THE SONGBIRD

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

Fall 2023





American redstart (Setophaga ruticilla) by Eric Peterson

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Message from Stacy Hill and Lori Smith, Smithsonian's National Zoo & Conservation Biology Institute **North American Songbird Working Group Co-chairs**

Co-Chair Message

A little delayed, but the newsletter is finally here! It's been an incredibly busy year with a lot of focus on the new USDA avian welfare ruling. While most of the standards seem inline with other accreditation needs, there is an increase in record keeping to satisfy inspections. Documentation on environmental enrichment pairs well with the changes seen for AZA, but more formalized plans are an important component. As we move into this first year, it would be great to share systems that are working for your teams. I've heard from a few folks that they're using monthly calendars to document enrichment offered and then either scanning it into a computer or adding it to a binder for reference. This works great for daily needs, while the more formal planning portion of the requirements can easily be tied into SOPs. Another important note for documentation comes around cleaning protocols. If there is any need to reduce cleaning during breeding season, then you must document the dates of breeding season, the last regular cleaning, and the date expected to resume normal cleaning. Like the enrichment calendars, scanning or taking a photo of a whiteboard outside the affected exhibit space should satisfy this requirement. The main thing is having the documentation ready should it be requested. For any facility already under USDA permits, the compliance date was August 21st. For all new facilities undergoing permitting, compliance begins February 21, 2024. There are a wealth of resources circulating, but the APHIS website has done a good job distilling the information down, including how to prepare for your first inspection. If you have not yet checked it out, I would give it a watch. It is lengthy at 45 minutes, but a transcript is available if you'd prefer to scan through text.

Successful Methods for Neotropical Songbird Quarantine

Jen Ferraro, Animal Keeper, Smithsonian's National Zoo & Conservation Biology Institute

Over the past five years of bringing neotropical migratory songbirds into the collection at the Smithsonian's National Zoo & Conservation Biology Institute, we have learned a great deal about native songbird husbandry. Success starts the moment the bird enters quarantine.

Weight monitoring

Upon arrival into quarantine, birds are weighed and fat scored using the European Science Foundation (ESF) system devised by Kaiser (Kaiser 1993, Bairlein 1995, Redfern & Clark 2001; slightly modified to include a trace score between 0 and 1). Using a simple system, we are able to obtain weights voluntarily as early as 24 hours after entry into quarantine. Each enclosure is fitted with action camera mounts at key locations where a small scale and feeding platform can be placed. Using a small battery powered jewelry scale that is programmed to remain on indefinitely, a food bowl is placed on the scale. When the bird lands on the food bowl to get food, its weight is recorded by the camera. Once the camera battery dies the camera is retrieved and the videos captured are reviewed by the keeper. This technique not only gives keepers the weight of the bird, but also allows us to observe how the bird is moving, feather appearance, and activity in the enclosure as well. This method has been invaluable in transitioning birds to a captive diet and reducing



A yellow-breasted chat participating in a voluntary weight check while in quarantine.

stress. Also, since Bird House keepers utilize this technique for routine weight monitoring once birds are released from quarantine, birds are already familiar with this method of obtaining weights. Fat scores are also assessed at their quarantine exam and upon exiting quarantine to ensure condition is appropriate throughout this period. Combined with weight history and diet consumption records, diets are adjusted to maintain birds' fat scores within the 1-3 range of the scale referenced above. Opportunistic fat scoring once released into the exhibit space allows us to monitor for necessary adjustments.

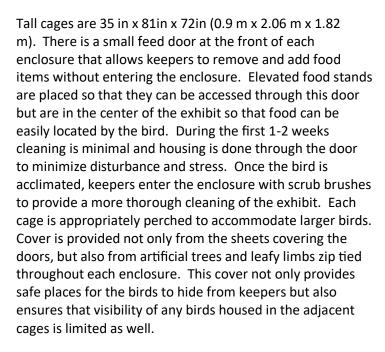
Quarantine Housing

We employ two sizes of holding cages for songbirds: smaller cages suitable for birds like warblers, sparrows, and buntings, and larger cages for species such as tanagers, catbirds, blackbirds, and thrushes. All cages are provisioned with artificial plants to provide birds areas to hide and a variety of perching. During morning cage servicing, sheets are draped over the enclosures to reduce stress and removed after the work is done. This technique was something we learned in 2013 when we cared for a collection of wild caught song sparrows as part of a research study (Smith et al, 2018). Nature sounds are played throughout the day for the first 3 weeks of quarantine. In the final week keepers begin to play talk radio to begin adapting the birds to background noises similar to what they will encounter once they leave quarantine. Three rows of cages 19.5 in x 23in x 19.5 in (49.53cm x 58.42cm x 49.53cm) are available for the smaller birds when they enter quarantine, allowing for 9 birds each season. Each cage is meshed with window screening to prevent injury as the birds adapt to the space. Each cage consists of a removable tray that pulls out for cleaning. This reduces the amount of disturbance needed to clean each cage. In addition to naturalistic food bowls, artificial leaves are added to the bottom of the smaller cages for enrichment and to break up the patterns of the newspaper used at the bottom of each cage. Food is scattered in various bowls and water is provided in a small ceramic crock as well as in large plastic leaf bowls. The large leaf bowl is often used for the birds to bathe as well. Appropriately sized perching is provided.

Successful Methods... (continued)



Small quarantine cages.



Nutrition

Transitioning wild caught songbirds to a captive diet has proven easier than expected, though time is required for them to recognize unfamiliar items (pellets, domesticated



Large quarantine cages.

produce) as food. Providing plenty of insects (mealworms, waxworms, crickets) is key. In addition, birds are given a variety of food items including hardboiled egg, fruit, greens, vegetables, and nutritionally complete pelleted foods suitable for songbirds in a captive setting.

We work closely with our nutritionists to develop strategies to monitor consumption and adjust the diet as needed during the quarantine period. Consumption is monitored by weighing back the uneaten food that was fed out the previous day. This is entered into a spreadsheet daily so that nutritionists can monitor food consumption and adjust the diet accordingly. As quarantine progresses, and birds acclimate to the balanced, zoo diet, high calorie items such as bugs are adjusted to ensure that the birds do not gain too much weight.

Once birds are consuming the zoo diet well, their diet item proportions will align with one of several feeding types assigned based on natural feeding ecology and time of year (breeding vs. nonbreeding season). Further adjustments are made on a caloric basis.

Successful Methods... (continued)



Dish and leaf set-up inside the small cages.

Diet Presentation in Quarantine

How we present the diet is critical. Early on, our primary concern was streamlining the process and creating a safe environment where we could manage clean up and reduce possible disease spread. Therefore, birds were fed in small ceramic crocks that could be easily cleaned and bleached between use. Within the first two years of observing how birds eat and what they eat, it became evident that most species of birds rarely consumed food from these dishes, preferring instead to eat insects that were hand tossed into their enclosure. This made transitioning them to the pelleted zoo diet and fruits challenging. Therefore, we began to look at alternatives to a traditional food bowl and explored more naturally looking food dishes. We now present food items on artificial rocks, leaves, and log



Naturalistic dishes used in songbird quarantine.

shaped bowls. Because these bowls are plastic, we can easily clean and disinfect them after each use maintaining a clean environment. And, because these bowls more closely resembled items these birds were used to foraging through in nature, we noticed that the birds were more likely to investigate, and later consume, the zoo diet sooner than when we were previously using the more traditional ceramic crock. These bowls have become so successful we have continued to use them in the new Bird House where a more natural appearance on exhibit is desired.

Conclusion

We have learned a lot about transitioning wild songbirds into our collection the past five years and have developed new techniques that have increased our success. It has taken many observations, creativity, a willingness to think outside the box, and open communication with all involved to ensure success. Each year brings new challenges and new ideas so that the process is constantly improving.

References

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Wings of the World

Mike Houlihan, Curator of Birds, Audubon Zoo

In March of this year Audubon Zoo was excited to finally open the new Wings of the World exhibit in the old tropical bird house. WoW is a walkthrough aviary containing over 70 individual birds from about 30 different species. Inside this fully immersive exhibit you will find endangered species like the Vietnamese pheasant, Bali mynas, and the Sihek (Guam kingfisher) among many other. You will learn a great deal of the wonders of the bird world as well as some of the troubles they face in the wild, such as invasive cats, window strikes and illegal collection for the pet trade. One exhibit features 10 individual of smaller finch like birds called siskins and redpolls. These were confiscated at the Miami airport as part of an illegal smuggling operation of songbirds.

But the message is not all doom and gloom. The idea behind the graphics to educate guests on the dangers birds face, but ultimately guide them to ways they can help in their own backyards. Information about bird friendly coffee, avoiding birds in the pet trade from unknown sources, and adding decals to windows to prevent window strikes can be found through out the building.

Upon exiting the building guests will enter out pollinator garden filled with native plants designed to attract local species. Shrimp plants, mountain blueberry, and black-eyed Susan plants help to feed local songbirds and migratory species passing through Louisiana.

The hope is to enamor guests with the wonderful world of birds, alert people to the struggles they face, and teach them how to be an active participant in their survival.

Pictured: Examples of conservation signage around the new exhibit and pollinator garden.









Bird House Reopens at Smithsonian's National Zoo and Conservation Biology Institute

Exhibit Celebrates Birds' Annual Migrations and Teaches Visitors How To Live Bird Friendly

The Smithsonian's National Zoo and Conservation Biology Institute (NZCBI) opened its newly renovated Bird House https://nationalzoo.si.edu/animals/exhibits/bird-house-0 on March 13th 2023. The innovative exhibit explores the fascinating world of migratory songbirds, waterfowl and shorebirds native to North, Central and South American ecosystems. Migratory birds play critical roles in pest control, pollination and seed dispersal for trees and plants as well as crops. Bilingual panels—in English and Spanish—tell the story of how migratory birds connect communities and contribute to healthy ecosystems across the Americas.

As Zoo visitors "migrate" through the shores of the Delaware Bay, a lush prairie pothole and a tropical Bird Friendly coffee farm, free-flighted birds stride, paddle, tweet and fly all around them. These multi-sensory, immersive aviaries mimic natural ecosystems—places that are of critical importance to the annual life cycles of migratory birds and that boost human well-being. From this exhibit, visitors can learn seven simple actions to live bird friendly to protect native species in their own backyards.

"Now more than ever, raising awareness about the plight of migratory birds is key to their survival," said Brandie Smith, Ph.D., John and Adrienne Mars Director, NZCBI. "As visitors walk through our spectacular aviaries and see these beautiful birds up close, I want them to appreciate the awe-inspiring journeys these animals make every year and walk away with the desire and knowledge to protect birds and

their shrinking habitats."

More than 170 individual birds representing 56 species are on view in the new Bird House and another 16 species in the surrounding outdoor exhibits on the bird plateau. In the first of three walk-through aviaries, visitors learn about shorebird migration in the Delaware Bay. Along with birds like the red knot and ruddy turnstone, the aviary features horseshoe crabs, fish and invertebrates native to the Delaware Bay.



Shorebirds—including sanderling, dunlin, and short-billed dowitchers—stroll on the beaches of the Delaware Bay aviary.



View of the Delaware Bay aviary upon entering the exhibit.

Bird House Reopens... (continued)



One of the horseshoe crabs and mummichogs in the Delaware Bay exhibit.

Visitors cross into the Prairie Pothole region of the northern Great Plains to view species of waterfowl and shorebirds—including ducks and black-necked stilts—while learning the importance of the wetlands. In the tropical Bird-Friendly Coffee Farm, visitors can see the migratory Baltimore oriole or wood thrush and a resident flock of barred parakeets. As they observe songbirds flitting among the coffee plants, visitors learn how agricultural sites can provide critical habitat for birds and other animals. The outside habitats on the plateau will feature charismatic favorites such as barred owls, standard bronze turkeys, sandhill cranes, whooping cranes and American flamingos, among others. Visitors can get to know the Bird House's animals during daily keeper talks and animal encounters.

"Rather than wait and see what fate holds for migratory birds, our team is proactively studying their husbandry,

nutritional and reproductive needs while they're still common," said Sara Hallager, curator of the Bird House. "Already, our team has had great success breeding several migratory species that breed in the United States, including indigo buntings, rose-breasted grosbeaks, orchard oriole, ovenbird, black and white warbler, Baltimore oriole Swainson's thrush and wood thrush to name a few. As populations decline drastically in the wild, the possibility of bringing them into human care to save their species becomes more real. We can't wait until numbers have dwindled to a few hundred or dozen individuals."

The Bird House closed for renovation Jan. 2, 2017. In keeping with NZCBI's conservation mission, the renovated exhibit was built within the walls of the Zoo's historic 1928 Bird House. More than 80% of the existing masonry walls



Ruddy ducks congregating on the upper pool in prairie pothole.



View of the prairie pothole aviary where guests discover birds of the northern Great Plains.

Bird House Reopens... (continued)

were retained with the intention of reducing the building's carbon footprint. The exhibit was designed to meet the Leadership in Energy and Environmental Design (LEED) Gold standards. LEED certification will take place about six months after the exhibit opens. The building's glass contains a ceramic frit pattern of horizontal lines, making it more visible to birds in an effort to prevent window collisions. The public opening of the Bird House March 13 marked the completion of this six-year, \$69 million project.

"To fully appreciate the brand new Bird House experience, visitors should grab their binoculars, take a moment to observe our birds and reflect on the wonderous cycle of bird migration," said Scott Sillett, head of NZCBI's Migratory Bird Center.

"When we spend a relaxing day at the beach, or enjoy food and coffee that was grown on a farm, we are benefiting from the same ecosystems on which birds live and depend. I hope visitors come away with an understanding of how our actions can impact wildlife and why the decision to live bird friendly is critical to our own future and wellbeing."

The Smithsonian Migratory Bird Center is the only scientific institution solely dedicated to studying migratory birds. Its scientists study what drives bird population size and how conservationists can use these insights to stop population

declines. They are at the forefront of ornithological research, innovating holistic approaches and testing the latest tracking technologies to answer complex questions about seasonal interactions, land management and behavior.

As visitors approach the Bird House, they are greeted by the Plateau Gardens, a green space abundant with native trees, bushes and flowers. The promenade serves as a model for planting bird-friendly gardens, which offer food and shelter for birds, insects and other local wildlife. Native plant species at the Plateau Gardens include downy serviceberry trees, eastern redbud trees, red-twig dogwood trees, highbush blueberry bushes and purple coneflowers, among others.







Wood thrush, Baltimore orioles, and black-and-white warblers are among the residents of the new coffee farm aviary.



View from the mezzanine inside the coffee farm aviary.

Bird House Reopens... (continued)



The bird house entrance was inspired by the slate gray and rusty brown plumage of sandhill cranes, which are on exhibit outside.

Upon entering the Bird House, visitors observe a towering mosaic arch decorated with parrots, toucans, songbirds and other tropical species. This artwork was originally part of the 1928 front entrance to the Bird House. Designed and fabricated by local artisan John Joseph Earley, the arch is made of polychrome concrete imbedded with glass and colored marbles. Using the same methods and materials, Earley designed and fabricated the historic pillar head (capital) that is on exhibit in the Plateau Gardens. This colorful capital—which was buried on Bird House grounds and uncovered during excavation—once flanked the Bird House's entryway.

In the Bird Observatory room, visitors can watch Migratory Bird Center science in action and see how researchers use satellite tracking to learn where birds go and how the climate, native and introduced predators, and availability of insect prey cause bird populations to grow and decline. These studies teach scientists how human development changes ecosystems over time and affects birds' ability to survive and thrive in their native habitats. In the Observatory, Migratory Bird Center researchers demonstrate how they use bird banding to study the wild birds that live around the Zoo.

As visitors make their way to the aviaries, they pass through the Flyway—an immersive experience where aluminum bird silhouettes are suspended from the ceiling in a murmuration formation, providing a sense of movement throughout the space. The walls of the Flyway feature largerthan-life stunning images of some of the birds visitors will meet in the aviaries, including the wood thrush, black-necked stilt, sanderling, canvasback and other native birds.

Upon exiting the aviaries, visitors can flock to the Roost store for commemorative bird-themed merchandise. The Roost offers a variety of souvenirs, from traditional toys, apparel, books and jewelry to items for living a bird-friendly

life—including Bird Friendly coffee and cocoa, bird houses and feeders, binoculars, window decals and more.



The historic arch of the bird house uncovered during construction.

Riverbanks Zoo & Garden Switches to All Bird Friendly Coffee

Hunter Balog, Conservation Project Manager, Riverbanks Zoo & Garden

Riverbanks Zoo & Garden, in partnership with SSA Group, first started offering Birds & Beans coffee in our gift shop following Migratory Bird Day in October 2022. We've been working to make the switch to Bird Friendly Coffee in our concessions areas and catered events to Bird Friendly Coffee. Our SSA general manager worked hard to identify the right roaster for our organization, and he delivered on his promise in April! Riverbanks is now proudly offering coffee from Ampersand Coffee Roasters, a company based out of Boulder, Colorado that strives to empower people through coffee. By modeling this simple conservation action, we hope that our guests will feel empowered to make decisions that benefit songbirds, people, other wildlife and their habitats.



Picture courtesy of Lake Murray Country website





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Rose-breasted grosbeak (*Pheucticus Iudovicianus*) 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 the editor by May 15 or

October 15 to be included in the next 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.