

words on
waterfowl

Newsletter of the Sylvan Heights Waterfowl Society and the International Wild Waterfowl Association

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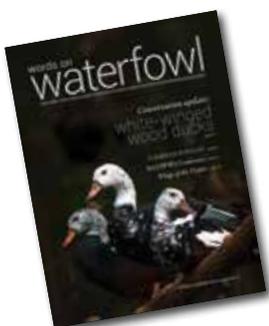


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A Scarlet Ibis lands on a perch in the South America aviary at Sylvan Heights.



ON THE COVER:

The endangered White-winged Wood Duck may be one of the most important species at Sylvan Heights.

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CONNECT ONLINE!



Get park updates, event information and more. Connect with Sylvan Heights and the IWWA on Facebook, Instagram, Twitter, or YouTube.

A male North American Ruddy Duck performs a bubbly display for a nearby female.



the director's report

We are now well into 2015, and like many people we experienced a very harsh, cold February and early March. Fortunately, none of the snow storms caused major damage, but the very cold nights and days took a toll on many plants and shrubs. However, spring is here and everything is bouncing back. The birds are breeding and strutting their beautiful colors and displays to the females. Visitation to the park is tremendous and sometimes parking is tight, but it strangely never feels crowded inside the park.

Our decision to spend rather a lot to have paving installed around the park's lower loop has been very well received, especially from visitors with wheelchairs or strollers. We'd like to once again thank Mike Diacont for installing pavers in the picnic area next to the pheasant exhibit, as well as providing many shrubs and plants for the park this spring. We are so lucky to have such great volunteers and supporters.

Our education team has been doing an amazing job in hosting many school groups and doing all sorts of wonderful events for children, such as "Park in the Dark" (an overnight camp), Saturday morning storytelling, Earth Day activities, and summer camps. All of these new events have been very popular.

Our grounds staff has not idled through the winter months, and has been busy building a greenhouse to winter hummingbirds, as

well as refreshing an old exhibit across from the new pheasant aviary. We are always looking to improve and maintain our exhibits, not only for visitors, but also for the well-being of the birds. With that in mind, our future plan is to remove the current exotic bird aviary and replace it with a large flight aviary we are calling "Wings of the Tropics" (see page 18).

We are still striving to play an important role in waterfowl conservation with continued involvement in projects involving Brazilian Mergansers and White-winged Wood Ducks. Recently, curator Brad Hazelton and his wife Monica made a trip to Bolivia to help research Puna and Andean flamingos (see Brad's article on page 8). Locally, we are doing our utmost to save a mill pond that offers the most wonderful habitat for wildlife.

Lastly, I'd like to thank you, our members, for believing in our mission and supporting us with your membership.

Mike Lubbock
Executive Director
Sylvan Heights Bird Park

Conservation update:

white-winged wood ducks

The endangered White-winged Wood Duck is one of the most important waterfowl species at Sylvan Heights. Native to India, southeast Asia, and Indonesia, it is among the rarest of all birds. Their forested wetland habitat is under threat from deforestation, drainage for agriculture, hunting, and egg collection, resulting in highly fragmented populations. Enigmatic and shy, White-winged Wood Ducks live in the shade of dense forest canopies and rarely form large flocks, making field research very challenging.

Mike Lubbock has been working with this species for over 50 years to preserve them in captivity, as conservation through aviculture may be our last chance to prevent this species from dying out. However, the White-winged Wood Duck's status in

captive collections is also fragile. Only a few original pairs were brought into captivity in the 1960s and 70s, resulting in very low genetic diversity in the current captive population.

Sylvan Heights Waterfowl established the original captive population in the United States, and maintains ownership of all White-winged Wood Ducks in the country. We loan them to zoos and other organizations in an effort to establish and maintain a diverse captive population, in the hope that these birds may one day help restore wild populations. Currently, 11 institutions throughout the country have White-winged Wood Ducks for breeding or educational purposes. We would like that number to increase in the future, as public awareness of the species is so important to conservation success.



Article by **NICK HILL**
Curator, Sylvan Heights
Avian Breeding Center



photo by Nick Hill



This year, we are excited to host Murchana Parasar, an Avian Husbandry intern from India, with a specific interest in gaining knowledge of White-winged Wood Duck behaviors. Upon her return, she may be able to put what she has learned into practice towards the conservation of this species in the wild. You can read about Murchana's internship at Sylvan Heights on page 15.

We are constantly learning about White-winged Wood Ducks as we work with them here at Sylvan Heights. Originally, we assumed that they needed to be in heavily shaded areas based on their native habitat preference. However, we have come to the conclusion that less shade may be better, along with clear, fresh water. We also believed that White-winged Wood Ducks could not reproduce in a flock setting because of male aggression, but recently we have found that our exhibition flock at the park breeds exceptionally well together, with up to 5 females sitting on eggs at one time with no problems. The main benefit of flock breeding is that the birds choose their own mates, rather than us humans guessing at which birds should be together. Additionally, we also believed that these birds would not breed until they were two years old. With the flock breeding situation, we have found that they can actually reproduce at one year old. We were also hesitant to allow the birds to raise their own ducklings, as we thought the aggressive males might be a threat to the young birds. We've since discovered that the females do a very good job of looking after the ducklings, and on one occasion, a female died shortly after her brood hatched and the male took over all of the parental duties on his own.

A new nest box design has also increased breeding success within our flock. The new box features a tunnel entrance to make the birds feel secure, and a deep area at the back that holds several inches of sand and nest material, so that the birds can make

a deep nest depression in which to lay without reaching bare boards at the bottom of the box. A large lid on the top of the box allows our aviculturists to easily access and monitor the nest, and reduces the chance of the female duck damaging her eggs during nest checks. We'd like to thank John Reiner, a volunteer carpenter, for kindly building a number of these boxes for us.

The average lifespan for a White-winged Wood Duck in captivity is a very short three years, due in part to low genetic diversity and a resulting susceptibility to some avian diseases. Recently, we have discovered that we can increase the average lifespan of the birds by implementing some different avicultural practices and changing the environment in which we house the birds. This knowledge may well benefit wild populations in the future.

We are excited to be collaborating with other institutions that are also doing valuable work to learn about White-winged Wood Ducks. Dr. Kim Cook, veterinarian at Akron Zoo in Ohio, visits Sylvan Heights twice a year to draw blood from our birds and physically examine them for problems. Hiram College in Ohio has built a biosecure facility to house White-winged Wood Ducks for further research.

Unfortunately, maintaining a flock of endangered birds and transferring them throughout the United States costs money, and lack of funding is always a problem. We are supported annually by our partner organization, the International Wild Waterfowl Association, but financial help is always a necessity.

It is our hope that perhaps in the year 2046, one of us will receive a postcard from India with a picture of a White-winged Wood Duck saying "Saw these amazing ducks! They used to be endangered, you know!"

park news & updates



plants and pavers installed

Landscaping has always been an integral component of the park, providing a setting for the birds and enhancing the overall visitor experience. Mike and Tammy Diacont of Wildwood Nursery in Henrico, NC have provided a tremendous amount of much-needed landscaping assistance to us over the past year.

In early spring, Mike and his crew renovated the large picnic area across from the owl exhibit. The fine gravel substrate had severely eroded from heavy rainfall over the years, so they leveled the ground and installed beautiful new landscaping pavers around the picnic tables. The result is a welcoming space for visitors to enjoy picnic lunches, and for education groups to learn about the adjacent wetlands.

Wildwood Nursery has also assisted with the installation and planting of large flower containers and raised beds throughout the park. We hope you enjoy the enhanced garden areas during your next visit.



education dept. receives grants

The Sylvan Heights education department has recently received grants from two generous organizations. Grants from Roanoke Electric Cooperative totalling \$2,215 will help provide discounted park admission for area school groups that have not visited the park before. It will also fund outreach programs that aim to generate interest in birds and nature amongst local students.

A \$4,000 grant from Halifax Electric Membership Corporation will fund a new play space within the park, which will be made of all natural materials and incorporate the surrounding landscape with the goal of encouraging children to learn through free play and discovery. Play areas will include a mole hill with slide, sand and mud play, balance elements, a bird nest, and a spider web. There will also be a “loose parts” area to encourage imaginative building. The hope is that by exposing children at an early age to a natural setting they will be more likely to become lifelong conservationists.



park signage updated

All of the identification signs throughout the park received a facelift this spring. New roofed signage stations in each continental aviary feature fresh graphics and beautiful images by photographer Joel Sartore.

Designed to be durable and weather-resistant, the new signs should also make it easier for visitors to quickly identify any bird in the aviary. Endangered and critically endangered species are also highlighted, and will be incorporated into a fun new educational activity we plan to debut later this year.

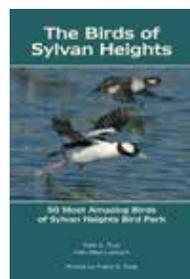
New displays featuring more in-depth information were also added to the Endangered Species aviary, the Flamingo aviary, and the African Finch aviary. The Ruff aviary near the treehouse and the Whooping Crane will also be receiving similar updated displays in the near future.

For all of the latest news from Sylvan Heights Bird Park and the International Wild Waterfowl Association, follow us online:



new book: *the birds of sylvan heights*

A new book, *The Birds of Sylvan Heights*, was released on May 9 as part of Duckling Day 2015. Featuring the 50 most amazing birds found at Sylvan Heights Bird Park, the book is packed with entertaining bird facts and insight from Mike Lubbock, the world's leading authority on avian husbandry and waterfowl conservation. There are also 85 vivid color photographs by wildlife photographer and avian expert, Frank S. Todd. The book's author, Dale True, also wrote Mike Lubbock's memoir, *The Waterfowl Man of Sylvan Heights*.



The Birds of Sylvan Heights is available on Amazon.com or by visiting the park's website: www.shwpark.com.

\$12.95 paperback

become a friend of sylvan heights

Do you ever draw a blank for something to talk about when you meet someone new? Become a "Foshalite" (Friend of Sylvan Heights - FOSH) and you'll always have something new and exciting to tell! There are so many good things happening at Sylvan Heights that you'll experience as a 'FOSH'. Whether you like planning events, working in the gardens or helping with the birds, there are opportunities for you to make a difference at Sylvan Heights Bird Park.

FOSH recently hosted the "2nd Annual Pig in the Park" pig cookoff. Over 400 people enjoyed sampling barbecue and sides from the competitors, as well as the entertainment and numerous activities. The colorful scarlet ibis, parrots and parakeets provided a beautiful backdrop for the event. Our next fundraising event is "Moonlight in the Park" on November 14. This dinner and live auction is always a popular, sell-out event. Check out www.shwpark.com or call the Park at 252.826.3986 to purchase tickets or find out more information.

new exhibits under construction

A new exhibit is in progress in the lower section of the park behind the Australia aviary. The park's staff has been working throughout the winter to demolish the previous exhibit, construct a new winter shelter, and pour a new concrete pool.

When complete, the aviary will house colorful African species, such as African Jacana, Kenya Crested Guineafowl, and African Pygmy Geese.

A greenhouse is also under construction. Although it will not be accessible to visitors, it will serve several important functions to the park and will include winter quarters for our more delicate tropical birds and plants.

Plans are underway for a major renovation to the exotic bird aviaries along the park's lower loop, which will provide a vast improvement for visitors and birds alike. Please see page 18 of this newsletter for more information about our next new exhibit, "Wings of the Tropics."

banding flamingos in bolivia

BRAD HAZELTON

General Curator
Sylvan Heights Bird Park



In March, my wife Monica and I were afforded the great opportunity to travel to Bolivia to band high Andean flamingos. This was a bit of a surprise since it came together very quickly. Mike and I had traveled to San Diego in October of 2014 for the 3rd International Flamingo Symposium. We heard many excellent papers about the status of flamingos and flamingo conservation around the world. As a result of one of these papers, we were introduced to the work of Omar Rocha and Sol Aguilera with the high Andean flamingos. We, along with David Oehler of the Bronx Zoo, had expressed an interest in assisting with the conservation work that was going on there. Not much more developed with this until about the beginning of March when it became clear that traveling to Bolivia for the banding was a real possibility. We very quickly managed to make all of the logistical preparations for the trip, but we were not sure what we were walking into with regard to the actual banding itself. I have been involved in three other banding campaigns in the Yucatan of Mexico with Caribbean flamingos, and I was fully aware that this is an endeavor that requires a lot of planning and coordination, as well as extensive knowledge of flamingo behavior and handling.

Another fear was how we would deal with the altitude. We flew into La Paz, Bolivia, which is situated at over 13,000 ft. To give you some perspective, the FAA requires that pilots flying over 12,500 for any length of time be equipped with oxygen. From there we flew to Uyuni for another day of acclimation and then drove an-

other six hours up to Laguna Colorada which is over 14,000 feet high. Fortunately, neither Monica nor I nor Kevin Hills from the Bronx Zoo suffered any problems in La Paz and only had minor discomfort at Laguna Colorada.

The scenery at Laguna Colorada was simply amazing. The lake gets its red color from the microscopic organisms that live there, and this is also what provides the pigments that give the flamingos their unique colors. These lakes or salars have fresh water streams flowing into them, but there is no outflow. The water is removed by evaporation leaving behind all of the minerals and salt that flowed in with the water. Laguna Colorada has large white islands of borax emerging from it that are referred to as “ice islands” because they look like large icebergs floating in the lake. Around the perimeter of the lake, there are very tough, windswept clump grasses. The sight of the red water dotted with pink flamingos and contrasting with the “ice islands” and the snow covered volcanoes surrounding it is breathtaking.

At this elevation there is very little vegetation of any kind. Around the freshwater streams there are grass-covered marshes referred to as “bufadales.” These are the areas that have the best grazing for the numerous Andean geese, llamas and vicunas that are seen. I was very surprised by the numbers of birds and mammals that we were able to see at these very high elevations. These bufadales were like oasis harboring a wealth of life. In small pools within

these areas, we saw Andean Crested Ducks, Puna Teal, Sharp-Winged Teal, Chilean Pintail, Andean Lapwings and occasionally even flamingos.

The first morning that we were there, Omar, Sol, and Franklin (a team biologist) had to go and do a census of the number of chicks on the lake. So Monica, Kevin and I were able to go for a short hike along the lake with Glenda, the project veterinarian. We went to a spring called Agua Caliente to get our first good look at large numbers of flamingos. The water in the spring was only lukewarm, but I guess that doesn't make for such a pretty name. We hiked up on a large rock outcropping that has a tourist overlook with great views. We met Omar, Sol and Franklin who were on the overlook counting flamingo chicks. They showed me how they count flamingos through the spotting scope and I took a turn and got up to about 250 birds. That was enough for me and it gave me even greater respect for them when I learned that they counted 18,000 chicks that day by noon.

That evening there was a banding orientation for all of the participants. We were joined by junior and senior students that were brought in from the nearest high school. All of my earlier apprehensions about the organization and preparation for the banding were quickly dispelled. We had several presentations over the next two hours that explained what we gained by banding flamingos, and included an overview of past banding campaigns and a very thorough presentation about the proper way to handle flamingo chicks. There was also a pamphlet that was handed out that reviewed proper flamingo handling procedures in case anyone had missed anything.

The next morning we were up early and I went with Omar, Sol, Franklin, Glenda and Antoinetta (a government official who was there to oversee the banding) to start construction on the capture corral. The corral is a large 20' diameter circle made of stakes and fabric that the chicks will be herded into through a gap and then closed up. This corral has two wings that extend for about 75 yards in two directions forming a funnel that the chicks are pushed into. By the time that the corral was nearing completion the school kids and the remaining participants had showed up and the park rangers left on an extremely long trek to encircle the chicks and begin pushing them into the corral. Due to the size of the lake, this crèche (a group of flamingo chicks) had to be brought in from three or four kilometers away. As the chicks were being pushed in by the park rangers, we hid behind the wing walls of the corral so that we wouldn't spook the chicks.

As soon as the chicks were enclosed in the corral, the team flew into action. Two or three rangers were responsible for catching chicks and passing them out to carriers who took them to one of three banding stations. Two stations were only banding and releasing birds and the third station was banding, weighing, taking measurements and doing health screenings. Kevin and I were carrying birds to banding stations and then releasing them, while Monica was assisting the veterinarian with taking blood and feather samples from the chicks for a study. After we were out of bands at the banding stations there was a bit of a backlog at the health table so I was asked to assist with holding birds for the vet. By the time that I released the last bird the remainder of the crew had already broke down the corral and transported all of the equipment off of the island. The whole process was done very quickly and the chicks were released in less than two hours.



Photos by Monica Olivera Hazelton, Sol Aguilar, and Omar Rocha

That afternoon was spent processing the collected samples and then Omar, Sol, Franklin, and Glenda had to leave for Uyuni that night. They were driving back to La Paz the next morning because elections were being held the day after that. In Bolivia, everybody is required to vote and if you don't vote you are not allowed to deposit or withdraw money from your bank account for a period of time. Also, there is no motorized transportation allowed in the cities except for police, fire, ambulance, press vehicles and very few taxis with special permission.

Monica, Kevin, Antoinetta and I stayed at Laguna Colorada that night and then had a hired driver to take us on the scenic route to Uyuni the following morning. We visited several more lakes and salars on the trip back. In Uyuni, we caught an evening flight back to La Paz. It was amazing how much more comfortable we were at only 1000 feet lower elevation. The next morning was election day and it was amazing to walk out into a city of over 1 million people and not hear cars or smell the exhaust. Kids were playing in the streets and you could actually hear the birds singing. We walked part of the way to Omar and Sol's house and managed to catch a taxi to take us the remainder of the way. We had a wonderful day visiting with them and their two young children.

On our last day in Bolivia, Sol took us to enjoy some bird watching at lower elevations. We were able to see species we'd never seen in the wild before, including toucanettes, oropendolas, mot-mots and Cock-of-the-Rock. This was a great finish to a wonderful trip.

from the **iwwa** president

Challenges...It seems that ever since I have been raising waterfowl there have been concerns about the challenges that interfere with the benefits and enjoyment of raising waterfowl. As I look back over the past years, I remember challenges that were won and also lost. In comparing current times with the past, it seems that new challenges are becoming more frequent and more difficult. This is at a time when more species are at risk globally from a great variety of mostly man-made problems. In his book 'The Waterfowl Man of Sylvan Heights' Mike Lubbock talked about threats to wild waterfowl, as well as the successes that have been accomplished and projects that are ongoing through maintaining waterfowl in captivity. The proceedings 'Conservation Through Aviculture' from the 2007 International Symposium on Breeding Birds in Captivity (IBRCC) also extensively revealed the need for captive breeding populations of a wide variety of bird species for the benefit of wild populations.

Late last year, a new challenge to our facility and other breeders here in the Northwest was an avian influenza outbreak. In cases where infected or dying birds are found, it is most likely that the entire captive population will be euthanized. A couple of private breeders here in Washington experienced such an unfortunate loss. If this happens, not only are well cared for collections destroyed, but also genetically important breeding stocks may be eliminated.

Through surveys, the IWWA has recognized waterfowl species of concern in terms of their representation in captivity. It is very important that all possible species be represented, and the captive population needs to include good genetic diversity and a sustainable reproductive age group. The IWWA has strived to buoy up low numbers. In some cases, the majority of some species are held in only a couple of facilities. This creates an obvious risk. As we held our breath during the AI outbreak, which no matter how good your bio-security procedures, one infected bird entering your property can end years spent developing a healthy and productive breeding population. Fortunately, we did not have any problems during the recent outbreak, and

there have been no recent reports of any infected waterfowl. However, the scare made us realize how long it took to build our collection, and in the past it was much easier to acquire good breeding stock than it is today. This reality drives home the importance of captive mixed-species collections throughout North America and Europe. We truly need more people raising waterfowl and more people willing to keep rare and difficult species. Among our challenges, there is great difficulty in getting new bloodlines and completely losing a species from captivity can be devastating. Zoos and private breeders need to work together to boost inventory numbers and maintain good viable breeding populations. Single birds - or a representative pair - placed randomly in facilities does not benefit the ultimate goal for species representation and protection. Sylvan Heights Waterfowl and the IWWA membership need to continue encouragement and support of private and public aviculture. Some excellent successes of wild waterfowl at risk that are being bred in captivity are the White-winged Wood Duck, Madagascar Pochard, Baer's Pochard and Scaly-sided Merganser.

The upcoming IWWA conference in October is a good opportunity to learn more about how to help save and sustain waterfowl in perpetuity. This year, we will be enjoying the Orlando, Florida area and all it has to offer. You will find details about the upcoming conference on the opposite page, and at www.wildwaterfowl.org.

As always, I welcome your comments or suggestions to help make our organization the best that it can be.

Arnold Schouten
President

International Wild Waterfowl Association



The endangered Scaly-sided Merganser is one of many species that can benefit from cooperative captive breeding efforts.

Photo by Joel Sartore
www.photoark.com

IWWA

CONFERENCE

2015

florida

OCT 13 - 17, 2015

POST CONFERENCE OCT 18-21

www.wildwaterfowl.org



We have put together a great Florida experience for this year's conference, visiting facilities at Disney's Animal Kingdom for a behind-the-scenes opportunity. Other places include Sea World, Gatorland and Lowry Park Zoo. The speaker sessions will be hosted at Sea World.

The main conference is in Orlando, but if you want to see more of this beautiful area, join us for the Post-Conference Tour starting on the 18th. We will be taking a scenic drive down the Gulf Coast and visiting Busch Gardens, with an overnight at Fort Myers, then continuing to Sanibel Island for wildlife viewing with a stop at Naples Zoo for evening bird flight. The next day, we will be visiting the Everglades and taking a boat trip for wildlife and bird watching.

Please visit wildwaterfowl.org for complete conference information and registration.

Open to all Sylvan Heights
and IWWA members!



education update

by **KATHLEEN FLEMING**

Education Assistant, Sylvan Heights Bird Park

In our wired society both adults and children are spending less and less time outdoors and more time in front of a screen. On average, a child spends more than seven hours a day in front of an electronic screen and less than 30 minutes of free play outdoors. Many experts agree that this shift is creating a negative impact on our children and causing a rise in obesity, depression and attention disorders. There is no arguing it, kids (and adults, for that matter) need to spend more time outdoors. The benefits are plentiful for someone's body, mind and spirit. Increased play time outdoors results in decreased obesity as children move more. Standardized test results for schools that have environmental education programs are routinely higher than schools that do not. Spending more time outdoors also decreases stress levels.

Summer will be a busy time of year at Sylvan Heights and a great time to explore the outdoors. Several special events and programs are planned and would be a great addition to a park visit. The Education Department will continue on with "Matilda and Friends" one Saturday morning a month in June and July. This hour-long program will include stories, activities, crafts and close encounters with animals. Weather permitting, the program will be held outside. Sylvan Heights will offer week-long camps for both 4-6 year olds as well as 7-10 year olds in July.

Teens and adults will want to visit the park on a Saturday of the "Park Talks" series. Dustin Foote, our Assistant Curator, will be presenting a series of education lectures one Saturday afternoon a month starting at 1pm. The talks will focus on a wide range of topics including "What it Takes to Raise a Duck" and "Chicken or the Egg, Who Came First?" "Park Talks" are included in the price of park admission.

The Education Department offers educational guided tours for teens as well as college and continuing education groups. This is an excellent opportunity for groups to observe birds up close as they discuss their significance in science, literature, conservation and many other ways they touch our lives. This added enhancement is a great way to make your group's visit a true learning experience and is designed for groups that have a heightened interest in learning about birds.

Of course any day Tuesday through Sunday is a great day to visit the park if you have not been in awhile. Step away from the screen and enjoy being in nature for a few hours. It will do wonders for your well being! Visit www.shwpark.com for more information about events including dates, registration information and fees.



2015 education calendar

MATILDA AND FRIENDS

JUNE 20: Bugs
JULY 18: Waterfowl

SUMMER DAY CAMPS

JULY 7-10: 4-6 years old
JULY 28-31: 7-10 years old

OVERNIGHT CAMP

(7-12 years old)

JULY 21

NC ESTUARINE TRIP

(Ages 6-10)

AUG 11

PARK IN THE DARK: WINGS OF THE NIGHT

OCT 16-17
NOV 6-7



PARK TALKS

JUN 13
JUL 11
AUG 11
SEPT 5

OCT 3
NOV 7
DEC 5

Reservations required. For more information, please visit:

www.shwpark.com



GET THE LATEST
NEWS FROM THE
EDUCATION TEAM!

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extraordinary eggs

The bird egg is a miraculous testament to avian adaptation. The hard shell of a bird egg allows them the opportunity to reproduce on dry land without being dependent on water. Even most reptiles must bury their softer shelled eggs in the ground - otherwise the egg will simply dry out. Birds have freed themselves from internal pregnancy or laying eggs in or near water. It is for this reason that birds are found across the globe.

The avian egg can provide you with a wealth of knowledge about the bird that laid it. Egg shape reveals a great deal of information about the life history of a bird. For example, many cavity nesting birds have very round eggs, whereas species that nest on a cliff have extremely pointed eggs. It matters little to a cavity nesting bird, such as an owl, if her eggs roll around - they won't go far inside a tree cavity. However, the cliff nesting seabirds wouldn't want their eggs rolling out of the nest! For this reason, they have extremely pointed eggs, a shape known as "long pyriform" scientifically. The pointed end causes the egg to roll in a small circle, rather than straight off the side of a cliff.

Egg color is equally enlightening when it comes to learning about how a bird lives. Blue eggs were once thought to look like water from above. However, it has been shown that the vibrancy of a bird's blue eggs is a direct indicator of the female's health, thereby signaling to the male if she is a good mate choice. White eggs are very common in cavity-nesting birds or birds that make well-constructed nests, like weavers. These birds do not have to worry about their eggs being seen

by predators. Many ground-nesting species such as shorebirds have speckled or blotched eggs that blend into the earth.

How many eggs a female lays provides another hint about her life history. The number of eggs laid, known as clutch size, is hard-wired in some species. For example, all flamingos lay one egg, all hummingbirds lay two eggs, and virtually all shore birds lay four eggs. However, some orders of birds have extremely variable clutch sizes. In waterfowl, many ducks lay large clutches of around eight eggs. Once these eggs hatch, the ducklings can feed themselves and the hen does not have to expend much energy looking after them. However, many songbird species, such as an American Robin, only lay around four eggs. Robin chicks hatch helpless, and both parents must spend weeks tirelessly feeding their chicks, a hard task for even a small brood!

Simply put, the bird egg is remarkable. It is the key to avian success because it allowed them not only to spread across the globe, but also the opportunity to fly. Imagine trying to fly with a belly full of babies! Just looking at eggs tells you a tremendous amount of information about the life history of a bird. Next time you visit Sylvan Heights Bird Park, take the time to look at our egg collection in the main lobby and see what you can discover about the birds that laid them!

Dustin Foote
Assistant Curator
Sylvan Heights Bird Park



Eggs from left to right: Lesser Flamingo, Eurasian Eagle Owl, Elegant Crested Tinamou, and Black-necked Stilt

where are the waterfowl?

by **NICK NEES**

Aviculturist, Sylvan Heights Bird Park

As the summer progresses, the weather heats up and life around eastern North Carolina is in full motion. But if you visit the park in late summer, you may notice something peculiar: what happened to some of the male ducks? The most colorful members of the waterfowl family, such as the showy male wood ducks and Mandarin ducks, seem to have vanished.

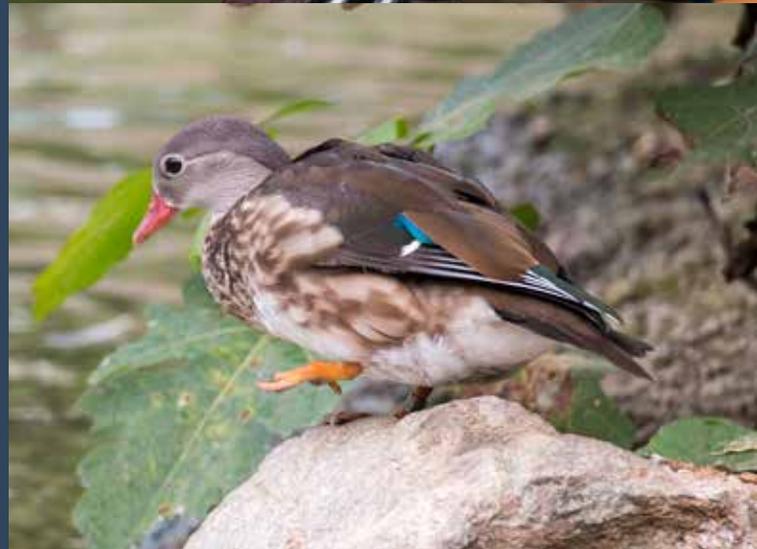
Just after the breeding season, many male ducks undergo a process called molting. Birds' feathers are dead in nature, similar to our fingernails or hair. Broken or damaged feathers cannot simply be repaired like wounds that heal, so instead they must be replaced with new ones.

Male ducks undergo this molt just after mating season comes to an end in the early summer. They lose all of their beautifully bright and shimmery feathering, or "breeding plumage," and replace it with a drab "eclipse plumage" similar to the females. Though females molt their plumage as well, there is not much, if any, change from the old to the new feathering.

So why do the males swap their flashy feathers for something more subtle?

When ducks undergo their molt they also lose their flight feathers, thus losing the ability to fly. This lack of flight is a big deal when, in most cases, that's their only line of defense from predation. When drab in color, the male wood ducks can be harder to see by potential predators, which is helpful when they cannot fly away to avoid them. This flightless stage only lasts a few weeks, and their new flight feathers start growing in as soon as the molt takes place. The male wood ducks will gradually grow back their bright and colorful feathering throughout the rest of summer, and will be ready to find themselves a mate for the following breeding season by mid-fall.

Sylvan Heights Bird Park is the perfect spot to see the effects of the summer molt up close. Consider visiting in the spring, fall, or winter to see most ducks in their peak plumage, then return in late summer to see the striking difference. Once you see the eclipse plumage of these males, the beauty of their vibrant mating feathers is just that much more impressive.



Male Mandarin ducks in breeding plumage (top two) and a male Mandarin duck in eclipse plumage (right). ▶

avian husbandry interns 2015

Every year, the IWWA awards the Liz Hudson Memorial Grant to a few young aviculturists seeking to advance their knowledge of avian husbandry. The grant assists with tuition and travel expenses to participate in the Sylvan Heights Avian Husbandry Program.



Olivia N Masi

After seven years of running my own business, I decided to follow my heart. I packed up my home and business and went to university, as a mature student, to study Wildlife Conservation. I graduated in 2011 and since then have been working, interning, or volunteering with nature recovery projects. Prior to coming to Sylvan Heights, I had a variety of husbandry experiences (from elephants to hedgehogs!), but I had never worked on the breeding of birds. My time at Sylvan Heights has very much filled that gap. I have gained experience in avian breeding behaviours, nest box preparation, nutritional requirements, egg handling and candling, incubation, and chick rearing techniques.

I also had the enormous pleasure of imprint-rearing a Cape Barren gosling for the education team. As I head back to the UK, I am hoping that my new experiences and skills will help booster my chances of employment on the next exciting nature recovery project.



Phoebe Young

In my position as Aviculture Warden-Duckery at Wetlands & Wildfowl Trust Slimbridge, I help to manage the organisation's breeding and rearing efforts. Throughout my career to date, the name "Mike Lubbock" has loomed large like a tantalizing tidbit when it comes to quality aviculture. Nowhere else has the same combination of wildfowl species, facilities, and expertise to train zoo and aviculture professionals at this level. I sincerely believe that to be an excellent aviculturist you need to show, share, and discuss your methods and thoughts. Conservation worldwide is lucky that Mike and Ali are so generous, as they have both bequeathed future generations with the love and experience to save species.

My personal aims were to investigate nesting choices in a different climate, Scaly-sided Merganser breeding, and species imprinting. The whole team has been so incredibly accommodating and I look forward to returning home to put some of what I've learnt into practice.



Murchana Parasar

I am doing my Master's degree in Wildlife Biology and want to do my research work on White-winged Wood Ducks, which are endemic to where I live in Assam, India. But I had no practical experience with this species, so I searched on the internet about organizations that can provide internships for students. I looked through many sites and then I found Sylvan Heights. This place is perfect for me as it has the highest number of birds, especially waterfowl. I applied for the internship, and luckily got selected.

From my very first day, I have learned many wonderful things about avian husbandry, like feeding, and candling eggs, which I like very much, and egging techniques which are really very unique.

These four weeks have been the most wonderful weeks of my life. Sylvan Heights will surely be the base for my future work. I am very thankful to the people of Sylvan Heights.

avian ALUMNI

Where are our interns now?

GEORGE CUMMINS

Crew Leader, Hawai'i Forest
Bird Demography Project



My name is George Cummins, or as some at Sylvan Heights know me, the Goosemaster. I got this name as I was the main daily caretaker of the breeding center's vast number of goslings in June and July for several years. In fact, one of the main things that I remember from my first visit to Sylvan Heights back in March 2004 involved then intern Katie Lubbock walking around the breeding center with an imprinted Nene (Hawaiian Goose) following her. At the time, I had no idea that a decade later I would be conducting research on Hawaiian forest birds at a wildlife refuge where wild Nene are breeding.

But to the beginning. I started volunteering at Sylvan Heights in 2004 and 2005, and worked full time during the summers of 2006 and 2007. When I first started working there, the Bird Park was still a drawing on a sketch pad, but soon enough I was helping to lay turf and build exhibits. I was present for its Grand Opening in 2006, and have seen the awesome progress ever since! After graduating from Virginia Tech in 2011, I returned to Sylvan Heights and worked at the breeding center full time for the fall and winter of that year. During my time at Sylvan, I was given many great opportunities, especially for someone new to aviculture and conservation. I was able to be a part of the educational bird show, lead tours of the park, learn all kinds of aviculture techniques for many different types of species, and work with people from all over the world. Plus, Sylvan Heights staff certainly became a second family of mine!

Since working at Sylvan Heights, I have gone on to do avian field research in many places around the world. I jumped from field job to field job, gaining experience on many different types of projects and species, and have been able to see a lot of amaz-

ing places along the way. This ranged from studying Red Knots on barrier islands along the Eastern Shore of Virginia, Jaguars in Belize (I know, not birds, but still cool), Nazca Boobies in Galapagos, Black-capped Vireos in Texas, White-crowned Sparrows in Oregon, 40-spotted Pardalotes in Tasmania, and currently Hawaiian forest birds on the Big Island of Hawai'i.

My first nest searching/monitoring job was with Black-capped Vireos in central Texas, and I had a blast searching for these little passerine's nests, and following each pair's nesting attempts across the season. This led me to do more nest searching jobs, finally ending up in my current role as crew leader and Masters student studying all avian species in high elevation Hawaiian rain forests on the Big Island. I work in Hakalau Forest National Wildlife Refuge, which was the first refuge in the country created specifically to protect endangered bird species. My study sites for this project range from 5,000' to 6,200', and it is usually cold and wet – not most people's picture of Hawai'i for sure! There are 8 native passerine species and several non-native species that we also study. The overall project is run by USGS avian ecologist Eben Paxton, and is actually looking at many demographic and movement patterns for these populations of birds. The project involves banding and re-sighting color banded birds (for survival estimates), radio telemetry studies (to track movements), and of course, nest monitoring (for productivity estimates). From this project, we can gauge not just if a population of birds is increasing or not, but what aspects of their lives are causing any overall population trends. My specific research for my Master's thesis is focused on the evolution of life history traits (such as clutch size or nestling period length) and parental behaviors in birds, using the na-

tive and non-native species here in Hawai`i as a comparison of different evolutionary histories. Native species evolved in the islands for millions of years without any mammalian or reptilian predators, while non-native species have always lived and evolved with such predators. Thanks to human introductions of species, they are all living in the same habitat now, and we

can tease apart the reasons that certain parental behaviors and life history traits evolve. Hopefully, this will lead to new evolutionary insights as well as help managers better understand the threats driving changes in populations of these endangered species.

thank you to our donors

Sylvan Heights Bird Park gratefully acknowledges our donors of \$500 or more since November 7, 2014 through March 31, 2015.

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2015 EVENTS

ART SHOW

Sept 1st-Oct 31st, 2015

Local artists from Riverwalk Gallery will have wildlife-themed art on display.

IWWA CONFERENCE

October 13-17th, 2015

Tours and guest speakers in Florida. More information at wildwaterfowl.org

TRICK OR TWEET

October 31st, 2015

Costumed characters will be handing out candy in the park.

MOONLIGHT IN THE PARK

November 14, 2015

Dinner and live auction to support the birds at Sylvan Heights Bird Park

12 BIRDS OF CHRISTMAS

Dec 1-31st, 2015

Holiday-themed scavenger hunt. Can you find them all?



DINNER & LIVE AUCTION

SAVE THE DATE

November 14th, 2015

introducing our next exhibit: *Wings of the Tropics*



“Wings of the Tropics” will replace and improve upon the existing exotic bird aviaries. ▼



Since the park's opening in 2006, our tropical bird collection has continued to improve in quality. We now need to provide enclosures that are worthy of these spectacular birds and that will showcase these birds in a safe and fulfilling environment, while allowing for their reproductive needs. This exhibit will educate visitors by comparing both Old and New World species of tropical birds, including Birds of Paradise, Crowned Pigeons, Elegant Crested Tinamous, Sulawesi Grosbeak Starlings, Helmeted Curassows, Hummingbirds and numerous others.

When the park opened to the public in 2006, a complex of seven small exhibits were hurriedly constructed to house some of the park's tropical birds. These exhibits were built with the intention of allowing the public to easily view the birds. But the wire chosen did not allow for easy viewing and the exhibits were very dark due to a full roof overhead. A wooden shelter with a dirt floor was built as winter housing along the back of these exhibits. The dirt floor does not allow for adequate disinfection of the shelters and now the back wall of the shelter has begun to rot increasing the risk of escape. This also compromises the warm airtight shelter for these cold-sensitive birds.

We would like to replace this older complex of exhibits with four bigger aviaries that are much brighter and in which visitors can more easily see the birds. The front wall of these exhibits will form one of the sidewalls for a large walk-through exhibit. Walk-through exhibits are very popular with our visitors as they allow for unobstructed observation of the birds as they perform normal behaviors and interact with other birds, as well as the visitors. All of the exhibits will have small pools or water features and will be naturally planted. The walk-through aviary will also share a wall with a large raptor aviary. Most captive raptor populations are in decline, and it is our desire to expand our raptor program at Sylvan Heights in an effort to improve captive husbandry techniques and breeding success. The existing wooden shelter will be replaced with a much more permanent block shelter with a concrete floor. This construction will allow for easier cleaning and a much warmer, more efficient shelter.

A design team has already drawn up preliminary blueprints and has created a timeline, as well as a working budget for the project.



The new exhibit will feature bright, spacious aviaries with attached winter quarters, and easy access for keepers. ▲

Sylvan Heights staff has the experience necessary to provide in-house labor for construction, greatly reducing the overall cost. This project will provide much safer and more appealing housing for our tropical bird collection and allow us to continue our participation in breeding programs for some of the most rare birds in captivity. This popular and visually appealing exhibit will also enhance the interactive experience for visitors, allowing for the spreading of our conservation message.

The date of completion largely depends on the availability of funds for building materials. If you would like to help us complete this project, please consider making a donation using the attached form. Your support is greatly appreciated, and we look forward to updating you on the progress of this exciting new feature at Sylvan Heights Bird Park.

HELP US BUILD "WINGS OF THE TROPICS"!

We need your help to build our newest exhibit. "Wings of the Tropics" will introduce visitors to hummingbirds, finches, toucans, curassows, tropical waterfowl and much more.

Name: _____ Address: _____

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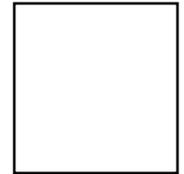
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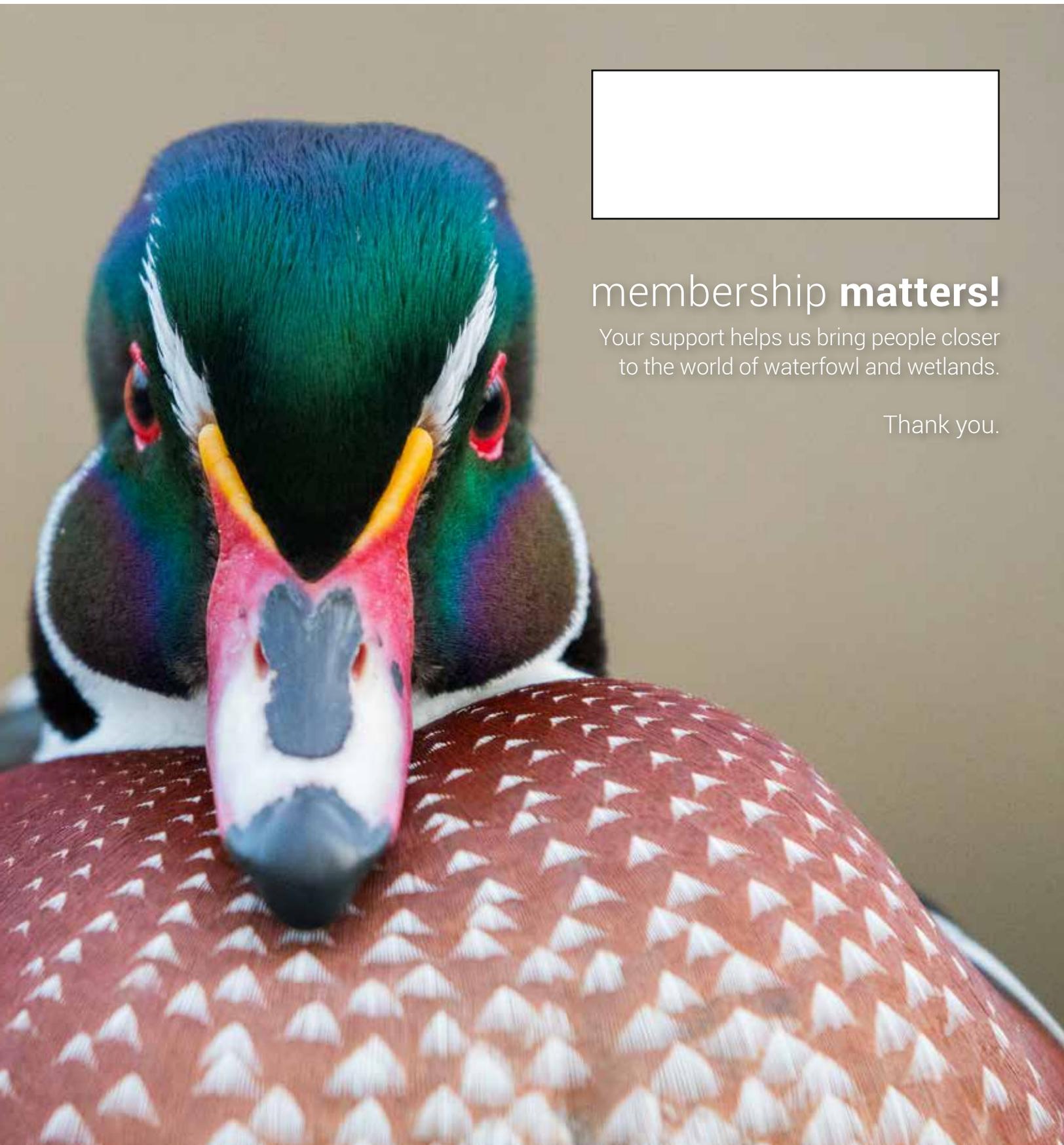
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membership **matters!**

Your support helps us bring people closer to the world of waterfowl and wetlands.

Thank you.