

# THE SONGBIRD

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

Fall 2022



Common Redpoll (*Acanthis flammea*) by Eric Peterson

## IN THIS ISSUE

Meet Mimi, A Mockingbird with a Big Personality	2
Solving Passerine Molt Problems by Manipulating Photoperiod	5
Yellow-Breasted Chat Fact Sheet	8
NASWG Team and Contact Info	12

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

As we head into the end of 2022, I'm sure we all are still processing the latest [State of the Birds report](#). Perhaps unsurprising to those already working with species of concern, the losses across nearly every major landscape are devastating. Several songbirds are among the 70 Tipping Point species that could lose another 50% or more of their population in the next 50 years. Notable inclusions in that list are Baird's sparrow, Canada warbler, cerulean warbler, Grace's warbler, mourning warbler, olive-sided flycatcher, wood thrush, Bachman's sparrow, Bendire's thrasher, Bicknell's thrush, black-chinned sparrow, black rosy-finch, bobolink, brown-capped rosy-finch, Cassia crossbill, evening grosbeak, golden-winged warbler, Harris's sparrow, Henslow's sparrow, LeConte's sparrow, LeConte's thrasher, pinyon jay, prairie warbler, saltmarsh sparrow, seaside sparrow, tricolored blackbird, and yellow-billed magpie. Despite these morbid predictions, there is notable hope. The report highlights the incredible rebound of waterfowl which have seen powerful funding and policy investments. The effects of these oversights extend well past the population growth of beloved species, but promote the protection and restoration of natural resources. These protections can encourage climate resiliency and improve community health. I encourage you to spend some time with the report and consider whether there is information you might be able to integrate with current messaging at your institutions.

# Meet Mimi, A Little Mockingbird with a Big Personality

Interview with: Shelby Burns, Bird House Keeper; Interviewed by: Janelle Dun, Media Relations Intern

Smithsonian National Zoo and Conservation Biology Institute

*Did you know mockingbirds can mimic up to 200 calls, from another songbird species' melodious tweet to a car's alarm? Meet Mimi, a 1.5-year-old female mockingbird and animal ambassador in training! Hear more about Mimi's amazing abilities, personality quirks and training triumphs in this Q+A with Bird House keeper Shelby Burns. This interview was conducted by media relations intern Janelle Dunn.*



*Northern mockingbird Mimi*

## How did Mimi come to live at the Zoo?

When Mimi was a young chick, she fell out of her parents' nest. A person spotted Mimi and scooped her up. Since this individual was not trained to care for wildlife and did not know what to feed her, they brought her to Florida Wildlife Hospital in Melbourne, Florida.

Rehabilitation centers often care for animals until they are healthy enough to be released in the wild. However, some animals become very dependent on humans or are drawn to people for food or shelter. Mimi was more interested in interacting with rehabilitation staff than other birds—so much so that she often sat on their shoulders.

Because Mimi had imprinted (social bonded) on humans, it was clear that she would not fare well if released into the wild. When we took her under our wing about a year ago, we found her interest in interacting with us so endearing and knew she would make a wonderful ambassador for her species. A fun fact about Mimi is that her name was inspired by her species' family name—*Mimidae!*

## What is Mimi's personality like?

When Mimi first arrived at the Zoo, she was shy around us. Now, she perceives us as being part of her flock. Whenever we enter the room, she enthusiastically greets us by hopping around her enclosure. She can be a bit of a diva if you do not greet her and match her enthusiasm and will make her displeasure known by vocalizing and climbing the enclosure mesh to greet you!

Normally, Mimi is very sweet, but she can be particular about her diet. Her favorite food is waxworms, and when we offer those to her, she snatches them from our fingertips. If we try to feed her seeds, fruits or vegetables—anything that she perceives to be less desirable—she will hang back until we offer her what she *really wants*: *waxworms*.

## Does she have a favorite enrichment item or toy?

In general, songbirds tend to be neophobic, or wary of new things in their environment. However, Mimi is not! She is very curious and eager to explore her enrichment and will often do a “wing-flash” display, where she repeatedly raises and lowers her wings.

Foraging for bugs is one of Mimi's favorite activities. To make it a fun challenge, we hide the bugs in a box filled with shredded paper. When we arrive at work the next morning, there is paper everywhere as if she had been playing with it all night. Another version of this foraging exercise involves a wooden puzzle box. We hide mealworms and waxworms in the drawers, and she has to pull the string and manipulate the boxes to get the treats inside. She figured that one out quickly, but she still enjoys it!

## Do you plan to breed Mimi?

Because Mimi is imprinted, she probably would not be a good candidate for breeding and we have no plans to do so. That said, we provide her with nesting materials so she has an opportunity to exhibit her natural behaviors. She receives pine needles, leaves and shredded newspaper, which seems to be her favorite.

## Meet Mimi (continued)



*Northern mockingbird Mimi with enrichment*

We also provided nest cups that are designed to resemble the ones this species creates in the wild, but she chose not to use them. Instead, she built a little nest out of a few sticks. It did not have a nest shape, but she worked very hard at it.

Mimi is housed alone, so although she did lay a few eggs, they were all infertile. Unfortunately, her natural mothering instincts just aren't there. She would rather interact with me than incubate her eggs.

### **What has been your favorite moment working with Mimi?**

Mimi's progress with training has come a long way since she arrived at the Zoo. It has been so rewarding to earn her trust and see her personality shine. Because Mimi is accustomed to spending time with people, it gives me the unique opportunity to train her outside her enclosure.

One of the behaviors that we train is called a "recall." That is when Mimi flies out of her enclosure and lands in my hand. That is a work in progress, mostly because she has so much fun exploring the room.

Earlier this summer, Mimi would sit on our shoulder, or on an object, as we brought her back to the enclosure. Now,

she has progressed in her training. She flies back to the enclosure on her own time after she is done exploring.

It's not quite on a cue, but she is enjoying her time exploring and is motivated to come back to her enclosure without persuasion. This is a good sign that she is getting enough mental stimulation in her enclosure as well as outside playtime.

### **What do you hope visitors learn from Mimi?**

Walking through our Delaware Bay, Prairie Pothole and Bird Friendly Coffee Farm aviaries, local visitors might recognize some familiar faces. Many of the songbirds, shorebirds and waterfowl in the Zoo's collection also live in our neighborhoods!

Normally, we can only observe these birds from a distance. These immersive habitats allow visitors to see all our animal ambassadors up close. I hope they take a moment to appreciate their beauty and, ultimately, walk away with a deeper connection to the birds in their own backyard.

As Mimi's recall training progresses, we hope to introduce her to visitors during special animal encounter demonstrations!

# Meet Mimi (continued)

---

## **I want to help mockingbirds! What can I do?**

Migratory birds, as a whole, need our help. Since 1970, North America has seen a cumulative loss of 3 billion birds. Mockingbirds, which are native to North America, are considered a species of least concern by the International Union of Conservation of Nature.

Although their populations are stable at the moment, they can still use our help to survive and thrive in the wild. There are seven simple actions we can all take to live bird-friendly; but I'd like to highlight two of them.

First, songbirds play a critical role in our ecosystem as pollinators; they help bring about the flowers, fruits and vegetables that we enjoy—including coffee and cocoa. You can help birds by creating a welcoming environment for them. To get started, find out which plants are (and are not) native to your area. Your local Native Plant Society is a great resource for pollinator-friendly plants. Bird feeders and baths, too, can attract animals to your yard; however, it is important to clean them often—at least once every two weeks—to avoid fostering the spread of diseases.

Second, if you have a pet cat, keep it indoors. Free roaming domestic cats are one of the biggest threats to mockingbirds and other songbird species, since they are not equipped to fight, and their natural defense is to try to hide.

I can't wait for visitors to see our beautiful new Bird House when it reopens in early 2023 and meet Mimi, our mockingbird ambassador! In the meantime, I hope you'll explore more ways to help birds in your own backyard by checking out these tips from our Migratory Bird Center on how to create a bird-friendly home.

*This story appears in the September 2022 issue of National Zoo News.*

# Solving Passerine Molt Problems by Manipulating Photoperiod

Rebecca Zurlo, Shelby Burns, Animal Keepers, Smithsonian's National Zoo and Conservation Biology Institute

Katharine Hope, DVM, Dipl. ACZM Veterinary Medical Officer, Smithsonian's National Zoo and Conservation Biology Institute

Erin Kendrick, Clinical Nutritionist, Smithsonian's National Zoo and Conservation Biology Institute

The Smithsonian's National Zoo and Conservation Biology Institute (NZCBI) is undergoing a major renovation of its Bird House with three new aviaries that will tell the stories of North American migratory birds. Many of the birds that will be featured in these new aviaries have never been kept in human care, which presents new husbandry challenges. One of these species is the orchard oriole (*Icterus spurius*), a small icterid songbird that breeds in the eastern United States and winters in Central America and northern South America. This species was chosen because they spend their winters on shade-grown coffee farms in Central America, the theme of one of the three walk-through aviaries.

In June of 2017, 3.0 wild caught orchard orioles were brought into NZCBI's collection after a 30-day quarantine period. They were placed in temporary holding cages measuring approximately 8' X 5' X 9' and housed separately. They were fed a diet consisting of Mazuri softbill and insectivore pellets, chopped fruits and veggies, crushed hard-boiled egg with shell, Marion Zoological All-preem parakeet pellets, insects (gut-loaded crickets and mealworms, waxworms), and Nekton Nektar-Plus. Their cages provided no natural light and they were kept on a photoperiod changed weekly to mimic the natural light

cycle of the Washington, DC region. The temperature in the building was kept between 68 to 78 degrees Fahrenheit.

In June of 2018, two of the birds were noted to be molting, which is earlier than would be expected in this species which typically has a complete molt between August and April (Sharf & Kren, 2020). In the subsequent months, the birds continued to lose feathers and began taking on a patchy appearance. The quality of the remaining feathers was also diminished (Figure 1). NZCBI keepers, veterinarians, and clinical nutritionist put their heads together to develop solutions to this problem.

Zoo veterinarians examined the birds but no physical abnormalities were found except for increased body condition and feather loss. The birds were treated with ivermectin orally in case there were undetected feather mites. The holding cages the birds were living in provided little to no natural light, so we placed UVB bulbs above their enclosures to simulate natural light in the hopes that this would trigger a complete feather molt. UVB bulbs were typically on during working hours, up to 9 hours. We began misting the birds daily to increase the humidity of their enclosures and allow the birds to bathe and preen their feathers. The nutritionist began adjusting their diet to address possible nutritional deficiencies including increasing the pellets and decreasing fruit in their diet, decreasing the amount of nectar offered, and decreasing the amount of food overall to address over-conditioning. The nutritional supplement Nekton-MSA was added to their diet, then replaced with Nekton-Bio after three months when no improvement was seen.

More than six months after the feather problems were first reported, there had been no improvement to their condition despite medical, environmental, and nutritional treatments. We began to look more seriously at altering the photoperiod to induce molt. Most temperate breeding songbirds undergo a complete molt in the fall after breeding (prealternate molt) and a partial molt in the spring (prebasic molt). The annual cycle of photoperiod is an important factor in ensuring that these seasonal events such as molt and breeding occur at the correct time (Dawson et al., 2001). Scientists studying this relationship



Male orchard oriole with aberrant molt.

# Solving Passerine Molt Problems...(continued)

have been able to artificially induce these seasonal events experimentally by manipulating photoperiod even as early as the 1930s and 40s (Leshner & Kendeigh, 1941). Additionally, thyroid (T4) increases during decreased photoperiods, and T4 is responsible for molting and feather regeneration (Schmidt and Reavill, 2008). Therefore, if we could place these birds on a reduced light cycle, it might induce a complete molt.

The birds were moved to a room by themselves where the light timer could be controlled and were given a few days to settle in. Once acclimated, timers were set to 8 hours of light, and 16 hours of darkness (6:30 AM - 2:30 PM). Within three weeks, one oriole had begun to molt and the other was growing in body feathers. Within one month, both birds looked remarkably better and had grown a substantial amount of feathers back. The birds were left on an 8-hour light cycle until all feathers had regrown, about 2.5 months. Once fully feathered, the light cycle was increased by 30 minutes per week until it matched the photoperiod of the rest of the songbird collection and they were returned to their original exhibit.

Since then, photoperiod manipulation has successfully induced a complete molt in three more orchard orioles and one scarlet tanager. All of these birds had similar molting issues, typically resulting in bald heads, necks, and a patchy abdomen that would not grow back in a natural amount of time. For each subsequent bird placed on this protocol, the duration from beginning the 8-hour light cycle to completion of molt was about one month. In each case the regrown feathers were healthy and of normal quality. We also found that after molt was completed we could return the birds to a normal photoperiod faster by adding one hour to their light cycle every four days without ill effects (see appendix 1). This protocol has helped us return birds with poor feather quality to a healthy, fully-feathered state. The cause of these poor molts occurring remains unknown, but we are monitoring and continuing research on this phenomenon as it occurs. We are learning more and more each day regarding best practices of husbandry of North American songbirds and hope to share this information with other institutions who may be interested in exhibiting these species.

## Special Acknowledgements:

We would like to thank all of the keepers, veterinarians, and nutrition staff that collaborated with us on this project. This success would not be possible without our dedicated



Female orchard oriole feather condition before (top photos) and after (bottom photos) light therapy.

Bird House passerine keepers, our assistant curator Eric Slovak, and our curator Sara Hallager.

## Sources:

Dawson, A., King, V. M., Bentley, G. E., & Ball, G. F. (2001). Photoperiodic Control of Seasonality in Birds. *Journal of Biological Rhythms*, 16(4), 365–380. <https://doi.org/10.1177/074873001129002079>

Leshner, S. W., & Kendeigh, S. C. (1941). Effect of Photoperiod on Molting of Feathers. *The Wilson Bulletin*, 53 (3), 169–180. <http://www.jstor.org/stable/4157041>

Scharf, W. C. and J. Kren (2020). Orchard Oriole (*Icterus spurius*), version 1.0. In *Birds of the World* (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bow.orcori.01>

Schmidt, RE, and Reavill, DR. (2008). *The Avian Thyroid Gland. Veterinary Clinics of North America: Exotic Animal Practice*; (11):1; 15-23.

# Solving Passerine Molt Problems...(continued)

## Appendix 1:

<b>Birds:</b>	<b>Experiment began:</b>	<b>Molt initiated:</b>	<b>Molt completed:</b>	<b>Returned to normal photoperiod:</b>
2.0 Orchard oriole	22 Jan 2019	14 Feb 2019	4 Apr 2019	2 May 2019
0.1 Orchard oriole	24 Nov 2020	4 Dec 2020	31 Dec 2020	16 Jan 2021
1.1 Orchard oriole	23 Jan 2021	19 Feb 2021	25 Feb 2021	12 Mar 2021
1.0 Scarlet tanager	23 Jul 2021	8 Aug 2021	28 Aug 2021	9 Sep 2021

*Table 1: Notable dates from each photoperiod manipulation.*

# Species Fact Sheets

**Order:** Passeriformes  
**Scientific Name:** Icteria virens

**Family:** Icteridae  
**Common Name:** Yellow-breasted Chat

**AZA Management:**  Green  Yellow  Red  None

**Photo (Adult): ON LEFT**



**Photo (Adult): ON RIGHT**



## NATURAL HISTORY:

**Geographic Range:** Europe  Asia  North America  Neotropical   
 Africa  Australia  Other

**Habitat:** Forest  Desert  Grassland  Coastal   
 Riverine  Montane  Other: Areas of dense shrubbery

**Circadian Cycle:** Diurnal  Crepuscular  Nocturnal  Other [Click here to enter text.](#)

**Cold Tolerance:** To 70° F  To 60° F  To 50° F  To 40° F   
 To 30° F  To 20° F  Other [Click here to enter text.](#)

**Heat Tolerance:** To 30° F  To 50° F  To 70° F  To 90° F   
 To 110° F  Other

**Diet:** Frugivore  Carnivore  Piscivore  Insectivore   
 Nectivore  Omnivore  Folivore  Other (Add Below)

### Captive Dietary Needs:

Has been successfully kept on a diet of passerine base mix, egg mix, and insects. The passerine base mix includes Mazuri softbill diet, Mazuri insectivore diet, and chopped banana, apples, zucchini, papaya, blueberries, and melons. The egg mix includes chopped hard-boiled egg in the shell and Marion Zoological All-preem parakeet pellets. Insects offered daily include gut-loaded mealworms, waxworms, and gut-loaded crickets. All insects are dusted with a calcium carbonate powder in the winter and calcium + D3 powder in the summer. Birds without access to natural sunlight may benefit from calcium+D3 yearround. The diet is changed between the breeding and non-breeding seasons. Non-breeding diet consists of a higher proportion of base and egg mix and a lower proportion of insects. During the breeding season, the proportion of insects to base and egg mix is increased.



## Species Fact Sheets

**Life Expectancy in the Wild:** estimated 5-8 years      Males: Undetermined      Females: Oldest recorded 11 years 11 months

**Life Expectancy in Captivity:**      Males: Undetermined      Females: Undetermined

### BREEDING INFORMATION:

**Age at Sexual Maturity:**      Males: 1 year      Females: 1 year

**Courtship Displays:**      Pair bonds form on the breeding grounds shortly after females arrive. There are 2 potential courtship displays described and confirmed in captivity. The first is a display flight where the male will descend from a high perch with exaggerated wing beats, sometimes singing. This display has been noted in courtship, but also as a threat/warning display against intruders (bird or human). The other display of note involves the male ducking or swinging his head to the side while displaying his yellow throat and sometimes singing towards the female. We observed this behavior from the male towards the female at Smithsonian's National Zoo & Conservation Biology Institute several times before nesting began. Pair bonding and nest building can take 13-24 days, with nest building comprising about 2-4 days.

**Nest Site Description:**      Found in low, dense vegetation, 1-8 feet off of the ground in riparian & upland habitats. Nests are a bulky cup made of grasses, leaves, strips of bark, and stems of weeds. They are lined with finer grasses, wiry plant stems, pine needles, and sometimes roots or hair.

**Clutch Size, Egg Description:**      3-5 eggs, white or creamy-white color with reddish brown, chestnut red, brown, and paler gray/purple speckling.

**Incubation Period:** 10-12 days

**Fledgling Period:** 7-10 days

**Parental Care:**      Only the female incubates and broods, with incubation onset on the penultimate or ultimate egg. Male will bring her food and guard the nest. Both sexes provision young and continue feeding fledglings up to 10 days post-departure. Fledglings expected to disperse from their home range in about 3 weeks.

**Chick Development:**      Altricial, born naked with no down

### CAPTIVE HABITAT INFORMATION:

**Social Structure in the Wild:**      *Breeding:* Males actively defend nesting territories, with mean territory size decreasing as more males move into a region. Dense populations may be independent of habitat quality, indicating potential loose colonial structure among breeding pairs. Currently unconfirmed by additional studies. Denser populations cause greater conflict between males, with increased extra-territorial forays. Both sexes appear to move extensively at night, with forays into neighboring territories and non-breeding habitats before returning to their home territory. Males more frequently foray at night. While females

## Species Fact Sheets

are less frequently off the home territory, they may make longer individual trips. Juveniles will disperse from natal grounds and exist in loose groups until migration.

*Wintering:* Both sexes defend separate territories and do not join mixed-species flocks for foraging. This is supported by a captive report which saw the submissive partner in a pair held over winter in the same enclosure become starved because they could not get to the available food source.

**Social Structure in Captivity:** A report from 1946 suggests that pairs should be separated after breeding season by October to avoid resource guarding. The dominant bird may keep the other from food causing it to starve. This issue was not seen among 2-3 birds kept in large aviaries, but specifically off-exhibit holding for breeding. The family group of 2 adults and 3 juveniles kept in holding at Smithsonian's National Zoo and Conservation Biology Institute did well together into September. Parents were pre-emptively separated, and juveniles needed to be separated as they began chasing each other by the end of September, supporting the previous findings.

**Minimum Group Size:** 1

**Maximum Group Size:** Undetermined, but space dependent

**Compatible in Mixed Species Exhibits:** Yes      **Comments:** Prefer to keep to themselves, not a flocking species

**Optimal Habitat Size:** Undetermined, although breeding occurred in off-exhibit holding about 8' x 7' x 9'.

**Management Challenges:** Chats are very shy birds and can be sensitive to disturbance if not provided the space and cover necessary for them to feel secure. Habitats should be dense and scrubby, particularly for breeding pairs. Smithsonian's National Zoo and Conservation Biology Institute found it necessary to block off the area around the breeding enclosure because the female chose to build in a tree near the walkway. Keepers serviced the enclosure only twice per day to feed, and clean. Nest checks were not attempted until late in incubation when eggs were expected to hatch, and only when the female was not present. Birds did seem to grow more comfortable with keeper interactions over the course of the summer.

### ADDITIONAL COMMENTS:

The first recorded hatch of the Eastern sub-species occurred at Smithsonian's National Zoo and Conservation Biology institute during Summer 2022. The last recorded breeding of a chat (Western sub-species) in captivity was from a private aviculturist in the 1940's. Eric Campbell Kinsey had excellent behavioral notes but sparse details on enclosure size, exact diet composition/amounts, etc... Chats are a unique species skirting the boundaries of several different bird families. There is much to refine still in regards to their breeding protocols, although NZCBI saw success with the initial set-up. Questions remain around proportion of fruits to insects for breeding diets, possible increases in vitamin/mineral supplements for breeding, temperature/humidity

## Species Fact Sheets

---

sensitivity for nesting, and appropriate prophylactic treatment of parents and/or juveniles for possible toxoplasmosis transmission from wild caught parents.

### REFERENCES:

*All About Birds: Yellow-breasted Chat* [https://www.allaboutbirds.org/guide/Yellow-breasted\\_Chat/lifehistory](https://www.allaboutbirds.org/guide/Yellow-breasted_Chat/lifehistory)

*Birds of the World: Yellow-breasted Chat* <https://birdsoftheworld.org/bow/species/yebcha/cur/introduction>

Kinsey, Eric Campbell. Nesting of the Yellow-breasted Chat in Captivity. *Aviculture*. September-October-November-December, 1946. Pages 44-54.

### COMPLETED BY:

Name: Stacy Hill, Animal Keeper  
Smithsonian's National Zoo and Conservation  
Biology Institute

Date: November 25, 2022

# North American Songbird Working Group Team

## Core Team, Advisors, and Contact Info

### Core Team

Stacy Hill, Smithsonian's National Zoo & Conservation Biology Institute  
Lori Smith, Smithsonian's National Zoo & Conservation Biology Institute  
Sara Hallager, Smithsonian's National Zoo & Conservation Biology Institute  
Anne Tieber, Saint Louis Zoo  
Shane Good, Akron Zoo

Bonnie Van Dam, Detroit Zoological Society  
Lindsay Jacks, Lights Out Baltimore

Co-Chair  
Co-Chair  
Permit Champion  
International Migratory Bird Day Champion  
Glass Strike Prevention Champion;  
Lights Out Champion  
Glass Strike Prevention Champion  
Glass Strike Prevention Champion

### Advisors

Matt Igleski, Lincoln Park Zoo  
Rhana Paris, NC Aquarium on Roanoke Island  
Joe Smith, Columbus Zoo & Aquarium; The Wilds  
Kim Cook, Akron Zoo  
Grant Sizemore, American Bird Conservancy  
Nikki Smith, Columbus Zoo and Aquarium  
Kelly Vineyard, Columbus Zoo and Aquarium  
Mike Kreger, Columbus Zoo and Aquarium; The Wilds  
Chris Sheppard, American Bird Conservancy

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

### Newsletter Team

Stacy Hill, Smithsonian's National Zoo & Conservation Biology Institute  
Stacy Johnson, Museum of Science  
Eric Peterson, Viking Photography

Chief Editor  
Co-Editor  
Photographer

### Contact Information

Stacy Hill, Smithsonian's National Zoo & Conservation Biology Institute  
Lori Smith, Smithsonian's National Zoo & Conservation Biology Institute  
Shane Good, Akron Zoo  
Sara Hallager, Smithsonian's National Zoo & Conservation Biology Institute  
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, Columbus Zoo and Aquarium; The Wilds  
Nikki Smith, Columbus Zoo and Aquarium  
Anne Tieber, Saint Louis Zoo  
Bonnie Van Dam, Detroit Zoo  
Kelly Vineyard, Columbus Zoo and Aquarium

hillsk@si.edu  
smithlo@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  
jsmith@thewilds.org  
nikki.smith@columbuszoo.org  
tieber@stlzoo.org  
bvandam@dzs.org  
kelly.vineyard@columbuszoo.org

# NASWG Newsletter Team and Content

## Newsletter Team and Contact Info:

*Stacy Hill, Chief Editor*

Smithsonian National Zoo, Washington DC  
[hillsk@si.edu](mailto:hillsk@si.edu)

*Stacy Johnson, Co-Editor*

Museum of Science, Boston MA  
[sjohnson@mos.org](mailto:sjohnson@mos.org)

*Eric Peterson, Photographer*

Viking Photography  
[vikingphotographyutah@gmail.com](mailto:vikingphotographyutah@gmail.com)



Ovenbird (*Seiurus aurocapilla*) 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 May 1 or October 1 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.

