numbers of sand gazelles with all three species breeding. Supplemental feeding for the three species is being phased out and in time Al Maha will be a restored Arabian Gulf desert ecosystem.

I arrived in Dubai on an Emirates Airlines direct flight from New York's JFK Airport. In the Arrivals Hall I met my contacts, was taken to my car and driver and was quickly on my way to Al Maha. The drive took about an hour from the airport on excellent roads. Once outside the City one passes by large camel breeding farms which in themselves could make an interesting day excursion. The Resort is spectacular but pricey; one can however, arrange daytrips from Dubai directly with Al Maha. I decided to splurge and pay for the cost of one night. The first wildlife I saw when I entered the Reserve were several male Arabian gazelles. This species is also common on the Resort grounds and you can approach them easily. Interesting birds that I saw during my stay included southern grey shrike, white-eared bulbul, European bee eater, purple sunbird & grey francolin. Houbara bustards are also said to be found within the Reserve. For each full night at the resort you have the choice of two complementary activities which include a desert safari on the nearby sand dunes, camel trekking, horse riding, falconry or archery. I picked the most nature-oriented activities: an afternoon wildlife drive and a morning nature walk. I was the only one on the drive with my ranger who was a South African-

trained Zimbabwean who gave a brief review of desert ecology, the history of the Reserve and the wildlife found there and showed me the oryx and both species of gazelles, including a small group of sand gazelles and the very interesting Leptien's spiny-tailed lizard. He also took me to the captive species holding facility which had a breeding herd of scimitar oryx and showed me the male of a breeding pair of Ruppell's fox. This was the first time I had seen this species and was surprised at how similar they are to fennec fox, being a sort of long-legged version of the smaller species. Afterwards I returned to the Resort and its bar balcony and while having a few glasses of a nice South African red, watched the sun set behind the Omani Mountains while small groups of Arabian oryx visited the adjacent water hole; overall a very idyllic experience. While walking to my room after sunset to get ready for dinner I tried to pass by a male oryx who made a slow motion bluff charge towards me. Having been charged more than a few times by male antelopes in my zoo career, on my return I left the path and made sure I had a good-sized bush between me and the annoyed oryx before walking past him again.

The next morning my walk was led by a South African-trained Swiss ranger. She showed me numerous animal tracks including desert red fox, lesser jerboa, gerbil, horned viper and sand boa. We also found the desiccated body of an adult Arabian oryx that had died of old age or perhaps a poisonous snake bite. Based on my zoo experience, finding this animal dead of a natural

cause was an indication to me that Al Maha's oryx population is truly free-ranging. In a captive situation this animal would have had a field necropsy so its exact cause of death could be determined. I also asked the ranger if any Resort guests had ever been gored by an oryx and I told her about my experience the night before. She said that no one had ever been gored but guests have hurt themselves running from the bluff charges into trees, bushes or falling on the path. I left the Al Maha at noon and returned to Dubai to spend the night before continuing on to Zambia the next morning. Surprisingly, besides Al Maha, Dubai has a couple of other interesting natural attractions. The Ras Al Khor Wildlife Sanctuary has resident greater flamingos as well as other birds. Dolphin & dugong viewing tours can also be arranged on the coast.

In my opinion with much of the world's wildlife habitat disappearing rapidly, the South African model of small, enclosed reserves may be the only chance that wildlife will have to survive in many areas of the planet. These reserves have to be managed to keep wildlife numbers in line with available habitat along with policies maintaining genetic diversity to prevent inbreeding. Zoos have been doing this on a much smaller scale for the past 50 years. Is this method of conservation ideal? No, but using this model can prevent the loss of numerous species of ungulates, medium to large-sized carnivores and primates from many individual countries and for some species complete extinction in the wild. 🐘

Photo by Carol Welsh



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! 🐘