Building Future Conservation Leaders

BY MICHELLE WIEGAND

Summer is approaching, but that does not mean we will be taking a break. In fact, we are ramping up for another exciting summer building future environmental stewards and community leaders! Of course, our programs include all the summertime essentials: summer camp, getting dirty outside, bug spray, camp songs, campfire cooking, and more! While our summer programs provide all those fun summer essentials, our goal is to address individual, community, and environmental challenges while empowering future environmental leaders.

We launch our third year of the Flight Crew jobs program this summer. Through Flight Crew, nine north county teens will receive seven weeks of paid hands-on work experience, training, and networking opportunities in the environmental conservation field. We recruit Flight Crew members from our RiverVision Leadership Project, a school-year program we have operated since 2010 with thirteen schools, including all three Ferguson-Florissant School District high schools, Normandy School District, Hazelwood Central, and Hazelwood East.

As Flight Crew members gain a stronger grasp of the environmental challenges and a deeper connection to nature, they are poised to become leaders who care about and protect our environment. With a focus on equity, diversity, and inclusion, we are working toward a more effective workforce in the environmental fields. We believe the ecosystems we all need benefit most when people from diverse backgrounds work to solve our most challenging environmental problems and all communities are considered.

During the first half of the summer, Flight Crew members learn about major topics and local issues related to environmental conservation. Teens also participate in work projects and receive training on facilitating outdoor education programs, mentoring youth, and first aid/CPR training during this time.

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We have yet to idle during COVID. Moreover, the creativity, flexibility, and hard work, which have been part of our DNA long before the pandemic, have allowed us to build towards an even more promising future for the Center while working to make the St. Louis Region an even better place for birds and people to live.

Splashed throughout this newsletter are examples of this resiliency that our supporters have come to expect. It will continue to shape our work in the months and years ahead. With the backing of our donors and funders and the commitment of our volunteers and Advisory Board, we will remain steadfast in our pursuit to:

- Provide a welcoming place in the magnificent Great Rivers Confluence area where all people can become inspired to protect birds and habitat, while finding health and balance in nature.
- Protect 49,000 acres of floodplain habitat for 300+ bird species and other wildlife.
- Build new generations of conservationists through inclusive, innovative, and immersive environmental education and for students from under resourced schools.

In the meantime, make Riverlands your outdoor destination of choice this summer. Take advantage of the Wellness Series and other program offerings. Find time to rejuvenate in nature. Listen to morning choruses of bird song. Walk the Ellis Island Trail. Enjoy a picnic dinner and spectacular views from our deck overlooking Ellis Bay.

Thank you for caring about nature. See you soon at Riverlands. You are always welcome at Audubon!

Sincerely,
Ken Buchholz
Center Director
Our community benefits from meaningful youth employment, as well. Employment contributes to increased earnings, a more highly educated workforce, and reduced crime. Youth who work as teens are more likely to earn higher in their future, which directly contributes to our local economy. Further, youth who work also have higher graduation rates (Leos-Urbel, 2012) and are less likely to engage in violent acts in their community (Modestino, 2017).

Flight Crew is made possible through a cost-share partnership with STL Youth Jobs, which provides teens with job coaching and workforce readiness training on topics ranging from financial planning to resume-building. Through our Flight Crew program, our Center is an active member of the local Green Teen Alliance, a St. Louis region-wide coalition of local environmental organizations providing paid summer work experiences for youth from historically marginalized communities. The Green Teen Alliance works throughout the year to plan training and opportunities for youth to connect socially across the network.

As Flight Crew members and Little Creek Summer campers gain a stronger grasp of the environmental challenges ahead and a deeper connection to nature, they are poised to become leaders who will care about and protect our environment.

For more information about our education programs contact: Michelle.Wiegand@Audubon.org
Nest Box Monitoring at Riverlands

By Tara Hohman

It is that time of year when birds are singing, building nests, raising young and defending territories. A wide diversity of species that breed around Riverlands means you can find a variety of nests here, such as cup or hanging nests, open nests laid out on rocks or gravel, indentations in the sand or more secretive cavity nests found in dead trees or nest boxes. While the natural landscape supports a lot of these options, we can help certain species by providing artificial nesting opportunities, for example the US Army Corps of Engineers’ (USACE) Interior Least Tern Nesting Barge and our more recent Riverlands Nest Box Program.

Initiated in 2019 by a former Audubon AmeriCorps VISTA, Emily Pavlovic, the Riverlands Nest Box Program focuses on species that utilize Eastern Bluebird boxes (e.g. Eastern Bluebirds, Tree Swallows, and others) and American Kestrels. Our 2019 summer Flight Crew program teens helped construct eight bluebird boxes. Through St. Louis Audubon Society’s Creley Memorial Conservation Grant, we were able to work with our Center and World Bird Sanctuary volunteers to construct 10 American Kestrel boxes. All of these boxes can be found around Riverlands Migratory Bird Sanctuary in off trails areas, fixed on Ameren MO utility poles, or placed on posts.

Natural tree cavities where bluebirds and kestrels prefer to nest are increasingly scarce. Between the removal of dead trees, or snags, and competition for remaining tree cavities, cavity nesters have it hard. Especially for secondary cavity nesters, birds that nest in cavities but don’t create them, like bluebirds and kestrels. They rely on old cavities created by primary cavity nesters, such as woodpeckers, or natural tree cavities. Competition for cavities (mainly from House or Eurasian Tree Sparrows) was one of the main culprits for the decline in the bluebird population back around the 1960s. With the work of the North American Bluebird Society, similar organizations, and large-scale installation of nest boxes, bluebird populations bounced back to sustainable levels. Now bluebirds are somewhat reliant on nest boxes, with some still seeking out available natural cavities.
American Kestrels are currently showing a population decline for unknown reasons. There also is not much data available for kestrels in our region. The American Kestrel Partnership is an organization that is trying to determine why North America’s smallest falcon is declining. One way they are doing this is by tracking nesting success through nest boxes.

We are helping these conservation endeavors by supplying nest boxes for bluebirds and similar sized cavity nesting songbirds, and tracking their nesting success through the Cornell Lab of Ornithology’s NestWatch program. As well, we are supplying nest boxes to kestrels and tracking their nesting success to share with the American Kestrel Partnership.

Following NestWatch and American Kestrel Partnerships protocols, monitors check on nesting progress one or two times weekly and report their findings. We provide training in February for volunteers and others interested in helping birds. Training on nest box monitoring is given every February to volunteers and others interested. We also partner with World Bird Sanctuary to band kestrel chicks each season with a unique USGS Bird Banding Lab silver band.

Last summer we had two successful kestrel pairs fledge a total of five chicks (four in one nest and one in the other), which were banded by World Bird Sanctuary. If resighted, we can determine if our kestrel chicks reached adulthood and are making their home around the sanctuary. We also had three successful nesting attempts in our bluebird boxes by Tree Swallows and two successful nesting attempts by Eastern Bluebirds resulting in 21 chicks total. This summer, we already have two pairs of kestrels incubating eggs, Eastern Bluebirds hatching their first clutch and Tree Swallows building their nests.

For information on Riverlands Nest Box Program, contact Conservation Science Associate Tara Hohman, tara.hohman@audubon.org.
“Hikes to highlight birds and trees! It is a nature nerd’s dream!” This was one of many kind remarks made by participants of our first annual Bows for Birds Challenge!

We recognize the importance of connecting with nature and its direct impact on physical and mental health. This winter, as we all experienced increased social isolation, Covid restrictions, shorter daylight hours and frigid temperatures, we knew it was important to provide meaningful ways to get outdoors, learn about, and connect to the natural world. In response to these challenging times, we launched an exciting opportunity to explore the outdoors and birds through a St. Louis region wide bird-themed scavenger hunt, dubbed the Bows for Birds Challenge!

Between December 12th and February 6th, hundreds of Bows for Birds participants visited 12 parks and natural areas in the STL region. At each location, participants followed clues to find a “Bow for Birds” station. A festive bow and clue card at each station with information helped them identify a common bird species. Participants then had to find a painted wooden mystery bird and ID it! In order to be eligible for a variety of super cool prizes, participants submitted "selfies" with their mystery bird finds at each location.

Our first year of the Bows for Birds Challenge was an absolute success! With over 3,200 submissions in our first year, we were overwhelmed by the positive response to this program. We would like to extend a special thanks to our partner sites for making this challenge possible: Gateway Arch National Park, Shaw Nature Reserve, World Bird Sanctuary, St. Louis County Parks, Forest Park Forever, City of St. Louis Government, Tower Grove Park, Missouri Dept. of Conservation, and Riverlands Migratory Bird Sanctuary!

"I discovered a love for birds that I never knew I had!"

~ Henry David Thoreau
Starting in the mid spring months between late April and early May, you may have caught a glimpse of tiny iridescent green birds. Perhaps you saw these flying dwarfs in a deciduous forest, park, garden, yard, or somewhere with colorful flowerbeds. Unlike other birds, this species has a rotator cuff that allows them to fly backwards and upside down. The males (responsible for this species name) are distinguished from the females with black throat patches that reflect bright ruby red in the sun and have a deeply forked tail. Females on the other hand, have a white throat and a white tip on their rounded tail feathers. While they do not typically sing, they will communicate with a buzzing chatter or a quiet, high pitched, mouse-like squeak. Following their venture north for breeding season, the females will spend 6-10 days building their nests, using a variety of plant materials. They use lichen and moss as camouflage, and spider silk to hold together their thimble sized nests, which are found in trees or shrubs about 10-40 feet off the ground.

The Ruby-throated Hummingbird (Archilochus colubris) is the smallest bird in Missouri, ranging between 3" and 3.5". Despite the slight size of an individual, the species occupy the largest breeding range out of the 23 other species of hummingbird in North America. These solitary migrants travel north from Central America, making their way to southern Canada and eastern North America. Rather than taking the longer shoreline route to reach U.S. shores, some travel as far south as Panama nonstop for 500 miles over the open water. Ruby-throated Hummingbirds typically fly about 25 miles per hour, while beating their wings an average rate of 53 times per second. That means they tackle this solo flight with nearly 4 million wing beats in about 20 hours to cross the Gulf of Mexico!
Prior to their strenuous migration in the spring, hummingbirds will increase their feeding in order to build up fat deposits. Following the breeding season, Ruby-throated Hummingbirds nearly double in weight from about 3.25g to 6g. In order to maintain themselves during their migration, Ruby-throated hummingbirds will enter a temporary state of torpor to conserve energy on cold nights. Torpor is a state of decreased physiological activity in order to conserve energy by lowering their body temperature and heart rate. As morning rises, so does their metabolism and body temperature as it regulates itself back to normal.

Another adaptation that allows Ruby-throated Hummingbirds to be a successful species is their ability to burn calories at an extremely fast rate. These hummingbirds have an extremely rapid metabolic rate and eat 1.5 to 3 times their body weight a day to sustain themselves. Compared to a human’s resting heart rate of 72 beats per minute (bpm), Ruby-throated Hummingbirds rest at 600bpm, which allows them to hover in flight and feed on nectar. When exerting a lot of energy, their hearts rate doubles at 1,200bpm. In comparison, during exercise, a human’s heart rate may go up to 180bpm to 200bpm. Throughout a hummingbird’s journey, they will often feed along their route in search of tubular flowers, their favorites being red or orange in color. When nectar is unavailable, they feast on tree sap and even have an appetite for insects such as mosquitos, spiders, gnats, fruit flies, and even small bees.

Ruby-throated hummingbirds need a lot of nectar throughout their migration. Check out this Nectar recipe to supply resources for their journey and keep an eye out for any Ruby-throated pit-spots at your feeder!

**Materials:**
- ¼ cup plain white sugar (cane sugar is best)
- 1 cup boiling water
- Bowl
- Spoon

**Steps:**
1. Mix sugar and boiling water until sugar is dissolved.
2. Cool and fill feeder
3. Hang up your feeder outside and wait for the hummingbirds to come

*Note: There’s no need for red dye here. Red coloring is not necessary and the chemicals could prove to be harmful to the birds.*
Ruby-throated Hummingbirds continued

The arrival of Ruby-throated Hummingbirds in our region aligns with the bloom of a number of native plant species. Flowering species such as phlox and columbine will bloom early in their migration while beardtongues, Indian Pink, and jewelweed bloom throughout the summer months. Ruby-throated Hummingbirds use tactile and visual cues, and some vocalization to navigate their environment. However, their vision is their most important sense, as they are fast fliers that make quick directional changes. They also rely on their vision to find bright colored flowers. Since Hummingbirds can see ultraviolet light, bright colors such as red, yellow, and orange, let them know that a snack is close by.

Hummingbirds are viable pollinators and are comparable to the efficiency of honeybees. They lap up nectar by flicking their long, forked tongue deep within a flower at rates up to ten times per second. Concurrently, while hummingbirds are hovering airborne and stockpiling on resources, they are collecting pollen on their feathers and bill before darting off, transferring this pollen and fertilizing female species. Due to their productive success as pollinators, scientists believe that many plants have co-evolved with hummingbirds. Researchers note as many as 19 species of eastern United States plants to coincide with hummingbird’s bill length and shape with the tubular shape in flowers. Species including trumpet creeper, red buckeye, jewelweed, columbine, red morning glory, trumpet/coral-honeysuckle, fly honeysuckle, cardinal flower, catchflies and fire pink, seem to be adapted specifically to their pollination.

Since Ruby-throated Hummingbirds have a mutualistic symbiotic relationship with various plant species, it is even more important that the populations stay protected in order to provide the resources that both species needs to thrive. Fortunately, the Ruby-throated Hummingbird is abundant throughout its range with an estimated population of over seven million individuals. While this species never became threatened, they used to be hunted and collected for their small size and brilliant plumage during the 19th century. Ruby-throated Hummingbirds are protected through the Migratory Bird Treaty Act. This act declares unlawful taking, killing, or possessing of migratory birds. Ruby-throated Hummingbirds are also listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Flora and Fauna of 1975 (CITES). Maintaining and protecting the habitat and nectar plants along Ruby-throated Hummingbird’s migration route, works in promoting a healthy population for them and the plants, animals, and humans that they support.

Native Plants for Hummingbirds

There are many native plants that support hummingbirds! Choose from the list below to support hummingbirds in your backyard.

- Columbine (Aquilegia canadensis)
- Indian Pink (Spigelia marilandica)
- Wild Sweet William (Phlox divaricata)

Visit Audubon’s Native Plant Database for more ideas! https://www.audubon.org/PLANTS FORBIRDS
CAIA GILLETT
EDUCATION & OUTREACH AMERICORPS VISTA

Hometown: Melbourne, Florida
Education: BS in Biology & Sustainability Principia College, 2020
Favorite Bird: Tawny Frogmouth
Time at Audubon: Began as a 2-month summer VISTA in June 2020, began full-term VISTA position in August 2020!
What sparked your love of nature? I was always drawn to nature since growing up on the coast in Florida. I love beachcombing, catching critters (with care) and climbing trees! Though it wasn’t until I took a marine science class in high school that I really became interested in the field of conservation.
What impact do you hope to make through your work with Audubon? Just like with everything I do, I hope to leave it better than when I found it. I hope my work assists others in understanding and bettering their own relationship with the natural world that we coexist in.
Favorite Part of VISTA service at Audubon: I am grateful for the amazing variety of experiences I’ve gained through my service at Audubon. I’ve really enjoyed conducting focus groups, working with volunteers, and any day spent outside! I’ve especially valued working on projects that work to address inequalities and empower those in our community.

SALLY CRONIN
SOCIAL WORK BSW PRACTICUM STUDENT

Hometown: Dow, IL
Education: Bachelor's in Social Work, May 2021
Favorite Bird: Northern Cardinal
Time at Audubon: Began practicum in October 2020
What sparked your love of nature? Playing in the creek by my house as a kid is where my love for nature began. It has continued to grow as I spend my free time hiking and foraging for spring mushrooms!
What do impact do you hope to make through your work with Audubon? The impact I hope to make through my work here at Audubon is to provide a different perspective to help the organization reach their goals in education outreach projects and projects on the ground. It has been such a great learning experience thus far!
Favorite Project You've Worked on: My favorite project that I have worked on is the Winter Donation Drive that was held during our Birds of Winter events! It was the first time the Center held clothing drive like this and I am grateful that I had the opportunity to help those in need in the St. Louis area with the help of our community!
Upcoming Events

Outdoor Wellness Series

Last year, we launched an outdoor Wellness Series in partnership with the US Army Corps of Engineers. Join us this summer to support your body and mind while connecting with the wonders of nature at Riverlands!

Register at: riverlands.audubon.org/events

Bikes, Birds, & Brews
- May 8
- June 24

Nature Art Works
- May 20
- June 17

Trail Treks
- May 22
- June 26

Kayaking Ellis Bay
- June 15
- July 6
- July 17

Field Day Fridays

Join Audubon and USACE for free, family sessions highlighting outdoor, hands-on activities to discover nature! These 1.5hr sessions will feature various nature and conservation topics. Registration is required in order to manage and limit group size.

To find out more & register visit: https://riverlands.audubon.org/events

- June 25: Build a Bird: Adaptations & Nests
- July 2: The Migration Story
- July 9: Plants & Pollinators: Sweep Netting
- July 16: Uncovering Nature: A Sensory Walk
- July 23: Nature's Investigation
- July 30: What's Up Water: Macro-netting
- August 6: Wet & Wild Wetlands

Community Pop-up Events

Join the Audubon Center at Riverlands and the World Bird Sanctuary for two pop-up bird-themed events in Ferguson, MO this summer! More information on our website and social media to come. Save the dates below.

July 17th, 10:00a-1:00p: Raptors of our Region
Location: Hudson Park (1271 Hudson Rd, Ferguson)

August 7th: All About Owls
Location: January Wabash Park (501 N Florissant Rd, Ferguson)
An Ahh-dubon Evening

Saturday, July 3
6:00p until close of Alton Fireworks

Ahh-dubon Evening is back! Join us for a special evening of appreciation, community, and friends. Enjoy an exclusive view of the Alton fireworks from the comfort and beauty of the Audubon Center at Riverlands. Bring a picnic, chairs, and friends. Yard games, local food vendors, and kids activities will be on-site. Local bluegrass band Riverbend Bluegrass will be performing throughout the evening.

Attendees are also invited to participate in a small group kayak session at 5:00p with the Mississippi River Water Trail Association. Sign up: https://act.audubon.org/a/july-3-evening-paddle-on-ellis-bay

***Covid-19 restrictions will be followed. In order to comply with event capacity limits, please be sure you select tickets for all attendees, including youth (free). ***

$10 per adult
Free to youth (17 & under)

Purchase tickets at: https://act.audubon.org/a/ahh-dubon-evening
Outdoor Amphitheater

A jointly funded outdoor amphitheater and classroom has been installed near the overlook just steps away from the Audubon Center at Riverlands! Visitors are already using the amphitheater, and we have used it to host education for scout groups. Made possible through a partnership between the US Army Corps of Engineers (USACE), Wild Ones St. Louis Chapter, and the Audubon Center at Riverlands, this project is a great example of our unique collaboration with the USACE, other non-profit organizations, and the volunteers who support our programs.

Council Ring

A new council ring welcomed outdoor visitors throughout our busy Birds of Winter series. Located next to the newly installed wetland pond behind our center, it includes stone seating, native landscaping, and a soon to be completed fire pit encased by stone. We have enjoyed seeing visitors picnicking at the council ring and loved making s’mores with you during Birds of Winter events! The council ring was made possible through a generous donation from an anonymous donor, and our partners at the US Army Corps of Engineers.

Bird-friendly Garden

With funding support from St. Louis Audubon Society’s Creley Grant, a new bird-friendly garden has been installed just off the Audubon Center parking lot. The garden features a variety of native plant species, as well as new bird feeders, which will provide vital resources to birds. This garden is also a great demonstration of how to utilize native plants and support birds in your home landscape. Thanks to St. Louis Audubon Society, the US Army Corps of Engineers, and our dedicated native gardening volunteers for their support of this new micro-sanctuary for birds!
When you support the Audubon Center at Riverlands, you make the St. Louis Region an even better place for birds and people to live.

Your yearly donations are key to keeping our Center vibrant and open while making it possible to operate and enhance our conservation, education, and public engagement programs.

Donate with cash, check, credit card, and gifts of appreciated securities. Make your checks payable to the Audubon Center at Riverlands and mail to:
Audubon Center at Riverlands
301 Riverlands Way
West Alton, MO 63386

To donate stock or other appreciated securities email Ken Buchholz at Ken.Buchholz@Audubon.org for instructions.

To find out more: https://riverlands.audubon.org/get-involved/give-today

**Volunteer**

Give your time, enthusiasm, and expertise! Volunteers are essential to maintaining and enhancing our conservation, education, and public engagement programs. Customer service, gardening, teaching, birding, presenting, and avian surveying are just some of the ways volunteers are making a positive difference birds, people, and nature. Start volunteering by contacting RiverlandsVolunteer@Audubon.org

We are the National Audubon Society, a 501(c)(3) nonprofit organization and the recipient of Charity Navigator’s highest rating and a platinum Guide Star rating. Our EIN or Tax ID: 13-1624102.