

Sandboxes: They're for the birds
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Goal: To enhance daily activity and stimulate natural foraging behaviors

Materials: Sand, large black tub, mealworms

Bird(s): Hadada ibis

Location: Natural Encounters Inc- (Winter Haven, FL)

Providing species appropriate enrichment is very important to the quality of life for the animals in our care. Enrichment is any added component that will make an animal's life more meaningful or rewarding. Or a more universal and scientific definition as stated by the American Zookeepers Association; Enrichment is "*...a dynamic process in which changes to structures and husbandry practices are made with the goal of increasing behavioral choices available to animals and drawing out their species- appropriate behaviors and abilities, thus enhancing animal welfare*".

Birds are truly challenging because they possess a wide range of qualities (size, type, diet preference, and bill form) that are not as easily understood as the more familiar characteristics of highly studied mammal species. It is obvious that not all enrichment devices will work for every bird. Therein lays the challenge of creating items that will be suitable for a particular species and give the results you desire. Oftentimes, enrichment is overlooked because the intricate details of the natural habits of the birds are unknown. In order to be most successful, research those natural tendencies and identify the behavior you are trying to target when providing any enrichment item.

Recently, I have been able to work hands on with a Hadada Ibis. This is a type of bird I have never encountered up close before and therefore had no information to work with when it came to creating enrichment. The Hadada Ibis are naturally found along riverbanks, marshes, and other flooded areas of the African savannah. They also forage by touch rather than sight, for creatures such as fish, insects, or crustaceans. After researching this information and discussing it with fellow co-workers, we decided it would be ideal to create an item that resembles this environment as well as encourages a natural probing behavior. Thus, we devised a "sandbox" for the ibis.

A large black, plastic (2ft x 1.5ft x 1ft) tub was filled with dry sand. After it was half full, I sprinkled a container of small mealworms over the sand and then covered them with the rest of the sand. It took about one 5 gallon pail of sand to fill the tub completely. I then exposed a few worms on the top to create interest for the ibis. There was also a second tub filled with water in her enclosure. Her interest was apparent for she watched me the entire time and immediately went over to the worms when I left. I came back an hour later to find the ibis standing in the sandbox probing for worms. It was obvious she had been there for a while because there were holes throughout the sand.

The sandbox was left in her enclosure for a period of three days. During that time, I checked on her frequently between the hours of 8am-5pm. I found that she spent well over 5 hours probing for worms. Each day, a random quantity of mealworms were buried and sprinkled in the sand. One factor I didn't consider was her desire/need for water in conjunction with the foraging behavior. It seemed the ibis would probe for some worms and then either rinse her bill in the water or drink to perhaps satisfy a thirst. After conducting more research on their feeding habits, I learned most sources stated that ibises "probed in *mud* for *slow moving* animals. On the second night, it rained and made the sandbox a floating mess. It occurred to me that wet sand might have a greater effect in creating a marshy type of environment. Although I thought she would abandon foraging in wet sand, once she saw that I added more worms she jumped right in. I decided to take it out after the third day because not only can standing water invite mosquitoes and other possible disease causing organisms, some enrichment items can lose their value if left unchanged.

All animals respond to change and once an object has been in their environment for a period of time, it can decrease in value, therefore causing many of them to accept it as part of their environment and lose interest. Reinforcement is valued differently by every individual, and how it is paired with enrichment devices may

dictate the schedule of use. Enrichment items that elicit responses such as feeding/drinking may be used or left inside enclosures more often than a device that produces activity such as play because primary reinforcers by and large create more consistent responses than secondary reinforcers.

Prior to the “sandbox”, I noted the ibis to only sit on her tree limb and not be very active. After it was added, she appeared to be more interested in her surroundings and move about her enclosure. The enrichment idea proved to be a great success because she did practice natural foraging habits which in turn increased her overall activity.

This enrichment idea can be altered and used for any type of bird that probes into sand, water, or mud as a basis of their foraging habit. This includes such species as ground hornbill, egrets, cranes, or any other individual with similar habits. The pan can be any size, but it is ideal for them to be able to stand in it because that may encourage a more broad range of behavioral responses. Materials can be sand, dirt, water with plants, or perhaps even straw in some cases. Identifying the substrate and dietary items the bird would encounter naturally may increase your rate of success. Take the time to consider any safety risks that may arise with the use of this enrichment item. Through research and careful planning you may be able to improve the physical and mental well-being of your birds. This is your opportunity to “be the bird” and get creative!