



Photo by Shawn Stackpoole, Bird keeper
Santa Barbara Zoo

INTERACTIVE LORIKEET EXHIBITS... A BEHIND THE SCENES LOOK

Sheri Hanna

There is a special thrill in interacting with wildlife and it doesn't come any better than in an interactive lorikeet exhibit! Noting the huge tourist attraction of feeding the wild lorikeets in Australia, the idea was brought to full concept by Mickey Ollson, founder and director of Wildlife World Zoo in Arizona. He opened the first interactive lorikeet exhibit in the USA in early 1985. He has been instrumental in helping the public appreciate these beautiful birds with a unique up close and personal experience! These aviaries have proven to be quite popular, and the zoos are opening more each year, in spite of the tongue-in-cheek comment of "going over to the dark side" made by those in the know. In reality, interactive aviaries are a huge project, demanding much in the way of time, money and attention to detail. In spite of the challenges they have proven to be in the top five most popular exhibits in the zoos and this generates many return visitors.

So, what goes into an interactive lorikeet exhibit? In 2002, Avian Scientific Advisory Group (ASAG), in conjunction with the Association of Zoos and Aquariums (AZA), conducted a workshop on interactive aviaries. The zoos folks got together and took on different aspects to research. Besides using their own zoos' experiences, they contacted many other institutions to find out about their experiences: the Good, the Bad, and the Ugly. And there were lots of those! For

example, one zoo opened its lorikeet exhibit to the public in 1999 to lots of anticipation and excitement. It was a new experience for them and the staff quickly learned that:

1. The beautiful landscaping was quickly destroyed,
2. Some of the mixed species of lories were incompatible,
3. The guests were as challenging as the birds!

Interactive aviaries are very different from "normal" avicultural set-ups and have unique management problems. They are considered a high-impact aviary whereas a regular walk-through aviary is considered low-impact. A number of topics on the how-to's were covered and some of the results are included here for your information and enjoyment.

EXHIBIT DESIGN is the first item of consideration. Adequate size for the number of birds housed is very important, and one bird per 40 square feet is the average. Aviary sizes ranged from 17' by 25', to 100' by 75'. Lower ceilings were better to bring the birds closer to the visitors as well as helpful in capture. Having the ceilings higher in back and lower in the front was recommended. A "howdy" or

holding area is a must for separating aggressive birds or capture for other reasons. Substrate and walkways needed to be easily cleaned and adequate-sized walkways for traffic flow are important. Vegetation is essential as visitors like to feel as if they are entering a habitat. Though the lories will enjoy undoing the landscape, it can and should be replaced regularly. Cut browse such as bamboo, honeysuckle and other bird-safe plants can be placed throughout the exhibit to freshen it up and give the birds enjoyment; heavy ropes for perching are also good. Benches are recommended to encourage people to stop and really observe the birds. Traffic flow is a key item here. Vestibules and doors have caused many problems for both visitors and birds so large-enough vestibules and direction of door openings have a big impact on both public and bird safety. Entry and exit doors have been a trouble spot for several zoos, contributing to a number of injuries and deaths to birds as well as escapees! Walkways need to be adequate in size and keeping visitors on the pathways with railings allows the birds to get away from the guests.

Having informational signs and rules posted outside rather than inside the exhibit works well as most don't tend to read the signs once they are inside. Signs letting visitors know what to expect before entering is beneficial because not everyone is really ready to have the birds so close. Distributing the food items for feeding outside the exhibit helps avoid mobbing once inside, leading to a more relaxed feeding experience. A hand washing station placed just outside the exit is a very important item; actually, the lack of such a station was the biggest complaint from guests!

The next topic covered was **TRAINING AND VOLUNTEERS**. Finding the right people to work in these exhibits is difficult, as is keeping them. Many of the keepers felt "stuck" and boredom was cited. The advice: Don't hire for aviculture! The reasoning here is that you can teach a person about birds but it can be tough to teach a bird person guest relation skills! (Many of us prefer

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birds to people, right?) The staff needs to be outgoing and interactive with guests, not with each other. Formal keeper talks don't work well inside since most people are more interested in feeding the lorikeets. Other staffing possibilities are the use of docents, summer intern programs for college students, teen volunteer programs and part-time bird keepers; having them work in the aviary is a good assessment tool. However, there must be someone responsible for the birds; don't try running the exhibit with only volunteers! Case in point: A docent who was very good with both the public and the lorikeets regularly staffed the exhibit in one zoo. He was removed when it was discovered he allowed the birds to chew shirt buttons off, to the dismay of one female guest in particular!

Now comes **COST VS. REVENUE.**

The initial thought was "let's open a lorikeet exhibit and we'll make lots of money!" As a huge public draw, a lorikeet exhibit would seem profitable; however, most are not close to being self-supporting. Most zoos feel it is well worth the cost since the guests really enjoy them; they are a big reason many people come to the zoo and it generates return visits. In fact, the guests get angry when the lorikeet exhibits are closed! Many permanent facilities are being built, with costs ranging from \$200,000 up to the \$1.9 million *Lorikeet Adventure* at the Denver Zoo. The trend is for zoos to run the exhibits themselves though a few use an outside contracted service. Using volunteers helps cut staffing costs and equals better enthusiasm

for guests. Most zoos sell nectar or fruit for feeding separate from the zoo admission charge; however, Wildlife World Zoo is one that includes the feedings in their admission price. The typical charge for a cup of nectar or fruit chunk is \$1-\$2, with no purchase necessary to enter the exhibit. One zoo did charge \$1 per person to enter the exhibit, which allowed them to track the revenue generated. On very busy days some zoos will dilute the nectar a bit in order to keep the birds coming down to feed. All are fed appropriately both before the exhibits open and after closing.

Merchandising helps revenue as well, whether with a small cart outside or exiting through a lory-themed gift shop. All play on the excitement of the guests and their recent experience. An example of the costs: One zoo opened their lorikeet exhibit in 2001, open 363 days a year, approximately four hours per day, housing 21 birds in a renovated aviary. Labor expenses were \$23,232 for one full-time keeper and one part-time attendant (keeper had other aviaries on their string, of course). Nectar cost was \$7,200 for a total of \$30,352. This did not include the cost of the paper cups for nectar feeding or daily fruit kabobs, exhibit maintenance, etc. The sales of the nectar were \$9,566, certainly a difference and not self-supporting or making lots of money.

Now we move on to **SPECIES CHOICE AND ACQUISITION.**

The majority of zoos fill their exhibits with the Rainbow Lory subspecies (*Trichoglossus haematodus* spp), likely due to initial cost, recognition (it's what the other zoos have) and perceived availability. I say perceived availability as most known breeders have had a phone call or two, that goes something like this:

"This is keeper X, from ABC Zoo and we're opening a new lorikeet exhibit soon. I have a few questions and I want 100 rainbow lorikeets, all handfed, all under six months old, from the same source, disease checked and I need them in the next 30 days, please".

When they are told I'm sorry, but that is impossible and given the reasons it's not possible, the response is usually one of disbelief and frustration!

Some of the zoos are using a mix of lorikeet species and it does work well. In my opinion, I prefer it, and think it helps introduce and educate about the variety within such an amazing family of birds. Some of the commonly displayed species include the Green-naped (*T. h. haematodus*), Swainson's (*T. h. moluccanus*), Edward's (*T. h. capistratus*), Rosenberg's (*T. h. rosenbergii*), Forsten's (*T. h. forsteni*), Blue-streaked (*Eos reticulata*), Yellow-streaked (*Chalcopsitta scintillata*), Red (*Eos bornea*), Violet-necked

(*Eos squamata*) and Goldie's (*Trichoglossus goldiei*). The larger aviaries have better success with the larger species and smaller aviaries have good success with the smaller species, which makes sense!

Another issue is where to get the birds: from private breeders or other zoos? Some of the pros and cons discussed are as follows:

PRIVATE BREEDER

Pro: Large quantity available, various ages, choice of breeder.

Con: Unhealthy birds, breeders difficult to work with, not as reliable

ZOOS:

Pro: AZA known institutions, health records and guarantees, more reliable

Con: Only that the birds are not bred in quantity "yet"

Another factor considered in choosing birds is parent-reared vs. hand-reared. Parent-reared birds were seen as more shy; the birds would feed and then leave and can become nippy. The handfed birds were seen as calmer with people and more interactive. Most zoos wanted to start with handfed, very friendly birds, even though the parent-reared lorikeets easily learned to come down for nectar. The ages used were commonly 6-18 months old, though as young as 3-4 months and adults could be used as well. Breeding is rarely if ever encouraged on exhibit; for those zoos breeding' it is most commonly done in off-exhibit aviaries.



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Moving on, they looked into **MANAGING INTERACTIVE EXHIBITS.** 70% of the aviaries are managed in-house; 30% are contracted out. 65% of the aviaries are open year-round. The seasonal closures related more to the guest attendance rather than due to weather. In general, there were anywhere from 20 -80 birds within the exhibits. Over half of the zoos had no ability to shift the birds off exhibit; something they looked into changing. Shifting is an important tool, useful for head counts when needing to re-do an exhibit, giving breaks to the birds from the public and allowing easier access for veterinarians to catch the birds up for such things as annual exams.

WHATMAKESANINTERACTIVE EXHIBIT WORK: Birds to interact with, a stage for interactions to happen, interaction facilitators, perching to encourage close proximity and visitors prepared for interaction.

WHAT PREVENTS INTERACTIONS:

Visitors not familiar in how to "see" birds, fear of the unknown and separation from the birds. A good interactive exhibit teaches the visitors so they can experience the thrill of discovery! A survey was taken in one zoo to help determine some more specific information on visitors to the lorikeet exhibit. The survey was done over a ten-day period in the summer of 2001. The results are as follows: On average, 70.6% of visitors going through the aviary bought nectar. The average person spent 20.5 minutes in the aviary feeding while those that did not feed the birds spent 12.5 minutes inside. The busiest times of day were 11:30 a.m.-12:30 p.m. and from 2:00 p.m.- 4:00 p.m. On average, two guests per day asked if the attendants have a camera to photograph them with the birds.

MANAGING AGGRESSION AND INTRODUCING NEW BIRDS

is a real concern, especially voiced by those zoos that haven't yet started up their aviaries. It is a valid concern. Some aggression is to be expected with these birds but it can be managed. Considerations include species choice for compatibility and the number of birds appropriate to exhibit size – no overcrowding. With lorries, fewer birds equal more! Too many birds equals stress and too many visitors to the aviary can cause the birds to act up. The age of the new birds is a factor; young birds about six months to one year of age seem to easily assimilate. A more than adequate number of feeding stations and perches are necessary and visual barriers and shelters should be available so birds can get away from one another if desired. Overall flock health is also important as the birds will quickly kill a sick or injured bird. Two must haves are a howdy cage as previously mentioned, useful for bird time-outs and introducing new birds, and proper supervision – very important for catching problems right away.

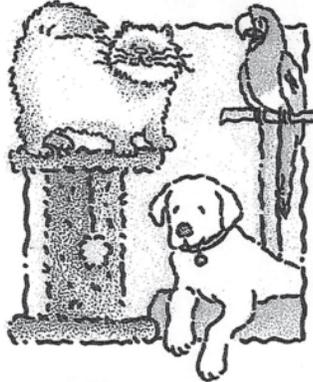
When introducing new birds or those that have been temporarily removed for medical or other reasons, setting them up as a mini flock in the howdy cage for a few days before releasing into the main aviary works well. A single bird being introduced can easily be picked on or injured whereas a small flock can more easily integrate and defend. If there is a continued problem, the offending bird(s) is removed permanently. In addition, if a bird is being singled out and attacked, proper

supervision will allow for quick removal and the bird should be checked for any health problems or injuries. Introductions are best done in the early morning before opening to the public. There will be some chasing and harassment (think pecking order) but this is typical and normally will sort itself out quickly. Offering distractions during introductions can be helpful. Items such as fresh cut browse, adding

or repositioning ropes, perching, feed stations and light showers with a hose are known as behavioral enrichment, helping to alleviate boredom and redirect attention when needed. Each bird or pair will have its own set of rules so a close watch is necessary in the beginning.

TRAINING PROCEDURES

are generally easy with the lorikeets. Starting with handfed birds is what most zoos do as they are quick to catch on to coming down to people for feeding and tend to spend more time with the guests. They also make the transition from quarantine to interactive aviary easily. While most places used hand fed birds, one zoo started with all wild-caught birds of the same species. In quarantine, the keepers used mannequin hands to hold the cups of nectar in the beginning; however, parent-raised birds quickly learned from the handfed ones. Food is a great motivator for training. Allowing the birds to become a bit hungry encourages them to go to the guests for food. Having timed feedings, with the aviary closed for periods during the day, allows a rest period and attitude adjustment time for both the birds and the keeper staff. Not allowing the birds to land on trainers' heads or shoulders is an excellent idea and is reinforced by a reward of nectar when they landed on the hand or forearm. This helps prevent the birds from going after ears and making off with the earrings and other jewelry items they so cleverly and quickly remove!



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A big issue is one of

HEALTH CONCERNS,

both for the birds and for the guests. Various problems have been encountered; these include yeast, E. coli, salmonella, psittacine beak and feather disease (PBFD) and chlamydia. Chlamydia has the highest concern due to transmission to people. A zoo in Japan closed briefly when four keepers and a guest contracted the disease. Both E. coli and salmonella have caused serious losses in several aviaries. Some solutions to preventing some of these problems include purchasing birds from closed aviaries, having breeders flock and test birds prior to shipment, increasing zoo quarantine from 30 to 45 days, routine testing such as complete blood counts (CBC), cultures and for polyoma, chlamydia, salmonella, PBFD and West Nile virus. Testing, quarantine and discovered health problems have been a big issue for zoos with repercussions to the breeders. Additional measures for health include the hand washing station, filtration system for water features, refrigerated or thermos type nectar containers used on hot days to eliminate bacteria growth, eliminate overcrowding, standing water and exposure to wild birds and rodents.

Lastly, **NUTRITION** was touched on but needed further review. A wide variety of diet items are offered in the zoos, including commercial nectar diets, fruit, fruit juice, fruit slurries and pellets. Museum specimens were studied, looking for comparisons of body composition and fat disposition. Forty-seven birds were studied; eight species of wild lorries from Australia and the Solomon Islands and 61 birds of eight species donated by private individuals and zoos. The wild birds had moderate to heavy fat deposits while the captive birds had little or no fat. In an example of weight comparisons, a wild Yellow-streaked Lory weighed 231grams; the captive specimens ranged from 187-268 grams. A wild Rainbow subspecies (unidentified here) weighed 113 grams, and the captive range was 98-135 grams. Crop contents from the wild birds were fruit and flower parts, whole and crushed seeds and insects.

Overall, though the challenges seem huge, the rewards of an interactive lorikeet aviary are great. Next time you are visiting one, take time to reflect on the work that goes into them, the playful nature of the birds themselves and, if you are lucky, you'll see another reward — a look of delight and wonder on a child's face as one of these beautiful birds alights on their hand to feed on nectar. That, as they say, is priceless!



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