THE SONGBIRD

THE BIANNUAL NEWSLETTER OF THE NORTH AMERICAN SONGBIRD WORKING GROUP, AN INITIATIVE OF THE AZA PACCT TAG



FALL 2020



Baltimore Oriole (Icterus galbula) by Eric Peterson

IN THIS ISSUE	
Meet Barb!	2
Rose-breasted grosbeaks at SNZP	3
What's a scarlet tanager doing in a South American aviary?	6
Summer is for the Birds	7
Flying south without Leaving Ohio	9
Training North American songbirds at Akron Zoo	11
Navigating Songbird Transfers	13
Continuing the Legacy of Bird Conservation	16
SAFE NAS Update	18
New Species Fact Sheets	19
Welcome Newsletter Editors	20

Message from Nikki Smith, Columbus Zoo and Aquarium

North American Songbird Working Group Chair

"This has been a challenging year for keepers and birds alike. Birds are perishing in unprecedented numbers in the southwest and government protections for the migratory birds we love so much have been minimized. Many of us have watched our colleagues leave the industry due to budget cuts at zoological parks, aquariums, aviaries and wildlife centers. We are at a time in the history of animals in human care that it is more important than ever to pass on what we know and what we are learning every day about the husbandry of North American songbirds. Migratory songbirds in human care still pose many questions that we as keepers can and should be documenting and answering before their numbers become critical. As I'm sure most of you are aware we are losing birds at an amazing rate, 3 billion since 1970 (abcbirds.org) alone. Mixed species opportunities (South American aviaries!), favorite nesting materials (did you know Indigo buntings love paper towel strips?), novel feeding approaches- we want to hear from you! I sincerely hope our spring article finds us in more precedented times and I know we all are looking forward to getting back to normal, whatever that may be. I hope you enjoy our fall 2020 edition as we highlight all of the great work we are doing in zoos, aquariums and rehabilitation centers. Thank you to all who made this edition possible."

Meet Barb the Loggerhead Shrike

By Leighann Cline, Animal Keeper Smithsonian Conservation Biology Institute

Meet Barb!

The Smithsonian Conservation Biology Institute (SCBI) has a new animal ambassador! Barb, a female loggerhead shrike, was hand-raised this spring with the goal of giving visitors an up close and personal encounter with one of North America's native songbird species.

The loggerhead shrike—also known as the "butcher bird"—is a small, migratory songbird best known for its gruesome habit of impaling prey on thorns or barbed wire. They can be found across most of North America. Like many grassland bird species, their numbers are in steep decline. In fact, loggerhead shrike populations have fallen more than 70% since the 1960s, and they have been extirpated from much of the northeast.

SCBI is part of the Loggerhead Shrike Working Group, which is an international partnership that includes governmental agencies, zoological institutions, professional groups and academics. Shrikes are also a target species for the Conservation Centers for Species Survival (C2S2). These birds are housed at SCBI and given breeding recommendations each spring. The majority of young produced each year are released in late summer in Ontario! The Eastern Loggerhead Shrike Breeding and Reintroduction Program—managed by Wildlife Preservation Canada has released more than 1,300 shrikes since 2001. The small population of less than 100 individuals remaining in Ontario would undoubtedly have gone extinct without these efforts. Approximately 40% of the birds spotted there each year were bred under human care.

Since all of SCBI's breeding pairs raise young for release to the wild, animal keepers minimize contact as much as possible to keep them wild and to maintain a healthy fear of humans and other predators. As a result, we are unable to exhibit our shrikes, as they can become stressed with too much disturbance. However, engaging visitors and getting them interested in conservation is much easier if they can connect with a live animal. This is where



Barb comes in! Barb is a very energetic and charismatic bird who seems to enjoy interacting with her keepers at SCBI. We have been diligently working with and training Barb so that someday soon she can captivate visitors from all over the world. We are certain she will easily win over the hearts of visitors and raise awareness to the alarming plight of loggerhead shrikes and other native grassland species.

Facilities interested in learning more about the Loggerhead Shrike program can contact Hazel Wheeler, lead biologist at the Eastern Loggerhead Shrike Recovery Program, at hazel@wildlifepreservation.ca.



Raising rose-breasted grosbeaks (*Pheucticus ludovicianus*) at the Smithsonian's National Zoo & Conservation Biology Institute

By Stacy Hill and Lori Smith, Animal Keepers



Photo: Adult male plumage

Background:

The Smithsonian's National Zoological Park (SNZP) Bird House is undergoing a major renovation and is slated to open in late 2021. The new exhibits will feature the journeys of North American migratory songbirds, waterfowl and shorebirds. The new aviaries will focus on different aspects of migration, such as breeding grounds, wintering grounds and stopover points. Many of these species have never been kept in human care and animal care staff are developing new husbandry programs to advance the avian field's knowledge and understanding of these species. One of the three aviaries depict a bird friendly Central American coffee farm that will house migratory songbirds, and resident species such as pigeons, doves, psittacines, and ruby throated hummingbirds representing North American migratory songbird

wintering grounds. The rose-breasted grosbeak (RBGR) is one species that will be exhibited. The rose-breasted grosbeak is a large, seed-eating grosbeak in the cardinal family (Cardinalidae). The species breeds in open deciduous woods across most of Canada and the northeastern United States. We acquired 0.2 RBGR that were hatched at the Columbus Zoo in 2019 and 1.0 RBGR that was brought in from the wild in 2019.

Timeline:

After a standard quarantine period, the two female grosbeaks were introduced to the male in order to provide him with a mate choice. We provided pans of twigs, leaves, pine needles, shredded newspaper, and coconut fiber to encourage nesting behaviors. We monitored for early courtship behavior, specifically birds spending time near each other and moving throughout the enclosures together. Based on these behavioral observations and similar temperaments, we paired off the male with one of the females and provided them their own enclosures. The second female was placed in an adjacent enclosure. While monitoring the pair, we observed the solitary female actively hunting for nest material, pulling on branches and leaves.

Based on this behavior of the second female, and a lack of progress with the pair's courtship, we switched females. The new female immediately began moving twigs and attempting to build a nest out of the twigs. To aid in her efforts, we provided artificial nest baskets in areas she was trying to build. Within days of switching partners, we observed male courtship displays and attempted copulations. At this stage, the female switched from twigs and pine needles to coconut fiber, which we have found most native passerines use as a nest lining. The female grosbeak also used these smaller fibers to line her nest. The first egg was laid on May 24^{**} just 2 days after observed copulation attempts, and one egg followed each day for the next 3 days, giving a total clutch size of 4. Before the estimated hatch date of all chicks, we started offering a chick pan of bugs every morning and afternoon that consisted of waxworms and mealworms lightly sprinkled with water for added hydration. We offered about 10 grams of waxworms and 5 grams of mealworms to start, and increased waxworms to 20 grams as chicks hatched and grew. Twice a week all birds also received toltrazuril in their drinking water to help prevent atoxoplasmosis, a protozoal parasite that commonly infects passerines. The birds were also given their normal diet consisting of Mazuri softbill pellets, egg, Marion Tropical bits, fruits, vegetable mix, mealworms, waxworms and crickets.

All 4 eggs were fertile and began hatching June 6th, 2020. Unfortunately, the first chick was found dead within 24 hours of hatch. It appeared to have sustained some compression trauma and had residual yolk sac visible on its abdomen. The female was seen carrying the deceased chick before leaving it on the food stand where keepers collected it. It was assumed that her inexperience may have led to its early death, since this was her first clutch. While the second chick continued to thrive, the third and fourth chicks each died 2 days after hatch. The third and fourth chicks looked as though they had swollen bellies, but the necropsy proved inconclusive as to the cause of their demise. We observed the male grosbeak spending a lot of time feeding the second chick with primarily waxworms, while the female made infrequent feedings with

mostly mealworms. Despite her inattentiveness to feeding, the female was an excellent brooder. The second chick successfully fledged on June 17th, and the male continued to care for it while the female began her second clutch.

The second clutch consisted of just 2 eggs laid on June 16th and 17th. The eggs hatched on June 28th and 29th but died on June 30th. Both chicks looked as though their bellies were swollen, and keepers began to suspect impaction from the female's preference for feeding more chitinous mealworms may be to blame. Pathology could not determine a cause of death due to marked autolysis of both chicks. During this time, the female was the primary caretaker as the male was busy continuing to feed the fledgling from the first clutch.

To our surprise, the female started a third clutch July 5th, which has not previously been reported in the wild or captivity (Watts 1935, Ivor 1944, Bent 1968b, Langley 1976, Peck and James 1998). Second broods have been confirmed in semi-captivity, but birds are generally assumed to be single-brooded (Ivor 1944). She laid four eggs over the next four days starting on July 5". Based on our theory, we decided to manipulate the diet presented to the adults. We removed all mealworms and crickets offered to the adults until the last chick hatched was 5 days old. Once the last chick reached 5 days, we resumed adding mealworms back into the diet followed by the addition of crickets 3 days later. The first and second eggs hatched on July 18th, while the third egg hatched on the 19th, and the fourth on the 20th. Unfortunately, the third and fourth chicks died after a few days. The fourth chick was unable to compete with its larger siblings, while the third chick may not have received adequate feedings. Like the first clutch, the male was the primary feeder, although the female took over more feedings as the chicks approached fledging. Much to our surprise we started to see the juvenile from the first clutch spending time near the nest, watching the adults care for the chicks. Within a few days we saw the juvenile helping feed the chicks alongside the adults. She even was caught attempting to brood the nestlings while the parents were away. We were curious if there were reports of assisted rearing in the wild or captivity, but only found one instance of an adult male feeding chicks in a neighboring nest in response to begging cries of the nestlings (Ivor 1944). This occurrence was in semi-captive birds, and no reports of assistance are recorded for wild rose-breasted grosbeaks.

Under the care of all 3 grosbeaks (the adults and the first juvenile), these last two chicks grew and fledged. The family group continued to be housed together through the rest of the summer, consistent with their wild counterparts who remain together until migration. All 3 juveniles were sexed based on plumage. Hatch-year rose-breasted grosbeaks look almost exactly like adult females, except for the coloration of their underwing shoulder coverts. Female grosbeaks have yellow feathers under their wings while the males sport pink feathers (Pyle 1997).

Lessons Learned:

The ability to observe this species closely helped us discover what may be causing the mortality of the chicks. We have stationary security cameras in each enclosure which we used to observe behavior. In order to see more detailed aspects of what was happening in the nest, we utilized a trail camera set directly above the nest. Thankfully, the birds were tolerant of this more visible intrusion to their breeding enclosure. This helped us discover who was the primary caretaker, what the chicks were fed, and the frequency of feedings at the nest. We feel confident the increased survival of the last clutch was due to the removal of chitinous insects from the diet options until chicks were at least 5 days old. Based on observations from the trail camera, the 2 chicks that did not make it to fledging were likely out-competed in the nest. Our



Photo: Juvenile plumage

hope is to bring in another male for our second female and continue to work with the same birds next spring. We will be curious to see if the parenting techniques of our pair will improve with time, or if we will need to continue limiting diet options while young nestlings are present.

References

Bent, A. C. (1968). Life histories of North American cardinals, grosbeaks, towhees, finches, sparrows, and allies (Part 1). United States National Museum Bulletin 237.

Ivor, H. R. (1944). Bird study and semi-captive birds: the Rose-breasted Grosbeak. Wilson Bulletin 56:91-104.

Langley, P. J. W. (1976). The breeding behavior and reproductive strategy of the Rose-breasted Grosbeak (*Pheucticus ludovicianus*). *Master's Thesis, Univ. of Western Ontario, London, ON.*

Peck, G. K. and R. D. James. (1998). Breeding birds of Ontario: nidiology and distribution: passerines (1st rev.-pt. C: tanagers to Old World sparrows). Ontario Birds 16:111-127.

Pyle, P. (1997). Identification Guide to North American Birds, Part I: Columbidae to Ploceidae. Slate Creek Press, Bolinas, CA, USA.

Watts, G. E. (1935). Life history of the Rose-breasted Grosbeak (*Hedymeles ludoviciana*). Master's Thesis, Cornell Univ., Ithaca, NY.



Western tanager (Piranga ludoviciana) by Eric Peterson

What's a Scarlet Tanager doing in a South American Aviary?

By Sara Hallager, Curator of Birds, Smithsonian's National Zoo and Conservation Biology Institute and Nikki Smith, Assistant Curator, Columbus Zoo and Aquarium

When zoo and aquarium professionals think of a typical Central or South American aviary, we might conjure up images of toucans, motmots, parrots, curassows, ibis and tropical waterfowl. Does a scarlet tanager or a Baltimore oriole come to mind too? If not, it should! Many species of native North American songbirds spend the winter in Central or South America and are perfectly suitable for your tropical aviary! As captive propagation increases for many native songbirds in AZA zoos and aquariums, the availability of native species is a reality. Recent propagation successes across multiple facilities with indigo bunting Passerina cyanea, scarlet tanager Piranga olivacea, Baltimore oriole Icterus galbula, wood thrush Hylocichla mustelina, song sparrow Melospiza *melodia*, black-capped chickadee *Poecile* atricapillus and rose-breasted grosbeak Pheucticus *ludovicianus* are examples of species of native songbirds that have been propagated in AZA zoos and aquariums over the past few years.

"The time to study birds is while they are still common," said the great conservationist Rosalie Edge nearly 100 years ago. Today, despite many laws in place designed to protect birds native to the United States, they are still in decline. Rosenberg et. al (2019) reported a cumulative loss of nearly 3 billion birds since 1970 across North America, signaling a pervasive and ongoing crisis. Forest songbirds have seen a decline of 22% since 1970. There may come a time in the future when our knowledge of and ability to care for these species will prove vital to in-situ populations. We have an opportunity to develop and cultivate these husbandry skills today and protect common birds now — before it's too late. Now more than ever, raising awareness about the plight of our songbirds is key to their survival.

Exhibiting native songbirds allows messaging about bridging the Americas, uniting cultures and working together to save species. The modern zoo is a center for conservation, education, and research. Zoos connect people with nature in such a way that they are inspired to conserve and protect animals. Once that connection has been made, zoos use education to help visitors discover what they can do at home to help save species.

Interpretively, adding native songbirds to a Central or South American aviary introduces topics that are vitally important to native songbird conservation. When guests come to our zoos and aquariums, they want to make a



Scarlet tanager (Piranga olivacea) by Smithsonian Magazine

difference. Conservation can sometimes feel overwhelming but native songbirds offer an opportunity for visitors to make a real difference to save their favorite Drinking bird friendly coffee is a good backyard bird. example. The Bird Friendly coffee certification is considered the gold standard in organic, biodiversity-friendly coffee production. While most of the world's coffee clear-cuts contributes to deforestation, Bird Friendly forest and coffee is grown under a canopy of native shade trees that support high numbers of migratory and native songbirds. In supporting this simple conservation action, AZA zoos and aquariums have the opportunity to impact visitors' daily routines. "From drinking Bird Friendly coffee in the morning to strengthening their connection to nature and the impact of their consumption, engaged visitors will think of their zoo or aquarium visit during their grocery store and café visits, consider habitats as they sip their morning cup of coffee, and seek out more ways to be good businesses environmental stewards in their and backyards" Bennett (Bowe and 2020, personal communication).

Promoting Bird Friendly coffee can be the catalyst that inspires guests to create bird friendly habitats at home, turn their lights off at night during peak migration and keep cats indoors. North American songbirds can connect people who care about birds and turn those connections into real change to save migratory birds. And all this by simply exhibiting a native songbird!

References

Rosenberg, K. V., A. M. Dokter, P. J. Blancher, J. R. Sauer, A. C. Smith, P. A. Smith, J. C. Stanton, A. Panjabi, L. Helft, M. Parr, and P. P. Marra. 2019. Decline of the North American avifauna. Science 365(6461). doi: <u>10.1126/science.aaw1313</u>

Summer 2020 is for the Birds

By Sara Hallager, Stacy Hill, Kathy Brader, and Shelby Burns Smithsonian's National Zoo and Conservation Biology Institute

Behind the scenes at the Smithsonian's National Zoo, the sweet tweets of chirping chicks are music to the Bird House team's ears. While their homestead exhibit is under renovation, the team has been busy researching, perfecting and literally writing the book of North American songbird and shorebird husbandry. The result? A bird baby boom—34 chicks among 11 species, and counting!

The last recorded hatching of a **Swainson's thrush** in human care dates back to the 1950s, across the pond in Great Britain. We were quite surprised (and pleased) when our male and female bred! In the wild, this species tends to abandon nests that are near hiking trails. After adding more bushes and trees to the enclosure so they could hide, we noticed they built their nest in a fern near the keeper door. We used another entry exclusively to minimize disturbance, and left them alone. Our efforts paid off when two chicks emerged from their shells July 6 and 7.

When a male **song sparrow** courts a female, he does a "pounce" behavior—he hops around and near her on branches before pouncing on her. Then, he will fly to a tall perch and sing a series of trills and whistles. The female will join in the song with her own chattering call and flutter her wings. Previously, we did not know that males did this "pounce" behavior, so it was amazing to see it for ourselves! This is the first time in the Zoo's 131-year history that we have welcomed song sparrow chicks. The pair's first chick hatched May 28. As soon as that chick fledged,



mom wasted no time in building a new nest. Our second chick hatched June 21, and our third emerged from its shell June 23. Because our first-time dad couldn't quite get the hang of feeding duties, keepers stepped in to help mom feed their chicks.

Top: rose-breasted grosbeak hatchlings; Above: Swainson's thrush fledgling; Below: song sparrow fledgling



The **wood thrush** is a consummate songster, and it can sing "internal duets" with itself. In the final trilling phrase of its three-part song, it sings pairs of notes simultaneously, one in each branch of its y-shaped syrinx, or voice box. The two parts harmonize with each other to produce a haunting sound!

At the propagation building, we celebrated the arrival of three wood thrush chicks—two females and one male—June 9, 10 and 12. This was incredibly exciting for several reasons, not the least of which is that mom hatched at the Zoo last year. That means we now have second generation hatchlings under our care! Wood thrush spend most of the year alone and only come together for breeding. Our female and male showed no interest in each other until the very last time we attempted introductions. As a first-time mom, it took the female some time to figure out how to construct her nest. This species is known for their nest-building "wiggle:" they lay down materials, sit in the nest, then kick and push with their feet until the structure is sturdy to their liking.

At the science building, we also had a second generation hatch! Two pairs produced four chicks altogether. The first chick hatched June 16, and the following three emerged from their shells July 6 and 7. Although these parents were less successful with building their own nests, we provided them with artificial ones, which seemed to suit them just fine.



Baltimore Orioles are named for their bold orange-and-black plumage—the colors they share with the heraldic crest of England's Baltimore family! Our female was hand raised by keepers; she was thrown out of her mother's nest at just four days old. Her mate has a rather rough reputation—he does not get along well with exhibit mates. So, we kept a close watch on this pair throughout their time together. They had "spats" on and off, and we would separate them to ease tensions. We were pleased to see them get along, for the most part, and mom wove an intricate

nest. The pair welcomed five chicks June 11 and 12. Around day 9, dad became a little too "high-spirited," so weseparated them permanently. Our first-time mom was incredibly dedicated to her offspring and did a fantastic job ofraisingthechicksonherown.



Common redpoll (Acanthis flammea) by Eric Peterson

Flying South Without Leaving Ohio:

How to manage migratory songbirds through the winter

By Nikki Smith, Lindsey Dunham, and Maureen Duffy, Columbus Zoo and Aquarium

The North America Migratory Songbird Aviary at the Columbus Zoo and Aquarium opened in 1998 with assistance from the Ohio Division of Wildlife and Ohio Department of Natural Resources. Dedicated to Rachel Carson, founder of the ecology movement. Rachel "wondered why songbirds were dying in a backyard on Cape Cod", searched for the answer, and subsequently wrote a book in 1962 entitled Silent Spring which exposed the dangers of pesticides and other man-made poisons to the world. She believed nature should be celebrated. Visitors are encouraged to enter, look, and listen; to celebrate nature in the way that Rachel Carson did; and learn what you can do in your own backyard to continue her cause.



Nearly all of the bird species found within the aviary spend some part of their life or migration in Ohio though some would be considered rarities when sighted in Ohio. We currently house about 60 individuals of 30 different species in a 5,000 sq ft walk through habitat. The majority of our current residents come from wildlife rehabilitation facilities and are considered non-releasable due to their injuries. Our collection is continually changing and houses year-round a wide variety of migratory birds, resident birds, waterfowl, and shorebirds. There are particular challenges to housing these birds year round: chiefly keeping live insects available and providing adequate options for birds to warm themselves.

During the spring and summer birds such as Baltimore orioles, Indigo buntings, and Rose-Breasted Grosbeaks can be seen flying about the aviary, sporting their vibrant breeding plumage. In the fall and winter months their colors become much more muted for their



migration south for the winter. Most guests wouldn't be able to see this seasonal dimorphism in their own backyards so our aviary ambassadors provide a great opportunity for our guests to see this first hand. Guests can take a seat on benches to see the flock dynamics of our many Cedar Waxwings up-close and personal. Some of our other migratory birds, such as our Dark-Eyed Junco and White Crowned Sparrow are quite used to the chilly winters and in the wild would even migrate to Ohio to ride out the colder months. Some of our resident species include Northern cardinal, Carolina chickadee, goldfinch, and Mourning dove.

As you walk along our aviary's boardwalks you will come across the pool and stream where most of our waterfowl spend the majority of their days. Along the edges of the pond, guests can often spot some of our shorebirds running in and out of the tall reeds. This gives guests a great opportunity to see some birds that while native to North America, might not be found in our backyard.



Left: Hooded warbler (Setophaga citrina); Top: American redstart (Setophaga ruticilla); Above: Ovenbird (Seiurus aurocapilla) by Eric Peterson



Western tanager (Piranga ludoviciana) by Eric Peterson

around ten wooden boxes of varying sizes into our aviary. from the weather. The boxes range from 2-4 feet and are complete with and insects from freezing.

One of the challenges of working with migratory keepers when looking for birds inside. birds in the winter is making sure that they are conserving birds to flee in our presence.

an indoor area should they choose. We have a window on safe access to water. the side of our aviary which allows our birds to enter or the fly-

There are several changes that we make in our in opening. This allows us to better control the inside aviary to prepare for Ohio winters. We begin by adding temperature, but still allows our birds to find some relief

Evergreen trees are brought in and placed around perches and fixtures for heat lamps and halogen spot the inside mesh of the aviary. This gives our birds safe lights. We have strategically found the best places to set hideouts insulated from wind and weather to sit and our boxes throughout the aviary based on where our birds conserve energy. We have several birds in our aviary that like to congregate as well as wind direction. The boxes are cannot fly to and roost in the treetops and the fallen covered with a layer of mulch on the bottom to match the evergreens help provide shelter. We also have a bird blind surrounding mulch in our aviary as well as to insulate the from which to view our Bald eagle habitat that we fill with floor of the box and make it easier to clean. The food and 3-4 large evergreens and block off so that the public is mealworm bowls are placed in the boxes to keep the food unable to enter. This blind also has a strip of red halogen bulbs to provide a little extra warmth and visual for

Since we have several waterfowl and shore bird enough energy to keep their bodies functioning. On the species, we must keep our pond functioning during the coldest days we close our aviary to the public to reduce cold winter days. We add a small bubbler to the center of the potential for our birds having to move when they do the pond to keep the water moving and preventing the not need to. This also means that the keepers tend to be pool from freezing over. The bubbler is weighed down more cautious with their movements to avoid causing the with a brick so, it is easy for keepers to move it around if needed, but not easy for our diving ducks to push. Besides Another important part of having a successful our large pond, we also have several heated water bowls migratory aviary in the winter is giving our birds access to that we place around the aviary to allow our other birds

We are proud to highlight these species year leave our inside aviary. During the winter, we add a piece round and educate our guests on what they can do at of plywood with a small cut out that covers a majority of home to make great habitat and help us conserve our migratory bird species!

Training North American Songbirds at Akron Zoo

By Mallory Balmert, Wild Animal Keeper Akron Zoological Park

The Akron Zoo's Grizzly Ridge Aviary is home to 22 species of North American songbirds. Established in 2013, the Mike and Mary Stark Grizzly Ridge area of the zoo highlights North America's native species including grizzly bears, North American river otters, red wolves, and one of AZA's largest North American songbird aviaries. The majority of the birds are rehabilitated and given a second chance at the Akron Zoo.

Traditional management for this aviary has been relatively hands-off, and the birds are largely left to express their natural behaviors for guests walking on the aviary deck. Some difficulties for managing this large habitat include trying to assess each bird's individual health and welfare daily since some individuals are hard to distinguish when multiple individuals of that species are present, or the individual is more secretive. One of the main goals for aviary keepers is to ensure each bird is seen daily and health issues are caught as early as possible. One method the Avian Team has used to increase visibility is to have each bird come to the deck or a keeper's hand for diet items. This ensures each bird is eating and allows keepers to observe physical condition and social dynamics. Another method is having each bird participate in scale training. This gives even more information and allows keepers to monitor weights and trends. Currently, a lot of the management is more desensitization-based than fully trained behaviors, with that being a goal for the future.



Photo: songbirds at Akron Zoological Park demonstrating scale training.



Photo: a Baltimore oriole trained to come to a keeper's hand for visual health checks.

Waxworms are typically used as a high-value reinforcer, and many of the birds are highly motivated by them. After the aviary deck is cleaned and the old food is removed, keepers generally throw a couple of handfuls of waxworms on the deck. To start, when birds would land to eat the worms, the principal keeper whistled in a distinct pattern to get the birds to associate the appearance of the waxworms with the sound. Soon, the birds started flying to the deck in the morning at the appearance of the principal keeper after whistling, though sometimes before, which indicates the keeper's presence was also a visual cue. Some of the birds were so highly motivated by the presence of waxworms that they started flying towards keepers to inspect for worms. These birds typically include 0.3 Northern orioles, 1.0 black-throated green warbler, and 1.0 rose-breasted grosbeak. The keeper opportunistically captured this behavior by holding waxworms out in a flat hand and allowed birds to choose to land on the hand to consume them. Having birds landing on the hand allows the keepers to get a close look at the physical condition of the birds, has implications for possible guest interactions in the future, and builds a relationship between the keeper and the birds that could allow for more trained behaviors in the The majority of birds in the aviary (with the future. exception typically of 4.0 mourning doves) find waxworms to be reinforcing enough to come to the deck more days than not, though higher-value reinforcement may be trialed in order to get more consistent success with more of the birds.

Once the birds were consistently coming to the deck with the whistling cue, keepers started introducing a small kitchen scale with waxworms placed on it and the scale tared. Some of the more outgoing birds landed on the scale right away, and the keeper was able to get weights on individual birds. For others, it took several weeks for them to be comfortable eating around the new item, and longer still for them to eat from the scale. For some birds, this was the first weight taken since they had gotten out of quarantine, so this was a huge success in being able to better monitor their health. Currently, about 20 of the birds regularly participate in the scale training. In order to increase the number of birds participating, keepers plan to use a larger scale for some of the larger birds, such as doves, jays, and robins, to make it more comfortable for them landing on the scale and preventing them from leaning over the scale to steal worms without actually getting on. Keepers also have behavior plans written to start any new birds that come into guarantine on the scale behavior in the guarantine space, so that the behavior is more easily translated into the exhibit once they are put in the aviary.



Songbirds demonstrating the trained "come to deck" behavior. This allows keepers to get a closer look at individuals and is the gateway to training additional behaviors.

There are also plans to set up RFID sensors in the aviary for research and daily monitoring purposes. Most of the birds currently have RFID bands, and the zoo is just waiting on the software to set up existing sensors in the aviary. Keepers have been placing RFID sensors on the deck during feeds in order to desensitize the birds to their presence, which will allow the birds to express their natural behaviors and not be affected by the presence of the RFID sensors once they are placed in the habitat.



Keepers have trained songbirds in a large aviary to come to hand so the birds can be visually assessed.

Ideally, each one of these behaviors: scale, come to the deck, and come to the hand, would be cued, completed by the bird, and then reinforced. The behaviors are primarily completed using baiting techniques currently, but progress is being made toward transitioning the birds to a more formally trained behavior. Future training goals include a station behavior, recall into holding area, and a crate behavior. The introduction of training into the management of this aviary has already increased daily visibility of the birds, improved relationships between the birds and keepers, and allowed for better monitoring of the birds' health. There are many more future possibilities for training in this aviary to continue to allow keepers to improve care and welfare for these birds.



Blackheaded grosbeak (Pheucticus melanocephalus) by Eric Peterson

Navigating Songbird Transfers: Do I need a permit, or can I use an exemption?

By Stacy Hill, Smithsonian National Zoological Park, and Rachél Watkins Rogers, Zoo Miami

Managing native songbirds in captivity is a complex and ever developing system within the bureaucracy of federal migratory bird permits. While there are some clear-cut use cases with rehabilitation, education, and research permits as laid out in the Code of Federal Regulations (CFR), things get murky when birds begin to move between facilities. This complexity is increased when you consider that each managing region gets to exercise significant autonomy in their interpretation of regulations, and some facilities may bring birds in under an exemption to permits. Transferring between permitted and exempt facilities impacts the future management of the birds. Before tackling why you might use a qualifying exemption, who actually is exempt from permit requirements?

Let's review the exemption status pertinent to most facilities as stated in CFR 50, Part 21.12(b)(1): "State game departments, municipal game farms or parks, and public museums, public zoological parks, accredited institutional members of the American Association of Zoological Parks and Aquariums (AAZPA) and public scientific or educational institutions may acquire by gift or purchase, possess, transport, and by gift or sale dispose of lawfully acquired migratory birds or their progeny, parts, nests, or eggs without a permit:"

It is important to note that 'public' in this instance refers to municipal institutions run by local or state government, and not simply a facility that is open to the public. It is possible that under these conditions an institution may qualify for multiple exemptions to permit requirements. Your regional office can supply a formal letter acknowledging the exemptions pertinent to your institution. You can reach out to them for an evaluation. It continues:

"...Provided, That such birds may be acquired only from persons authorized by this paragraph or by a permit issued pursuant to this part to possess and dispose of such birds, or from Federal or State game authorities by the gift of seized, condemned, or sick or injured birds. Any such birds, acquired without a permit, and any progeny therefrom may be disposed of only to persons authorized by this paragraph to acquire such birds without a permit..."

This means that exempt institutions can accept birds collected under permit or from other exempt institutions, but any bird acquired under an exemption cannot be transferred to a non-exempt facility. When

deciding to bring a bird in under an exemption you are limiting its future potential transfers, as well as the activities associated with that bird. However, legally it is a more flexible option for bringing in new species or the offspring of birds collected under permits. For example, depending on the interpretation of your regional office, birds under exemption may not qualify for scientific or research activities that would be regulated under a research permit. Exemptions broadly assume that birds will be maintained for exhibition and education purposes only. While certain species of waterfowl, gamebirds, and raptors may have special propagation permits, there is not an equivalent for captive songbirds under permit or exemption. The regulation states that progeny of birds collected under permit or exemptions may be transported to other exempt institutions, but there are no regulations on how such progeny are managed. No current permit for songbirds explicitly states propagation as an activity, so it is important to clearly work through this with your regional office if this is a goal of maintaining your captive songbirds.

Now that we know who is exempt and a little about the legal reasons for using an exemption, Zoo Miami has provided case studies to help further demonstrate the potential benefits of different transfer scenarios between permitted and exempt facilities. These case studies will explain the paperwork benefits of the different transfer decisions as well as what it means for the birds in the future.



Brown thrasher (Toxostoma rufum) by Eric Peterson

Navigating Songbird Transfers: Do I need a permit, or can I use an exemption?

By Stacy Hill, Smithsonian National Zoological Park, and Rachél Watkins Rogers, Zoo Miami

Species	Transfer From	Transfer To	Attachments Needed?	Explanation
White-crowned pigeon (<i>Columba leucocephala</i>)	Rehabilitation Facility, Federally licensed	Zoo Miami, using exemption (Required state permit for pro- tected species)	Non-releasable wildlife letter by vet, and caging information from Zoo Miami	The licensed rehab facility is required to file MBT form 3-202-12 for the transfer, which authorizes the trans- fer to Zoo Miami along with the ap- propriate state permits for holding protected native species. This bird can ONLY be sent to exempt facilities in the future.
Brown thrasher (<i>Toxostoma rufum</i>)	AZA Zoo, using exemption (held state re- quired permit for zoos)	Zoo Miami, using exemption	Non-releasable wildlife letter by vet, and caging information from Zoo Miami	The bird was transferred between exempt institutions so no MBT form was required, but both institutions must keep accurate records showing the species, number of birds, names & addresses of the parties involved, and the date of transfer. They also must maintain the original vet records showing the bird is "non-releasable". These records must be kept for 5 years. Birds transferred under exemp- tions CANNOT be returned to per- mitted facilities in the future.
Blue jay (<i>Cyanocitta cristata</i>)	AZA Zoo, under special purpose permit, wild caught bird	Zoo Miami, using exemption	Non-releasable wildlife letter by vet, and caging information from Zoo Miami	All migratory birds collected under permit are considered "on loan" and property of USFWS. By completing the transfer to an exempt institution, MBT Form 3-202-12 was filed by the permitted institution. This bird can only be transferred to other exempt institutions in the future.
Common grackle (Quiscalus quiscula)	Rehabilitation facility, under permit	Zoo Miami, using exemption	Non-releasable wildlife letter by vet, and caging information from Zoo Miami	The birds are considered "on loan" and the transfer must be approved. The birds can only be transferred to other exempt institutions in the fu- ture.

Navigating Songbird Transfers: Do I need a permit, or can I use an exemption?

By Stacy Hill, Smithsonian National Zoological Park, and Rachél Watkins Rogers, Zoo Miami

These are just a small selection of many, many scenarios for transfers. It can be a complex process, but by keeping open lines of communication between the transferring institutions and your local regulatory offices, you can save yourself a lot of headaches. To help smooth out your next transfer, start with the following information:

- Check if the zoo or rehab facility is permitted. Reason: Depending on what type of permit will depend on how you can accomplish the transfer.
- If you use an exemption with a non-permitted facility it must be the same type of facility. *Reason: Some exemptions can only transfer to the same type of facility.*
- Get in touch with your regional permitting officer to double-check requirements. *Reason: Regions vary in their interpretation of the MBTA or what they allow in their Region. Each Region has autonomy within the execution of their authorizations.*
- Check with the state to ensure you have what you need to prevent any issues.
 Reason: If a species is protected or regulated in your state you may need another type of authorization or permit.

For further information:

Permitting regulations – review Title 50 Parts <u>10</u>, <u>13</u>, and <u>21.23</u> of the Code of Federal Regulations <u>New permits</u>

Transfer form 3-202-12



Green jay (Cyanocorax yncas) by Eric Peterson

Continuing the Legacy of Bird Conservation

By Sara Hallager, Curator of Birds, Smithsonian National Zoological Park and Conservation Biology Institute

"The time to study birds is while they are still common," said the great conservationist Rosalie Edge nearly 100 years ago. Edge pioneered conserving birds in a time when the practice was not commonplace. Alarmed by the high numbers of migrating hawks killed for sport each year, she founded Hawk Mountain in Pennsylvania as a place of refuge for migrating raptors.

Today, despite many laws in place designed to protect birds native to the United States, they are still in decline. Last year, a scientific study published in the journal Science, reported a cumulative loss of nearly 3 billion birds since 1970 across North America, signaling a pervasive and ongoing crisis.

Now more than ever, raising awareness about the plight of these marvelous migrators is key to their survival. At the Smithsonian's National Zoo and Conservation Biology Institute, we are in the midst of completely transforming our beloved Bird House from its humble foundation (circa 1928) into a celebration of birds and their amazing annual journeys.

Opening in fall 2021, the new Bird House will immerse visitors in the cyclical migrations of shorebirds, waterfowl and songbirds. Three themed aviaries and interactive exhibits will highlight conservation research and seven simple actions that visitors can take to help native species in their own backyard. We hope that each visitor leaves with a passion for migratory birds and a desire to participate in protecting them and their shrinking habitats. I can't wait to welcome visitors to our beautiful new



Bird House and introduce them to the officially declared extinct in 1914. spectacular aviaries and animals within.

Since the Bird House closed to visitors in 2018, our animal keepers, nutritionists and scientists have been working behind the scenes to better understand the husbandry of native songbirds and shorebirds. As some of these species have never been in human care before, we are literally writing the book on what they need to survive, thrive and reproduce. I am proud that the Zoo's bird team is leading the charge and taking a proactive look at studying common species of birds while they are still common.

In less than 100 years, the passenger pigeon population dropped from 3 billion — the most numerous species on the planet — to zero. By the time the last few individuals were brought into zoos to save them, it was too late. No one knew how to take care of this species, and it was

At the Smithsonian's National Zoo and Conservation Biology Institute, we are determined not to let history repeat itself. From our the colleagues at Smithsonian Migratory Bird Center, who research and track birds in the wild, to our Bird House keepers who care for and breed these animals at the Zoo, we are working together to study, understand and protect common birds now before it's too late.

One of the common species we are trying to better understand is the wood thrush — the official bird of Washington, D.C. Currently, around 11 million birds live in the wild, though their populations are declining. Last year, we welcomed two chirping chicks on July 3, 2019. We are fortunate to have had breeding success and cracked the code on wood thrush husbandry now, before numbers reach critical levels.

Continuing the Legacy of Bird Conservation

Continued...

How do we determine what migratory songbirds need in order to thrive in human care?

To some degree, we can apply common husbandry guidelines that we have perfected on non-native songbirds. However, working with migratory songbirds and shorebirds has proven to be different. For instance, birds gain weight during key points in their annual migration cycle. In the wild, this is key to their survival. The extra calories (i.e., energy) enable them to fly thousands of miles to reach their breeding grounds in spring or wintering grounds in fall.

Interestingly, migratory songbirds in human care exhibit the same physiological weight change. This requires a careful approach to feeding them to ensure they don't become overweight. Working closely with the Nutrition Zoo's Department of Sciences, we offer our migratory songbirds food items that replicate what they would be eating at specific times in their annual cycle. In spring and summer, we increase the number of insects we feed. In fall and winter, we offer less insects while increasing fruit. We work to balance out the calories to ensure each bird receives a healthy, nutritionally complete diet.

Just as important as proper nutrition is the environment in which these birds are housed. Our team researches the species' natural ecology and biology in order to provide speciesappropriate enrichment in their enclosures. For example, we provide vertical pieces of bark for black-andwhite warblers to cling to and recreate То streams for wood thrush. encourage breeding, we offer the birds



Previous page: wood thrush (Hylocichla mustelina); Above: prothonotary warbler (Protonotaria citrea) Images courtesy of the Smithsonian Institution

a variety of nesting materials: cotton, raffia, woven grass, hay, twine, mud and even hair sheared from our alpacas at the Kids' Farm! Many birds choose to take advantage of small, man-made baskets and add nesting material to them.

To ensure the birds have the proper light cycle, we use astrological timers to mimic the day length where the birds would be in their annual cycle. Supplemental light bulbs emit UVB and enhance the light spectrum for the birds. To monitor their health, we have a robust husbandry training program that enables us to examine them up close, monitor their weights and look for any signs they may need veterinary attention, including bill and nail trims.

A critical component to our success with migratory songbirds and shorebirds is the collaboration between Smithsonian Migratory Bird Center scientists and our animal care team to better understand wild populations and those under human

care. Behind the scenes in the new Bird House, a dedicated space for propagation will not only provide optimal husbandry conditions and support birds on exhibit, but also the space to try different husbandry management strategies and gain valuable husbandry experience.

All this attention to detail has culminated in the hatching of several species of migratory North American songbirds, including the indigo bunting, scarlet tanager, wood thrush and Baltimore oriole. In April, our efforts were recognized by the Association of Zoos and Aquariums' Avian Scientific Advisory Group when they bestowed the 2019 Plume Award upon the Bird House team in recognition of our expertise and skills to aid in the recovery of threatened and endangered Western Hemisphere migratory bird populations. It was an incredible "feather in our cap!" Rosalie Edge would be proud.

SAFE North American Songbird Program Update

By Sara Hallager, Smithsonian's National Zoo and Conservation Biology Institute and

Mike Kreger, Columbus Zoo and Aquarium, Program Co-Chairs

The goal of Saving Animals From Extinction North American Songbirds (SAFE NAS) is to reduce the threats to North American songbirds and secure sustainable wild populations of these species throughout their ranges. We achieve measurable successes by harnessing the collective strengths of zoos, aquariums, and partners through supporting education and on-the-ground conservation activities on AZA facilities, in the community, and at state, national and provincial levels.

SAFE NAS focuses on three areas of native songbird conservation:

- 1. Reducing bird collisions with glass
- 2. Reducing free-roaming cat impacts on wildlife
- 3. Preserving, enhancing, and building native habitats

It also begins to address:

- 4. Reducing contaminants that affect North American songbirds
- 5. Promoting Bird Friendly coffee
- 6. Promoting and participating in citizen science
- 7. Reducing North American songbird trafficking

Since all zoos and aquariums have native songbirds on property, it's quite likely that you are already doing activities such as Christmas Bird Counts, World Migratory Bird Day, collision prevention, Lights Out programs, educational messaging around songbird conservation (talks, signage, social media), bird banding demonstrations, eBird, Project FeederWatch, Breeding Bird Survey, Motus tracking stations, promoting bird friendly products, leading bird walks, messaging outdoor cats, and more!

Since the SAFE NAS was approved in July 2019, we have grown to include 30 institutional members and advisors from organizations like the American Bird Conservancy and U.S. Fish and Wildlife Service. We have active subcommittees that are addressing the conservation challenges and how we will meet conservation, awareness, and engagement goals. Our three-year action plan has been provisionally approved. And, we now have a social media presence so please follow us on Facebook at North American Songbird SAFE!



We invite all institutions interested in North American songbird conservation to partner with us and work to promote native songbird awareness and conservation across the country! Please contact SAFE NAS Co-chairs Sara Hallager hallagers@si.edu and Dr. Mike Kreger <u>michael.kreger@columbuszoo.org</u> for more information.



Blue-throated black warbler (Setophaga caerulescens) by Eric Peterson

Order: Scientif	fic Name:	Passeriformes Pheucticus luc	lovicianus		Family: Common	Name:	Cardinalidae Rose Breaste	e ed Grosbeak	
AZA Ma	anagement	: 🗌 Green		Yellow		Red		None	
Photo ((Male):				Pho	oto (Fema	le):		
NATUR		(:							
Geogra Range:	phic	Europe Africa		Asia Australia		North An Other	nerica X	Neotropical	Х
Habitat	t:	Forest Riverine	Х	Desert Montane		Grassla Other	and 🗌 Click here to	Coastal o enter text.	
Circadia	an Cycle:	Diurnal	Crepuscula	r 🗆	Nocturnal	🗆 Ot	ther Click l	nere to enter text.	
Cold To	lerance:	To 70° F To 30° F		To 60° F To 20° F		To 50° Other:	F 🗆 Undetermi	To 40° F ined lower limit	
Heat To	olerance:	To 30° F To 110° F		To 50° F Other: Ur	□ ndeterminec	To 70° I upper lin	F 🗆 nit	To 90° F	
Diet:		Frugivore	X C	arnivore		Piscivore	e 🗆	Insectivore	Х
		Nectivore		mnivore		Folivore	e 🗌 Ot	ther (Add Below)	Х
	Captive Di	etary Needs:	Granivore						
Life Exp recorde	Dectancy in ed: 12 yrs 7	the Wild: Oldes mos.	st Males:			Fer	nales:		
Life Exp Reporte	Dectancy in ed: 15 yrs., 2	Captivity: 17 yrs., 24yrs.	Males:	Click her	e to enter te	xt. Fer	males: Clic	k here to enter text	

BREEDING INFORMATION:					
Ago at Soyual Maturity	Malaci One ve	or Fomale			
Age at Sexual Maturity.	iviales. One ye		s. One year		
Courtship Displays:	Male performs str wing movements and wings out and	aight or circling flight with with song. Performs move I sings. Female responds w	tail feathers spread and small ment along perch, tail spread ith chasing		
Nest Site Description:	Off the ground, u	isually in a fork of a sapling			
Clutch Size, Egg Description:	1-5 eggs, pale gree	en to blue, speckled with re	eddish brown or purple		
Incubation Period: 11-14	days	Fledgling Period:	Fledge at 9-12 days		
Parental Care: Mal	e and females both inc	cubate eggs and feed youn	g		
Chick Development: Altr	icial				
CAPTIVE HABITAT INFORMAT	TION:				
Social Structure in the Wild:	Territorial on bree tolerated. Found c groups with consp	eding grounds, although un on winter grounds indepen pecifics. Records of being se	paired individuals may be dently, in pairs and in loose een in mixed flights.		
Social Structure in Captivity:	Loose hierarchy a	mong family group housed	l together.		
Minimum Group Size: 1		Maximum Group	Size: Not yet determined		
Compatible in Mixed Species Exhibits:	s Comme	Easy-going and kee ents: species flocks unles space.	ep to themselves in mixed ss another bird intrudes on their		
Optimal Habitat Size: Not yet determined, but a current family group of 5 birds is comfortable in 12' x 9' x 7' space. They were previously housed in an 8' x 9' x 7' enclosure but are behaviorally calmer in the expanded space.					
Management Challenges:Birds are foliage gleaners but increase their plant material consumption during the winter months (e.g. tree buds, fruit, and seeds). This may result in destruction of fake and natural plants provided as cover in the enclosure. Some captive birds spend time chewing off leaves and small twigs although they do not appear to be eating them. Fresh browse is provided to divert attention away from plastic plants. Whole leafy greens used to encourage foraging habits.Inexperienced parents may have difficulty providing appropriate and adequate care for nestlings. High mortality rate among nestlings potentially linked to digestive impaction from chitinous insects (e.g. mealworms, crickets). Diet adjustments may be necessary to help parents feed appropriate food items.					
ADDITIONAL COMMENTS:					

REFERENCES:

https://www.allaboutbirds.org/guide/Rose-breasted_Grosbeak/lifehistory

https://birdsoftheworld.org/bow/species/robgro/cur/introduction

COMPLETED BY:

Name:	Stacy Hill, Animal Keeper – hillsk@si.edu
	Lori Smith, Animal Keeper – smithlo@si.edu
	Smithsonian National Zoo & Conservation Biology
	Institute

Date: 9/16/20

Order [.]		Passer	iforme				Family		Turdic	lae		
Scientif	fic Name:	Hylocia	chla mu	Istelina			Common	Name:	Wood	l Thrush		
AZA Ma	anagement	:: □	Green			'ellow		Red			None	
Photo (Adult Male	e):			_		Pho	oto (Adul	t Fema	ale):		
NATUR	AL HISTOR	Y:										
Geogra Range:	phic	Euro Afri	ope ica		A	Asia ustralia		North A Other	merica	Х	Neotropical	Х
Habitat	::	Fore River	est rine	Х	l M	Desert ontane		Grass Other	land Click	here to	Coastal enter text.	
Circadia	an Cycle:	Diurnal	Х	Crepus	cular		Nocturnal		ther	Click h	ere to enter text.	
Cold To	lerance:	То 7 То 3	70° F 30° F		ר ר	o 60° F o 20° F		To 50 Other	° F Und	□ letermir	To 40° F ned lower limit	
Heat To	olerance:	То 3 То 1	30° F 10° F		٦ Oth	o 50° F er Ur	□ ndetermine	To 70 d upper l	° F imit		To 90° F	
Diet:		Frugi	vore	Х	Car	nivore		Piscivor	e		Insectivore	Х
		Necti	vore		Om	nivore		Folivor	е	🗆 Otl	ner (Add Below)	
	Captive D	ietary N	eeds:									
	Has been	successf	ully kep	ot on a di	iet of	oasserin	e base mix,	egg mix,	and in	sects. T	he passerine bas	е
mix includes softbill pellets, insectivore pellets, and chopped banana, apples, zucchini, papaya,												
blueberries, and melons. The egg mix includes chopped hard-boiled egg in the shell and scenic pellets.					ets.							
	Insects offered daily include mealworms, waxworms, and crickets. The diet is changed between the					e						
	Insects of	fered da	liy inclu	iuc meai		breeding and non-breeding seasons. Non-breeding diet consists of a higher proportion of base and						-
	Insects of breeding	fered dai and non-	breedi	ng seaso	ns. No	n-breed	ing diet co	nsists of a	highe	r propo	rtion of base and	
	Insects of breeding egg mix a	fered dai and non- nd a low	breedii er prop	ng seaso ortion of	ns. No f insec	n-breed ts. Durir	ling diet con ng the bree	nsists of a ding seas	highe on, the	r propo propor	rtion of base and tion of insects to	
	Insects of breeding egg mix a base and	fered dai and non- nd a low egg mix i	breedii er prop is increa	ng seaso ortion of ased. The	ns. No f insec e Natio	n-breed ts. Durir onal Zoo	ing diet con ng the bree has found	nsists of a ding seas that incre	highe on, the easing	r propor e propor insects	rtion of base and tion of insects to leading into the)
	Insects of breeding egg mix a base and breeding	fered dai and non- nd a low egg mix i season h	breedin er prop is increa as likel	ng seaso ortion of ased. The y contrib	ns. No f insec e Natio uted t	n-breed ts. Durir onal Zoo o breed	ing diet con ng the bree has found ing success	nsists of a ding seas that incre	highe on, the easing	r propor e propor insects	rtion of base and tion of insects to leading into the)

Life Expectancy in the Wild: Old recorded: 8 yrs 11 mos	est Males:		Females:	
Life Expectancy in Captivity:	Males:	Estimated ~15 yrs	Females:	Estimated ~15 yrs
BREEDING INFORMATION:				
Age at Sexual Maturity:	Males: 1 y	r	Females:	1 yr
Courtship Displays:	Round, silent f together	lights, 1-2 meters a	bove ground fol	lowed by perching
Nest Site Description:	In trees or shr	ubs at forked brand	hes, average 2.3	m above ground
Clutch Size, Egg Description:	3-4, turquoise	green without any	marking	
Incubation Period: 11-14 day	c	Eledali	ng Period: 12	2-15 days
	3	Treugh		. 15 0875
Parental Care: Female	only broods, bo	oth female and mal	es feed young	
Chick Development: Altricia				
CAPTIVE HABITAT INFORMATIO	N:			
Social Structure in the Wild:	Males establis territoriality of home range w wintering grou	h territory on bree n wintering ground hile others "wande ınd.	ding grounds. Th s, although some r." Occasionally	ere is likely some individuals establish a found in mixed flocks on
Social Structure in Captivity:	Not vet deter	mined		
Social Structure in captivity.	Not yet deten	linited		
Minimum Group Size: 1		Maxir	num Group Size:	Not yet determined
Compatible in Mixed Species Exhibits:	Con	We hav other p holding should	e successfully ho asserines and Co , but aggression l be closely monito	used wood thrush with lumbiformes in off exhibit petween conspecifics pred.
Optimal Habitat Size: Not yet	determined			
Management Challenges: The Ag ho be Off sep	e National Zoo h gression has bee used adjacent to tween male/fen spring should b parated from ea	nas experienced iss en observed betwe o one another with nale pairs housed t e separated from p ch other before the	ues with aggressi en males housed out a visual barri ogether outside o arents after wea ey reach sexual n	on between conspecifics. In the same enclosure or er separating them and of the breeding season. ning and siblings should be naturity.
ADDITIONAL COMMENTS:				

REFERENCES:

https://birdsoftheworld.org/bow/species/woothr/cur/introduction

COMPLETED BY:

Name:	Rebecca Zurlo and Shelby Burns, Smithsonian	Date:	9/17/20
	National Zoo & Conservation Biology Institute		

Welcoming Newsletter Editors to the Flock

Meet Stacy Johnson, Ashley Saulsberry, and Stacy Hill



Stacy Johnson, Curator *Museum of Science, Boston, MA*

My ornithology professor developed my love of backyard birds in college, birding at every available opportunity and I never really looked back. My career started at a small zoo in Western MA as a keeper in 2003, then moved to Florida to work for Disney as a generalist concentrating on birds until 2013. I became so obsessed with birds that I needed to specialize which is how I landed at Denver Zoo as a bird keeper. I have been in my current role as the Curator of the Live Animal Center at the Museum of Science, Boston since January 2020. My love of birds runs deep which is why I am so excited to be working with the NASWG!



Ashley Saulsberry, Aviculturist Tracy Aviary, Salt Lake City, Utah

While in high school, I represented my school at two Science Olympiad events: protein modelling and ornithology. One of these became a major interest in my life, and I bet you can guess which. Since then, wanting to learn as much I could about birds, I worked in a lab studying avian ectoparasites and on a field project in the Galápagos Islands on some of the islands' endemic landbirds. My additional interests in animal welfare and husbandry led me to zookeeping, and I have been working in Aviculture at Tracy Aviary ever since. Passerines are so important but sometimes overlooked at zoos, so I am excited for this newsletter and to be a part of it.



Stacy Hill, Animal Keeper

Smithsonian's National Zoological Park, Washington, DC

I developed a love for birds at a very young age, watching them at our backyard feeder. Fresh out of college I thought I would use my communication background to become an advocate for birds, but accidentally took a detour into corporate America. I mapped out a course-correction that landed me in graduate school for environmental science and conservation. I've been a part of the Smithsonian family for over 4 years in various roles. I began volunteering with the Smithsonian Conservation Biology Institute bird unit, which helped me form my thesis research project around their flock of endangered red siskins (*Spinus cucullatus*). From there I began a temporary research and education outreach position with the Migratory Bird Center, and as of January 2020 I've found a full-time home with the National Zoo. I am so excited to be working with our native songbirds at such a critical point in their conservation journey.

Core Team, Advisors, and Contact Info

Core Team

Nikki Smith, Columbus Zoo and Aquarium Lori Smith, Smithsonian National Zoological Park Sara Hallager, Smithsonian National Zoological Park Anne Tieber, Saint Louis Zoo Jason Fischer, Disney's Animal Kingdom Shane Good, Akron Zoo Bonnie Van Dam, Detroit Zoological Society Lindsay Jacks, Lights Out Baltimore

Advisors

Matt Igleski, Lincoln Park Zoo Rhana Paris, NC Aquarium on Roanoke Island Brianne Warthman, Columbus Zoo and Aquarium Joe Smith, Fort Wayne's Children's Zoo Kim Cook, Akron Zoo Grant Sizemore, American Bird Conservancy Kelly Vineyard, Columbus Zoo and Aquarium Mike Kreger, Columbus Zoo and Aquarium; The Wilds Chris Sheppard, American Bird Conservancy

Newsletter Team

Kirby Pitchford, National Aquarium Stacy Johnson, Museum of Science Ashley Saulsberry, Tracy Aviary Stacy Hill, Smithsonian National Zoological Park Eric Peterson, Viking Photography

Contact Information

Jason Fischer, Disney's Animal Kingdom Lori Smith, Smithsonian National Zoological Park Shane Good, Akron Zoo Sara Hallager, Smithsonian National Zoological Park Matt Igleski, Lincoln Park Zoo Lindsay Jacks, Lights Out Baltimore Mike Kreger, Columbus Zoo and Aquarium; The Wilds Rhana Paris, NC Aquarium Chris Sheppard, American Bird Conservancy Grant Sizemore, American Bird Conservancy Joe Smith, Ft Wayne's Children's Zoo Nikki Smith, Columbus Zoo and Aquarium Anne Tieber, Saint Louis Zoo Bonnie Van Dam, Detroit Zoo Kelly Vineyard, Columbus Zoo and Aquarium Brianne Warthman, Columbus Zoo and Aquarium

Chair Husbandry Champion Permit Champion International Migratory Bird Day Champion Research Advisor Glass Strike Prevention Champion; Lights Out Champion Glass Strike Prevention Champion Glass Strike Prevention Champion

Education Advisor Education Advisor Education Advisor Veterinary Advisor Veterinary Advisor Cat Advisor Husbandry Advisor Conservation Advisor Glass Collisions Advisor

Chief Editor Co-Editor Co-Editor Co-Editor Photographer

jason.d.fischer@disney.com smitlo@si.edu s.good@akronzoo.org hallagers@si.edu migleski@lpzoo.org lightsoutbaltimore@gmail.com michael.kreger@columbuszoo.org rhana.paris@ncaquariums.com csheppard@abcbirds.org gsizemore@abcbirds.org joe.smith@kidszoo.org nikki.smith@columbuszoo.org tieber@stlzoo.org bvandam@dzs.org kelly.vineyard@columbuszoo.org brianne.warthman@columbuszoo.org

NASWG Newsletter Team and Content

Newsletter Team and Contact Info:

Kirby Pitchford, Chief Editor National Aquarium, Baltimore MD kpitchford@aqua.org

Stacy Johnson, Co-Editor Museum of Science, Boston MA sjohnson@mos.org

Ashley Saulsberry, Co-Editor Tracy Aviary, Salt Lake City UT <u>ashleys@tracyaviary.org</u>

Stacy Hill, Co-Editor Smithsonian National Zoo, Washington DC <u>hillsk@si.edu</u>

Eric Peterson, Photographer Viking Photography vikingphotographyutah@gmail.com



NORTH AMERICAN SONGBIRD WORKING GROUP



Northern cardinal (Cardinalis cardinalis) by Eric Peterson

Our goal is to continue publishing biannual newsletters, issues for both spring and fall to coincide roughly with the celebration of World Migratory Bird Day. If your facility works with native songbirds, is developing husbandry or breeding protocols, or is providing a permanent home for non-releasable native songbirds, we want to hear from you!

> Please email all materials to an editor by April 1 to be included in the Spring 2021 issue.

Submission Tips:

- Articles are recommended to be approximately 750 words.
- Pictures should be included where possible.
- Credit the author and organization/facility name.
- Submit materials in Microsoft Word with pictures either attached to the email or within the word document. Don't worry about formatting, that's our job!
- Provide references if applicable.
- Email one of the editors by the deadline for the edition you wish to be featured in. (April 1 for Spring, September 1 for Fall)