

Construction of **NEW PENGUIN EXHIBIT** Presents Unique Design, Construction Challenges

Question: How many construction steps does it take to build an outdoor home and swimming pool for a dozen or more noisy, active, perpetually hungry penguins?

Answer: A lot, and then some.

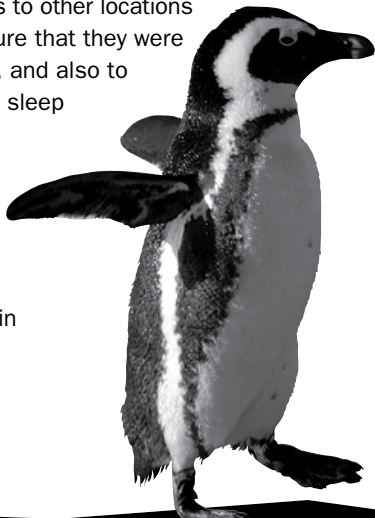
Construction of *Penguin Point*, the National Aviary's new African penguin exhibit, is an intensive project with plenty of challenges for the architects, contractors and workers who are putting in long days to ensure that the exhibit is completed for its May 23 grand opening.

Under the direction of John Leuch, Jr., project superintendent for Pittsburgh-based Mascaro Construction Company, work on the new exhibit's foundation and penguin pool, as well as for the Aviary's main hallway leading out to the exhibit, is happening simultaneously, even as architects and artisans with the firm PGAV are finalizing plans for the design and installation of the rockwork and overall exhibit.

It's all happening in and around the home nest of more than 600 birds and while the Aviary remains open to the public.

"The biggest challenge has undoubtedly been scheduling the work around visitor hours, and making sure that construction noise and mess do not have any adverse impact on the birds," says National Aviary expansion project manager Erin Estell. "We have temporarily moved a number of birds to other locations within the Aviary to ensure that they were not stressed in any way, and also to give them uninterrupted sleep during the night hours."

Early construction milestones included excavation work for the construction of the new exhibit's penguin pool and integrated Life Support System (LSS).

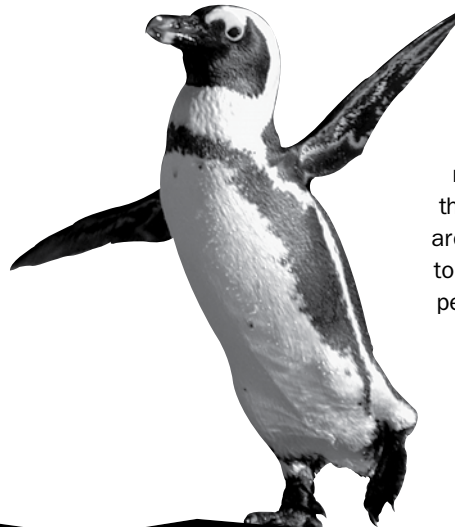


The LSS makes it possible for the birds' watery retreat to remain clean, purified and at a consistent temperature when inhabited year-round by a colony of lively penguins. African penguins eat up to a pound of fish a day, and they poop, on average, about every 15 minutes. California-based T.J.P Inc., a firm with extensive experience working with systems for zoo aquariums, is up to the task and will ensure that Stanley, Simon, Sidney, Elvis and Patrick – and their new exhibit mates – have a fresh and inviting home to inhabit.

Following excavation work in January and February, auger cast piles were installed to create a steady foundation for the entire exhibit. Approximately 200 cubic yards of concrete was poured to form a mat slab for the floor of the pool, and in March, workers formed and poured the walls of the pool and the ViewTube tunnels to allow for the installation of rockwork and the pool's clear acrylic front.

The rock walls and landing points that form the backdrop for *Penguin Point* are one of the exhibit's unique features. Designed to have the appearance of a rocky South African beach,

the formations allow the penguins to perch and hang out at various heights, locations and levels. Heated cubbies and nesting areas will be built into the rocks, giving visitors who walk around the exhibit the chance to get a close look at individual penguins from all angles.



The Show **GROWS** On:

FliteZone 2009 Features Expanded Cast, New Stars

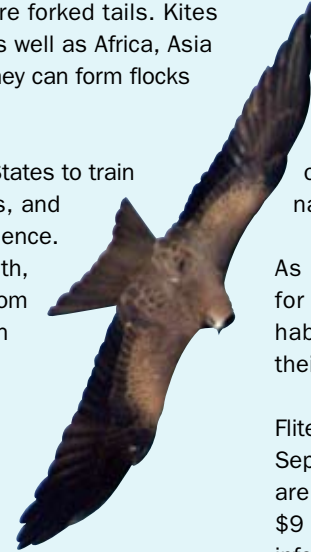
The National Aviary's popular summer bird show, FliteZone™, returns in May with new featured birds and a cast double the size of previous shows.

This year's program, which runs from Memorial Day weekend through Labor Day, includes the rare opportunity to see black kites in free flight.

Kites are raptors known for their remarkable soaring and flight patterns, which are aided by their long wings and signature forked tails. Kites are found throughout the Australian mainland, as well as Africa, Asia and Europe, where during grasshopper swarms they can form flocks of thousands of birds.

The National Aviary is the only zoo in the United States to train and fly these swift and agile birds for audiences, and FliteZone™ guests are in for a memorable experience. During the show, the kites – Apache, Baron, Stealth, Bomber, Recon and Radar – will circle, dive and zoom over the heads of seated audience members in pursuit of food tossed into the air by trainers.

Another highlight of this year's program will be the sight of multiple Eurasian eagle owls flying simultaneously and giving guests a breathtaking close encounter with the world's largest species of owl. Birds of prey that will be displaying their



powerful physiques include Talon, an auger buzzard; Dillon, an imposing martial eagle; and Indy, a bald eagle.

A group of hooded vultures with five-foot wingspans are sure to have some viewers feeling their skin prickle just a bit as the birds coast to the stage in signature vulture style.

Adding color and fun to the show as they interact with the audience will be Piper the trumpeter hornbill showing off his vertical flight skills; a flock of hyacinth, green-winged and scarlet macaws; and a bevy of Amazon parrots. Rounding out the program – a flock of silver gulls and an American crow named Minnie.

As in previous years, FliteZone™ will offer plenty of opportunities for learning about the ecology of each species and the impact that habitat loss, human population growth and pollution are having on their wild counterparts.

FliteZone™ runs twice daily, Wednesday through Sunday, May 23 through September 7 in the Aviary Rose Garden, weather permitting. Show times are 11:30 am and 2:30 pm. National Aviary admission is \$10 adults; \$9 seniors; \$8.50 children 2-12; children under 2 admitted free. More information at www.aviary.org or by calling 412.323.7235.



PITTSBURGH FALCONCAM GOES LIVE

A high-tech video camera installed at the top of the Cathedral of Learning on the University of Pittsburgh campus is providing nature lovers and researchers an intimate look at the life of peregrine falcons and their young.

The live streaming video, a project of the National Aviary's Department of Conservation and Field Research in collaboration with the University of Pittsburgh and the Pennsylvania Game Commission, can be accessed online at www.aviary.org. Cameras at the Gulf Tower and the Cathedral of Learning provide real-time footage of the peregrine nests of E2 and Dorothy (Cathedral), and Louie and Tasha 2 (Gulf Tower), two closely followed peregrine pairs in the Pittsburgh area.

"The ability to watch peregrine falcons continuously as they proceed through the nesting cycle adds greatly to the public's ability to learn more about this remarkable species and to scientists' ability to study them," says Dr. Todd Katzner, director of conservation and field research at the National Aviary. "Anyone with a high-speed Internet connection can see what is going on at the Cathedral and Gulf Tower nests."



this important species," adds Katzner. "The biology of peregrine falcons in wild settings is well understood; however, despite the fact that they have adapted well to urban environments, there is less known about how they live in cities. We also do not know how they will survive long-term in the face of increasing human population densities throughout their territories in the United States and internationally."

Peregrine falcons were once one of the most widespread birds in the world, but the use of long-lived pesticides such as DDT caused females to produce thin eggshells that often cracked during incubation. By the 1960s, populations crashed throughout much of the world, and in 1974, peregrines were listed as Endangered under the U.S. Endangered Species Act. After a nation-wide recovery program enabled the species to make a comeback, the peregrine falcon was federally de-listed in 1999.



As of the date this newsletter went to print, the pair at the Gulf Tower has laid 5 eggs, and the pair at the Cathedral of Learning has laid 4 eggs. The incubation period for falcons is typically 30-32 days, after which the chicks quickly grow up, leaving the nest before they are 40 days old.

"As a scientist I'm excited about the opportunities this provides for giving us the detailed knowledge required to really study

"Following these birds through the process of laying, hatching and maturity reminds us all of the important role that people can play in conservation of wildlife, says Katzner. "In this case human actions caused the decline of one of the world's most widespread species. Likewise, human actions were also responsible for the phoenix-like resurrection of peregrine falcon populations. (Continued on page 6.)

Letter from the Executive Director

Our ugly duckling is becoming a swan.

After years of planning, construction is now underway that will transform this nearly 60-year old facility into one of this region's premier attractions.

First up is *Penguin Point*. Our colony of African penguins will be moving into their new, multi-million dollar home this May and will be ready to greet visitors Memorial Day weekend. This new exhibit – a replica of the rocky shores of their South African homeland – features indoor and outdoor viewing areas as well as a kids' ViewTube that will allow kids of all ages to tunnel deep into the rockwork for a nose-to-beak view of our fish-loving flock.

On April 22 – Earth Day – we'll break ground on the next phase of our expansion; construction of the FliteZone™ Theater and Rooftop Raptor Encounter. Slated to open in Fall 2010, FliteZone™ will be a theater like no other. The audience will be immersed in an avian world, where feathered actors swoop and soar to the sights and sounds of their native habitat. At the rooftop theater, trainers will demonstrate the natural behavior of our raptor collection. Pigeons beware!

This transformation is being made possible by grants from the Commonwealth, local foundations, and most important, the generosity of our members and friends. We encourage you to help the National Aviary "Take Flight" by taking advantage of one of the many sponsorship opportunities you'll find in this issue of Bird Calls.

Thank you for your support.



Patrick T. Mangus
Executive Director

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(Continued from Cover)

Building the rockwork is an artistic venture. Because the rocks cannot be drawn as part of an architectural blueprint like the rest of the exhibit, the formations begin as an artist's rendering that is then molded into a clay sculpture. Actual construction begins with the spraying of mounds of "shotcrete" onto the walls of the pool and exhibit. An artist will then chisel away at the concrete to form the rocks, which will later be painted.

During this process, the steel that supports the walls and roof of the exhibit will be set with a crane, followed by what will be the most delicate process in the construction project: the installation of the exhibit's acrylic viewing wall. This large panel will be lifted and placed by a crane, then leaned and slid into place – all, it is hoped, without scratching or damaging the acrylic.

Once the physical construction is completed, the pool will be filled and tests will be conducted to ensure that the Life Support System is functioning correctly. The test water will then be drained, the pool will be refilled, and the Aviary's flock will be introduced to their brand new home, and to up to seven new penguins from zoos across the country, for the first time.

"It will take a few days for the group to figure out the pecking order and who's the top bird, but they'll be busy exploring the rocks, caves and underwater passages of this fantastic new exhibit," says National Aviary Director of Animal Programs Steve Sarro. "It will be a wonderful, unique experience for birds and visitors alike, and we invite everyone to come down to see Stanley, Simon, Sidney, Elvis and Patrick – and their new roommates – enjoying their new home."

A few of the new penguins will be of particular genetic value to the captive African penguin population in the United States, and will likely be bred at the National Aviary under the Association of Zoos and Aquariums (AZA) Species Survival Plan (SSP). If so, in the future Aviary visitors will experience the unforgettably endearing sight of penguin chicks interacting with their parents and siblings, and with the humans who peek in for a close look.

